RULES AND REGULATIONS

Title 22—EDUCATION

STATE BOARD OF EDUCATION

[22 PA. CODE CH. 49]

Certification of Professional Personnel

The State Board of Education (Board) amends Chapter 49 (relating to certification of professional personnel) to read as set forth in Annex A. Notice of proposed rulemaking was published at 50 Pa.B. 7164 (December 19, 2020).

Statutory Authority

The Board is acting under the authority of sections 1109, 1141, 2603-B and 2604-B of the Public School Code of 1949 (24 P.S. §§ 11-1109, 11-1141, 26-2603-B and 26-2604-B).

Purpose

Chapter 49 sets forth requirements for educator preparation, certification, induction and ongoing professional education.

Background

In July 2018, the Department of Education (Department) invited interested stakeholders to participate in dialog on issues surrounding educator preparation and certification. Attendees at forums held in Philadelphia, Harrisburg and Pittsburgh provided input on potential changes to state policy that could strengthen preparation and certification and strategies to advance the Department's other priorities for the educator workforce, including diversifying Pennsylvania's educator workforce and ensuring all students have equitable access to effective teachers. Stakeholder feedback from these convenings was considered in tandem with a review of research on the impact and effectiveness of policy changes suggested by stakeholders in a report prepared for the Department by the Learning Policy Institute (LPI).

Guided then by input from diverse stakeholders and a review of related academic literature, the Secretary of Education (Secretary) presented a set of recommendations for updating Chapter 49 to the Board in November 2018. The Board accepted the Secretary's recommendations on its agenda for consideration and initiated a major review of Chapter 49 that is to occur at 10-year intervals per 22 Pa. Code § 49.51(b) (relating to review of certification) with the Secretary's recommendations serving as a starting point for that review.

The Board, through its Teacher and School Leader Effectiveness Committee (Committee), held four public hearings on the Secretary's recommended updates to Chapter 49 and invited additional testimony from stakeholders on the Chapter broadly. In advance of the hearings, draft proposed amendments to Chapter 49 prepared by the Secretary were posted on the Board's web site for public review. Hearings were held at the Philadelphia School District administration building on March 4, 2019, at the Department of Education in Harrisburg on March 14, 2019, at Lock Haven University on March 28, 2019, and at the Allegheny Intermediate Unit on April 23, 2019. In addition to providing an opportunity to testify before the Committee, the Board also invited individuals to submit written testimony on draft proposed amendments to Chapter 49.

Individuals affiliated with small businesses were welcome to participate in the public hearings convened by the Committee and to submit written testimony to the Board. In addition, the Board invited comments on the impact of draft proposed amendments on small businesses directly from the Pennsylvania chapter of the National Federation of Independent Business prior to adopting the proposed rulemaking.

Comments received during this process were taken into consideration by the Board in making further amendments to the Secretary's recommendations. Draft proposed amendments to Chapter 49 were reviewed and approved by the Committee and by the Council of Higher Education before being adopted by the Board as a proposed rulemaking at its public meeting on July 8, 2020.

The Board's proposed rulemaking was published at 50 Pa.B. 7164 for a 30-day public comment period. The Board received and considered comments from faculty in schools of education, educators and parents, as well as comments from the Independent Regulatory Review Commission (IRRC).

The Board prepared amendments to this final-form rulemaking to address concerns raised by stakeholders and IRRC through public comment. Those amendments clarified the scope of applicability of requirements for training in structured literacy, deleted references to "cognitive competencies" that was identified as duplicative, deleted a proposal to permit the Secretary to determine the length of field experiences for prospective educators that more appropriately should be considered through amendments to Chapter 354 (relating to preparation of professional educators), and deleted the proposal for annual data reporting on first-generation students that are admitted, retained and graduated from educator preparation programs that affected stakeholders identified as not reasonable. The additional amendments also established new definitions for "cultural awareness" and "trauma-informed approaches to instruction," as suggested by IRRC, to provide greater clarity in this final-form rulemaking. Final amendments also deleted a proposal to permit school psychologists with 5 years of satisfactory experience to be issued a Special Education Supervisory certificate in response to concerns raised by faculty in schools of education and parents over whether school psychologists have the requisite knowledge and skills to support and evaluate special education teachers, whether they have the requisite knowledge to design, implement and assess related instructional programs, and whether the change may exacerbate the shortage of school psychologists. Finally, the Board made other clarifying amendments in this final-form rulemaking as requested by IRRC. Those clarifying amendments are explained in detail in the following section titled "Summary of the Final Rulemaking."

A revised final-form rulemaking encompassing the amendments previously described was approved by the Council of Higher Education and by the Board on September 9, 2021.

Need for the rule

This final-form rulemaking has two aims—conforming the chapter to changes in State statute and enhancing educator preparedness by establishing new training re-

quirements related to culturally responsive and sustaining education (CR-SE), structured literacy and professional ethics.

The majority of final amendments reflect technical amendments to align certain provisions of Chapter 49 with statutory changes to the Public School Code of 1949 (24 P.S. §§ 1-101—27-2702), clarify ambiguous language and update language for relevancy.

Substantive changes related to educator training are needed to address concerns surrounding this Commonwealth's supply of effective educators. Chapter 49 directs the Department to report annually to the Board on the status of certification in the Commonwealth (see § 49.51(a)). Data presented in the Department's July 2020 annual human capital report shows that enrollment in traditional educator preparation programs in this Commonwealth has decreased by 67% since 2010, with a slight increase between 2017 and 2018.

This downward trend is consistent with declines in educator preparation program enrollments Nationally that fell by 35% between 2009 and 2014. Data on National educator preparation program enrollments was presented by LPI in a presentation titled *"National Trends in Teacher Preparation and Certification"* that was delivered at a public meeting of the Board in March 2019. The steep decline in the number of individuals preparing for a career in education is a contributing factor to the challenges districts face in hiring fully prepared educators. Issues surrounding educator supply further are compounded by persistent teacher shortages in certain geographic areas and subject areas.

The decline in supply and resulting shortages disproportionately impact inequities in access to qualified teachers for low-income students and students of color. A report prepared by LPI titled *"Examining Educator Certification in Pennsylvania: Research and Recommendations for Chapter 49"* notes that the eight districts that top the State's list for teacher shortages based on unfilled vacancies are all Title I districts. Title I is a Federal program that provides financial assistance to local education agencies and schools with high numbers or high percentages of children from low-income families. Collectively, in 2016-2017, these districts served over 13% of the State's overall student population and over 30% of students of color in this Commonwealth. According to the LPI report, six of the eight districts with the greatest teacher shortages serve primarily students of color.

To address these gaps, the State has become increasingly reliant on long-term substitutes serving on emergency permits to staff classrooms as evidenced by a 100% increase in the number of emergency permits issued to districts in this Commonwealth between 2014-2015 and 2016-2017. Data on the increasing reliance on emergency permits was presented to the Board in the Department's 2018 annual certification report and further reported in the aforementioned report prepared by LPI. These circumstances are concerning because research demonstrates that teachers with little or no preparation often lead classrooms with lower student outcomes and experience a higher attrition rate from the field. Nationally, 66% of teacher turnover in 2015-2016 was due to pre-retirement attrition, as reported by LPI in its March 2019 presentation at a public meeting of the Board.

While significant turnover occurs before educators reach retirement age, the Board also gauged this Commonwealth's educator workforce needs by reviewing data on the supply gap as measured by potential retirements. In 2018-2019, 12% of teachers were close to or at the age of retirement (defined as 55 years of age or older) and, in that same year, 5% of teachers were close to retirement based on years of services (defined as 30 or more years of service) as evidenced by data in the Department's July 2020 annual human capital report.

Amendments in this final-form rulemaking are also intended to reinforce the professional integrity expected of both new and experienced educators. The Professional Standards and Practices Commission, the State body charged with adjudicating educator misconduct, has seen its caseload more than triple over the past 5 years according to data from the Commission. The Commission disciplines nearly 300 educators annually, and the Department's Office of Chief Counsel had more than 2,000 educator misconduct complaints pending as of November 2020. Protecting students from educator misconduct is of the utmost imperative. Through these amendments, the Board seeks to ensure that Commonwealth educators are prepared not just in pedagogy and content knowledge, but that they also possess a clear understanding of the ethical practice that is expected of them.

Collectively, these challenging circumstances require attention to ensure that all students in this Commonwealth are served by teachers fully prepared to meet their needs. To address these challenges, the Board is establishing new educator training requirements that would be integrated throughout three points in an educator's career to provide a continuum of professional learning.

First, this final-form rulemaking adds requirements for instruction for preservice educators, which would be delivered as part of undergraduate or alternative post-baccalaureate programs for individuals who are working toward earning a teaching certificate. Under this final-form rulemaking, individuals studying to become teachers would need to receive instruction in professional ethics and CR-SE. CR-SE is inclusive of mental wellness, trauma-informed instruction, cultural awareness, and technological and virtual engagement. Preservice instruction in structured literacy also would be required for individuals seeking to earn the following instructional certificates: Early Childhood; Elementary/Middle; Special Education PreK—12; English as a Second Language; and Reading Specialist.

Second, this final-form rulemaking adds requirements for training as newly-employed teachers enter the profession. When teachers enter the classroom for the first time, they are required to complete an induction program that includes a variety of professional support services, often delivered under the guidance of a mentor teacher, to facilitate entry into the education profession. At present, induction programs typically span an educator's first year in the classroom. This final-form rulemaking extends induction supports to the first 2 years of an educator's career. This final-form rulemaking also requires induction programs for newly-employed educators to include training in CR-SE, as previously described and in professional ethics.

Finally, this final-form rulemaking adds requirements for training as part of continuing professional development for current educators. The act of November 23, 1999 (P.L. 529, No. 48), requires educators in this Commonwealth to complete continuing education requirements every 5 years to maintain an active teaching certificate. Educators must earn either six credits of collegiate study, six credits of Department-approved continuing professional education courses or 180 hours of continuing

professional education programs, activities or learning experiences through a Department-approved provider to maintain active certification status.

Further, both section 1205.1 of the Public School Code of 1949 (24 P.S. § 12-1205.1) and § 49.17 (relating to continuing professional education) require school entities to develop continuing professional education plans every 3 years. The existing requirements of Chapter 49 further require that professional education plans must address training in meeting the needs of diverse learners (defined as students with limited English language proficiency or students with disabilities), improving language and literacy acquisition, and closing the achievement gap among students. This final-form rulemaking requires that continuing professional education for current educators also include training in CR-SE and professional ethics for all educators, as well as training in structured literacy for educators who hold instructional certificates in Early Childhood, Elementary/Middle, Special Education PreK—12, English as a Second Language and Reading Specialist.

The amendments are intended to support efforts to improve educator recruitment, increase the number of classrooms staffed by fully prepared teachers, increase retention in the profession, and improve student outcomes by strengthening the preparation of new educators, creating conditions to provide more support for educators as they enter the classroom and by improving the skill sets of current educators in working with an increasingly diverse student population.

Provisions of this Final-Form Rulemaking

The majority of amendments in this final-form rulemaking make technical amendments to either align provisions of Chapter 49 with statutory changes, clarify language or update language for relevancy. The balance of amendments establish new competencies to be incorporated both in preservice instruction for individuals preparing to enter the education profession and in training delivered through induction programs and professional development for current educators. This final-form rulemaking also strengthens supports for beginning educators by extending the length of induction programs and requires annual reporting of data on students admitted, retained and graduated from educator preparation programs including disaggregated data for students of color and economically disadvantaged students.

§ 49.1. Definitions

Amendments to § 49.1 (relating to definitions) add a new definition for "alternative program provider." The act of June 30, 2011 (P.L. 112, No. 24) (Act 24 of 2011) created new powers and duties for the Secretary through the addition of section 1207.1 to the Public School Code of 1949 (24 P.S. § 12-1207.1). These powers permit the Secretary to evaluate and approve postbaccalaureate certification programs and to evaluate and approve qualified providers of postbaccalaureate certification programs, which may include providers other than institutions of higher education. The definition of "alternative program provider" is added as a technical revision to align the regulation with the authorization in statute permitting the Secretary to approve these providers and to acknowledge the current landscape of educator preparation providers that is inclusive of approved alternative programs. References to alternative program providers are also incorporated throughout Chapter 49 as appropriate to recognize the presence of alternative program providers. Final amendments to this definition update the citation to the Public School Code of 1949 referenced within the definition to correctly refer to section 1207.1(a) of the act as requested by IRRC in its comments dated February 17, 2021.

In the Board's proposed rulemaking, the term "approved teacher certification program" was updated for relevance to refer to "approved educator preparation program" to recognize that preservice education providers offer a breadth of programming that extends beyond preparing individuals to serve only as classroom teachers. The definition was also updated to reflect the presence of alternative program providers, as described in the new definition for "alternative program provider." In its comments to the Board, IRRC correctly noted that the term "approved educator certification program" is not used in the regulation. Final amendments to Chapter 49 correct this drafting error by amending the defined term to read "approved educator preparation program" for consistency with references to approved preparation programs throughout Annex A.

A definition of "baccalaureate degree" is included as a technical amendment in the Board's proposed rulemaking to provide context for individuals qualified to pursue certification through an alternative program provider as defined in statute. Requirements established in section 1207.1 of the Public School Code of 1949 set forth that these programs may be offered at the postbaccalaureate level. Final amendments to the definition of "baccalaureate degree" delete the last sentence of the definition because it contained a substantive provision relating to graduate degrees. Per § 2.11(e) (relating to definition section) of the *Pennsylvania Code and Bulletin Style Manual*, substantive provisions may not be included in a definition. To correct this, the Board created a new paragraph within § 49.12 (relating to eligibility) and moved the language being deleted from the proposed definition of "baccalaureate degree" to § 49.12(4).

The existing definition of "professional certified personnel" is amended to refer to "certified personnel" to clarify professional as certified and to reflect the application of the term as applied in current inter-State reciprocity agreements.

The definition of "completer" is deleted from this final-form rulemaking because the term is not used in the regulation.

A definition for "cultural awareness" is added to this final-form rulemaking, as requested by IRRC, to improve the clarity of the regulation and the clarity of the definition of "culturally relevant and sustaining education" that contains a reference to cultural awareness.

A definition for "culturally relevant and sustaining education" (CR-SE) is added to describe new competencies for educators in which instruction and training would be required under this final-form rulemaking. The definition of CR-SE includes the following specific competencies: mental wellness, trauma-informed approaches to instruction, technological and virtual engagement, and cultural awareness. The proposed definition of CR-SE also included reference to ". . .any factors that inhibit equitable access for all students in this Commonwealth." The Board determined that the use of the word "any" in the proposed definition was too broad and, in this final-form rulemaking, replaced the word "any" with the word "emerging" to more accurately express the intent of the Board that educator training in CR-SE is not static and should address factors that may inhibit equitable access for all students as they arise.

The existing definition for the "Professional Educator Discipline Act" is updated to the "Educator Discipline Act" to appropriately refer to the Act as it was renamed by the act of December 18, 2013 (P.L. 1205, No. 120). References to the "Professional Educator Discipline Act" throughout the entirety of the chapter are also updated accordingly to align with the title as changed in statute.

A definition for "historically underrepresented groups" provides context for the disaggregated reporting requirements set forth in § 49.14(4)(v) (relating to approval of institutions and alternative program providers). As proposed, educator preparation programs would have been required to annually submit data to the Department on students admitted, retained and graduated, including disaggregated data for students of color, economically disadvantaged students and first-generation college-goers. Final amendments to the definition of "historically underrepresented groups" delete the requirement to annually report data on first-generation college-goers in response to concerns from educator preparation programs that colleges and universities do not have reliable data on this student subgroup.

A definition for "professional ethics" is added to provide context for instruction and training for educators in ethical practice and professional integrity that is required under this final-form rulemaking. Final amendments to the definition of "professional ethics" deleted language that referred to standards of behavior, values and principles as "accepted and collectively agree[d] upon" as this language is determined to be too subjective. Further amendments to the definition deleted reference to "applicable laws and regulations" generally that was determined not to be specific enough. Finally, the definition is amended to delete reference to the Model Code of Ethics for Education, as published by the National Association of State Directors of Teacher Education, as a guiding document on standards of behavior, values and principles related to professional ethics for educators to address concerns that referring to a National code could appear as an unlawful delegation of authority. Rather, the final definition is amended to refer to the Pennsylvania Model Code of Ethics for Educators as adopted by the Professional Standards and Practices Commission.

The term "school entity" is updated to replace the existing reference to "area vocational-technical schools" with "area career and technical schools." This amendment aligns language included in the definition with terminology as it was updated throughout the Public School Code of 1949 under amendments enacted by the act of October 30, 2019 (P.L. 460, No. 76) (Act 76 of 2019).

A definition for "structured literacy" is added to provide context for instruction and training for educators in these competencies as required under this final-form rulemaking. Final amendments further refine the definition to clarify the purpose of systematic, explicit instruction in structured literacy as providing a strong core of foundational skills in the language systems of English. The final definition is also amended to add "spelling" to the foundational skills cited in the definition in response to stakeholder requests to include this related skill among those already identified.

A definition of "subject area" is added to distinguish content instruction from grade spans.

This final-form rulemaking also includes a definition for "trauma-informed approaches to instruction" as requested by IRRC to improve the clarity of the regulation and the clarity of the definition of "culturally relevant and sustaining education" that contains a reference to trauma-informed approaches to instruction.

§ 49.12. Eligibility

References to providing a physician's certification in § 49.12(2) are deleted as these certificates are no longer required in statute.

Current § 49.12(4) is renumbered as § 49.12(3) to maintain appropriate sequence following the deletion of the current § 49.12(2). Clarifying amendments in this section update terminology to replace references to "vocational" with "career and technical." This terminology update is consistent with the same terminology changes made throughout the Public School Code of 1949 under amendments enacted by Act 76 of 2019.

As previously described relative to § 49.1, § 49.12(4) is added to address language previously contained within the proposed definition of "baccalaureate degree" that was deleted from the definition because it contained a substantive provision. That language is more appropriately situated within this section.

§ 49.13. Policies

Amendments replacing the term "teacher education" with "educator preparation" are reflected in subsection (b)(1) and (4) (relating to policies) to update language for relevancy and to reflect updates to the definition of "approved educator preparation program" in § 49.1. Parallel amendments to this terminology are reflected throughout the balance of Chapter 49 for greater accuracy and relevancy in identifying the breadth of program offerings by preservice education providers that extend beyond preparing classroom teachers.

Final amendments to subsection (b)(4)(i) contain a technical correction to replace the word "of" with the word "or" as it pertains to the pathways through which educator preparation programs can demonstrate they are meeting existing requirements for at least nine credits or 270 hours of instruction in accommodations and adaptations for students with disabilities in inclusive settings. This technical correction makes the language consistent with how a reference to this language is presented later in the same paragraph.

Subsection (b)(4)(ii) requires instruction in professional ethics and culturally relevant and sustaining education to be integrated throughout educator preparation programs and directs the Department to determine whether this requirement is being satisfied by educator preparation providers. This instruction must align with competencies and associated standards in professional ethics and culturally relevant and sustaining education developed by the Department as set forth elsewhere in § 49.14(4)(i) of this final-form rulemaking. The Department will evaluate whether educator preparation program providers are meeting these requirements through its existing major review process for approved program providers.

Final amendments add subsection (b)(4)(iii) as a new subsection requiring instruction in structured literacy to be included in educator preparation program pathways that prepare candidates to earn an instructional certificate in Early Childhood, Elementary/Middle, Special Education PreK—12, English as a Second Language and Reading Specialist. This section further directs the Department to determine whether this requirement is being satisfied by educator preparation providers. This instruction must align with competencies and associated standards in structured literacy developed by the Department as set forth elsewhere in § 49.14(4)(i) of this final-form

rulemaking. The Department will evaluate whether educator preparation program providers are meeting this requirement through its existing major review process for approved program providers.

Current subsection (b)(4)(iii) is renumbered as subsection (b)(4)(iv) to maintain appropriate sequence following the addition of subsection (b)(4)(iii) as previously described.

Subsection (c) is amended for clarity and to reference the new definition of "alternative program provider" to recognize the presence of alternative providers in the landscape of educator preparation programs.

Subsection (f) is added to the regulation to address procedures for evaluating applicants for certification who seek certification after their educator preparation program has closed or been discontinued. This addition is intended to ensure there are no gaps in the evaluation of applicants for certification. This section is also amended to comply with § 6.7(c) (relating to use of "shall," "will," "must" and "may") of the *Pennsylvania Code and Bulletin Style Manual*, which states that the term "will" applies to a pledge of action by the Commonwealth. As drafted, the section inappropriately uses the term "shall" in directing action by the Department, which is a Commonwealth entity. Technical amendments in this final-form rulemaking update the term "shall" to the correct term "will."

§ 49.14. Approval of institutions and alternative program providers

The title of this section is being updated to reference the proposed new definition of "alternative program provider" to recognize the inclusion of the providers in section 1207.1 of the Public School Code of 1949 and their presence in the landscape of educator preparation providers. References to "alternative program provider" are added throughout the section, and throughout the balance of Chapter 49 as appropriate, to reflect the Secretary's responsibility for approving these providers as established by Act 24 of 2011.

Amendments to § 49.14(4)(i) require educator preparation program providers to deliver instruction that includes competencies, coursework, and field experiences in professional ethics and CR-SE, inclusive of mental wellness, trauma-informed approaches to instruction, cultural awareness, and technological and virtual engagement, for all educators. In response to comments from interested stakeholders, final amendments also clarify the scope of required preservice instruction in structured literacy. Individuals studying to earn an instructional certificate in Early Childhood, Elementary/Middle, Special Education PreK—12, English as a Second Language and Reading Specialist must receive training in structured literacy as part of their preservice preparation. Finally, this section requires the Department to identify competencies and develop associated standards for educator training in professional ethics, structured literacy and CR-SE.

Section 49.14(4)(iv) requires the Secretary to consult with the Board in making determinations related to participation in sequential clinical experiences for candidates studying to earn an educator certification.

Section 49.14(4)(v) establishes annual reporting requirements for educator preparation programs on students admitted, retained and graduated, including students from historically underrepresented groups. In response to concerns raised by educator preparation programs about the availability of reliable data, the definition of "historically underrepresented groups" in § 49.1 is amended to remove first generation college-goers from annual reporting requirements included in the Board's proposed rulemaking. As defined in this final-form rulemaking, disaggregated annual reporting would be required for students of color and economically disadvantaged students.

Section 49.14(4)(v) is also updated to comply with § 6.7(a) of the *Pennsylvania Code and Bulletin Style Manual*, which states that the term "shall" expresses a duty or obligation as it applies to a person, committee or other nongovernmental entity. As proposed, § 49.14(4)(v) incorrectly used the term "will" to direct action required of institutions and alternative program providers related to annual reporting requirements. This final-form rulemaking includes a technical amendment to replace the term "will" with the correct term "shall."

Amendments to § 49.14(4)(vii) better clarify the institutional approval process by including reference to designations for at-risk or low performing educator preparation program providers. In its comments to the Board, IRRC asked where the Department defines these terms, requested that the Board revise this paragraph by adding a citation, and asked that the Board explain these standards. As requested by IRRC, final amendments to § 49.14(4)(vii) add a citation to the Federal Higher Education Act of 1965 (HEA) (20 U.S.C.A. §§ 1001—1161aa-1), from which the Department derives its authority to identify at-risk or low performing programs.

The United States Congress enacted Title II provisions to the HEA authorizing Federal grant programs to improve the recruitment, retention, preparation and support of new teachers. Title II also included accountability measures in the form of reporting requirements for institutions and states on educator preparation and licensing. Section 207 of Title II (20 U.S.C.A. § 1022F(a)) reporting requirements mandate that the United States Secretary of Education collect data on standards for educator certification and licensure, as well as data on the performance of educator preparation programs. The law requires the Secretary to use these data in submitting its annual report on the quality of educator preparation to Congress.

In addition, states were required to develop criteria, procedures or processes to identify institutions that are at-risk of becoming low performing and low-performing institutions. These levels of performance shall be determined solely by the state and may include criteria based upon information collected under Title II. In keeping with the Federal requirements, the Department developed criteria to address the performance standards/criteria. The Department is currently working on updating these standards. The Department's current criteria for identifying at-risk and low performing educator preparation programs can be found on the Department's web site at https://www.education.pa.gov/Teachers%20-%20Administrators/Teacher%20Quality/Pages/default.aspx.

Proposed amendments to § 49.14(4)(viii) that would have granted more discretion over field experiences to the Secretary in consultation with the Board are deleted from this final-form rulemaking. In its comments to the Board, IRRC stated that this proposed amendment circumvented the regulatory process by not adequately revising § 354.25 (relating to preparation program curriculum), which sets standards for the student teaching experience and cooperating teachers. As such, this proposed amendment is deleted.

Section 49.14(4)(x) is amended to clarify the Board's role in consulting with the Secretary to approve achievement targets.

Amendments to § 49.14(6) are added to acknowledge the need of educator preparation programs to comply with Federal requirements. Section 49.14(6) is also updated to comply with § 6.7(a) of the *Pennsylvania Code and Bulletin Style Manual*, which states that the term "shall" expresses a duty or obligation as it applies to a person, committee or other nongovernmental entity. As proposed, the section inappropriately used the term "will" as it applied to a requirement for institutions to comply with Federal law. This final-form rulemaking includes a technical amendment to replace the term "will" with the correct term "shall."

§ 49.15. Approval of experimental programs

As noted in the previous section, the proposed definition for "alternative program provider" is added to relevant provisions throughout Chapter 49 to recognize inclusion in the landscape of educator preparation programs.

Section 49.15 (relating to approval of experimental programs) also adds a cross-reference to § 49.13 for clarification to highlight needs for experimental programs to meet requirements established in § 49.13.

§ 49.16. Approval of induction plans

Amendments to § 49.16(a) (relating to approval of induction plans) strengthen the supports available to beginning educators by extending the length of induction programs to 2 years. Existing requirements for induction direct school entities to include long-term substitutes who are hired in a position for 45 days or more in their induction plans. In its comments to the Board, IRRC asked the Board to explain the rationale for requiring long-term substitutes to participate in a 2-year induction program. As drafted in the proposed rulemaking, the amendment to subsection (a) could require long-term substitutes to participate in induction for a period that exceeds the duration of their service as a long-term substitute. The Board concurred that this requirement is not reasonable and, in response, reconsidered the proposed amendment to subsection (a). The Board adopted final amendments to subsection (a) to clarify that long-term substitutes hired for a position for 45 days or more must participate in an induction program only for the period of time in which they serve in that capacity, which may be less than 2 years.

Subsection (c) was added as a new subsection in the Board's proposed rulemaking. This new subsection requires school entities to include competencies related to professional ethics and CR-SE in induction program plans for new educators. Consistent with changes made elsewhere in this final-form rulemaking, a proposed requirement to include "cognitive competencies" as part of induction plans is deleted in the final amendments adopted by the Board due to concerns expressed by stakeholders that the term was too vague and redundant with existing competencies and, therefore, did not add value to current programs.

Existing subsections (c) and (d) are being renumbered as subsections (d) and (e), respectively. These technical amendments are being made to maintain proper sequencing following the addition of the new subsection (c) as previously described.

§ 49.17. Continuing professional education

Amendments to subsection (a)(6) require school entities to address delivery of training in professional ethics and in CR-SE for all educators as part of existing continuing professional education plans.

As defined in § 49.1, CR-SE encompasses a number of competencies, including trauma-informed approaches to instruction. Addressing trauma-informed approaches to instruction as a component of professional development for current educators, which would be required by the inclusion of CR-SE in subsection (a)(6), is consistent with the recent additions of section 1205.1 and section 1205.7 to the Public School Code of 1949 (24 P.S. § 12-1205.7) that require school entities' professional education plans to include trauma-informed approaches.

Final amendments to subsection (a)(6) also clarify new requirements related to training for current educators in structured literacy. The amendments delete the proposal for school entities to provide training in structured literacy to elementary-level educators generally and, instead, refine the scope of required professional development in structured literacy to include educators who hold an instructional certificate in Early Childhood, Elementary/Middle, Special Education PreK—12, English as a Second Language and Reading Specialist. This amendment is consistent with the scope of required instruction in structured literacy for individuals studying to earn a teaching certification set forth in amendments to § 49.14(4)(i) of this final-form rulemaking.

Subsections (b) and (c) reflect technical amendments to align the regulation with section 1205.5 and section 1217 of the Public School Code of 1949 (24 P.S. § 12-1217) that sets forth requirements for continuing professional education for school and system leaders. Final amendments to subsection (c) also reflect a technical amendment requested by IRRC in its comments to the Board by adding the phrase "of the Act" for context following the citation to section 1205.5(g) of the Public School Code of 1949.

Amendments to subsection (d) align terminology in this section with amendments to the definition of "certified personnel" in § 49.1.

§ 49.18. Assessment

Amendments to § 49.18(a) (relating to assessment) and its subdivisions provide clarification that assessments used to demonstrate the knowledge and skills delineated in this section may be stand-alone measures. These clarifications reflect existing practice in preservice assessment.

Subsection (b) is amended for grammatical consistency with the amendments to subsection (a) and its subdivisions.

Subsection (c) is amended for clarification and for cross-reference to changes enacted by the act of October 22, 2014 (P.L. 2624, No. 168) (Act 168 of 2014). Act 168 of 2014 established satisfactory achievement of the basic skills assessment as a requirement to be reached prior to formal entry into an educator certification preparation program and further established that candidates enrolled in a postbaccalaureate certification program are not required to take and pass a basic skills assessment.

In subsection (d), the Board is establishing a more feasible timeframe for conducting periodic reviews of assessments required for certification by changing the timeframe from every 3 years to every 5 years.

Subsection (e) is amended to clarify that certifications added-on through testing by individuals with an Instructional I or Intern Certificate may be issued in related subject areas and retains the exclusion for all Special Education certificates to be added-on through testing. Amendments to this section also clarify the Board's role in consulting with the Secretary in identifying other

certification areas that may be excluded from being added-on by passing related subject matter tests.

§ 49.31. Criteria for eligibility

Section 49.31 (relating to criteria for eligibility) adds language to include eligible providers for the PA Pre-K Counts program, as defined in Chapter 405 (relating to PA Pre-K Counts) and in section 1511-D of the Public School Code of 1949 (24 P.S. § 15-1511-D), as entities to which the Department may issue an emergency, long-term or day-to-day substitute permit. These eligible providers should have the ability to request these permits from the Department to address staffing needs as requirements for their program staffing set forth in § 405.44(a)(4) (relating to staffing and professional development) require all teachers in program classrooms to possess an early childhood education certification.

Proposed language that also extended this provision to an approved private school is deleted in this final-form rulemaking. In its comments to the Board, IRRC noted that Chapter 49 establishes requirements for certification and permitting of individuals in public school entities. IRRC further questioned whether the Board holds the statutory authority to include approved private schools in the rulemaking and whether there is a need to do so in Chapter 49.

Section 1377.2 of the Public School Code of 1949 (24 P.S. § 13-1377.2) permits approved private schools to apply for emergency permits under § 49.31 as if the teachers were employed by a public school entity, provided all other conditions for obtaining an emergency permit are met. The Board included references to approved private schools in its proposed rulemaking to provide context in Chapter 49 for the breadth of certification changes enacted to the Public School Code of 1949 over the past decade. However, approved private schools are not included in the definition of school entity in § 49.1 that defines the scope of the regulated community subject to Chapter 49. Therefore, for clarity and consistency with the regulated community to which Chapter 49 applies, the Board deletes the reference to approved private schools in this final-form rulemaking. Deleting this reference from Chapter 49 will not affect the Department's authority to issue emergency permits for service in an approved private school because that authority is derived from the Public School Code of 1949.

§ 49.65. Out-of-State and Nationally-certified applicants

Section 49.65(a)(3) (relating to out-of-State and Nationally-certified applicants) is amended to make clear that the section refers to subjects on out-of-State certificates, rather than to subjects that the candidate desires to teach.

Subsection (d) is added to permit school psychologists certified by the National Association of School Psychologists to be granted the highest-level certificate available for certification as a school psychologist. This revision parallels existing policy for classroom teachers in subsection (c) that permits educators certified by the National Board for Professional Teaching Standards to be granted the highest-level certificate applicable.

Existing subsection (d) is being renumbered as subsection (e) to maintain appropriate sequencing due to the addition of new subsection (d) as previously described. New subsection (e) is revised to reflect more accurate terminology and to make clear that a candidate must demonstrate mastery of the "certification" area, not the "subject" area. Also in this section, the existing reference to "bachelor's" is replaced with "baccalaureate" to align with the terminology used in the new definition of "baccalaureate degree" in § 49.1.

Existing subsection (e) is renumbered as subsection (f) to maintain appropriate sequencing due to renumbering of the immediately preceding section. Multiple provisions of Chapter 49 are updated to reflect changes made to statute by Act 24 of 2011, including amendments to subsection (f), as renumbered. Act 24 of 2011 modified eligibility requirements, set forth in section 1206(a) of the Public School Code of 1949 (24 P.S. § 12-1206(a)), for issuing instructional certificates to candidates who hold a valid certificate from another state. Technical amendments presented in subsection (f) bring the regulation in line with eligibility requirements as now defined in statute regarding the experience that must be demonstrated by out-of-State candidates certified in another state who are seeking certification in this Commonwealth. Amendments to this section also add references to educational specialist, supervisory and administrative certificates to clarify the types of certificates to which these requirements apply.

§ 49.72. Categories of certificates and letters of eligibility

Section 49.72(a)(10) (relating to categories of certificates and letters of eligibility) renames the category of "Vocational Education Certificates" as "Career and Technical Education Certificates." This terminology update is consistent with global terminology changes enacted throughout the Public School Code of 1949 by Act 76 of 2019 that replaced references to "vocational" with "career and technical."

§ 49.82. Instructional I

Section 49.82(a) (relating to Instructional I) adds language for consistency with Chapter 405 regarding eligible providers and in acknowledgement of additional providers for qualified service leading to conversion of Instructional Level I to Instructional Level II certification.

§ 49.83. Instructional II

The final amendment to § 49.83(1) (relating to Instructional II) establishes completion of a 2-year induction program as a requirement to earn an Instructional II certification. This revision is included for consistency with amendments to § 49.16(a) that strengthen the supports available to beginning educators by extending the length of induction programs to 2 years.

§ 49.84. Collegiate credit acceptable for conversion of the Instructional I Certificate

Section 49.84(a) (relating to collegiate credit acceptable for conversion of the Instructional I Certificate) adds reference to "State-approved associate degree-granting institutions" to permit credits earned at a community college to be accepted toward credits required to convert an Instructional Level I Certificate to an Instructional Level II Certificate.

Subsection (c) adds language to permit graduate credits earned before an individual becomes certified to count toward the credits required for conversion of a Level I Certificate.

§ 49.85. Limitations

Final amendments to § 49.85(c) (relating to limitations) and the addition of subsection (d) reflect technical amendments to align the regulation with changes to Special Education certificates enacted by the act of October 19, 2018 (Act 82 of 2018). These statutory changes modified the scope of grade spans and ages for Special Education certificates and decoupled the requirement for Special

Education certificates to be issued in tandem with an additional content area certificate. As set forth in statute, Special Education certificates will be issued to educators to work with students in prekindergarten through grade 12 or under 21 years of age on or after January 1, 2022. These technical amendments are reflected in subsection (d)(5) and (6).

In its comments to the Board, IRRC requested that the Board reorganize proposed amendments to subsection (c) to provide greater clarity about the dates of validity for current certifications and Special Education certification as amended in the Public School Code of 1949. To be more clear about the dates of validity, the Board deleted language in its proposed amendments to subsection (c) that addressed the January 1, 2022, effective date for issuing new Special Education certifications. Alternatively, the Board adds subsection (d) to this final-form rulemaking that comprehensively reflects the grade level limitations for instructional certificates that will be issued on or after January 1, 2022. This new subsection is added for clarity and does not make any substantive changes to the grade level limitations for existing certificates, save for updating the grade level and age limitations for Special Education certificates to reflect changes to these certificates previously enacted by Act 82 of 2018.

The remaining provisions of § 49.85 are renumbered to maintain appropriate sequencing following the addition of subsection (d) as previously described. Further, language in renumbered subsection (g)(2) is being updated for clarity.

Subsection (h), as renumbered, updates existing language that permits the Secretary to grant exceptions in response to shortages of certified personnel to include an effective date of January 1, 2022. This revision aligns the date of applicability with Act 82 of 2018.

§ 49.86. Accelerated program for Early Childhood and Elementary/Middle level certificate holders

The amendments to § 49.86 (relating to accelerated program for Early Childhood and Elementary/Middle Level certificate holders) separate the words "certificate" and "holders" to correct typographical errors in the existing text of the regulation.

§ 49.90. Criteria for eligibility

Language in § 49.90(a)(1) (relating to criteria for eligibility) regarding eligibility criteria for a Temporary Teaching Certificate is deleted as the criteria are no longer used due to changes in statute.

§ 49.91. Criteria for eligibility

Consistent with amendments elsewhere in the regulation, § 49.91(c) (relating to criteria for eligibility) is amended for clarity to refer to "certification" area rather than "subject" area.

Subsection (d) reflects amendments both for clarity and to align with practice that an Intern Certificate is valid for 3 years of service, rather than 3 calendar years.

§ 49.92. Term of validity

Like the amendment to § 49.91(d), the revision to § 49.92 (relating to term of validity) reflects both clarity and alignment with practice that an Intern Certificate is valid for 3 years of service, rather than 3 calendar years.

§ 49.104. College credit acceptable for conversion of Educational Specialist I Certificate

Section 49.104(c) (relating to college credit acceptable for conversion of Educational Specialist I Certificate) permits graduate credits earned before certification as an Educational Specialist to count toward conversion of the certificate from Level I to Level II.

§ 49.111. Supervisory Certificate

Final amendments to § 49.111(a)(2) and (d)(2) (relating to Supervisory Certificate) add reference to approved alternative program providers. As previously described, this final-form rulemaking adds a definition for "alternative program provider" in § 49.1 as a technical revision to align the regulation with new powers and duties delegated to the Secretary by Act 24 of 2011. Act 24 of 2011 added section 1207.1 to the Public School Code of 1949, which permits the Secretary to evaluate and approve postbaccalaureate certification programs and to evaluate and approve qualified providers of postbaccalaureate certification programs, including providers other than higher education institutions. References to alternative program providers were incorporated throughout the chapter in the Board's proposed rulemaking to recognize the presence of alternative program providers in the current landscape of educator preparation programs, but inclusion of these technical amendments in subsections (a)(2) and (d)(2) was overlooked. The Board is adding reference to alternative program providers to this section as appropriate in this final-form rulemaking.

Amendments to subsection (a) also reflect a technical edit to clarify that criteria for being issued a Supervisory Certificate includes 5 years of satisfactory "certified" experience, rather than "professional" experience.

Subsections (b) and (c) permit individuals certified in one area of supervision to add-on another area by demonstrating expertise in the content of that area. Special Education Supervisory Certificates would be excluded from this add-on pathway.

In the proposed rulemaking, the Board added subsection (e) to permit school psychologists who have completed 5 years of satisfactory certified experience as a school psychologist to be issued a Special Education Supervisory Certificate. This subsection is deleted from this final-form rulemaking in response to opposition from multiple stakeholder groups. In reconsidering its proposed amendment, the Board reviewed concerns expressed by stakeholders about creating a pathway to a supervisory position that bypasses teacher certification, whether school psychologists have requisite classroom teaching experience to be aware of the variables involved in creating quality instructional opportunities and best practices for classroom management in a manner that would allow them to effectively serve as evaluators or to support teachers in revision of practice, whether school psychologists have adequate experience in writing and implementing Individualized Education Plans, and whether allowing school psychologists to move into Special Education supervisory positions would simply increase one area of educator shortage to address another by exacerbating the shortage of school psychologists. Given these concerns, the proposed amendment is deleted from this final-form rulemaking.

§ 49.121. Administrative Certificate

Section 49.121(a) (relating to Administrative Certificate) aligns the regulation with requirements of the act of July 20, 2007 (P.L. 278, No. 45), that established school leadership standards that must be addressed in principal and superintendent leadership programs.

Subchapter C. Career and Technical Education Certification

Throughout the entirety of Subchapter C (relating to career and technical education certification), and the balance of Chapter 49, references to "vocational-technical education" are updated to refer to the more current term "career and technical education." These amendments are included for consistency with the same terminology updates that were reflected globally in the Public School Code of 1949 under amendments enacted by Act 76 of 2019.

§ 49.131. Basic requirements for baccalaureate and nonbaccalaureate programs.

Amendments to § 49.131(a) (relating to basic requirements for baccalaureate and nonbaccalaureate programs) replace "teacher education" with a more current and more accurate reference to "educator preparation," as reflected throughout the chapter and in the updated definition for "approved education preparation program" in § 49.1. Amendments to this section also add a reference to the definition for "alternative program provider" in § 49.1 to recognize the presence of these providers in the landscape of educator preparation.

§ 49.142. Career and Technical Instructional I

Amendments to § 49.142(a)(1) and (b) (relating to Career and Technical Instructional I) align these provisions with statutory changes enacted by the act of June 22, 2018 (P.L. 241, No. 39) (Act 39 of 2018) that address requirements for issuing Career and Technical Instructional I, Career and Technical Instructional II, and Career and Technical Intern certification.

§ 49.143. Career and Technical Instructional II

Amendments to § 49.143(2) (relating to Career and Technical Instructional II) align this provision with statutory changes enacted by Act 39 of 2018 that address requirements for issuing Career and Technical Instructional I, Career and Technical Instructional II, and Career and Technical Intern certification.

Paragraph (3) is updated for clarity to bring the conversion of Career and Technical I certification to Career and Technical II certification into alignment with conversion from Instructional I to Instructional II under § 49.18(a).

Paragraph (4) establishes completion of a 2-year induction program as a requirement to earn a Career and Technical Instructional II certification. This revision is included for consistency with amendments to § 46.16(a) that would strengthen the supports available to beginning educators by extending the length of induction programs to 2 years.

§ 49.151. Eligibility and criteria

Section 49.151(a)(1) (relating to eligibility and criteria) includes a technical amendment to update the cross-reference to § 49.12(4) for accuracy as that section was renumbered due to updates in § 49.12. A corrected reference to the renumbered § 49.12(3) is included in this final-form rulemaking.

Amendments to subsection (b) align this provision with statutory changes enacted by Act 39 of 2018 that address requirements for issuing Career and Technical Instructional I, Career and Technical Instructional II, and Career and Technical Intern certification.

Subsection (c) is added to clarify that continuing enrollment in a State-approved teacher intern program is a condition for maintaining the validity of a Career and Technical Education Intern Certificate from one year to the next. This clarification aligns with language regarding eligibility for Intern Certificates as set forth in § 49.91(d).

§ 49.153. Career and Technical Day-to-Day Substitute Permit

Section 49.153(b) (relating to Career and Technical Day-to-Day Substitute Permit) deletes a cross-reference to § 49.32 (relating to exceptional case permits).

§ 49.163. Career and Technical Administrative Director

Amendments to § 49.163(1) (relating to Career and Technical Administrative Director) modify requirements for issuing a Career and Technical Administrative Director Certificate by reducing the minimum number of years of relevant professional experience in a Career and Technical Education school required from 5 years to 3 years. This technical amendment aligns with statutory changes to the issuance of this administrative certificate set forth in section 1207.1(d)(1)(ii) of the Public School Code of 1949. Further amendments to this section provide clarity and relevancy by amending the phrase "successful teaching in vocational education" with the phrase "relevant professional experience in a Career and Technical Education School."

Paragraph (2) adds a cross-reference to § 49.111(a) and adds a reference to an "approved alternative program" as established in section 1207.1 of the Public School Code of 1949 and defined in § 49.1.

§ 49.172. Letter of eligibility

Section 49.172(a)(3) (relating to letter of eligibility) reflects technical amendments to align eligibility requirements for receiving a Superintendent's Letter of Eligibility with changes to section 1000.3 of the Public School Code of 1949 (24 P.S. § 10-1000.3) enacted by Act 82 of 2012. These changes permit individuals to earn a Superintendent's Letter of Eligibility based on prior experience in higher education.

§ 49.182. Letter of eligibility

Section 49.182(d) (relating to letter of eligibility) permits Intermediate Unit (I.U.) Boards of Directors to address vacancies in Executive Director positions by appointing an Acting Director to serve in that capacity for not more than 1 year if the I.U. Board finds it impossible or impractical to fill the vacancy.

§ 49.191. Letters of equivalency

Section 49.191(1) (relating to letters of equivalency) clarifies procedures for earning a letter of equivalency for a baccalaureate degree by removing the requirement that the minimum number of credits toward the equivalency that must be earned at a State-approved baccalaureate degree granting institution, currently set at 18 of the 90 total credits required, must be completed during the final 30 credits. Existing provision of paragraph (1) permit these letters of equivalency to be issued to individuals who hold certificates in Career and Technical Instructional I, Career and Technical Instructional II or the equivalents for salary purposes only.

Paragraph (2) updates language for clarity to refer to certification area as opposed to primary teaching assignment. Based on this clarification, the Department will recognize college-level credits earned in pursuit of a Letter of Equivalency for a master's degree in the candidate's certification area(s) rather than in the primary teaching assignment. This amendment improves the alignment of the credits with the candidate's formal

education and area(s) of expertise if these are different from the primary teaching assignment. In addition, this amendment streamlines application reviews by the Department as staff examining applications have ready access to the candidate's certification area(s) but not the primary teaching assignment.

Affected Parties

This final-form rulemaking affects educator preparation program providers and the students enrolled in their programs, public school entities and educators.

Cost and Paperwork Estimates

Extending induction programs to 2 years may result in a cost for school entities that do not currently offer that length of support for beginning educators. Currently, 58 school entities offer a 2-year induction program and another 68 school entities offer a 3-year induction program. There are 551 school entities that offer a 1-year induction program. This final-form rulemaking impacts those 551 school entities that will need to extend induction programs for another year. Costs to districts could range from $1,000 to $5,000 per second-year teacher to support mentor stipends and additional professional development days. The estimated cost to school entities for scaling up to 2-year induction programs Statewide is $9,643,000 (based on the 551 school entities that will need to convert from a 1-year to a 2-year induction model and an assumption that each of those school entities would support seven second-year teachers annually at a cost of $2,500 per second-year teacher).

The Department would incur costs to support the delivery of training in new competencies for educators as part of both induction programs and professional education for current classroom educators, as well as to extend offerings to participate in these trainings to faculty in educator preparation programs. Some training opportunities focused on the new competencies identified in this final-form rulemaking are already available through the State's existing network of I.U.s and other professional development educational entities within this Commonwealth. Work to develop additional trainings in mental wellness, trauma-informed instruction, cultural awareness and virtual and technological engagement, and to provide professional development to I.U. staff to serve as trainers, is estimated at a one-time cost of $26,700. This estimate is based on engaging 10 stakeholders over a 2-day period to develop new topics and trainings at a cost of $3,000 for facilitators and $2,000 to support expenses related to this work, and an additional cost of $21,700 to train one staff person in each of the State's 29 I.U.s at a cost of $750 per I.U.

Support for providing training in structured literacy to educator preparation program faculty and educators who hold designated instructional certificates (Early Childhood, Elementary/Middle, Special Education PreK—12, English as a Second Language and Reading Specialist) is estimated at $350,000 annually. Professional development training and technical assistance in structure literacy currently is available at no cost to school entities through the Pennsylvania Training and Technical Assistance Network. To support the amendments to Chapter 49 that would require this training for educators with designated instructional certificates, the Department intends to enhance and scale up the current offerings by hiring a Statewide lead for structured literacy efforts and establishing a Statewide system of supports in structured literacy through the existing network of I.U.s. The estimated annual cost to support this work is based on a cost of $203,000 to support trainings to be offered by 29 I.U.s (estimated at $700/day for 10 days annually) and to support the salary and benefits of hiring a Statewide lead. Support for the first 2 years of this work has been budgeted through Federal funds available through the Federal Coronavirus Aid, Relief, and Economic Security Act (P.L. No. 116-136), referred to as the CARES Act, to set aside funds.

Additional support for training in structured literacy, mental wellness and trauma-informed approaches to instruction is available through the Commonwealth's allocation of Federal funds from the American Rescue Plan (ARP) Elementary and Secondary Schools Relief Fund (ESSER). The act of June 30, 2021 (P.L. 62, No. 24) appropriated approximately $250 million of ARP ESSER State reserve funds to local education agencies (LEAs) to address gaps in students' learning and social and emotional wellness through evidence-based interventions. Eight percent of each LEAs allocation must be used to address student learning gaps in reading, and 30% of each LEAs allocation must be used to address the social, emotional and mental health needs of students. Professional development for educators in structured literacy, mental health and trauma-informed instruction is among the allowable uses of these Federal funds.

Effective Date

This final-form rulemaking will be effective upon publication in the *Pennsylvania Bulletin*.

Sunset Date

The Board will review the effectiveness of Chapter 49 every 10 years in accordance with § 49.51(b) that directs the Board to conduct a major review of certification regulations at 10-year intervals. Thus, no sunset date is necessary.

Regulatory Review

Under section 5(a) and (f) of the Regulatory Review Act (71 P.S. § 745.5(a) and (f)), on December 8, 2020, the Board submitted a copy of the notice of proposed rulemaking, published at 50 Pa.B. 7164, and a copy of the Regulatory Analysis Form to IRRC for review and comment. Under section 5(f) of the Regulatory Review Act, the Board submitted the notice of proposed rulemaking and a copy of the Regulatory Analysis Form to the Chairpersons of the House and Senate Education Committees for review and comment on February 16, 2021, following formation of the Committees at the start of the 2021-2022 legislative session.

Under section 5(c) of the Regulatory Review Act, the Board is required to submit to IRRC and the House and Senate Education Committees copies of the comments received during the public comment period. In preparing this final-form rulemaking, the Board considered comments from IRRC and the public. No comments were received from the House or Senate Education Committees.

Under section 5.1(j.2) of the Regulatory Review Act (71 P.S. § 745.5a(j.2)), the final-form rulemaking was deemed approved by the House and Senate Education Committees on March 9, 2022. Under section 5.1(e) of the Regulatory Review Act, IRRC met on March 10, 2022, and approved this final-form rulemaking.

Contact Person

Persons who require additional information about this final-form rulemaking may submit inquiries to Karen

Molchanow, Executive Director, State Board of Education, 333 Market Street, 1st Floor, Harrisburg, PA 17126, ra-stateboardofed@pa.gov.

Findings

The Board finds that:

(1) Public notice of the intention to adopt this final-form rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202), referred to as the Commonwealth Documents Law and the regulations promulgated thereunder, 1 Pa. Code §§ 7.1 and 7.2 (relating to notice of proposed rulemaking required; and adoption of regulations).

(2) A public comment period was provided as required by law and all comments were considered.

(3) This final-form rulemaking does not enlarge the purpose of the proposed rulemaking published at 50 Pa.B. 7164.

(4) This final-form rulemaking is necessary and appropriate for the administration of the Public School Code of 1949.

Order

The Board, acting under authorizing statute, orders that:

(a) The regulations of the Board, 22 Pa. Code Chapter 49 are amended, by amending §§ 49.1, 49.12—49.18, 49.31, 49.64a, 49.65, 49.68, 49.71, 49.72, 49.82—49.86, 49.90—49.92, 49.104, 49.111, 49.121, 49.131—49.133, 49.141—49.143, 49.151—49.153, 49.161, 49.163, 49.172, 49.182 and 49.191 to read as set forth in Annex A, with ellipses referring to the existing text of the regulations.

(b) The Board shall submit this final-form rulemaking to the Office of General Counsel and Office of Attorney General (OAG) for review and approval as required by law. The OAG approved this final-form rulemaking as to form and legality on April 11, 2022.

(c) The Board shall submit this final-form rulemaking to IRRC and the Legislative Standing Committees as required by law.

(d) The Board shall certify this final-form rulemaking, as approved for legality and form, and shall deposit it with the Legislative Reference Bureau as required by law.

(e) The final-form rulemaking shall take effect upon publication in the *Pennsylvania Bulletin*.

KAREN MOLCHANOW,
Executive Director

(*Editor's Note*: See 52 Pa.B. 1845 (March 26, 2022) for IRRC's approval order.)

Fiscal Note: Fiscal Note 6-346 remains valid for the final adoption of the subject regulations.

Annex A

TITLE 22. EDUCATION

PART I. STATE BOARD OF EDUCATION

Subchapter C. HIGHER EDUCATION

CHAPTER 49. CERTIFICATION OF PROFESSIONAL PERSONNEL

Subchapter A. GENERAL PROVISIONS

THE PROGRAM

§ 49.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

Act—The Public School Code of 1949 (24 P.S. §§ 1-101—27-2702).

Alternative program provider—A provider of accelerated post-baccalaureate preparation program, other than an institution of higher education, that has been approved by the Department in accordance with section 1207.1(a) of the act (24 P.S. § 12-1207.1(a)).

Approved educator preparation program—A sequence of courses and experiences, offered by a preparing institution or alternative program provider, that is reviewed and approved by the Department.

Articulation agreement—A formal agreement between two higher educational institutions, stating specific policies relating to transfer and recognition of academic achievement to facilitate the successful transfer of students without duplication of course work.

* * * * *

Assessment of subject matter—A measurement of a candidate's knowledge of an academic field or discipline to be taught in the public schools of this Commonwealth.

Baccalaureate degree—A conferred bachelor's degree from an approved 4-year college or university.

Candidate—A person seeking certification in any of the areas outlined in this chapter.

Certificate—A document prepared and issued by the Department indicating that the holder has completed an approved professional preparation program and is qualified to perform specific professional duties.

Certified personnel—Professional employees, excluding school secretaries, as defined in section 1101 of the act (24 P.S. § 11-1101) or educators, or both, holding a comparable certificate from another state.

Chief school administrator—The superintendent, intermediate unit executive director, or equivalent private school administrator.

* * * * *

Community provider—A not-for-profit or for-profit organization that operates prekindergarten programs.

Continuing professional education—The formal acquisition of collegiate or in-service credits designed to improve and expand the expertise of professional personnel.

Core academic subject—Includes reading, language arts, mathematics, science, foreign languages, social studies and the arts.

Cultural awareness—Understanding, consideration, and integration of individuals' culture, language, heritage, and experiences.

Culturally relevant and sustaining education (CR-SE)—Education that ensures equity for all students and seeks to eliminate systemic institutional racial and cultural barriers that inhibit the success of all students in this Commonwealth—particularly those who have been historically underrepresented. Culturally relevant and sustaining education encompasses skills for educators including, but not limited to, approaches to mental wellness, trauma-informed approaches to instruction, technological and virtual engagement, cultural awareness and emerging factors that inhibit equitable access for all students in this Commonwealth.

Day-to-day substitute permit—A permit issued for no longer than 20 consecutive days to fill a position due to the absence of professional certified personnel.

* * * * *

Educational specialist—Professional certified personnel whose primary responsibility is to render professional service other than classroom teaching, such as dental hygienist, home and school visitor, instructional technology specialist, social restoration specialist, nutrition service specialist, elementary counselor, secondary counselor, school nurse and school psychologist.

Educator Discipline Act—24 P.S. §§ 2070.1a—2070.18a.

Emergency permit—A permit issued to fill a vacancy resulting from resignation, termination, retirement, death or the creation of a new position.

Exceptional case permit—A permit issued to fill a vacancy due to exceptional conditions.

Historically underrepresented groups—Groups that are documented to have been represented across time in the educator population in proportions below their representation in the general population. These include, but are not limited to, people of color and the economically disadvantaged.

Inclusive setting—The placement of a diverse learner in a regular classroom setting

* * * * *

PSPC—Professional Standards and Practices Commission—A body composed of educators from the fields of basic and higher education, members of the general public and an ex officio member of the Board established by the Educator Discipline Act.

* * * * *

Preparing institution—A college or university that offers a program approved by the Department to prepare professional personnel for employment in the public schools.

Professional duties—A duty the performance of which is restricted to personnel by the scope of their certificate.

Professional ethics—The standards of behavior, values, and principles that inform and guide professional decision-making. These standards of behavior, values and principles include those detailed in the Pennsylvania Model Code of Ethics for Educators, as adopted by the Professional Standards and Practices Commission.

Satisfactory achievement—An acceptable level of performance as determined by the Secretary in consultation with the Board on the Department-prescribed assessments required in this chapter.

School entity—Public schools, school districts, intermediate units, area career and technical schools, charter schools, cyber schools and independent schools.

Structured literacy—Systematic, explicit instruction that provides a strong core of foundational skills in the language systems of English, integrates listening, speaking, reading, spelling, and writing and emphasizes the structure of language across the speech sound system (phonology), the writing system (orthography), the structure of sentences (syntax), the meaningful parts of words (morphology), the relationships among words (semantics), and the organization of spoken and written discourse.

Subject Area—Specific areas of instructional content.

Term of validity—A period of time as specified in §§ 49.33, 49.34, 49.82, 49.92, 49.102, 49.142 and 49.152 in which the holder of a certificate is entitled to perform the professional duties for which the certificate was issued.

Trauma-informed approaches to instruction—Pedagogy that recognizes the signs and symptoms of trauma and integrates knowledge about trauma for the purpose of promoting resiliency among students.

§ 49.12. Eligibility.

In accordance with sections 1109, 1202 and 1209 of the act (24 P.S. §§ 11-1109, 12-1202 and 12-1209), every professional employee certified or permitted to serve in the schools of this Commonwealth shall:

(1) Be of good moral character.

(2) Be at least 18 years of age.

(3) Except in the case of the Resource Specialist Permit, Career and Technical Emergency Permit, Career and Technical Instructional Intern Certificate, and Career and Technical Instructional Certificate, have earned a baccalaureate degree.

(4) For the purposes of certification, the Department will accept a conferred graduate degree from an accredited college or university in lieu of a baccalaureate degree.

§ 49.13. Policies.

* * * * *

(b) The Department will have the following responsibilities with respect to certification and permitting of professional personnel in the schools of this Commonwealth:

(1) Provision of advisory services to college and school personnel in matters pertaining to educator preparation and certification.

(2) Designation of professional titles for personnel.

(3) Prescription of procedures for issuance of certificates and permits.

(4) Evaluation and approval of educator preparation programs leading to the certification and permitting of professional personnel.

(i) The evaluation by the Department will provide assurance that, on or before January 1, 2011, teacher education programs will require at least nine credits or 270 hours, or an equivalent combination thereof, regarding accommodations and adaptations for students with disabilities in an inclusive setting. Within the context of these nine credits or 270 hours, instruction in literacy skills development and cognitive skill development for students with disabilities must be included, as determined by the institution. At least three credits or 90 additional hours, or an equivalent combination thereof, must address the instructional needs of English language learners. For purposes of this requirement, one credit equals 30 hours of coursework. Applicable hours are limited to a combination of seat hours of classroom instruction, field observation experiences, major research assignments, and development and implementation of lesson plans with accommodations and adaptations for diverse learners in an inclusive setting.

(ii) The evaluation by the Department will provide assurance that educator preparation programs demonstrate the integration of culturally relevant and sustaining education and professional ethics throughout the preparation program.

(iii) The evaluation by the Department will provide assurance that educator preparation programs include instruction in structured literacy as part of programs that prepare candidates to earn an instructional certificate in Early Childhood, Elementary/Middle, Special Education (PK—12), English as a second language and Reading Specialist.

(iv) Program approval reviews shall be conducted by professional educators from basic and higher education.

* * * * *

(c) Except for applicants whose certification status is subject to subsection (b)(9) and § 49.171 (relating to general requirements), the Department will require that an applicant for a certificate shall have completed an approved preparation program and shall be recommended by the preparing institution or alternative program provider.

(d) The Department will have the right to review approved programs at any time. Major evaluations shall be conducted at 7-year intervals, by professional educators appointed by the Department in accordance with subsection (b)(4), to review process and content.

(e) The Department will accept the request of an institution to withdraw from an approved program. The Department will have the right to withdraw the approval of a program from an institution. New students may not be accepted in a program which has lost its approved status after the date of the action.

(f) The Department will prescribe procedures for evaluation of an applicant's preparation in the event that application for a certificate is made after the program at a preparing college or university has closed or been discontinued.

§ 49.14. Approval of institutions and alternative program providers.

To be authorized to conduct programs that lead to certificates for professional positions, institutions and any of their off-campus centers as well as alternative program providers engaged in the preparation of educators shall meet the following requirements:

(1) Be approved as a baccalaureate or graduate degree granting institution or alternative program provider by the Department.

(2) Be evaluated and approved as an educator preparing institution or alternative program provider to offer specific programs leading to certification in accordance with procedures established by the Department.

(3) Report to the Department, for approval, all planned changes in previously approved programs. This report shall be made 90 days prior to the implementation of the planned changes.

(4) Follow Department prescribed standards developed from the following principles:

(i) Institutions and alternative program providers develop clear goals and purposes for each program, which shall include competencies, coursework and field experiences that address professional ethics, structured literacy (for programs that lead to certification in Early Childhood, Elementary/Middle, Special Education PK—12, English as a second language and Reading Specialist), and culturally relevant and sustaining education. The Department will identify these competencies and develop associated standards.

(ii) Institutions and alternative program providers are able to demonstrate how instructional and clinical activities provide educator candidates with the capacity to enable the achievement of all students, including diverse learners in an inclusive setting.

(iii) Institutions and alternative program providers are able to demonstrate that educator candidates have participated in instructional activities that enable the candidates to provide instruction to students to meet the provisions of Chapter 4 (relating to academic standards and assessment).

(iv) Institutions and alternative program providers are able to demonstrate that educator candidates successfully participate in sequential clinical experiences fully integrated within the instructional program as determined by the Secretary in consultation with the Board.

(v) Institutions and alternative program providers have clearly expressed standards for admission to, retention in and graduation from approved programs and can demonstrate recruitment and participation of students from historically underrepresented groups. Institutions and alternative program providers annually shall report on students admitted, retained, and graduated from their programs, including numbers from historically underrepresented groups.

(vi) Institutions and alternative program providers shall provide ongoing assessment of educator candidates' knowledge, skills, dispositions and performance with which to identify needs for further study, certification assessment assistance or clinical experience or dismissal from the program.

(vii) Institutions and alternative program providers can demonstrate how information from systematic evaluations of their programs, including students and educator evaluators, and achievement levels of candidates for certification in the Department-designed assessment program, are used for continual program improvement and shall develop corrective action steps if identified as at-risk or low performing program providers as defined by the Department in accordance with section 207 of the Higher Education Act of 1965 (20 U.S.C.A. § 1022F(A)).

(viii) Institutions and alternative program providers, in partnership with local education agencies, provide a school-based experience integrating the teacher candidates' knowledge, skills and dispositions in professional practice. This experience shall be fully supported by institutional faculty, including frequent observation, consultation with supervising teachers and opportunities for formative and summative evaluation.

(ix) Institutions and alternative program providers provide ongoing support for novice educators in partnership with local education agencies during their induction period, including observation, consultation and assessment.

(x) Institutions and alternative program providers supply evidence that an acceptable percentage of candidates applying for certification as determined by the Secretary and approved by the Board achieve at a satisfactory level on all assessments appropriate to initial certification in each program for which they are approved.

(5) Institutions and alternative program providers may enter into articulation agreements with community colleges that permit students to earn credits toward meeting the requirements of this chapter.

(6) Institutions shall comply with requirements set forth in the Federal Elementary and Secondary Education Act (20 U.S.C.A. §§ 6301—7981) and the Federal Higher Education Act (20 U.S.C.A. §§ 1001—1019d).

§ 49.15. Approval of experimental programs.

The Department may enter into a written agreement with a preparing institution or alternative program provider wishing to conduct an experimental program. The institution and alternative program provider shall meet

the requirements described in §§ 49.13 and 49.14 (relating to policies; and approval of institutions and alternative program providers). Certification shall be given to graduates of an experimental program upon recommendation by the institution or alternative program provider if the provider has met all of the following requirements:

(1) Submitted a detailed explanation of the experimental program to the Department for approval.

(2) Planned a thorough procedure conforming to accepted canons of educational research for evaluating results of the experimental program. These results shall be reported to the Department in accordance with a schedule approved at the time of the agreement.

(3) Agreed to terminate the experimental program upon request by the Department when it is judged by a program approval team to be inadequate for preparation of professional personnel.

§ 49.16. Approval of induction plans.

(a) Each school entity shall submit to the Department for approval a plan for a 2-year induction experience for first-year teachers (including teachers in prekindergarten programs, when offered) and educational specialists. Long-term substitutes who are hired for a position for 45 days or more also shall be included in a school entity's induction plan and shall participate in an induction experience for the period of time in which they serve in that capacity. The induction plan shall be submitted every 6 years as required under § 4.13(b) (relating to strategic plans). The induction plan shall be prepared by teacher or educational specialist representatives, or both, chosen by teachers and educational specialists and administrative representatives chosen by the administrative personnel of the school entity. Newly employed professional personnel with prior school teaching experience may be required by the school entity to participate in an induction program. A school entity shall make its induction plan available for public inspection and comment for a minimum of 28 days prior to approval of the plan by the school entity's governing board and submission of the plan to the Department.

(b) The Department will establish guidelines and will review for approval induction plans submitted by school entities.

(c) Induction plan guidelines shall include professional ethics, and culturally relevant and sustaining education as determined by the Secretary.

(d) The induction plan shall reflect a mentor relationship between the first-year teacher, long-term substitute or educational specialist, teacher educator and the induction team.

(e) Criteria for approval of the induction plans will be established by the Secretary in consultation with the Board and must include induction activities that focus on teaching diverse learners in inclusive settings.

§ 49.17. Continuing professional education.

(a) As required under § 4.13(a) (relating to strategic plans), a school entity shall submit to the Secretary for approval a 3-year professional education plan every 3 years in accordance with the professional education guidelines established by the Secretary and section 1205.1 of the act (24 P.S. § 12-1205.1). A school entity shall make its professional education plan available for public inspection and comment for a minimum of 28 days prior to approval of the plan by the school entity's governing board and submission of the plan to the Secretary.

* * * * *

(6) The continuing professional education plan must include a section which describes how the professional education needs of the school entity, including those of diverse learners, and its professional employees are to be met through implementation of the plan. The plan must describe how professional development activities will improve language and literacy acquisition for all students, including the provision of training in structured literacy for professional employees who hold instructional certificates in Early Childhood, Elementary/Middle, Special Education PK—12, English as a second language and Reading Specialists. The plan must contribute to closing achievement gaps among students, and improve professional employees knowledge of professional ethics and culturally relevant and sustaining education.

* * * * *

(b) A commissioned officer who holds a Letter of Eligibility for Superintendent shall satisfy the requirements for continuing professional education through the completion of courses and credits approved by the Department to address the school leadership standards of section 1217 of the act (24 P.S. § 12-1217) in accordance with section 1205.5 of the act (24 P.S. § 12-1205.5) every 5 years.

(c) Certified personnel including school or system leaders defined in section 1205.5(g) of the act who fail to comply with the continuing professional education plan under subsection (a) or fail to complete the requirements of sections 1205.1, 1205.2 and 1205.5 of the act will have their certificates or Letter of Eligibility rendered inactive by the Department until the requirement is met. Certified personnel and school or system leaders whose certificate or Letter of Eligibility is rendered inactive shall have a right to appeal the action to the Secretary.

(d) School districts that employ certified personnel or commissioned officers with inactive certificates or commissions are subject to penalties provided for under section 2518 of the act (24 P.S. § 25-2518).

(e) Certified personnel are responsible for monitoring their own progress toward completing the requirements prescribed by sections 1205.1 and 1205.2 of the act and for notifying the Department of any changes to their home mailing address.

§ 49.18. Assessment.

(a) The Secretary will establish assessments for candidates for certification designed to assess their basic skills; professional knowledge and practice; and subject matter knowledge. Candidates for elementary, K—12 instructional, Special Education and Early Childhood Certificates shall also be assessed in the area of general knowledge. The following principles will guide the Secretary in the development of any assessment:

(1) Assessments will be based in the standards developed for each certificate.

(2) Assessments will measure the candidate's abilities across the domains of basic skills knowledge, professional knowledge and practice, and subject matter knowledge employing a variety of measures at a minimum of three points:

(i) During the candidate's preparation program.

(ii) Upon application for initial certification.

(iii) Upon application for Level II, supervisory or administrative certification.

(3) Assessments will be developed in consultation with teachers, administrators, teacher educators and educational specialists with relevant certification.

(4) Assessments will employ, when appropriate, available assessment tools, instruments and procedures.

(b) The Secretary, in consultation with the Board, will establish a satisfactory achievement level for any assessments in subsection (a).

(c) The assessments in basic skills will be given, and satisfactory achievement levels shall be reached, prior to formal entry into a certification preparation program in accordance with section 1207.3 of the act (24 P.S. § 12-1207.3). The assessments in general knowledge; professional knowledge and practice; and subject matter knowledge will be given, and satisfactory achievement levels shall be obtained, prior to the issuance of a certificate. Candidates who will complete all certification requirements at the post-baccalaureate level are not required to take and pass assessments in basic skills (See 24 P.S. § 12-1207.3).

(d) A periodic review of the assessments will be made by the Board every 5 years.

(e) The Department may issue additional subject areas to holders of Instructional (see §§ 49.82 and 49.83 (relating to Instructional I; and Instructional II)) or Intern (see § 49.91 (relating to criteria for eligibility)) certification in related subject areas and who pass the appropriate subject matter testing components. All Special Education areas are excluded. The Department may identify other certification areas to be excluded from eligibility based on criteria established by the Secretary in consultation with the Board.

EMERGENCY, LONG-TERM AND DAY-TO-DAY SUBSTITUTE PERMITS

§ 49.31. Criteria for eligibility.

The Department may issue an emergency, Long-Term or Day-to-Day Substitute Permit for service in the public schools or an eligible provider setting as defined in § 405.2 (relating to definitions), at the request of the employing entity, to an applicant who is a graduate of a 4-year college or university to fill a vacant position or to serve as a long-term or day-to-day substitute teacher, when a fully qualified and properly certificated applicant is not available. The permit is issued on the basis of terms and conditions agreed upon between the requesting public school entity and the Department. Each July, the Department will report to the Board the number and nature of emergency, Long-Term and Day-to-Day Substitute Permits issued during that year. A long-term substitute permit may be issued only after the position has been posted a minimum of 10 days on the school entity's web site and no qualified candidate has been identified.

MISCELLANEOUS PROVISIONS

§ 49.64a. Authority to annul and reinstate certificates and discipline professional educators.

(a) A professional certificate or letter of eligibility obtained by fraud or mistake shall be considered void "ab initio" and shall be annulled by the Secretary. An annulment will not be effected without prior notice and hearing in accordance with reasonable procedures as the Secretary will prescribe, after review of and comment on the procedures by the Board.

(b) In accordance with the authority vested with the PSPC by the Educator Discipline Act, the Commission may discipline professional educators.

(c) In accordance with the authority vested with the PSPC by section 16 of the Teacher Certification Law (24 P.S. § 2070.16), the Commission may reinstate a professional educator's certificate.

§ 49.65. Out-of-State and Nationally-certified applicants.

(a) The Department will issue the appropriate Commonwealth certificate to applicants who have:

(1) Graduated from a State approved out-of-State college or university whose educator preparation requirements are comparable to those of this Commonwealth.

(2) Completed the preparing institution's preparation program.

(3) Received the recommendation of the preparing institution for the out-of-State certificate issued.

(4) Presented evidence of satisfactory achievement in assessments prescribed by the Department under § 49.18(a) (relating to assessment) and the requirements of Chapter 354 (relating to teacher preparation).

(b) The Department may enter into a reciprocal certification agreement with the appropriate authority of another state to recognize comparable certificates. A temporary teaching permit may be issued to educators prepared outside of this Commonwealth in accordance with the current reciprocity agreement with other states. It will be valid for 1 year to allow the teacher to meet the Commonwealth's requirements as out lined in the reciprocity agreement.

(c) Candidates certified by the National Board for Professional Teaching Standards will be granted the highest level certificate applicable.

(d) School psychologists certified by the National Association of School Psychologists will be granted the highest level certificate available for certification as a school psychologist.

(e) Candidates successfully completing other National teacher training programs that require a candidate to demonstrate mastery of the certification area to be taught and professional knowledge needed for classroom effectiveness as approved by the Board, will be certified to teach in this Commonwealth, provided the approved program includes 1 year of intensive supervision in an internship program approved by the Secretary and the teacher has satisfied the basic certification requirements of the act (see 24 P.S. §§ 12-1202 and 12-1209), such as having good moral character, being at least 18 years old and having a baccalaureate degree.

(f) Candidates holding a valid and current instructional, educational specialist, supervisory, or administrative certificate issued by another state may be eligible for comparable certification if the applicant has 2 years of successful classroom or school experience in the area for which State certification is sought and has achieved the qualifying score on the appropriate content area test required by the Commonwealth.

§ 49.68. Evaluation of prescribed requirements and standards.

Institutions of higher education within this Commonwealth with approved educator preparation programs are authorized to evaluate, equate, and accredit educational experience and background of candidates for meeting the

specific requirements for certification. A candidate may not be recommended for certification until providing evidence of satisfactory achievement in the assessments under § 49.18 (relating to assessment).

Subchapter B. CERTIFICATION OF GRADUATES FROM COMMONWEALTH INSTITUTIONS

GENERAL PROVISIONS

§ 49.71. Basic requirements.

Applicants for a certificate shall have completed, in addition to all legal requirements, a program of educator preparation approved by the Department and shall have the recommendation of the preparing institution.

§ 49.72. Categories of certificates and letters of eligibility.

(a) The following basic categories of certificates and letters of eligibility will be issued by the Department:

(1) Temporary Permit.

(2) Emergency and Substitute Permits.

(3) Intern Certificates.

(4) Instructional Certificates.

(5) Educational Specialist Certificates.

(6) Supervisory Certificate.

(7) Administrative Certificate.

(8) Program Specialist Certificate.

(9) Letters of Eligibility.

(10) Career and Technical Education Certificates.

(11) Exceptional Case Permits.

(12) Resource Specialist Permits.

(b) The Secretary annually will disseminate an approved list of official titles of all certificates and letters of eligibility which the Department has issued during the past fiscal year or proposes to issue in the ensuing year.

INSTRUCTIONAL CERTIFICATES

§ 49.82. Instructional I.

(a) The Instructional I Certificate is valid for 6 years of teaching in public schools or in eligible provider settings (as defined in § 405.2 (relating to definitions)) in this Commonwealth in the area for which it applies. It may be converted to an Instructional II Certificate as provided by § 49.83 (relating to Instructional II).

(b) The Instructional I Certificate will be issued to applicants who:

(1) Possess a baccalaureate degree.

(2) Present evidence of successful completion of a Department-approved teacher preparation program.

(3) Present evidence of satisfactory achievement in assessments prescribed by the Department under § 49.18(a) (relating to assessment).

(4) Receive recommendation for certification from the preparing college or university or alternative program provider.

§ 49.83. Instructional II.

The Instructional II Certificate will be issued to an applicant who has completed:

(1) A Department-approved 2-year induction program.

* * * * *

§ 49.84. Collegiate credit acceptable for conversion of the Instructional I Certificate.

(a) College credit acceptable for conversion to the Instructional II Certificate shall be earned at a State-approved associate degree-granting institution, baccalaureate or graduate degree granting institution.

(b) Credits earned in programs designed to prepare for professional fields such as law, medicine or theology, when relevant to the area of certification, will be considered acceptable for purposes of renewing or converting the Instructional I Certificate.

(c) Credits shall be earned subsequent to the conferring of the baccalaureate degree. Graduate credits earned prior to obtaining the Instructional I Certificate are considered acceptable for purposes of converting the Instructional I Certificate.

§ 49.85. Limitations.

* * * * *

(b) For instructional certificates issued on or after January 1, 2013, the grade level limitations shall be the following:

(1) Early Childhood (prekindergarten, kindergarten, grades one through four or ages 3 through 9).

(2) Elementary/Middle (grades four through eight or ages 9 through 14). Elementary/Middle Certificates permit instruction in any subject in grades four, five and six and in a core academic subject or subjects in grades seven and eight.

(3) Secondary (grades seven through twelve or ages 11 through 21).

(4) Specialized Areas (prekindergarten through grade twelve or up through age 21).

(5) Special Education—PK—8 (prekindergarten through grade eight (ages 3 through 14)). Applicants for this certificate shall also obtain certification in one of the following certificates:

(i) Early Childhood—in accordance with paragraph (1).

(ii) Elementary/Middle—in accordance with paragraph (2).

(iii) Reading Specialist—in accordance with paragraph (4).

(6) Special Education—7—12 (grades seven through twelve (ages 11 through 21)). Applicants for this certificate shall also obtain certification in one of the following certificates:

(i) Secondary—in accordance with paragraph (3).

(ii) Reading Specialist—in accordance with paragraph (4).

(7) Special Education Hearing Impaired, Visually Impaired and Speech/Language Impaired Certificates (prekindergarten, kindergarten, grades one through twelve or ages 3 through 21).

(c) Instructional certificates issued beginning January 1, 2013, through December 31, 2021, remain valid for the term of the certificate for the grade spans and age levels outlined in subsection (b) paragraphs (1)—(7).

(d) For instructional certificates issued on or after January 1, 2022, the grade level limitations shall be the following:

(1) Early Childhood (prekindergarten, kindergarten, grades one through four or ages 3 through 9).

(2) Elementary/Middle (grades four through eight or ages 9 through 14). Elementary/Middle Certificates permit instruction in any subject in grades four, five and six and in a core academic subject or subjects in grades seven and eight.

(3) Secondary (grades seven through twelve or ages 11 through 21).

(4) Specialized areas (prekindergarten through grade twelve or up through age 21).

(5) Special Education PK—12 (prekindergarten through grade 12 or under 21 years of age). Applicants for this certificate are not required to obtain any additional certificates.

(6) Special Education Hearing Impaired, Visually Impaired and Speech/Language Impaired Certificates (prekindergarten, kindergarten, grades one through twelve or a person 3 years of age and a person under the age of 21).

(e) The decision about staffing based on age or grade level rests with the school entity.

(f) The Secretary may grant exceptions to the grade and age level limitations between Early Childhood (subsection (b)(1)), Elementary/Middle (subsection (b)(2)), Special Education-PK—8 (subsection (b)(5)) and Special Education—7—12 (subsection (b)(6)) for individual teachers on a case-by-case basis. The school entity shall submit a written request to the Secretary that provides justification for the exception. The Secretary will set a time limit for each individual exception granted. The Secretary will issue guidelines that outline the circumstances under which exceptions will be granted.

(g) When a school district contracts with a community provider for the provision of prekindergarten services, prekindergarten teachers providing the services shall possess a certificate in early childhood as provided in subsection (a)(1) or subsection (b)(1) within the following time frame:

(1) For contracts in place prior to September 22, 2007, September 24, 2012.

(2) For first-time contracts, 5 years from the start of services.

(h) The Secretary may grant exceptions in response to shortages of certified personnel that apply Statewide to specific provisions of this section when it is necessary to facilitate transition to the revised provisions scheduled to become effective on January 1, 2022. Exceptions may be granted under the following conditions:

(1) The Secretary will provide a written certification to the Board that includes relevant information and justification of the need for the exception. If the Board does not disapprove the exception within 90 days of receipt of the certification, the exception will stand approved.

(2) The exception will be valid for a limited term not to exceed 3 years.

(3) The Secretary will report annually to the Board on the nature and status of exceptions made under this section.

§ 49.86. Accelerated program for Early Childhood and Elementary/Middle Level Certificate holders.

(a) The Department will establish standards consistent with the criteria outlined in subsection (d) for an accelerated program for Early Childhood and Elementary/Middle Level Certificate holders to be effective January 1, 2013.

(b) Early Childhood Instructional I or Instructional II Certificate holders may add the Elementary/Middle Level I Certificate through the successful completion of a Department approved accelerated program of study offered by an approved Commonwealth institution.

(c) Elementary/Middle Level Instructional I or Instructional II Certificate holders may add the Early Childhood Instructional I Certificate through the successful completion of a Department approved accelerated program of study offered by an approved Commonwealth institution.

(d) Accelerated programs must include appropriate level academic content aligned with State academic standards, child development and instructional practice appropriate for the developmental level covered by the certificate. Applicants shall demonstrate subject matter knowledge by passing the appropriate assessment under § 49.18 (relating to assessment).

TEMPORARY TEACHING PERMITS

§ 49.90. Criteria for eligibility.

(a) The Department may make a one-time issuance of a Temporary Teaching Permit for service in a specific area of instruction for use in elementary, middle or secondary schools to applicants who, in addition to meeting the requirements of § 49.12 (relating to eligibility), hold a credential issued by a Board-approved National alternative certification program and completed any ancillary requirements agreed upon by the Department and the credentialing authority.

(b) The Temporary Teaching Permit will be valid for 1 calendar year from the date of issuance.

(c) The Department will issue an Instructional I Certificate when the prescribed courses or ancillary requirements are satisfied.

INTERN CERTIFICATES

§ 49.91. Criteria for eligibility.

* * * * *

(c) Intern Certificate programs must provide flexible and accelerated pedagogical training to teachers who have demonstrated competency in a certification area, provided that the first year of teaching includes a minimum of one classroom observation each month by an approved college/university in this Commonwealth.

(d) An Intern Certificate is valid for 3 years of service. This professional certificate may be issued only to an applicant who is a graduate of an accredited 4-year college or university. During the first year, the applicant shall complete all tests, enroll in an authorized program and complete a minimum of nine credits per year. The certificate requires continuing enrollment in a State-approved teacher intern program. This certificate cannot be renewed.

§ 49.92. Term of validity.

The Intern Certificate will be issued for the period of time necessary for the candidate to complete the approved intern program, but this time period will not exceed 3 years of service.

EDUCATIONAL SPECIALIST CERTIFICATES

§ 49.104. College credit acceptable for conversion of Educational Specialist I Certificate.

* * * * *

(c) Credits shall be earned subsequent to the conferring of the baccalaureate degree. Graduate credits earned prior to obtaining the Educational Specialist I Certificate

are considered acceptable for purposes of converting the Educational Specialist I Certificate.

SUPERVISORY CERTIFICATES

§ 49.111. Supervisory Certificate.

(a) The Department will issue Supervisory Certificates for positions in the schools of this Commonwealth to persons who:

(1) Have completed 5 years of satisfactory certified experience in the area in which the Supervisory Certificate is sought.

(2) Have completed an approved graduate or approved alternative program preparing the applicant for the responsibilities of supervising in the program area and of directing the activities of certified professional employees.

(3) Present evidence of satisfactory achievement in assessments prescribed by the Department under § 49.18(a) (relating to assessment).

(4) Are able to help students achieve under Chapter 4 (relating to academic standards and assessment).

(5) Meet the following standards:

(i) The supervisor understands the central concepts of organizational leadership, tools of research and inquiry and principles of teaching and learning that make supervision effective and efficient.

(ii) The supervisor understands how all children learn and develop and configures resources to support the intellectual, social and personal growth of all students.

(iii) The supervisor knows and understands effective instructional strategies and encourages and facilitates employment of them by teachers.

(iv) The supervisor uses an understanding of individual and group motivation to create a professional development environment that engages teachers to develop and apply effective instructional techniques for all students.

(v) The supervisor is an effective communicator with various school communities.

(vi) The supervisor organizes resources and manages programs effectively.

(vii) The supervisor understands and uses formative and summative assessment strategies to gauge effectiveness of people and programs on student learning.

(viii) The supervisor understands the process of curriculum development, implementation and evaluation and uses this understanding to develop high quality curricula for student learning in collaboration with teachers, administrators, parents and community members.

(ix) The supervisor possesses knowledge and skills in observation of instruction and conducting conferences with professional staff that are intended to improve their performance and enhance the quality of learning experiences for all students.

(x) The supervisor thinks systematically about practice, learns from experience, seeks the advice of others, draws upon educational research and scholarship and actively seeks out opportunities to grow professionally.

(xi) The supervisor contributes to school effectiveness by collaborating with other professionals and parents, by using community resources, and by working as an advocate to improve opportunities for student learning.

(b) Notwithstanding the requirements of subsection (a), and excluding Special Education Supervisory Certification, the Department may issue additional Supervisory Certificate areas to individuals who already hold a valid State Supervisory Certificate if they demonstrate competency in the requested supervisory area by one of the following:

(1) complete 12 Department-approved credits of collegiate study in the supervisory area sought, or

(2) achieve a passing score on the applicable content test.

(c) For Supervisory Certificates issued under paragraph (b), 5 years of service in the area is not required.

(d) A Supervisory Certificate for either Curriculum and Instruction or Pupil Personnel Services will be issued to persons who:

(1) Have 5 years of satisfactory professional certified service in the school program area for which the comprehensive certificate is sought.

(2) Have completed an approved graduate or approved alternative program preparing the applicant for the broad area, districtwide supervisory functions specified by the endorsement area of the certificate.

(3) Present evidence of satisfactory achievement in assessments prescribed by the Department under § 49.18(a).

ADMINISTRATIVE CERTIFICATES

§ 49.121. Administrative Certificate.

(a) The Department will issue Administrative Certificates to persons who have a minimum of 3 years of satisfactory instructional or student support experience completed in a public or private PK—12 school or accredited institution of higher education and have completed an approved program of graduate study, approved alternative program, or completed the alternative route in accordance with section 1207.1(d) of the act (24 P.S. § 12-1207.1(d)) preparing the applicant to direct, operate, supervise and administer the organizational and general educational activities of a school. Applicants shall be recommended by the preparing institution or alternative program provider in which the program was completed. Candidates for Administrative Certificates shall be able to help students achieve under Chapter 4 (relating to academic standards and assessment).

* * * * *

Subchapter C. CAREER AND TECHNICAL EDUCATION CERTIFICATION

GENERAL PROVISIONS

§ 49.131. Basic requirements for baccalaureate and nonbaccalaureate programs.

(a) Applicants for a certificate shall have completed, in addition to all legal requirements, a program of educator preparation approved by the Department and shall have received the recommendation of the preparing institutions or alternative program provider.

* * * * *

§ 49.132. Types of certificates.

Five basic types of certificates will be issued, as follows:

(1) Career and Technical Instructional Intern.

(2) Career and Technical Instructional.

(3) Supervisor of Career and Technical Education.

(4) Career and Technical Administrative Director.

(5) Vocational Career and Technical Substitute Permits.

§ 49.133. Levels of certification.

Career and Technical Instructional Certificates shall be issued for the following levels of qualifications:

(1) Level I (Provisional).

(2) Level II (Permanent).

CAREER AND TECHNICAL INSTRUCTIONAL CERTIFICATES

§ 49.141. General.

(a) The Department will issue Career and Technical Instructional Certificates to persons whose primary responsibility is teaching occupational skills in State approved career and technical education programs in the public schools of this Commonwealth. The certificates will be valid for teaching in any career and technical or technical area for which the holder has registered his occupational competency credential with the Department in the manner prescribed by the Department.

(b) The holder of a Career and Technical Teaching Certificate may also teach the technical skills and knowledge of the holder's occupation in courses of comparable content provided in secondary school programs which have not been accorded State approval as career and technical education programs under conditions in the policies and standards of the Department. Candidates for Career and Technical Teaching Certificates shall be able to help students achieve under Chapter 4 (relating to academic standards and assessment).

§ 49.142. Career and Technical Instructional I.

(a) A single certificate will be issued and titled, "Career and Technical Instructional Certificate." Individuals qualifying for this certificate shall be authorized to teach in the areas for which they also hold an occupational competency credential. The occupational competency credential will be issued by the Department or an institution of higher education approved by the Secretary. The applicant shall have:

(1) A minimum of 8,000 hours (equivalent to 4 years full-time) wage-earning experience in the occupational area to be taught or 4,000 hours (equivalent to 2 years) wage-earning experience plus a baccalaureate degree.

(2) Successfully completed the occupational competency examination or evaluation of credentials for occupations where examinations do not exist or present evidence of satisfactory achievement on an assessment of subject matter under § 49.18 (relating to assessment).

(3) Completed 18 credit hours in an approved program of career and technical educator preparation. For Career and Technical I Certificates issued on or after January 1, 2013, the 18 credit hours must include at least 3 credits or 90 hours, or equivalent combination thereof, regarding accommodations and adaptations for diverse learners in an inclusive setting. For purposes of this requirement, 1 credit equals 30 hours of coursework. Applicable hours are limited to a combination of seat hours of classroom instruction, field observation experiences, major research assignments, and development and implementation of lesson plans with accommodations and adaptations for diverse learners in an inclusive setting.

(4) Presented evidence of satisfactory achievement on the assessment of basic skills under § 49.18.

(b) The Career and Technical Instructional I Certificate shall be valid for 8 years during which time the applicant shall complete the approved preparation program leading to the Career and Technical Instructional II Certificate.

§ 49.143. Career and Technical Instructional II.

The Career and Technical Instructional II Certificate shall be a permanent certificate issued to an applicant who has:

(1) Completed 3 years of satisfactory teaching on a Career and Technical Instructional I Certificate attested to by the chief school administrator of the approved public or nonpublic school entity in which the most recent service of the applicant was performed.

(2) Completed an additional 42 credit hours including at least 6 credits or 180 hours, or an equivalent combination thereof, regarding accommodations and adaptations for students with disabilities in an inclusive setting and at least 3 credits or 90 hours, or an equivalent combination thereof, in teaching English language learners, in an approved program in the appropriate field of career and technical education. For purposes of this requirement, one credit equals 30 hours of coursework. Applicable hours are limited to a combination of seat hours of classroom instruction, field observation experiences, major research assignments, and development and implementation of lesson plans with accommodations and adaptations for diverse learners in an inclusive setting.

(3) Presented evidence of satisfactory achievement in assessments under § 49.18(a) (relating to assessment).

(4) Completed a Department-approved 2-year induction program.

CAREER AND TECHNICAL INTERN CERTIFICATES

§ 49.151. Eligibility and criteria.

(a) The Department will issue Career and Technical Intern Certificates for teaching in State approved programs of career and technical education in the public schools of this Commonwealth to applicants who have:

(1) Met all eligibility requirements stipulated in § 49.12 (relating to eligibility) except for the baccalaureate degree requirement in § 49.12(3).

(2) Provided evidence of satisfactory achievement in assessments of subject matter under § 49.18 (relating to assessment) or satisfactory occupational competency by one of the following:

(i) Successfully completing the occupational competency examination of the Department.

(ii) Securing recognition of occupational competency upon the basis of credentials review and adequate work experience beyond the learning period as established by the Department in those competency areas where occupational competency examinations do not exist.

(iii) Receiving State licensure or occupational accreditation by a Board of Examiners recognized by the Commonwealth.

(iv) Receiving certification from another state whose certification criteria are similar to those of this Commonwealth.

(3) Been accepted for enrollment in a State approved career and technical educator preparation program at a Commonwealth college or university.

(4) Been recommended for the certificate by the institution at which they are enrolled or accepted.

(b) The applicant shall be issued a Career and Technical Instructional I Certificate upon presenting evidence of 8,000 hours (equivalent to 4 years full-time) wage-earning

experience in the occupational area to be taught and satisfactory achievement on the assessment of basic skills.

(c) The certificate requires continued enrollment in a State-approved teacher intern program.

§ 49.152. Term of validity.

The Career and Technical Instructional Intern Certificate shall be issued for the period of time needed by the applicant to complete 18 semester hours within the approved career and technical educator preparation program, but in no case shall the validity period exceed 3 years from the date of issuance.

§ 49.153. Career and Technical Day-to-Day Substitute Permit.

(a) The chief school administrator or career and technical school administrative director having jurisdiction over any approved Career and Technical Education program is authorized to issue a special Day-to-Day Substitute Permit to an occupational practitioner when no properly certified teachers are available. The teacher shall function under the supervision of a properly certified supervisor or administrator. Assignments as described in this section shall be made only in case of an emergency and may not exceed 20 consecutive school days. This permit will be valid for 20 days of substitute service and may be renewed for an additional 20 school days upon the approval of the Secretary.

(b) This permit does not qualify the holder to serve as a regularly employed teacher to fill a vacant position or as a long-term substitute. These positions shall be filled by a person holding a valid Career and Technical Instructional or a State issued Long-term or Day-to-Day Substitute Permit.

SUPERVISOR OF CAREER AND TECHNICAL EDUCATION CERTIFICATE

§ 49.161. Supervisor of Career and Technical Education.

(a) The Department will issue a Supervisor of Career and Technical Education Certificate to a person who has a minimum of 3 years satisfactory certified career and technical teaching experience and whose primary assignment will be one or more of the following:

(1) Instructional supervision in the fields of career and technical education—career and technical agriculture, career and technical business, distributive education, health occupations, career and technical home economics, and career and technical industrial, or trade and industrial—in area career and technical schools and corresponding career and technical courses in the public secondary schools of this Commonwealth.

(2) Directing the activities of professional staff teaching in the program areas specified in paragraph (1).

(b) The Department will issue a Supervisor of Career and Technical Education Certificate to a person who shall meet the requirements of § 49.111(a)(3)—(5) (relating to Supervisory Certificate).

CAREER AND TECHNICAL ADMINISTRATIVE DIRECTOR CERTIFICATE

§ 49.163. Career and Technical Administrative Director.

The Department will issue the Career and Technical Administrative Director Certificate to persons who:

(1) Have a minimum of 3 years of relevant professional experience in a Career and Technical Education School.

(2) Have completed an approved program of graduate study following standards listed in §§ 49.111(a) and 49.121(d) (relating to Supervisory Certificate; and Administrative Certificate) or an approved alternative program under section 1207.1 of the act (24 P.S. § 12-1207.1) preparing them to direct, operate, supervise, and administer the organizational and educational activities of a career and technical school or department; applicants shall be recommended by the preparing institution in which the graduate program was completed.

(3) Present evidence of satisfactory achievement on assessments prescribed by the Department under § 49.18(a) (relating to assessment).

Subchapter D. OUT-OF-STATE APPLICANTS

§ 49.172. Letter of eligibility.

(a) The Department will issue the appropriate letter of eligibility for consideration for appointment as a district superintendent or an assistant district superintendent to an applicant who:

(1) Has completed a State-approved graduate level program of educational administrative study for the preparation of chief school administrators or been prepared through an out-of-State graduate level program equivalent to those approved in this Commonwealth.

(2) Has received the recommendation of the preparing institution for certification as a chief school, district level, administrator.

(3) Has provided evidence of 6 years of satisfactory educational or student support service in private or public K—12 schools or an accredited institution of higher education of which at least 3 years must be service in supervisory or administrative positions.

* * * * *

Subchapter E. COMMISSIONS AND CERTIFICATES FOR INTERMEDIATE UNITS

§ 49.182. Letter of eligibility.

* * * * *

(c) A commission will be issued to a person holding an appropriate letter of eligibility upon the candidate's election as the executive director or assistant executive director of an intermediate unit by its respective board of directors.

(d) When an Intermediate Unit Board of Directors finds it impossible or impractical to fill immediately a vacancy occurring in the position of intermediate unit executive director or assistant intermediate unit executive director, the board may appoint an acting intermediate unit executive director or an acting intermediate unit executive director who does not meet the requirements of subsection (a) to serve no more than 1 year from the time of the appointment as acting intermediate unit executive director or acting assistant intermediate unit executive director.

Subchapter F. LETTERS OF EQUIVALENCY FOR PAY PURPOSES

§ 49.191. Letters of Equivalency.

A Letter of Equivalency will be issued for salary purposes only, subject to the following terms and conditions:

(1) The Letter of Equivalency for Baccalaureate Degree is issued to holders of Career and Technical Instructional

I, Career and Technical Instructional II or their equivalents upon the accumulation of 90 college credits. A minimum of 18 credit hours shall be earned at a State-approved baccalaureate degree granting institution. Twelve of the final 30 credit hours may be satisfied, in full or in part, through in-service programs approved by the Secretary for meeting baccalaureate equivalency requirements.

(2) The Letter of Equivalency for Master's Degree is issued to persons holding a valid Instructional I, Instructional II, Educational Specialist I, Educational Specialist II Certificate, Career and Technical Instructional I, Career and Technical Instructional II Certificate, or their equivalents, upon the accumulation of 36 hours of graduate level credit. A minimum of 18 academic graduate credits shall be earned in the content area of the applicant's certification area(s) at a college or university approved to offer graduate work. A maximum of 18 of the credit requirement may be satisfied through in-service programs approved by the Secretary for meeting master's equivalency requirements.

(3) A grade of "C" or better is required in college and university courses in which grades are given and a letter of satisfactory completion is required for all in-service courses used toward the attainment of the certificate.

[Pa.B. Doc. No. 22-624. Filed for public inspection April 22, 2022, 9:00 a.m.]

Title 25—ENVIRONMENTAL PROTECTION

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CH. 145]

CO_2 Budget Trading Program

The Environmental Quality Board (Board) amends Chapter 145 (relating to interstate pollution transport reduction) to add Subchapter E (relating to CO_2 budget trading program) to establish a program to limit the emissions of carbon dioxide (CO_2) from fossil fuel-fired electric generating units (EGU) located in this Commonwealth, with a nameplate capacity equal to or greater than 25 megawatts (MWe) as set forth in Annex A.

This final-form rulemaking was adopted by the Board at its meeting of July 13, 2021.

A. *Effective Date*

This final-form rulemaking will be effective upon publication in the *Pennsylvania Bulletin*.

B. *Contact Persons*

For further information, contact Virendra Trivedi, Chief, Division of Permits, Bureau of Air Quality, Rachel Carson State Office Building, 400 Market Street, 12th Floor, P.O. Box 8468, Harrisburg, PA 17105-8468, (717) 783-9476; or Jennie Demjanick, Assistant Counsel, Bureau of Regulatory Counsel, Rachel Carson State Office Building, 400 Market Street, 9th Floor, P.O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7196. Persons with a disability may use the Pennsylvania Hamilton Relay Service, (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This final-form rulemaking is available on the Department of Environmental Protection's (Department) web site at www.dep.pa.gov (select "Public Participation," then "Environmental Quality Board").

C. *Statutory Authority*

This final-form rulemaking is authorized under section 5(a)(1) of the Air Pollution Control Act (APCA) (35 P.S. § 4005(a)(1)), which grants the Board the authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in this Commonwealth. Section 6.3(a) of the APCA (35 P.S. § 4006.3(a)) also authorizes the Board by regulation to establish fees to support the air pollution control program authorized by the APCA and not covered by fees required by section 502(b) of the Clean Air Act (CAA) (42 U.S.C.A. § 7661a(b)).

D. *Background and Purpose*

The purpose of this final-form rulemaking is to reduce anthropogenic emissions of CO_2, a greenhouse gas (GHG) and major contributor to climate change impacts, in a manner that is protective of public health, welfare and the environment in this Commonwealth. This final-form rulemaking would reduce CO_2 emissions from sources within this Commonwealth and establish the Commonwealth's participation in the Regional Greenhouse Gas Initiative (RGGI), a regional CO_2 Budget Trading Program. This final-form rulemaking would establish a CO_2 Budget Trading Program for this Commonwealth which is capable of linking with similar regulations in states participating in RGGI (participating states). These independently promulgated and implemented CO_2 Budget Trading Program regulations together make up the regional CO_2 Budget Trading Program or RGGI.

This final-form rulemaking would effectuate least-cost CO_2 emission reductions for the years 2022 through 2030. The declining CO_2 Emissions Budget in this final-form rulemaking directly results in CO_2 emission reductions of around 20 million short tons in this Commonwealth as well as emission reductions across the broader PJM regional electric grid. However, the Department projects that 97—227 million short tons of CO_2 that would have been emitted by EGUs in this Commonwealth over the next decade are avoided by participation in RGGI. According to data from the United States Energy Information Administration (EIA), this Commonwealth generates the fifth most CO_2 emissions from EGUs in the country. Since CO_2 emissions are a major contributor to regional climate change impacts, the Department developed this final-form rulemaking to establish this Commonwealth's participation in a regional approach that significantly reduces CO_2 emissions and this Commonwealth's contribution to regional climate change.

RGGI equity principles

Throughout the development and implementation of this final-form rulemaking, the Commonwealth is committed to striving to develop a power sector carbon-reduction program and investment strategy, through RGGI, that embodies a set of equity principles. These equity principles advance the Department's commitment to equity and were developed by the Department with input from environmental justice stakeholders, including the Department's Environmental Justice Advisory Board (EJAB). First, the Commonwealth will strive to inclusively gather public input using multiple methods of engaging the public, especially environmental justice communities and meaningfully consider that input in making decisions related to the design and implementation of the power sector carbon-reduction program and disseminate any final decisions that are made that affect such im-

pacted communities in a timely manner. Second, the Commonwealth will strive to protect public health, safety and welfare, mitigating any adverse impacts on human health, especially in environmental justice communities and seek to ensure environmental and structural racism are not replicated in the engagement process. Third, the Commonwealth will strive to work equitably and with intentional consideration to distribute environmental and economic benefits of auction proceeds in communities that have been disproportionately impacted by air pollution. As part of this third principle, the Commonwealth will seek to address legacy impacts related to emissions and pollution in vulnerable populations and among environmental justice communities. The Commonwealth will also develop and provide data about emissions in environmental justice communities to inform the investment process. The development of an Annual Air Quality Impact Assessment is discussed further under the subsection titled "Modifications from RGGI Model Rule." Lastly, as part of the third principle, the Commonwealth will strive to provide access to investment programs for all members of the community, especially low-income communities.

Climate change impacts and the greenhouse effect

Like every state in the country, this Commonwealth has already begun to experience adverse impacts from climate change, such as higher temperatures, changes in precipitation and frequent extreme weather events, including large storms, flooding, heat waves, heavier snowfalls and periods of drought. These impacts could alter the many fundamental assumptions about climate that are intrinsic to this Commonwealth's infrastructure, governments, businesses and the stewardship of its natural resources and environment. If not properly accounted for, changes in climate could result in more frequent road washouts, higher likelihood of power outages and shifts in economic activity, among other significant impacts. Climate change can also affect vital determinants of health such as clean air, safe drinking water, sufficient food and secure shelter. These vital determinants are particularly affected by the increased extreme weather events, in addition to decreased air quality and an increase in illnesses transmitted by food, water and disease carriers such as mosquitos and ticks. If these impacts are to be avoided, GHG emissions must be reduced expeditiously.

The impacts of climate change are vast and what was predicted 10 years ago is being confirmed today. Climate change impacts are being caused by the emission and atmospheric concentration of GHGs, namely, but not exclusively, CO_2. Scientists have confirmed that increased CO_2 emissions from human activity are causing changes to global climate. Ninety-seven percent of the actively publishing climate scientists agree that climate warming trends over the past century are extremely likely due to human activities. Major scientific institutions including the United States National Academy of Sciences, the United States Global Change Research Program (USGCRP), the American Medical Association, the American Association for the Advancement of Science, and many others endorse this position. In the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) released in 2014, the IPCC concluded that, "human influence on the climate system is clear, and recent anthropogenic emissions of GHGs are the highest in history." See IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

While CO_2 is a necessary element of life on Earth and acts as a fundamental aspect of nearly every critical system on the planet, CO_2 in high concentrations in the atmosphere leads to the greenhouse effect. The greenhouse effect occurs when CO_2 (and other GHG) molecules absorb solar energy and re-emit infrared energy back to the Earth's surface. This absorption and re-emitting of infrared energy is what makes certain gases trap heat in the lower atmosphere, not allowing it to go back out to space. The greenhouse effect disrupts the normal process whereby solar energy is absorbed at the Earth's surface and is radiated back through the atmosphere and back to space. Maintaining the surface temperature of the Earth depends on this balance of incoming and outgoing solar radiation. See the National Aeronautics and Space Administration, "The Causes of Climate Change," https://climate.nasa.gov/causes/.

Global temperatures are increasing due to the greenhouse effect. Significantly changing the global temperature has impacts to every other weather and climate cycle occurring across the world. For instance, global average sea level, which has risen by about 7-8 inches since 1900 (with about 3 inches of that increase occurring since 1993), is expected to rise at least several inches in the next 15 years and by 1—4 feet by 2100. The impacts of increased GHGs in the atmosphere, including extreme weather and catastrophic natural disasters, have become more frequent and more intense. Extreme weather events also contribute to deaths from extreme heat or cold exposure and lost work hours due to illness. The World Health Organization expects climate change to cause around 250,000 additional deaths globally per year between 2030 and 2050, with additional direct damage costs to health estimated to be around $2—$4 billion per year by 2030. Based on the overwhelming scientific evidence, these harms are likely to increase in number and severity unless aggressive steps are taken to reduce GHG emissions.

Climate change impacts assessments

Since 2009, the Department has released Climate Change Impacts Assessments, as required under the Pennsylvania Climate Change Act (71 P.S. §§ 1361.1—1361.8), which have underscored the critical need to take action to reduce GHG emissions and address climate change. The Department's climate change impact assessments are available at https://www.dep.pa.gov/Citizens/climate/Pages/CCAC.aspx. On May 5, 2021, the Department, with support from ICF and Penn State University, released the most recent Pennsylvania Climate Impacts Assessment. The 2021 Pennsylvania Climate Impacts Assessment found that the average annual temperature Statewide will continue to rise and is expected to increase by 5.9°F (3.3°C) by midcentury compared to a baseline period of 1971—2000. Additionally, this Commonwealth could experience more total average rainfall, occurring in less frequent but heavier rain events. Extreme rainfall events are projected to increase in magnitude, frequency and intensity, while drought conditions are also expected to occur more frequently due to more extreme, but less frequent precipitation patterns.

There will also be more frequent and intense extreme heat events with temperatures expected to reach at least 90°F on 37 days per year on average across the State, up from the 5 days during the baseline period. Days reaching temperatures above 95°F and 100°F will become more frequent as well. These increasing temperatures will continue to alter the growing season and increase the number of days that individuals and businesses will have to run air conditioning. As heat waves become increasingly common, individuals will be more susceptible to

health and economic risks. This is particularly true for vulnerable populations, including low-income populations, the elderly, pregnant women, people with certain mental illnesses, outdoor workers and those with cardiovascular conditions. Most notable from the 2021 Pennsylvania Climate Impacts Assessment is that climate change will not affect all the residents of this Commonwealth equally. Some may be more at risk because of their location, income, housing, health or other factors. As shown by all of the Pennsylvania Climate Change Impacts Assessments, climate risks and related impacts in this Commonwealth could be severe, potentially causing increased infrastructure disruptions, higher risks to public health, economic impacts and other changes, unless actions are taken by the Commonwealth to avoid and reduce the consequences of climate change.

In April 2020, the Environment and Natural Resources Institute at Penn State University released an updated Climate Change Impacts Assessment for the Department, which states that the expected disruptions to this Commonwealth's climate and impacts on this Commonwealth's climate sensitive sectors remain as dire as presented in the 2015 Climate Change Impacts Assessment. The 2015 Climate Change Impacts Assessment found that this Commonwealth has undergone a long-term warming of more than 1.8°F over the prior 110 years, and that due to increased GHG emissions, current warming trends are expected to increase at an accelerated rate with average temperatures projected to increase an additional 5.4 degrees by 2050. This warming will have potential adverse impacts related to agriculture, forests, aquatic ecosystems, water resources, wildlife and public health across this Commonwealth. In this Commonwealth, average annual precipitation has increased by approximately 10% over the past 100 years and, by 2050, is expected to increase by an additional 8%, with a 14% increase during the winter season. In particular, climate change will worsen air quality relative to what it would otherwise be, causing increased respiratory and cardiac illness. Air quality impacts from climate change are due to the combination of pollutants emitted from anthropogenic sources and weather conditions. Climate change can potentially also worsen water quality, affecting health through consumption of diminished quality drinking water and through contact with surface waters during outdoor recreation. The risk of injury and death from extreme weather events could also increase as a consequence of climate change. Additionally, climate change could affect the prevalence and virulence of air-borne infectious diseases such as influenza.

In 2009, the Department released its first Climate Change Impacts Assessment which showed that this Commonwealth was already experiencing some of the harmful effects of climate change. That same year, under CAA section 202(a)(1), (42 U.S.C.A. § 7521(a)(1)), the United States Environmental Protection Agency (EPA) issued an "Endangerment Finding," that six GHGs—CO_2, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride—endanger both the public health and the public welfare of current and future generations by causing or contributing to climate change. See 74 FR 66496 (December 15, 2009). The EPA's 2009 endangerment finding particularly concerned GHG emissions released from motor vehicles. However, in 2015, the EPA issued an endangerment finding for GHG emissions released from new EGUs through the promulgation of its regulation concerning "Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units." See 80 FR 64509 (October 23, 2015). On January 19, 2021, the D.C. Circuit Court of Appeals affirmed that the endangerment finding issued for new EGUs provided a sufficient basis for the EPA's regulation controlling GHG emissions from existing EGUs, commonly known as the "Affordable Clean Energy Rule or ACE rule" in its decision vacating the rule and remanding it back to the EPA. See *Am. Lung Ass'n v. Env't Prot. Agency*, 985 F.3d 914, 977 (D.C. Cir. 2021). In other words, the EPA made a source-specific finding that GHG emissions, principally CO_2, from EGUs endanger public health and welfare and cause or contribute to climate change. Additionally, the EPA's Endangerment Findings are further reinforced by the findings of the USGCRP's Fourth National Climate Assessment (NCA4) which is consistent with the Commonwealth's 2015, 2020 and 2021 Climate Change Impacts Assessments. While these Federal studies inform the Department's decision to regulate CO_2 emissions within this Commonwealth, they are not determinative because this final-form rulemaking is being promulgated by the Board under the authority of the APCA, not the CAA.

On November 23, 2018, the USGCRP released the NCA4, a scientific assessment of the National and regional impacts of natural and human-induced climate change. See USGCRP, "Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II," (D.R. Reidmiller et al. eds., 2018), https://nca2018.globalchange.gov/. The NCA4 represents the work of over 300 government and nongovernment experts, led by experts within the EPA, the United States Department of Energy and 11 other Federal agencies. The NCA4 shows how the impacts of climate change are already occurring across the country and emphasizes that future risks from climate change will depend on the decisions made today. It is worth noting that the NCA4 mentions that the Northeast region is a model for other states, as it has traditionally been a leader in GHG mitigation action.

By 2035, the NCA4 projects that the Northeast will see the largest temperature increase in the country of more than 3.6°F on average higher than the preindustrial era. This would occur as much as two decades before global average temperatures reach a similar milestone. The changing climate of the Northeast threatens the health and public welfare of its residents and will lead to health-related impacts and costs, including additional deaths, emergency room visits and hospitalizations, higher risk of infectious diseases, lower quality of life and increased costs associated with healthcare utilization. Mosquitoes, fleas and ticks and the diseases they carry have been a particular concern in the Northeast in recent years. Scientists have linked these diseases, specifically tick-related Lyme disease, to climate change.

Climate change also threatens to reverse the advances in air quality that the states in the Northeast, including this Commonwealth, have worked so hard to achieve over the past few decades. In particular, climate change will increase levels of ground-level ozone pollution in the Northeast through changes in weather and increased ozone precursor emissions. Ozone is an irritant and repeated exposure to ozone pollution for both healthy people and those with existing conditions may cause a variety of adverse health effects, including difficulty in breathing, chest pains, coughing, nausea, throat irritation and congestion. In addition, people with bronchitis, heart disease, emphysema, asthma and reduced lung capacity may have their symptoms exacerbated by ozone pollution. Asthma, in particular, is a significant and growing threat to children and adults in this Commonwealth. The threat

of asthma is particularly pronounced in Philadelphia, which has especially high asthma prevalence and hospitalization rates—affecting approximately one out of four children in West Philadelphia alone. Asthma disproportionately affects African Americans and those below or near the poverty line, highlighting key environmental justice considerations for pollution control. See United States EPA Region 3, EPA Mid-Atlantic Recognizes First Asthma Community Champion, May 2021, https://www.epa.gov/newsreleases/epa-mid-atlantic-recognizes-first-asthma-community-champion. The NCA4 refers to this reversal as a "climate penalty" and projects it could cause hundreds more ozone pollution-related deaths per year.

Over the past several decades, the Department has made substantial progress in decreasing ground-level ozone pollution in this Commonwealth, including limiting precursor emissions. However, Bucks, Chester, Delaware, Montgomery and Philadelphia Counties are designated as marginal nonattainment areas for the 2015 ozone National ambient air quality standards (NAAQS). See 83 FR 25776 (June 4, 2018). There is still more work that needs to be done to reduce emissions in these nonattainment areas and to avoid backsliding on the improvements to air quality across this Commonwealth. An increase in ground-level ozone levels due to climate change would interfere with continued attainment of the ozone NAAQS, hinder progress in marginal nonattainment areas and put public health and welfare at risk.

Immediate action is needed to address this Commonwealth's contribution to climate change

Given the urgency of the climate crisis, including the significant impacts on this Commonwealth, the Board determined that concrete, economically sound and immediate steps to reduce GHG emissions are necessary. As one of the top GHG emitting states in the country, the Board has a compelling interest to reduce GHG emissions to address climate change and protect public health, welfare and the environment. Based on the most recent data from the EPA's State Inventory Tool, in 2018, this Commonwealth generated net GHG emissions equal to 227.04 million metric tons CO_2 equivalent ($MMTCO_2e$) Statewide, the vast majority of which are CO_2 emissions. In the context of the world, this Commonwealth's electricity generation sector alone emits more CO_2 than many entire countries including Greece, Sweden, Israel, Singapore, Austria, Peru and Portugal. See Joint Research Centre, European Commission, "JRC Science for Policy Report: Fossil CO_2 emissions of all world countries," 2020, https://publications.jrc.ec.europa.eu/repository/handle/JRC121460.

Historically, the electricity generation sector has been the leading source of CO_2 emissions in this Commonwealth. Based upon data contained in the Department's 2020 GHG Inventory, 29% of this Commonwealth's total GHG emissions are produced by the electricity generation sector. The Department's GHG inventory and related information is available at https://www.dep.pa.gov/Citizens/climate/Pages/CCAC.aspx. In recent years, this Commonwealth has seen a shift in the electricity generation portfolio mix, resulting from market forces and the establishment of alternative energy goals, and energy efficiency targets. Since 2005, this Commonwealth's electricity generation has shifted from higher carbon-emitting electricity generation sources, such as coal, to lower and zero emission generation sources, such as natural gas, wind and solar. At the same time, overall energy use in the residential, commercial, transportation and electric power sectors has reduced.

However, looking forward, the Department projects CO_2 emissions from the electricity generating sector will increase due to reduced switching from coal to natural gas, the potential closure of zero carbon emitting nuclear power plants, and the addition of new natural gas-fired units in this Commonwealth. The Three Mile Island nuclear power plant already closed on September 20, 2019, amounting to a loss of 818 MWe of carbon free generation. However, the modeling conducted for this final-form rulemaking predicts no further nuclear power plant retirements through 2030 with implementation of this final-form rulemaking. Without this final-form rulemaking, this Commonwealth's nuclear fleet may remain at-risk of closure. In fact, on March 13, 2020, Energy Harbor, the owner of the Beaver Valley nuclear power plant, responsible for 1,845 MW of carbon free generation, withdrew its closure announcement, specifically citing this Commonwealth's intended participation in RGGI as a key determinant in continuing operations.

This final-form rulemaking is necessary to ensure CO_2 emissions continue to decrease and at a rate that shields this Commonwealth from the worst impacts of climate change. RGGI plays an important role in providing a platform whereby this Commonwealth can reduce CO_2 emissions using a market-based approach. As the electricity generation sector remains one of the leading sources of CO_2 in this Commonwealth, it is imperative that emissions continue to decrease from that sector.

The Commonwealth's GHG emission reduction goals

On January 8, 2019, Governor Tom Wolf signed Executive Order 2019-01, Commonwealth Leadership in Addressing Climate Change and Promoting Energy Conservation and Sustainable Governance, codified in 4 Pa. Code §§ 5.1001—5.1009 (relating to Governor's Green Government Council). This Executive Order set the first ever climate change goal for this Commonwealth to reduce net GHG emissions from 2005 levels by 26% by 2025 and 80% by 2050. These climate change goals align this Commonwealth with the reduction targets under the Paris Agreement aimed at keeping global temperature rise below the 2-degree Celsius threshold. According to climate experts, the 2-degree Celsius threshold is the level beyond which dire global consequences would occur, including sea level rise, superstorms and crippling heat waves.

On April 29, 2019, the Department issued a Pennsylvania Climate Action Plan that identified GHG emission trends and baselines in this Commonwealth and recommended cost-effective strategies for reducing or offsetting GHG emissions. The Department's climate action plans are available at https://www.dep.pa.gov/Citizens/climate/Pages/CCAC.aspx. The Climate Action Plan determined that reducing the overall carbon intensity of the electricity generated in this Commonwealth is one of the most critical strategies for reducing GHG emissions. The Climate Action Plan also identified many different strategies and actions that all the residents of this Commonwealth can take to combat climate change. According to the Climate Action Plan, one of the most cost-effective emissions reduction strategies is to limit CO_2 emissions through an electricity sector cap and trade program. This Commonwealth participating in a cap and trade program is expected to result in the largest near-term reduction in emissions and was deemed cost-effective relative to the social cost of carbon. The Climate Action Plan modeled a cap and trade program that requires a carbon cap equal to a 30% reduction from 2020 CO_2 emissions levels by 2030, which is equivalent to RGGI stringency.

On October 3, 2019, Governor Tom Wolf signed Executive Order 2019-07, Commonwealth Leadership in Addressing Climate Change through Electric Sector Emissions Reductions, codified in 4 Pa. Code §§ 7a.181—7a.183 (relating to Commonwealth leadership in addressing climate change through electric sector emissions reductions), which directed the Department to use its existing authority under the APCA to develop a rulemaking to abate, control or limit CO_2 emissions from fossil fuel-fired electric power generators. This Executive Order also directed the Department to present a proposed rulemaking to the Board by July 31, 2020. On June 22, 2020, Governor Tom Wolf amended this Executive Order to extend the deadline to September 15, 2020. As directed by this Executive Order, this final-form rulemaking establishes a CO_2 budget consistent in stringency to that established by the participating states, provides for the annual or more frequent auction of CO_2 emissions allowances through a market-based mechanism, and is sufficiently consistent with the RGGI Model Rule such that CO_2 allowances may be traded with holders of allowances from other states.

Considering that this Commonwealth has the fifth leading CO_2 emitting electricity generation sector in the country, this final-form rulemaking is a significant component in achieving the Commonwealth's goals to reduce GHG emissions. Although this final-form rulemaking will not solve global climate change, it will aid this Commonwealth in addressing its share of the impact, joining other states and countries that are addressing their own impacts. The statutory authority for this final-form rulemaking, the APCA, is built on a precautionary principle to protect the air resources of this Commonwealth for the protection of public health and welfare and the environment, including plant and animal life and recreational resources, as well as development, attraction and expansion of industry, commerce and agriculture. To be proactive, this final-form rulemaking is needed to address this Commonwealth's contributions to climate change, particularly CO_2 emissions. The Board determined to address CO_2 emissions through a regional initiative because regional cap and trade programs have proven to be beneficial and cost-effective at reducing air pollutant emissions. In fact, this Commonwealth has and continues to participate in successful regional cap and trade programs.

History and success of this Commonwealth's participation in cap and trade programs

In the 1990 CAA Amendments, the United States Congress determined that the use of market-based principles, such as emissions banking and trading, are effective ways of achieving emission reductions. See 42 U.S.C.A. §§ 7651—7651o. According to the EPA, emissions trading programs are best implemented when the environment and public health concerns occur over a relatively large geographic area and effectively designed emissions trading programs provide flexibility for individual emissions sources to tailor their compliance path to their needs. See generally, 63 FR 57356 (October 27, 1998). The EPA has also determined that reducing emissions using a market-based system provides regulated sources with the flexibility to select the most cost-effective approach to reduce emissions and has proven to be a highly effective way to achieve emission reductions, meet environmental goals and improve human health. 63 FR 57356, 57458 (October 27, 1998). In contrast to traditional command and control regulatory methods that establish specific emissions limitations and technology use with limited or no flexibility, cap and trade programs harness the economic incentives of the market to reduce pollution. The Board has a decades-long history of promulgating regulations that have established this Commonwealth's participation in successful cap and trade programs.

Beginning in 1995, this Commonwealth participated in the first National cap and trade program in the United States, the Acid Rain Program, which was established under Title IV of the 1990 CAA Amendments and required, in part, major emission reductions of sulfur dioxide (SO_2) through a permanent cap on the total amount emitted by EGUs. See 24 Pa.B. 5899 (November 26, 1994) and 25 Pa. Code § 127.531 (relating to special conditions related to acid rain). For the first time, the Acid Rain Program introduced a system of allowance trading that used market-based incentives to reduce pollution. The Acid Rain Program reduced SO_2 emissions by 14.5 million tons (92%) from 1990 levels and 16.0 million tons (93%) from 1980 levels. Information related to the Acid Rain Program is available at https://www.epa.gov/airmarkets/progress. The undisputed success of achieving significant emission reductions in a cost-effective manner led to the application of the market-based cap and trade tool for other regional environmental problems.

From 1999 to 2002, this Commonwealth participated in the Ozone Transport Commission's (OTC) NO_x Budget Program, an allowance trading program designed to reduce summertime NO_x emissions from EGUs to reduce ground-level ozone, which included all the current states participating in RGGI. See 27 Pa.B. 5683 (November 1, 1997) and 25 Pa. Code §§ 123.101—123.121 (relating to NO_x allowance requirements). According to the OTC's NO_x Budget Program 1999—2002 Progress Report, NO_x Budget Program units successfully reduced ozone season NO_x emissions in 2002 by nearly 280,000 tons, or about 60%, from 1990 baseline levels, achieving greater reductions than required each year of the program. The Progress Report is available on the EPA's webpage for the National Service Center for Environmental Publications, https://nepis.epa.gov. Based on the success of the OTC's NO_x Budget Program and the Acid Rain Program, in 2003 the EPA implemented a regional NO_x cap and trade program under the NO_x SIP Call, which closely resembled the OTC NO_x Budget Program. 63 FR 57356 (October 27, 1998). The EPA again noted the cost savings of achieving emissions reductions through trading. The EPA's regional NO_x cap and trade program was adopted by the Board on September 23, 2000, to reduce NO_x emissions Statewide. See 30 Pa.B. 4899 (September 23, 2000) and 25 Pa. Code Chapter 145, Subchapter A (relating to NO_x Budget Trading Program).

Beginning in 2009, the EPA's NO_x Budget Trading Program was replaced by the Clean Air Interstate Rule (CAIR) trading program, covering 28 eastern states, which required further summertime NO_x reductions from the power sector as well as SO_2 reductions. See 70 FR 25162 (May 12, 2005). The Board adopted the CAIR program in 2008. See 38 Pa.B. 1705 (April 12, 2008) and 25 Pa. Code Chapter 145, Subchapter D (relating to CAIR NO_x and SO_2 Trading Programs). Finally, in 2015, CAIR was replaced by the Cross-State Air Pollution Rule trading program.

Regional Greenhouse Gas Initiative (RGGI)

RGGI is a cooperative regional market-based cap and trade program designed to reduce CO_2 emissions from fossil fuel-fired EGUs. RGGI is currently composed of eleven northeastern and Mid-Atlantic states, including Connecticut, Delaware, Maine, Maryland, Massachusetts,

New Hampshire, New Jersey, New York, Rhode Island, Vermont and Virginia. Since its inception on January 1, 2009, RGGI has utilized a market-based mechanism to cap and cost-effectively reduce CO_2 emissions that cause climate change. Because CO_2 from large fossil fuel-fired EGUs is a major contributor to regional climate change, the participating states developed a regional approach to address CO_2 emissions. This regional approach resulted in a Model Rule applicable to fossil fuel-fired EGUs with a nameplate capacity equal to or greater than 25 MWe.

RGGI is implemented in the participating states through each state's independent CO_2 Budget Trading Program regulations, based on the Model Rule, which link together. It is also important to note that states do not execute a multistate agreement or compact to participate in RGGI, and states may withdraw from participation at any time. There is also no central RGGI authority as states jointly oversee the program. The key piece to becoming a "participating state," as the term is defined under § 145.302 (relating to definitions), is the establishment of a corresponding regulation as part of the CO_2 Budget Trading Program. As defined under § 145.302, the "CO_2 Budget Trading Program" is a multistate CO_2 air pollution control and emissions reduction program established under this final-form rulemaking and corresponding regulations in other participating states as a means of reducing emissions of CO_2 from CO_2 budget sources. For this Commonwealth to participate in RGGI, the Board is promulgating this final-form rulemaking which is consistent with the Model Rule.

RGGI is a "cap and trade" program that sets a regulatory limit on CO_2 emissions from fossil fuel-fired EGUs and permits trading of CO_2 allowances to effect cost-efficient compliance with the regulatory limit. RGGI is also referred to as a "cap and invest" program, because unlike traditional cap and trade programs, RGGI provides a "two-prong" approach to reducing CO_2 emissions from fossil fuel-fired EGUs. The first prong is a declining CO_2 emissions budget and the second prong involves investment of the proceeds resulting from the auction of CO_2 allowances to further reduce CO_2 emissions.

CO_2 emissions budget and CO_2 allowance budget

Each participating state establishes its own annual CO_2 emissions budget which sets the total amount of CO_2 emitted from fossil fuel-fired EGUs in a year. What is commonly referred to as the "RGGI cap" on emissions is a reference to the total of all the state CO_2 emissions budgets. This final-form rulemaking includes a declining annual CO_2 emissions budget, which starts at 78 million tons in 2022 and ends at 58,085,040 tons in 2030. This is anticipated to reduce CO_2 emissions in this Commonwealth by 31% compared to 2019. The declining annual CO_2 emissions budget is equivalent to the CO_2 allowance budget, which is the number of CO_2 allowances available each year. A CO_2 allowance represents a limited authorization by the Department or a participating state under the CO_2 Budget Trading Program to emit up to one ton of CO_2. The number of CO_2 allowances available each year decreases along with the CO_2 emissions budget.

One of the benefits of participating in a regional market-based program is that CO_2 allowances are fungible across the participating states. This means that regulated sources within this Commonwealth may, at their option, purchase or sell CO_2 allowances with other regulated sources inside or outside of this Commonwealth. Although this Commonwealth has an established CO_2 allowance budget for each year, this Commonwealth's CO_2 allowances are available to meet the compliance obligations in any other participating state and vice versa at the option of those regulated sources. Therefore, CO_2 emissions from this Commonwealth's power sector are not "capped" by the CO_2 emissions budget, meaning they are not limited to strictly the amount of this Commonwealth's CO_2 allowances. This provides additional compliance flexibility and the regional market assists in achieving least cost compliance for all participating states.

Authority to limit CO_2 emissions and to participate in RGGI through this final-form rulemaking

The Board has the authority to promulgate this final-form rulemaking under the APCA. Specifically, section 5(a)(1) of the APCA provides the Board with broad authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in this Commonwealth. The purpose of the APCA is expansive because it seeks "to protect the air resources of the Commonwealth to the degree necessary for the. . .protection of public health, safety and well-being of its citizens. . ." See 35 P.S. § 4002(a). When the APCA was enacted, the General Assembly was concerned with air pollution generally and that it be remedied no matter what the source. Id. This is shown by the broad scope of the definitions of "air contamination," "air contamination source" and "air pollution" under section 3 of the APCA (35 P.S. § 4003). The broad language in the APCA shows an overall legislative policy to provide regulatory flexibility to the Board to address a pollutant like CO_2 proven to be inimical to public health and welfare and to be a key contributor to climate change. Therefore, this final-form rulemaking is consistent with the legislative intent and purpose under the APCA.

Through the APCA, the Legislature granted the Department and the Board the authority to protect the air resources of this Commonwealth, which is inclusive of controlling CO_2 pollution. CO_2 falls under the definition of "air pollution" in section 3 of the APCA. First, CO_2 is a gas, and falls within the definition of "air contaminant" under section 3 of the APCA, which is defined as "[s]moke, dust, fume, gas, odor, mist, radioactive substance, vapor, pollen or any combination thereof." By extension, CO_2 is also "air contamination" under section 3 of the APCA, which is defined as "[t]he presence in the outdoor atmosphere of an air contaminant which contributes to any condition of air pollution." The term "air pollution" is defined as "[t]he presence in the outdoor atmosphere of any form of contaminant. . .in such place, manner or concentration inimical or which may be inimical to the public health, safety or welfare or which is or may be injurious to human, plant or animal life or to property or which unreasonably interferes with the comfortable enjoyment of life or property" under section 3 of the APCA. Therefore, CO_2 is also considered to be "air pollution" under the APCA. Additionally, there is a significant body of scientific literature to show that CO_2 meets the definition of air pollution under the APCA. As mentioned previously, numerous sources, including the EPA, Penn State University, the USGCRP and the IPCC, have confirmed that CO_2 emissions cause harmful air pollution that is inimical to the public health, safety and welfare, as well as human, plant and animal life. CO_2 is also a GHG and the largest contributor to climate change.

Section 5(a)(1) of the APCA also provides the Board with authority to regulate CO_2 emitted from fossil fuel-fired EGUs in this Commonwealth. Since the EGUs regulated under this final-form rulemaking emit CO_2, they fall within the definition of "air contamination source" under section 3 of the APCA, which is "[a]ny

place, facility or equipment, stationary or mobile, at, from or by reason of which there is emitted into the outdoor atmosphere any air contaminant." As noted previously, the EPA has issued an Endangerment Finding for CO_2 emissions resulting from fossil fuel-fired EGUs. See 80 FR 64509 (October 23, 2015); *Am. Lung Ass'n v. Env't Prot. Agency*, 985 F.3d 914 (D.C. Cir. 2021). CO_2 is also a Federally regulated air pollutant under the CAA (42 U.S.C.A. §§ 7401—7671q). See *Massachusetts v. EPA*, 549 U.S. 497 (2007). Accordingly, regulating CO_2 emissions from fossil fuel-fired EGUs is necessary to protect public health and welfare from harmful air pollution and to address climate change.

In *Marcellus Shale Coalition v. Department of Environmental Protection*, 216 A.3d 448 (Cmwlth. Ct. 2019), the Commonwealth Court outlined the test for determining whether a legislative rulemaking has statutory authority. To determine whether a regulation is adopted within an agency's granted power, the Commonwealth Court stated that it looks to the statutory authority authorizing the agency to promulgate the legislative rule and examines that language to determine whether the rule falls within that grant of authority. The Court also found that the legislature's delegation must be clear and unmistakable. In particular, the Court considers the letter of the statutory delegation to create the rule and the purpose of the statute and its reasonable effect. Id.

As this final-form rulemaking would limit CO_2 pollution by regulating CO_2 emitted from fossil fuel-fired EGUs to ensure protection of public health, welfare and the environment, this final-form rulemaking is clearly within the Board's granted authority under the APCA and advances the purposes of the APCA to abate air pollution.

Furthermore, the auction proceeds amount to fees authorized under section 6.3(a) of the APCA and not an illegal tax. Section 6.3(a) of the APCA provides the Department with the authority to establish fees to support the air pollution control program. The Department is limited by its existing statutory authority under section 9.2(a) of the APCA (35 P.S. § 4009.2) to only use fees for "the elimination of air pollution." Since the auction proceeds generated as a result of this final-form rulemaking would be used to reduce GHG emissions, further eliminating air pollution, the fees would be used to support the "air pollution control program" in accordance with section 6.3(a) of the APCA.

Under RGGI, regulated EGUs are required to purchase one CO_2 allowance per ton of CO_2 they emit through multistate auctions or on the secondary market. The proceeds of the multistate auctions are then provided back to the participating states. The purchase of CO_2 allowances generating auction proceeds is a fee because these purchases are one component of the "regulatory measures intended to cover the cost of administering a regulatory scheme authorized under the police power of the government." See *City of Philadelphia v. Southeastern Pennsylvania Transp. Auth.*, 303 A.2d 247, 251 (1973). As mentioned previously, RGGI provides a "two-prong" approach to reducing CO_2 emissions from fossil fuel-fired EGUs. The second prong involves the proper investment of the auction proceeds to further reduce CO_2 emissions, as well as other harmful GHG emissions. This investment therefore fulfills the purpose and administration of this final-form rulemaking. This final-form rulemaking does not create a tax which is a "revenue-producing measure authorized under the taxing power of the government." Id. The intent of RGGI is not to generate revenue for general government or public purposes, but to achieve a common goal of reducing CO_2 emissions from EGUs.

As provided under section 9.2(a) of the APCA, this Commonwealth's auction proceeds will be held in a subaccount within the Clean Air Fund, which is administered by the Department "for the use in the elimination of air pollution." Section 9.2(a) of the APCA authorizes the Department to establish separate accounts in the Clean Air Fund as may be necessary or appropriate to implement the requirements of the APCA. Under section 9.2(a) of the APCA, the Board was required to adopt a regulation for the management and use of the money in the Clean Air Fund. The Board adopted Chapter 143 (relating to disbursements from the Clean Air Fund) to provide for the monies paid into the Clean Air Fund to be disbursed at the discretion of the Secretary for use in the elimination of air pollution. See 25 Pa. Code § 143.1(a) (relating to general). Under § 143.1(b), the full and normal range of activities of the Department are considered to contribute to the elimination of air pollution, including purchase of contractual services and payment of the costs of a public project necessary to abate air pollution.

Lastly, section 5(a)(1) of the APCA provides the Board with authority to establish a CO_2 Budget Trading Program through this final-form rulemaking. As mentioned previously, this Commonwealth has and continues to participate in cap and trade programs. Specifically, the Board promulgated the NO_x Budget Trading Program in Chapter 145, Subchapter A (relating to NO_x Budget Trading Program) and the CAIR NO_x and SO_2 Trading Programs in Chapter 145, Subchapter D (relating to CAIR NO_x and SO_2 Trading Programs). See 30 Pa.B. 4899 (September 23, 2000) and 38 Pa.B. 1705 (April 12, 2008). Although those cap and trade program regulations were promulgated in response to initiatives at the Federal level, both subchapters were promulgated under the broad authority of section 5(a)(1) of the APCA, as is this final-form rulemaking. The statutory authority granted to the Board under section 5(a)(1) of the APCA is broad related to the adoption of any rule or regulation for the "prevention, control, reduction and abatement of air pollution." The comprehensive scope of this directive provides the Board with the discretion to promulgate a trading program to reduce CO_2 emissions from fossil fuel-fired EGUs in this Commonwealth.

Consistent with framework of the RGGI Model Rule

As mentioned previously, the participating states developed a Model Rule to use as the framework for each state's independent CO_2 Budget Trading Program regulation. The development of the RGGI Model Rule was supported by an extensive regional stakeholder process that engaged the regulated community, environmental nonprofits and other organizations with technical expertise in the design of cap and trade programs. The Board is familiar with the structure of the RGGI Model Rule, because it was drafted based on the language in the EPA's NO_x Budget Trading Program rule in 40 CFR Part 96 (relating to NO_x budget trading program and CAIR NO_x and SO_2 trading programs for state implementation plans), which the Board used as a model for Chapter 145, Subchapter A.

States that participate in RGGI develop regulations that are compatible with the RGGI Model Rule to ensure consistency among the individual programs. Key areas of compatibility include alignment of the main program elements, stringency of the CO_2 allowance budgets and consistency of regulatory language. This consistency is necessary to ensure the fungibility of CO_2 allowances across the participating states, which supports the regional trading of CO_2 allowances and the use of a CO_2

allowance issued in one participating state for compliance by a regulated source in another participating state.

This final-form rulemaking therefore adopts the main program elements of the RGGI Model Rule, including the definitions, applicability, standard regulatory requirements, monitoring and reporting requirements, the CO_2 Allowance Tracking System (COATS), the emissions containment reserve, the cost containment reserve and the CO_2 emissions offset project provisions. The CO_2 allowance budgets in this final-form rulemaking are sufficiently stringent to align with RGGI's goal of reducing CO_2 emissions by 30% from 2020 to 2030. This final-form rulemaking also contains regulatory language consistent with the RGGI, Inc. auction platform, the online platform used to sell CO_2 allowances. RGGI, Inc. is a nonprofit corporation created to provide technical and administrative support services to the participating states in the development and implementation of their CO_2 Budget Trading Programs. Each participating state is also allotted two positions on the Board of Directors of RGGI, Inc.

Under this final-form rulemaking, RGGI, Inc. would provide technical and administrative services to support the Department's implementation of this final-form rulemaking. This support would include maintaining COATS and the auction platform and providing assistance with market monitoring. Any assistance provided by RGGI, Inc. would follow the requirements of this final-form rulemaking. RGGI, Inc. has neither any regulatory or enforcement authority within this Commonwealth nor the ability to restrict or interfere with the Department's implementation of this final-form rulemaking.

Each participating state's regulation provides for the distribution of CO_2 allowances from its CO_2 allowance budget. The majority of CO_2 allowances are distributed at auction and each CO_2 allowance sold at auction returns proceeds from the sale to that state to invest in energy efficiency, renewable energy and GHG abatement programs. Some states have elected to designate a limited amount of CO_2 allowances to be "set-aside" in a designated account and distributed to advance individual state policy goals and objectives. Since this final-form rulemaking is consistent with the RGGI Model Rule, the Commonwealth's CO_2 allowances will have equal value to the CO_2 allowances held in the other participating states, meaning they may be freely acquired and traded across the region.

Although CO_2 allocation provisions may vary from state to state, to be consistent with the RGGI Model Rule each participating state allocates a minimum of 25% of its CO_2 allowance budget to a general account from which CO_2 allowances will be sold or distributed to provide funds for energy efficiency measures, renewable or noncarbon-emitting energy technologies and CO_2 emissions abatement technologies, as well as programmatic costs. Consistent with the RGGI Model Rule, this final-form rulemaking establishes a general account from which CO_2 allowances will be sold or distributed, which is labeled as the Department's Air Pollution Reduction Account. Each year, the Department will allocate CO_2 allowances representing 100% of the tons of CO_2 emitted from the Commonwealth's CO_2 allowance budget to the Air Pollution Reduction Account, except for the CO_2 allowances that the Department has set aside for a designated purpose as discussed in the following section. CO_2 allowances in the Air Pollution Reduction Account will be sold or distributed to provide funds for use in the elimination of air pollution and programmatic costs.

Modifications from RGGI Model Rule

While this final-form rulemaking is sufficiently consistent with the Model Rule and corresponding regulations in the participating states, the Board, in the exercise of its own independent rulemaking authority, also accounts for the unique environmental, energy and economic intricacies of this Commonwealth. This provides the Board the flexibility to limit CO_2 emissions from fossil fuel-fired EGUs in a way that aligns with the other participating states, while tailoring this final-form rulemaking to this Commonwealth's energy markets. In this final-form rulemaking, the Board made modifications from the language in the Model Rule to include permitting requirements and definitions specific to this Commonwealth, as well as stylistic changes. The Board also made adjustments to the language, including the adjustment for banked allowances and control periods, to reflect the timing of this Commonwealth's participation in RGGI. In addition to these modifications, there are six main areas in which this final-form rulemaking differs from the Model Rule.

First, under § 145.306(b)(3) (relating to standard requirements), the Department is making an annual commitment to assess changes in emissions and air quality in this Commonwealth as it relates to implementation of this final-form rulemaking. The Board received several comments that requested monitoring of the air quality impacts of this final-form rulemaking and in particular an assessment of any impacts on environmental justice communities. The Department also heard concerns about potential impacts on environmental justice communities from members of EJAB. To address these concerns, the Department is committing to providing an Annual Air Quality Impact Assessment. The report will include at a minimum the baseline air emissions data from each CO_2 budget unit for the calendar year prior to the year this Commonwealth becomes a participating state and the annual emissions measurements provided from each unit. The Department will not only be assessing the CO_2 emission data provided under the requirements of this final-form rulemaking but will be assessing the entirety of the data submitted from each CO_2 budget unit as required under the Department's regulations. The Department will assess the emission data to determine whether areas of this Commonwealth have been disproportionately impacted by increased air pollution as a result of implementation of this final-form rulemaking. The Department will also publish notice of the availability of the report and the determination in the *Pennsylvania Bulletin* on an annual basis.

Second, under § 145.342(i) (relating to CO_2 allowance allocations), the Department will set aside 12.8 million CO_2 allowances at the beginning of each year for waste coal-fired units located in this Commonwealth. The amount of the set aside increased in this final-form rulemaking from 9.3 million CO_2 allowances in the proposed rulemaking to account for one of the waste coal-fired units remaining in operation and to provide additional compliance assistance. One waste coal-fired unit had originally indicated it was shutting down operations when the Department was developing the proposed rulemaking. Since that waste coal-fired unit will remain in operation, its legacy emissions are now included in this final-form rulemaking. Legacy emissions, as defined under § 145.302, for that waste coal-fired unit amount to 1.18 million tons of CO_2 or 1.18 million CO_2 allowances. The Department added the 1.18 million to the proposed set-aside amount of 9.3 million and further adjusted the value to provide additional compliance assistance. Given recent policy changes impacting the waste coal industry,

including the recent legislative adjustment to Tier II of the Alternative Energy Portfolio Standards Act, the Department also made an adjustment in this final-form rulemaking to the definition of "legacy emissions." Instead of determining the amount of legacy emissions based on the amount of CO_2 emissions in tons equal to the highest year of CO_2 emissions from a waste coal-fired unit during the 5-year period beginning January 1, 2015, through December 31, 2019, the Department will determine the legacy emissions based on the 10-year period beginning January 1, 2010, through December 31, 2019. Reviewing a 10-year period as opposed to a 5-year period better reflects the operation levels of waste coal-fired units in this Commonwealth. Including a slightly higher set-aside amount in this final-form rulemaking will also enable the Department to provide additional compliance assistance to owners or operators of waste coal-fired units, the majority of which are small businesses. The Department took into consideration all comments submitted pertaining to the waste coal set-aside and made the determination to maintain the set-aside provision, and make an adjustment to the definition of legacy emissions that was included in the proposed rulemaking. The Department made this determination because waste coal-fired units provide an environmental benefit of reducing the amount of waste coal piles in this Commonwealth.

Reducing waste coal piles is a significant environmental issue in this Commonwealth, because waste coal piles cause air and water pollution, as well as safety concerns. Waste coal-fired units burn waste coal to generate electricity, thereby reducing the size, number and impacts of these piles otherwise abandoned and allowed to mobilize and negatively impact air and water quality in this Commonwealth. In recent years, waste coal-fired units have struggled to compete in the energy market, due in part to low natural gas prices, and several units have shut down or announced anticipated closure dates. Given the environmental benefit provided, the Board determined that it is necessary to encourage owners or operators of waste coal-fired units to continue burning waste coal to generate electricity. This legacy environmental issue from this Commonwealth's long history of coal mining further underscores why it is vital to not leave additional environmental issues, like climate change, for future generations to solve.

By providing a set aside, as opposed to an exemption, the CO_2 emissions from waste coal-fired units are included in this Commonwealth's CO_2 emissions budget and owners or operators of waste coal-fired units are still required to satisfy compliance of all the regulatory requirements in this final-form rulemaking. After reviewing the last 10 years of CO_2 emission data from waste coal-fired units, the Department determined that the CO_2 allowance set aside should be equal to the total of each waste coal-fired unit's highest year of CO_2 emissions from that 10-year period, referred to as "legacy emissions." That total is 12.8 million tons of CO_2 emissions. Thus, the Department will set aside 12.8 million CO_2 allowances annually. Each year, the Department will allocate the CO_2 allowances directly to the compliance accounts of the waste coal-fired units equal to the unit's actual emissions. However, if the waste coal-fired units emit over 12.8 million tons of CO_2 emissions sector-wide in any year, then the units must acquire the remaining CO_2 allowances needed to satisfy their compliance obligation.

Third, under § 145.342(j), the Department will set aside CO_2 allowances for a strategic use allocation. By April 1 of each calendar year, the Department will allocate any undistributed CO_2 allowances from the waste coal set-aside to the strategic use set-aside account. Given the possibility that waste coal-fired units may emit less than 12.8 million tons of CO_2 each year, the Department could be left with undistributed CO_2 allowances. Under the strategic use set-aside, the Department will allocate these undistributed CO_2 allowances directly to eligible projects that result in GHG emission reductions. Eligible projects include those that implement energy efficiency measures, implement renewable or noncarbon-emitting energy technologies or develop innovative GHG emissions abatement technologies. In response to comments received, in this final-form rulemaking the Department adjusted the strategic use set-aside provision to further clarify the process to apply for CO_2 allowances. The owner of an eligible project will need to submit a complete strategic use application to the Department. At a minimum the application must specify how the project will result in GHG emission reductions, the number of CO_2 allowances requested, and the calculations and supporting data used to determine the emission reductions. After verifying that the information in the application is complete and accurate, the Department will determine the number of CO_2 allowances to distribute based on the emission reductions achieved. The Department will then distribute CO_2 allowances upon completion of the eligible project and will not award CO_2 allowances to an eligible project that is required under law, regulation or court order.

Fourth, under § 145.342(k), the Department will set-aside CO_2 allowances for combined heat and power units. The proposed rulemaking included a set-aside provision for cogeneration units, which also covered combined heat and power (CHP) systems. In this final-form rulemaking, the Department changed the name of the set-aside from "cogeneration" to "combined heat and power." This change was made to clarify that it is CHP units that will be qualified for CO_2 allowances under the set-aside provision. A CHP unit is defined as an electric-generating unit that simultaneously produces both electricity and useful thermal energy. Due to the efficiency and environmental benefits that CHP units provide, the Department understands that it is beneficial to incentivize new CHP buildout in this Commonwealth. In addition, incentivizing future CHP units provides economic development benefits and can be a significant factor for manufacturers and other industrial facilities looking to expand operations within or to this Commonwealth. In fact, the most recent Pennsylvania Climate Action Plan recognized the benefits and importance of incentivizing CHP. In the proposed rulemaking, the Department included a set provision that involved adjusting the compliance obligation of a CHP unit. As proposed, the Department would have adjusted the compliance obligation by reducing the total CO_2 emissions by an amount equal to the CO_2 that is emitted as a result of providing useful thermal energy or electricity, or both, supplied directly to a co-located facility during the allocation year. In this final-form rulemaking, the Department instead includes two tiers for the retirement of CO_2 allowances from the combined heat and power set-aside account. Under the first tier, which is an addition at final-form, applicable combined heat and power units may request that the Department retire CO_2 allowances equal to the total amount of CO_2 emitted as a result of providing all useful thermal energy and electricity during each allocation year. Under the second tier, which was included in the proposed rulemaking, applicable combined heat and power units may request that the Department retire CO_2 allowances equal to the partial amount of CO_2 emitted as a result of supplying useful thermal energy or electricity, or both, to an

interconnected industrial, institutional or commercial facility during the allocation year. This two-tier approach aligns the overall environmental benefits of CHP units with the CO_2 allowances that may be requested.

As in the proposed rulemaking, the combined heat and power units must submit a complete application to request that CO_2 allowances be retired by the Department on behalf of the unit. The Department adds in this final-form rulemaking that if the unit is requesting total retirement of CO_2 allowances, then the unit must satisfy the more stringent requirements. The unit must submit an application, including documentation that the useful thermal energy is at least 25% of the total energy output of the combined heat and power unit on an annual basis and that the overall efficiency of the combined heat and power unit is at least 60% on an annual basis. If the unit is requesting partial retirement of CO_2 allowances, the unit must submit an application which includes documentation of the amount of useful thermal energy or electricity, or both, supplied to an interconnected industrial, institutional or commercial facility. Unlike the waste coal set-aside, the Department would not distribute CO_2 allowances directly to the unit, but rather retire CO_2 allowances on behalf of the unit to reduce its compliance obligation. The owner or operator of a unit requiring additional CO_2 allowances to satisfy the CO_2 requirements under § 145.306(c) shall transfer CO_2 allowances for compliance deductions to the compliance account of the unit.

Fifth, under § 145.305 (relating to limited exemption for CO_2 budget units with electrical output to the electric grid restricted by permit conditions), the Board provides additional flexibility in the form of a limited exemption for CHP units that are interconnected and supply power to an industrial, institutional or commercial facility. In the proposed rulemaking, the interconnected facility was required to be a manufacturing facility. In response to comments received, in this final-form rulemaking the Department broadens the language to allow for the interconnected facility to be an industrial, institutional or commercial facility. A CHP unit that supplies less than 15% of its annual total useful energy to the electric grid, not including energy sent to the interconnected facility, does not have a compliance obligation under this final-form rulemaking. The owner or operator of the CHP unit claiming this limited exemption must have a permit issued by the Department containing a condition restricting the supply to the electric grid. This limited exemption is in addition to the exemption in the RGGI Model Rule for fossil fuel-fired EGUs with a capacity of 25 MWe or greater that supply less than 10% of annual gross generation to the electric grid. The Board includes this additional exemption for CHP units that primarily send energy to an interconnected facility because these CHP units provide a CO_2 emission reduction benefit. These units provide useful thermal energy, a byproduct of electricity generation, to the interconnected facility which helps prevent the need for the facility to run additional boilers onsite to generate electricity which in turn avoids additional CO_2 emissions.

Lastly, this final-form rulemaking includes §§ 145.401—145.409 (relating to CO_2 allowance auctions) outlining the procedure for auctioning CO_2 allowances, which is not contained in the RGGI Model Rule. Several participating states have also added auction procedure language to their CO_2 Budget Trading Program regulations or developed separate auction regulations. By including the auction procedure in this final-form rulemaking, the Board seeks to ensure that auction participants fully understand the auction process and the associated requirements.

In § 145.401 (relating to auction of CO_2 allowances), the Board includes a provision for the Department to participate in multistate CO_2 allowance auctions in coordination with other participating states based on specific conditions. First, a multistate auction capability and process must be in place for the participating states. A multistate auction must also provide benefits to this Commonwealth that meet or exceed the benefits conferred on this Commonwealth through a Commonwealth-run auction process. The criteria that the Department will use to determine if the multistate auction "meets or exceeds the benefits" of a Commonwealth-run auction are whether the auction results in reduced emissions and environmental, public health and welfare and economic benefits. As discussed further under section G, participation in RGGI would provide those benefits to this Commonwealth. Additionally, the multistate auction process must be consistent with the process described in this final-form rulemaking and include monitoring of each CO_2 allowance auction by an independent market monitor. Since the multistate auctions conducted by RGGI, Inc. satisfy all four of the conditions, the Department will participate in the multistate auctions. However, the Board also states that if the Department finds these four conditions are no longer met, the Department may determine to conduct a Commonwealth-run auction. By including the ability to conduct a Commonwealth-run action in this final-form rulemaking, the Board provides for flexibility in case the benefits of the multistate auctions diminish in the future.

Compliance and the RGGI CO_2 Allowance Tracking System (COATS)

Under § 145.304 (relating to applicability), the owner or operator of a fossil fuel-fired EGU with a nameplate capacity equal to or greater than 25 MWe that sends more than 10% of its annual gross generation to the electric grid will have a compliance obligation. These regulated EGUs are referred to as "CO_2 budget units" and a facility that includes one or more CO_2 budget units is a "CO_2 budget source," as defined under § 145.302. Under § 145.306, the owner or operator of each CO_2 budget source will be required to have a permit under Chapter 127 (relating to construction, modification, reactivation and operation of sources) which incorporates the requirements of the CO_2 Budget Trading Program. The owner or operator will be required to operate the CO_2 budget source and each CO_2 budget unit at the source in compliance with the permit.

Based on the most recent data from the EPA's Clean Air Market Division, the EIA and the Department's emission inventory, the Department estimates that as of the end of 2020, 63 CO_2 budget sources (facilities) with 150 CO_2 budget units would have a compliance obligation under this final-form rulemaking. However, due to the dynamic nature of the electricity generation sector, the number of covered facilities will likely change by the time this final-form rulemaking is implemented. The Department projects, based on announced closures and future firm capacity builds, that in 2022 there will be 66 CO_2 budget sources with 158 CO_2 budget units with a compliance obligation under this final-form rulemaking. The Department conducted an analysis of power sector emissions and the facilities that meet the applicability criteria in this final-form rulemaking and determined that around 99% of this Commonwealth's power sector CO_2 emissions would be covered under this final-form rulemaking.

Within the participating states and under this final-form rulemaking, the owner or operator of a CO_2 budget unit must obtain one CO_2 allowance for each ton of CO_2 emitted from the CO_2 budget unit each year. The owner or operator may use a CO_2 allowance issued by any participating state to demonstrate compliance with any state's regulation, including this final-form rulemaking. RGGI operates on 3-year control periods for compliance, meaning full compliance is evaluated at the end of each 3-year control period. As described under § 145.306(c), at the end of a control period, the owner or operator is required as a permit condition to hold enough CO_2 allowances in their compliance account to cover the CO_2 budget source's CO_2 emissions during the period. The owner or operator must also show interim control period compliance during each of the first 2 calendar years of a control period. During each interim control period, the owner or operator must hold CO_2 allowances equal to 50% of CO_2 emissions in the compliance account for the CO_2 budget source. As outlined under § 145.355 (relating to compliance), at the end of the control period or interim control period, CO_2 allowances will be deducted from each CO_2 budget source's compliance account to cover each of the CO_2 budget unit's CO_2 emissions at the source for the control period or interim control period.

Owners or operators of CO_2 budget sources are required to open a compliance account in COATS to transfer and hold CO_2 allowances for compliance purposes. The Department will use COATS to determine compliance with this final-form rulemaking by comparing the covered emissions of a CO_2 budget source with the CO_2 allowances held in its compliance account. COATS is a publicly accessible platform that records and tracks data for each state's CO_2 Budget Trading Program, including the transfer of CO_2 allowances that are offered for sale by the participating states and purchased in the quarterly auctions. On the COATS web site, the public can view and download reports of RGGI program data and CO_2 allowance market activity. COATS is used to allocate, award and transfer CO_2 allowances, to certify and provide CO_2 allowances for compliance-related tasks and to register and submit applications and reports for offset projects.

Under § 145.352 (relating to establishment of accounts), any person may apply to open a general account for the purpose of holding and transferring CO_2 allowances by submitting a complete application for a general account to the Department or its agent. A general account can be used for the receipt, transfer and banking of CO_2 allowances in COATS, but unlike a compliance account, it does not provide for the CO_2 allowance compliance deduction process outlined in this final-form rulemaking. A compliance account is associated with an EGU, a CO_2 budget source, regulated under a state CO_2 Budget Trading Program. These accounts are used for compliance with the requirements of each state's CO_2 Budget Trading Program. Only one compliance account will be assigned to each CO_2 budget source. An applicant must have either a general or compliance account to participate in CO_2 allowance auctions. CO_2 allowances can be "banked" meaning they may be held for future compliance as they have no expiration date.

CO_2 allowances may be acquired through purchases in quarterly multistate auctions, through secondary markets or by obtaining CO_2 offset allowances. Once a CO_2 allowance is purchased in an auction, it can then be resold in the secondary market. The secondary market assists with compliance by allowing CO_2 allowances to be traded in between quarterly auctions. As previously mentioned, every auction is overseen by an independent market monitor. Trading in the secondary market is also monitored by an independent market monitor to identify anticompetitive conduct. The quarterly multistate auction process continues each consecutive year of the CO_2 Budget Trading Program with fewer CO_2 allowances distributed into the auctions by the participating states each year.

As provided under section 4 of the Environmental Hearing Board Act (35 P.S. § 7514), persons adversely affected by a final Department action have the opportunity to appeal that action to the Environmental Hearing Board.

Offsets

As an additional compliance option under this final-form rulemaking, owners or operators of CO_2 budget sources may complete an offset project to reduce or avoid atmospheric loading of CO_2 or CO_2 equivalent (CO_2e) emissions. CO_2e refers to the quantity of a given GHG, other than CO_2, multiplied by its global warming potential. By completing an offset project, the owner or operator will generate CO_2 offset allowances which can be used to offset a portion of the CO_2 budget source's emissions. A CO_2 offset allowance is equivalent to a CO_2 allowance, however a CO_2 offset allowance represents a project-based GHG emission reduction outside of the electric generation sector. This project must be in addition to, not in place of, an existing legal requirement. Under § 145.355(a)(3), consistent with the RGGI Model Rule and the regulations in the participating states, the number of CO_2 offset allowances available to be deducted for compliance purposes may not exceed 3.3% of the CO_2 budget source's CO_2 emissions for a control period or interim control period.

As described under § 145.395 (relating to CO_2 emissions offset project standards), the three eligible offset categories include landfill methane capture and destruction projects, projects that sequester carbon due to reforestation, improved forest management or avoided conversion and projects that avoid methane emissions from agricultural manure management operations. Each of the three offset categories are designed to further reduce or sequester emissions of CO_2 or methane within the northeast region. In the RGGI Model Rule, the participating states cooperatively developed prescriptive regulatory requirements for each of the offset categories that have been incorporated into this final-form rulemaking. These requirements ensure that awarded CO_2 offset allowances represent CO_2e emission reductions or carbon sequestration that are real, additional, verifiable, enforceable and permanent.

Under § 145.393 (relating to general requirements), offset projects must be located in this Commonwealth or partly in this Commonwealth and partly within one or more of the participating states, provided that the majority of the CO_2e emission reductions or carbon sequestration occurs in this Commonwealth. Massachusetts, New Hampshire, Rhode Island and Virginia have determined not to award CO_2 offset allowances, but CO_2 budget sources located within those states may use CO_2 offset allowances awarded by a participating state, including this Commonwealth. By recognizing CO_2e emission reductions and carbon sequestration outside the electric generation sector and this Commonwealth's CO_2 emissions budget, offset projects provide compliance flexibility and create opportunities for low-cost emission reductions and other co-benefits across various sectors. Thus, including offset projects in this final-form rulemaking provides two crucial benefits, an additional compliance option for own-

ers or operators and the potential for this Commonwealth to further reduce GHG emissions.

Auction proceeds

The auction proceeds are an integral part to carrying out the purpose of this final-form rulemaking, which is to reduce anthropogenic emissions of CO_2, a GHG, from CO_2 budget sources in a manner that is protective of public health, welfare and the environment. By requiring the attainment of CO_2 allowances, this final-form rulemaking establishes a monetary obligation per ton of CO_2 emitted from a CO_2 budget source. The value of CO_2 allowances is used to further support the CO_2 Budget Trading Program and reduce GHG emissions and any associated costs related to achieving the emission reduction goals. The CO_2 allowances purchased in the multistate auctions generate proceeds that are provided back to the participating states, including this Commonwealth, for investment in initiatives that will further reduce CO_2 emissions. The fee amounts generated each year are a function of the CO_2 allowance budget and the CO_2 allowance price. Each participating state determines how best to invest auction proceeds to provide public health benefits and further reduce GHG emissions. Historically, RGGI-funded programs, including energy efficiency, clean and renewable energy, GHG abatement and direct bill assistance programs, have saved consumers money and helped support businesses, all with a net positive economic impact. The investment of auction proceeds is discussed further under section G.

Benefits

In addition to decreasing CO_2 emissions and addressing this Commonwealth's contribution to regional climate change impacts, this final-form rulemaking provides numerous co-benefits to public health and welfare and the environment. The co-benefits include job creation and worker training, decreased incidences of asthma, respiratory illness and hospital visits, avoidance of premature deaths, avoidance of lost work and school days due to illness and future electric bill savings. This Commonwealth will also see a decrease in harmful NO_x, SO_2 and particulate matter (PM) emissions, as well as ground level ozone pollution. This will particularly benefit those most often impacted by marginal air quality, such as low income and environmental justice communities. Emerging evidence links chronic exposure to air pollution with higher rates of morbidity and mortality from the novel coronavirus (COVID-19). As such, reductions in CO_2 emissions are even more significant now more than ever before. The COVID-19 pandemic has resulted in a renewed focus on climate change, local air quality impacts and opportunities for economic development, all areas where RGGI participation can provide value. The benefits of this final-form rulemaking are discussed further under section G.

RGGI provides regulatory certainty

This final-form rulemaking provides regulatory certainty for CO_2 budget sources in this Commonwealth. Although RGGI is a market-based approach, there are also price fluctuation protections that are built into the auction platform to help ensure that CO_2 allowance prices are predictable. Specifically, there are auction mechanisms that identify a precipitous increase or decrease in price, and trigger what are referred to as the Cost Containment Reserve (CCR) and Emissions Containment Reserve (ECR). The CCR process triggers additional CO_2 allowances to be offered for sale in the case of higher than projected emissions reduction costs. Similarly, states implementing the ECR, including this Commonwealth, will withhold CO_2 allowances from the auction to secure additional emissions reductions if prices fall below the established trigger price, so that the ECR will only trigger if emission reduction costs are lower than projected. This provides predictability in terms of the cost of compliance for covered entities. CO_2 allowances may also be purchased through the secondary market when costs are low and held for future compliance years.

Public outreach

As required under the Regulatory Review Act (RRA) (71 P.S. §§ 745.1—745.14) and further emphasized by Executive Order 2019-07, the Department conducted a robust public outreach effort, including the business community, energy producers, energy suppliers, organized labor, environmental groups, low-income and environmental justice advocates and others, to ensure that the development and implementation of this program results in reduced emissions, economic gains and consumer savings. The Department, working with the Pennsylvania Public Utility Commission (PUC), engaged with PJM Interconnection to promote the integration of the CO_2 Budget Trading program in a manner that preserves orderly and competitive economic dispatch within PJM and minimizes emissions leakage. The Department also met with various stakeholders to receive additional input on this final-form rulemaking on numerous occasions throughout the development process. In particular, the Department met with environmental groups, residents, businesses, legislators, owners and operators of affected sources, industry groups and environmental justice stakeholders during the development of this final-form rulemaking.

Additionally, the Department consulted with the Air Quality Technical Advisory Committee (AQTAC), the Citizens Advisory Council (CAC), the Small Business Compliance Advisory Committee (SBCAC) and EJAB throughout the development of this final-form rulemaking.

Air Quality Technical Advisory Committee (AQTAC)

AQTAC was established under section 7.6 of the APCA (35 P.S. § 4007.6) to provide technical advice at the request of the Department on policies, guidance and regulations. On December 12, 2019, the Department presented concepts to AQTAC on a potential rulemaking to participate in RGGI. The Department returned to AQTAC on February 13, 2020, to discuss the preliminary draft proposed Annex A. At the April 16, 2020, AQTAC meeting, the Department provided a brief update on the development of the draft proposed rulemaking. In response to requests from committee members for more opportunities to learn about the CO_2 Budget Trading Program, on April 23, 2020, the Department presented on and provided the modeling results associated with the draft proposed rulemaking in a Special Joint Informational Meeting of AQTAC and CAC. The meeting was held by means of a webinar and over 225 members of the public were able to listen to the modeling results. Individuals interested in hearing the modeling results can also watch the meeting at any time through a link on the Department's web site.

On May 7, 2020, the draft proposed rulemaking was presented to AQTAC for review and technical advice before the Department moved the draft proposed rulemaking forward to the Board for consideration. The meeting was held by means of a webinar and over 200 members of the public had the opportunity to listen to the discussion and to request to provide comments. The AQTAC members were divided on whether to submit a

formal letter of concurrence on the draft proposed rulemaking and ultimately declined to do so without a majority decision.

On April 8, 2021, the Department presented an update on this final-form rulemaking to AQTAC. The update included information on the regulatory process, a summary of the comments received, the Department's key proposed regulatory changes from proposed to final and the Department's public outreach efforts. On May 17, 2021, at a special AQTAC meeting, the Department presented this final-form rulemaking and updated power sector modeling results. After the Department answered the members' remaining questions on this final-form rulemaking, the members voted in support of recommending that the Department move this final-form rulemaking forward to the Board. The supportive vote is particularly notable considering that the same committee had been divided on whether to concur with the draft proposed rulemaking.

The opportunity to provide public comment on the draft proposed rulemaking to AQTAC members was provided on three occasions, at the February 13, 2020, April 16, 2020, and May 7, 2020, AQTAC meetings. Additionally, the opportunity to provide public comment on this final-form rulemaking to AQTAC members was provided on April 8, 2021, and May 17, 2021.

Citizens Advisory Council (CAC)

Under section 7.6 of the APCA, the Department is required to consult with CAC in the development of the Department's regulations and State Implementation Plans. On November 19, 2019, the Department presented concepts to CAC on a potential rulemaking to participate in RGGI. The Department returned to CAC on February 18, 2020, for an informational presentation on a preliminary draft proposed Annex A. On April 23, 2020, the Department presented on and provided the modeling results associated with the draft proposed rulemaking in a Special Joint Informational Meeting of AQTAC and CAC. The Department also conferred with CAC's Policy and Regulatory Oversight Committee concerning the draft proposed rulemaking on May 8, 2020. At the May 19, 2020, CAC meeting, the draft proposed rulemaking was presented to CAC for review before the Department moved the draft proposed rulemaking forward to the Board for consideration. The CAC members ultimately declined to submit a formal letter of concurrence with the Department's recommendation to move the draft proposed rulemaking forward to the Board for consideration.

On April 20, 2021, the Department presented an update on this final-form rulemaking to CAC. The update included information on the regulatory process, a summary of the comments received, the Department's key proposed regulatory changes from proposed to final, and the Department's public outreach efforts. On May 19, 2021, the Department presented this final-form rulemaking and updated power sector modeling results to CAC. After the Department answered the members remaining questions on this final-form rulemaking, the members voted in support of recommending that the Department move this final-form rulemaking forward to the Board. Again, the supportive vote is particularly notable considering that the same committee had been divided on whether to concur with the draft proposed rulemaking.

The opportunity to provide public comment on the draft proposed rulemaking to CAC members was provided on three occasions, at the November 19, 2019, February 18, 2020, and May 19, 2020, CAC meetings. Additionally, the opportunity to provide public comment on this final-form rulemaking to CAC members was provided on April 20, 2021, and May 19, 2021.

Small Business Compliance Advisory Committee (SBCAC)

Under section 7.8 of the APCA (35 P.S. § 4007.8), the SBCAC is required to review and advise the Department on rulemakings which affect small business stationary sources. The Department provided informational presentations on the draft proposed rulemaking to SBCAC on January 22, 2020, and April 22, 2020. On July 22, 2020, the Department presented the draft proposed rulemaking to SBCAC for review and advice on the potential small business stationary source impact of the draft proposed rulemaking. During the presentation, the Department mentioned that it had estimated that ten small business stationary sources, as defined under section 3 of the APCA (35 P.S. § 4003), may need to comply with the draft proposed rulemaking. Of those ten sources, seven were estimated to be waste coal-fired power plants. The Department also mentioned that it had included in the draft proposed rulemaking a CO_2 allowance set-aside provision to assist all waste coal-fired power plants located in this Commonwealth with their compliance obligation. The SBCAC ultimately voted not to concur with the Department's recommendation to move the draft proposed rulemaking forward to the Board.

On May 19, 2021, the Department presented this final-form rulemaking and updated power sector modeling results to SBCAC. During the presentation, the Department mentioned that it had estimated that now 12 small business stationary sources, as defined under section 3 of the APCA, may need to comply with this final-form rulemaking. Of those 12 sources, 8 were estimated to be waste coal-fired power plants. The Department also mentioned that, in this final-form rulemaking, it had retained the CO_2 allowance set-aside provision to assist all waste coal-fired power plants located in this Commonwealth with their compliance obligation. After the Department answered the members' remaining questions on this final-form rulemaking, the members voted in support of recommending that the Department move this final-form rulemaking forward to the Board. In light of the SBCAC vote in opposition to the draft proposed rulemaking, the members' support of this final-form rulemaking is particularly significant.

Environmental Justice Advisory Board (EJAB)

Additionally, the Department provided an informational presentation on the draft proposed rulemaking to EJAB on May 21, 2020, and had further engagement with environmental justice stakeholder groups such as the Chester Environmental Partnership and EJ Stakeholders Group throughout 2020. On July 16, 2020, the Department participated in a discussion with EJAB members centered around recommendations to the Department regarding RGGI. This conversation continued at the August 11, 2020, meeting and resulted in recommendations shared with the Department regarding RGGI program implementation in addition to review and discussion of the draft RGGI equity principles, developed in conjunction with EJAB. Discussion and consultation with EJAB regarding the draft RGGI Equity Principles continued during the November 17, 2020, meeting.

On May 20, 2021, the Department provided a presentation on this final-form rulemaking and updated power sector modeling, specifically highlighting environmental justice and equity concerns and how these were addressed in this final-form rulemaking and would be addressed in

an investment plan. The Delta Institute, with whom the Department collaborated to conduct outreach and research in communities impacted by this final-form rulemaking, also presented their findings and recommendations for the Department's efforts in affected communities. The Department also provided an opportunity to present public comments at this meeting. While EJAB did not vote on the draft proposed rulemaking in 2020, the EJAB members decided to vote unanimously in support of the Department moving this final-form rulemaking forward to the Board.

Other Advisory Committees

The Department also provided informational presentations on the draft proposed rulemaking to the Climate Change Advisory Committee on February 25, 2020, and the Oil and Gas Technical Advisory Board on May 20, 2020. Additionally, the Department provided updates to these committees on this final-form rulemaking.

E. *Summary of Final-Form Rulemaking and Changes from Proposed to Final-Form Rulemaking*

General provisions

§ 145.301. Purpose

This section establishes the purpose of the CO_2 Budget Trading Program.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.302. Definitions

This section establishes definitions for the following terms: "account number," "acid rain emissions limitation," "acid rain program," "adjustment for banked allowances," "administrator," "agent," "air pollution reduction account," "allocate or allocation," "allocation year," "allowance auction or auction," "ascending price, multiple-round auction," "attribute," "attribute credit," "automated data acquisition and handling system," "award," "beneficial interest," "bidder," "boiler," "CEMS—continuous emissions monitoring system," "COATS—CO_2 allowance tracking system," "CO_2 allowance," "CO_2 allowance auction or auction," "CO_2 allowance deduction or deduct CO_2 allowances," "CO_2 allowances held or hold CO_2 allowances," "CO_2 allowance price," "COATS account," "CO_2 allowance transfer deadline," "CO_2 authorized account representative," "CO_2 authorized alternate account representative," "CO_2 budget emissions limitation," "CO_2 budget permit condition," "CO_2 budget source," "CO_2 Budget Trading Program," "CO_2 budget unit," "CO_2 CCR allowance or CO_2 cost containment reserve allowance," "CO_2 CCR trigger price or CO_2 cost containment reserve trigger price," "CO_2 ECR allowance or CO_2 emissions containment reserve allowance," "CO_2 ECR trigger price or CO_2 emissions containment reserve trigger price," "CO_2e—CO_2 equivalent," "CO_2 offset allowance," "combined cycle system," "combined heat and power set-aside account," "combined heat and power unit," "combustion turbine," "commence commercial operation," "commence operation," "compliance account," "control period," "decay rate," "descending price, multiple-round auction," "discriminatory price, sealed-bid auction," "electronic submission agent," "eligible biomass," "excess emissions," "excess interim emissions," "general account," "GWP—global warming potential," "gross generation," "interim control period," "legacy emissions," "life-of-the-unit contractual arrangement," "maximum potential hourly heat input," "minimum reserve price," "monitoring system," "nameplate capacity," "notice of CO_2 allowance auction," "operator," "owner," "participating state," "Pennsylvania CO_2 budget trading program adjusted budget," "Pennsylvania CO_2 budget trading program base budget," "qualified participant," "receive or receipt of," "recordation, record or recorded," "reserve price," "reviewer," "source," "strategic use set-aside account," "ton or tonnage," "total useful energy," "undistributed CO_2 allowance," "uniform-price, sealed-bid auction," "unit," "unit operating day," "unsold CO_2 allowance," "useful thermal energy," "waste coal," "waste coal-fired," and "waste coal set-aside account." These defined terms are used in the substantive provisions of Subchapter E.

This section amends the definition of "allocate or allocation" by replacing the term "cogeneration" with "combined heat and power." The Board also amends the definition of "cogeneration set-aside account" to change it to "combined heat and power set-aside account" and to reflect the changes made to the combined heat and power set-aside provision under § 145.342(k). The Board also amends the definition of "cogeneration unit" to change it to "combined heat and power unit" and clarifies the production requirements for the electric-generating unit. The Board amends the definition of "control period" to delete the part of the definition that indicates when the Commonwealth will participate in the CO_2 Budget Trading Program. The Board amends the definition of "legacy emissions" to delete the language related to the 5-year period beginning January 1, 2015, and replace it with the 10-year period beginning January 1, 2010. The Board amends the definition of "minimum reserve price" by deleting the price for calendar year 2020 and adding the price for calendar year 2021. The Board amends the definition of "strategic use set-aside account" to reflect the changes made to the strategic use set-aside provision under § 145.342(j). The Board also adds a definition for the term "total useful energy." The Board slightly amends the definition of "undistributed CO_2 allowance" to reflect the proper verb tense. The Board amends the definition of "useful thermal energy" to add that the energy may come in the form of air. The Board amends the definition of "waste coal" to indicate that the term "waste coal" is defined within the definition of "alternative energy sources" under section 2 of the Alternative Energy Portfolio Standards Act (73 P.S. § 1648.2).

§ 145.303. Measurements, abbreviations and acronyms

This section establishes the measurements, abbreviations and acronyms used in Subchapter E.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.304. Applicability

This section establishes that this final-form rulemaking would apply to the owner or operator of a CO_2 budget unit that serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe. A CO_2 budget source is any source that includes one or more CO_2 budget unit.

This section is amended to delete the provision under subsection (a) indicating that applicable CO_2 budget units are in operation at any time on or after January 1, 2005, in response to comments that the date is unnecessary and may cause confusion.

§ 145.305. Limited exemption for CO_2 budget units with electrical output to the electric grid restricted by permit conditions

This section establishes a limited exemption as well as compliance requirements for a CO_2 budget source that has a permit issued by the Department containing a condition restricting the supply of the CO_2 budget unit's

annual electrical output to the electric grid to no more than 10% of the annual gross generation of the unit, or restricting the supply less than or equal to 15% of its annual total useful energy to any entity other than the industrial, institutional or commercial facility to which the CO_2 budget source is interconnected.

This section is amended to delete the language under subsection (a) indicating that the interconnected facility has to be a manufacturing facility and to instead broaden the language to allow for the interconnected facility to be an industrial, institutional or commercial facility. This amendment was made based on comments received that the prior exemption language was too narrow. This section is also amended to replace the January 1, 2022, commencement dates under subsection (c)(5) with an editor's note indicating that the commencement date shall be January 1, 2022, or the date of publication of the final-form rulemaking in the *Pennsylvania Bulletin*, whichever is later.

§ 145.306. Standard requirements

This section establishes the standard permit, monitoring, CO_2, excess emissions and recordkeeping and reporting requirements. This section also establishes liability for the CO_2 authorized account representative and the owner or operator of a CO_2 budget source or CO_2 budget unit.

This section is amended to add a provision under subsection (b)(3) for the Department to use the emissions measurements recorded and reported under Subpart C, Article III (relating to air resources) to determine whether areas of this Commonwealth have been disproportionately impacted by increased air pollution as a result of implementation of this final-form rulemaking. The Department will publish notice of the availability of a report of the emissions measurements and the determination in the *Pennsylvania Bulletin* on an annual basis, including the baseline air emissions data and the annual emissions measurements. This provision is added in response to comments received recommending that the Department ensure that this final-form rulemaking does not disproportionately impact environmental justice and low-income communities in this Commonwealth.

This section is also amended to replace the January 1, 2022, start date under subsection (c) for CO_2 budget units to be subject to the CO_2 requirements with an editor's note indicating that the start date will either be January 1, 2022, or the first day of the next calendar quarter following the date of publication of the final-form rulemaking in the *Pennsylvania Bulletin*, whichever is later.

§ 145.307. Computation of time

This section establishes the computation of any time period scheduled under the CO_2 Budget Trading Program.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

CO_2 authorized account representative for a CO_2 budget source

§ 145.311. Authorization and responsibilities of the CO_2 authorized account representative

This section establishes the authorization and responsibilities of the CO_2 authorized account representative.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.312. CO_2 authorized alternate account representative

This section establishes the requirements for the designation of no more than one CO_2 authorized alternate account representative to act on behalf of the CO_2 authorized account representative.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.313. Changing the CO_2 authorized account representative and the CO_2 authorized alternate account representative; changes in the owner or operator

This section establishes the process and requirements for changing the CO_2 authorized account representative or the CO_2 authorized alternate account representative. This section also establishes the process and requirements for changes in the owner or operator.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.314. Account certificate of representation

This section establishes the elements of a complete account certificate of representation for a CO_2 authorized account representative or a CO_2 authorized alternate account representative.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.315. Objections concerning the CO_2 authorized account representative

This section establishes the procedure for objections concerning the CO_2 authorized account representative.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.316. Delegation of authority to make electronic submissions and review information in COATS

This section establishes a provision for a CO_2 authorized account representative or a CO_2 authorized alternate account representative to delegate their authority to make an electronic submission in COATS.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

Permits

§ 145.321. General requirements for a permit incorporating CO_2 Budget Trading Program requirements

This section establishes the requirement for each CO_2 budget source to have a permit issued under Chapter 127 that incorporates the CO_2 Budget Trading Program requirements.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.322. Submission of an application for a new, renewed or modified permit incorporating CO_2 Budget Trading Program requirements

This section establishes the process and deadlines for the CO_2 authorized account representative to submit a complete permit application to the Department.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.323. Contents of an application for a permit incorporating CO_2 Budget Trading Program requirements

This section establishes the required contents of a complete permit application.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

Compliance certification

§ 145.331. Compliance certification report

This section establishes the requirement for a CO_2 authorized account representative of a CO_2 budget source to submit to the Department a compliance certification report for each control period. This section includes the required contents of the report and compliance certification.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.332. Department action on compliance certifications

This section establishes a provision for the Department or its agent's review of compliance certifications, the ability to conduct independent audits of submissions and to deduct or transfer CO_2 allowances based on the information in the compliance certification.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

CO_2 allowance allocations

§ 145.341. Pennsylvania CO_2 Budget Trading Program base budget

This section establishes the Pennsylvania CO_2 Budget Trading Program declining base budget for the years 2022 through 2030 and each succeeding calendar year. For example, for 2022, if the Commonwealth is a participating State on January 1, 2022, the Pennsylvania CO_2 Budget Trading Program base budget is 78 million tons. By 2030 and each succeeding calendar year, the Pennsylvania CO_2 Budget Trading Program base budget is 58,085,040 tons.

This section is amended to add quarterly provisions under subsection (a) for the 2022 Pennsylvania CO_2 Budget Trading Program Base Budget if the Commonwealth is a participating State after January 1, 2022. If the Commonwealth is a participating State after January 1, 2022, but before or on April 1, 2022, then the Pennsylvania CO_2 Budget Trading Program Base Budget is 57,954,000 tons. If the Commonwealth is a participating State after April 1, 2022, but before or on July 1, 2022, then the Pennsylvania CO_2 Budget Trading Program Base Budget is 40,716,000 tons. If the Commonwealth is a participating State after July 1, 2022, but before or on October 1, 2022, then the Pennsylvania CO_2 Budget Trading Program Base Budget is 18,564,000 tons.

§ 145.342. CO_2 allowance allocations

Subsection (a) establishes that the Department will allocate CO_2 allowances representing 100% of the tons for each allocation year from the Pennsylvania CO_2 Budget Trading Program base budget to the air pollution reduction account, less those allowances set aside each allocation year.

Subsection (b) establishes the Department's set-aside accounts for waste coal, strategic use and combined heat and power. Subsection (b) is amended to replace the term "cogeneration" with "combined heat and power" to account for the name change of the set-aside account under subsection (k).

Subsection (c) establishes the Pennsylvania CO_2 Budget Trading Program adjusted budget for each allocation year. Subsection (c) clarifies that the provision is applicable to each allocation year and to delete the language distinguishing allocation year 2022.

Subsection (d) establishes the CCR allocation and the process by which the Department will allocate CO_2 CCR allowances, separate from and additional to the Pennsylvania CO_2 Budget Trading Program base budget to the air pollution reduction account.

Subsection (e) establishes the ECR and the process by which the Department will convert and transfer any CO_2 allowances that have been withheld from any auction into the Pennsylvania ECR account.

Subsection (f) establishes a provision for the Department to determine whether to make an adjustment for banked allowances and the formula to be used.

Subsection (g) establishes a provision for the Department to establish the Pennsylvania CO_2 Budget Trading Program adjusted budget for an allocation year and the formula to be used.

Subsection (h) establishes a provision to require the Department to publish notice in the *Pennsylvania Bulletin* of the CO_2 Budget Trading Program adjusted budget for the allocation year, if the Department determines to adjust the budget for banked allowances.

Subsection (i) establishes the process for the waste coal set-aside allocation, including the establishment of a general account, allowance transfers, compliance allocation, an exception or exceedance of legacy emissions or 12.8 million tons during a calendar year, and the set-aside termination. This subsection applies to waste coal-fired units located in this Commonwealth that commenced operation on or before the effective date of this final-form rulemaking, that are subject to the CO_2 Budget Trading Program requirements.

Subsection (i) clarifies that the allowance transfer and compliance allocation under subsection (i)(3) and (4) occur each calendar year except for 2022. This subsection also increases the total amount of legacy emissions under subsection (i)(5) from 9.3 million tons from the proposed rulemaking to 12.8 million tons in this final-form rulemaking. This amendment is due to the changes to the definition of legacy emissions under § 145.301. This amount better reflects the operation levels of the waste coal-fired units in this Commonwealth and accounts for the CO_2 emissions from an additional waste coal-fired unit in the calculation for the total amount of legacy emissions.

Subsection (j) establishes the process for the strategic use set-aside allocation, including the establishment of a general account, allowance transfers, allocation to eligible projects, the strategic use application, CO_2 allowance determination, general requirements, use of CO_2 allowances and the transfer or retirement of CO_2 allowances. The strategic use set-aside allocation consists of undistributed CO_2 allowances from the waste coal set-aside account.

Subsection (j) clarifies the allocation of CO_2 allowances to eligible projects under subsection (j)(3) by adding a requirement for eligible projects to be located in this Commonwealth and result in a GHG emission reduction benefit. The Board also deletes language under subsection (j)(3)(i)—(iii) pertaining to the allocation to eligible projects for clarification purposes because the language was unnecessary and could cause confusion. Subsection (j) also adds the process for a strategic use application under subsection (j)(4). The Board clarifies that owners of eligible projects must submit an application that includes at a minimum the information required by the Department. This includes documentation that the project will result in GHG emission reductions, identification of the general account, specification of the number of CO_2 allowances requested and the calculations and supporting

data used to determine the GHG emission reductions. Subsection (j) also adds the process for the final CO_2 allowance determination by the Department, general requirements for eligibility, the use of CO_2 allowances by the owner of an eligible project and the transfer or retirement of CO_2 allowances at the end of each control period under subsection (j)(5)—(8).

Subsection (k) establishes the process for the combined heat and power set-aside allocation, including applicability, the establishment of a general account, the CO_2 allowance retirement, the required CO_2 allowance retirement application, the CO_2 allowance retirement determination and the retirement and transfer of CO_2 allowances.

Subsection (k) amends the name of the set-aside from "cogeneration" to "combined heat and power." This amendment clarifies that it is combined heat and power units that will be qualified for CO_2 allowances under the set-aside provision. The term "cogeneration" could have included units that are less efficient and less environmentally beneficial than the narrower category of "combined heat and power" units that the Department intended to cover under the set aside provision. The Board also clarifies under subsection (k)(1) that for a unit to be applicable, it must be located in this Commonwealth and subject to the CO_2 Budget Trading Program requirements in this final-form rulemaking.

Subsection (k) also includes two options under subsection (k)(3) for the retirement of CO_2 allowances from the combined heat and power set-aside account. Under the first option, which is an addition at final-form, applicable combined heat and power units may request that the Department retire CO_2 allowances equal to the total amount of CO_2 emitted as a result of providing useful thermal energy and electricity during each allocation year. Under the second option, which was included in the proposed rulemaking, applicable combined heat and power units may request that the Department retire CO_2 allowances equal to the partial amount of CO_2 emitted as a result of supplying useful thermal energy or electricity, or both, to an interconnected industrial, institutional or commercial facility during the allocation year.

As in the proposed rulemaking, the combined heat and power units must submit a complete application to request that CO_2 allowances be retired by the Department on behalf of the unit. The Board adds under subsection (k)(4) that if the unit is requesting total retirement of CO_2 allowances, the unit must submit an application, including documentation that the useful thermal energy is at least 25% of the total energy output of the combined heat and power unit on an annual basis and that the overall efficiency of the combined heat and power unit is at least 60% on an annual basis. In this final-form rulemaking, the Board includes calculations for a unit to determine the percentage of useful thermal energy and the percentage of overall efficiency. The Board also adds under subsection (k)(4) that if the unit is requesting partial retirement of CO_2 allowances, the unit must submit an application which includes documentation of the amount of useful thermal energy or electricity, or both, supplied to an interconnected industrial, institutional or commercial facility. In this final-form rulemaking, the Board also includes language under subsection (k)(5) indicating that it will retire CO_2 allowances on behalf of the units based on the satisfaction of the application requirements. The Board also adds in this final-form rulemaking under subsection (k)(5) that the owner or operator of a unit requiring additional CO_2 allowances to satisfy the CO_2 requirements shall transfer CO_2 allowances for compliance deductions to the compliance account of the unit. Lastly, the Board adds under subsection (k)(6) that it will retire CO_2 allowances from the set-aside account in an amount equal to the determination for each unit at the end of each interim control period, in addition to the end of each control period.

§ 145.343. Distribution of CO_2 allowances in the air pollution reduction account

This section establishes a description for how the Department will distribute CO_2 allowances held in the air pollution reduction account. With the exception of CO_2 allowances held in a set-aside account, the Department makes available all CO_2 allowances for purchase or auction each allocation year. The proceeds of the auction will be used in the elimination of air pollution in accordance with the APCA and Chapter 143 and for programmatic costs associated with the CO_2 Budget Trading Program.

This section is amended to replace the term "cogeneration" under subsections (a) and (d) with the term "combined heat and power" to account for the name change of the set-aside account under § 145.342(k).

CO_2 allowance tracking system

§ 145.351. CO_2 Allowance Tracking System (COATS) accounts

This section establishes a description for the nature and function of compliance and general accounts. Compliance accounts are only for CO_2 budget sources, while any person may have a general account.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.352. Establishment of accounts

This section establishes a provision for the establishment of a compliance account by the Department or its agent upon receipt of a complete account certificate of representation. This section also provides for any person to apply to open a general account by submitting a complete application to the Department or its agent that includes the required contents listed in this section. This section establishes the requirements for the authorization of a CO_2 authorized account representative, changing a CO_2 authorized account representative or a CO_2 authorized alternate account representative, changes in persons with ownership interest, objections concerning a CO_2 authorized account representative, delegation by a CO_2 authorized account representative and a CO_2 authorized alternate account representative and account identification.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.353. COATS responsibilities of CO_2 authorized account representative and CO_2 authorized alternate account representative

This section establishes a provision that allows submissions to the Department or its agent pertaining to a COATS account to be only submitted by the CO_2 authorized account representative or CO_2 authorized alternate account representative for the account.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.354. Recordation of CO_2 allowance allocations

This section establishes the deadlines for the Department or its agent to record and assign a serial number to

the CO_2 allowances allocated for the air pollution reduction account, the waste coal set-aside account, the strategic use set-aside account and the combined heat and power set-aside account.

This section adds under subsection (a) that the recordation of CO_2 allowances allocated for the air pollution reduction account will occur by January 1 of each calendar year except for 2022. This section also replaces the term "cogeneration" under subsection (b) with the term "combined heat and power" to account for the name change of the set-aside account under § 145.342(k).

§ 145.355. Compliance

This section establishes the requirements for allowances available for compliance deduction, deductions for compliance, allowance identification, deductions for excess emissions, recordation of deductions and action by the Department on submissions.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.356. Banking

This section establishes a provision to allow a CO_2 allowance that is held in a compliance account or a general account to be banked or in other words to remain in the account until the CO_2 allowance is deducted or transferred.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.357. Account error

This section establishes a provision to allow the Department or its agent to correct and notify a CO_2 authorized account representative of an error in a COATS account.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.358. Closing of general accounts

This section allows the CO_2 authorized account representative of a general account to instruct the Department or its agent to close a general account and for a general account that shows no activity for 1 year or more and does not contain any CO_2 allowances to be closed. This section also describes the notification procedure for the closure.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

CO_2 allowance transfers

§ 145.361. Submission of CO_2 allowance transfers

This section establishes the requirements for a CO_2 authorized account representative to submit a CO_2 allowance transfer to the Department for recordation.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.362. Recordation

This section establishes the requirements and process for the Department to record a CO_2 allowance transfer.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.363. Notification

This section establishes the processes for notification of recordation and nonrecordation of a CO_2 allowance transfer and allows for the resubmission of a CO_2 allowance transfer for recordation.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

Monitoring, reporting and recordkeeping requirements

§ 145.371. General monitoring requirements

This section establishes the monitoring requirements that an owner or operator or CO_2 authorized account representative of a CO_2 budget unit must comply with, including applicable sections of 40 CFR Part 75 (relating to continuous emission monitoring). This section also includes the requirements for installation, certification and data accounting, compliance dates for recording, reporting and quality assuring data from the monitoring system, reporting data and prohibitions.

This section replaces the July 1, 2021, and January 1, 2022, dates under paragraph (2) with blanks along with editor's notes indicating that the dates are based on the date of publication of this final-form rulemaking in the *Pennsylvania Bulletin*. Instead of July 1, 2021, the date will be 180 days prior to the date of publication. Instead of January 1, 2022, the date will be either January 1, 2022, or the date of publication.

§ 145.372. Initial certification and recertification procedures

This section establishes the conditions for an exemption from the initial certification requirements, the applicability of recertification, the process for petitions, the certification and recertification requirements, the approval process for initial certification and recertification, the procedures for loss of certification, initial certification and recertification procedures for low mass emissions units and certification and recertification procedures for an alternative monitoring system.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.373. Out-of-control periods

This section establishes the quality assurance requirements and the audit decertification procedure.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.374. Notifications

This section establishes the requirement for a CO_2 authorized account representative for a CO_2 budget unit to submit written notice to the Department and the Administrator in accordance with 40 CFR 75.61 (relating to notifications).

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.375. Recordkeeping and reporting

This section establishes the recordkeeping and reporting requirements, including monitoring plans, certification applications and quarterly reports.

This section deletes language under subsection (d) pertaining to when a quarterly report must be submitted based on the date of commencement of commercial operation because it was unnecessary, and the rest of the section provides sufficient information.

§ 145.376. Petitions

This section establishes the process and requirements for submitting a petition to the Department or the EPA Administrator requesting approval to apply an alternative monitoring requirement.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.377. CO_2 budget units that co-fire eligible biomass

This section establishes reporting and data calculation requirements for the CO_2 authorized account representative of a CO_2 budget unit that co-fires eligible biomass as a compliance mechanism under the CO_2 Budget Trading Program.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

Auction of CO_2 CCR and ECR allowances

§ 145.381. Purpose

This section establishes a provision to allow the Department or its agent to specify additional information in the auction notice for each auction, including the time and location of the auction, auction rules, registration deadlines and any additional information deemed necessary or useful.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.382. General requirements

This section establishes the required contents of an auction notice. This section also includes tables with the CCR trigger price and the ECR trigger price for the years 2023 through 2030. This section also establishes the process for the sale of CCR allowances, implementation of the reserve price and withholding ECR allowances from an auction.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

CO_2 emissions offset projects

§ 145.391. Purpose

This section establishes a provision to allow the Department to award CO_2 offset allowances to sponsors of CO_2 emissions offset projects that have reduced or avoided atmospheric loading of CO_2, CO_2e or sequestered carbon. CO_2 offset allowances must be real, additional, verifiable, enforceable and permanent within the framework of a standards-based approach.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.392. Definitions

This section establishes definitions for the following terms: "AEPS—Alternative energy portfolio standards," "anaerobic digester," "anaerobic digestion," "anaerobic storage," "biogas," "conflict of interest," "forest offset project," "forest offset project data report," "forest offset protocol," "independent verifier," "intentional reversal," "market penetration rate," "offset project," "project commencement," "project sponsor," "regional-type anaerobic digester," "reporting period," "reversal," "system benefit fund," "total solids," "unintentional reversal," "verification" and "volatile solids." These defined terms are used in the substantive provisions of §§ 145.391—145.397 (relating to CO_2 emissions offset projects).

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.393. General requirements

This section establishes the requirements for an offset project to qualify for the award of CO_2 offset allowances, including the three eligible offset project types, offset project location requirements, the project sponsor, general additionality requirements, maximum allocation periods for offset projects, offset project audits, as well as ineligibility of an offset project due to noncompliance.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.394. Application process

This section establishes the requirement for a project sponsor to establish a general account and to submit a consistency application, including the deadlines and required contents of the consistency application and the process for the Department's action on consistency applications.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.395. CO_2 emissions offset project standards

This section establishes the eligibility, offset project description, calculation and monitoring and verification requirements for the categories of offset projects, landfill methane capture and destruction, sequestration of carbon due to reforestation, improved forest management or avoided conversion and avoided methane emissions from agricultural manure management operations.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.396. Accreditation of independent verifiers

This section establishes the standards for accreditation of independent verifiers, the required contents of an application for accreditation, the process for Department action on applications for accreditation, reciprocity of independent verifiers across participating states and the required conduct of an accredited verifier.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.397. Award and recordation of CO_2 offset allowances

This section establishes the process for awarding and recording CO_2 offset allowances. This section also establishes the deadlines for submittal of monitoring and verification reports, the required contents of monitoring and verification reports, the prohibition against filing monitoring and verification reports in more than one participating state and the process for Department action on monitoring and verification reports.

This section replaces the January 1, 2022, and June 30, 2022, dates under subsection (c) with blanks along with editor's notes indicating that the dates are based on the date of publication of this final-form rulemaking in the *Pennsylvania Bulletin*. Instead of June 30, 2022, the date will be either June 30, 2022, or 180 days after the date of publication, whichever is later. Instead of January 1, 2022, the date will be either January 1, 2022, or the date of publication, whichever is later.

CO_2 allowance auctions

§ 145.401. Auction of CO_2 allowances

This section establishes that the Department will participate in a multistate CO_2 allowance auction in coordination with other participating states. However, the Department may determine to conduct a Commonwealth-run auction if the conditions for participating in a multistate auction are no longer met. The Department may delegate implementation and administrative support for any CO_2 allowance auction and retains its authority to

enforce compliance with the CO_2 Budget Trading Program and control over the proceeds.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.402. Auction format

This section establishes the format of a CO_2 allowance auction, the lot of CO_2 allowances and the reserve price.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.403. Auction timing and CO_2 allowance submission schedule

This section establishes the timing of a CO_2 allowance auction, the availability of CO_2 allowances held in the air pollution reduction account and the requirement for an auction to include a CCR reserve and trigger price.

This section replaces the term "cogeneration" with the term "combined heat and power" under subsection (b) to account for the name change of the set-aside account under § 145.342(k).

§ 145.404. Auction notice

This section establishes the requirement for notice to be provided of each CO_2 allowance auction and the required contents of the notice.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.405. Auction participant requirements

This section establishes the eligibility requirements to participate in a CO_2 allowance auction as a bidder.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.406. Auction participant qualification

This section establishes the requirement for the submittal of a qualification application, the deadline for submittal, the required contents of a qualification application, the process for Department review of a qualification application and changes in qualification status.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.407. Submission of financial security

This section establishes the requirement for a qualified applicant to provide financial security to the Department to participate in a CO_2 allowance auction as a bidder and the process for requesting return of the financial security.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.408. Bid submittal requirements

This section establishes the requirements and limitations of bid submittals.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

§ 145.409. Approval of auction results

This section establishes the requirement for an independent monitor to observe the conduct and outcome of each auction and issue a report to the Department. If the Department approves the outcome of an auction based on the contents of the report, the Department will transfer and record the CO_2 allowances to successful bidders and make available the auction clearing price and the number of CO_2 allowances sold in the auction.

There are no changes made to this section from proposed rulemaking to final-form rulemaking.

F. *Summary of Comments and Responses on the Proposed Rulemaking*

The Board adopted the proposed rulemaking at its meeting on September 15, 2020. On November 7, 2020, the proposed rulemaking was published for a 69-day comment period at 50 Pa.B. 6212 (November 7, 2020). Ten public hearings were held virtually with two each day on December 8, 9, 10, 11, and 14, 2020. Over 445 persons provided verbal testimony, including several in Spanish translation. The comment period closed on January 14, 2021. The Board received comments from 14,038 commentators, including the House and Senate Environmental Resources and Energy Committees (ERE Committees), members of the General Assembly and the Independent Regulatory Review Commission (IRRC). The majority of the commentators expressed their support of the CO_2 Budget Trading Program, noting the success of cap and trade programs in reducing emissions and the health, environmental and economic benefits that can be achieved through this final-form rulemaking. The comments received on the proposed rulemaking are summarized in this section and are addressed in a comment and response document which is available on the Department's web site.

During the comment period, the Board sought comment specifically on potential approaches for the implementation of this final-form rulemaking that would address equity and environmental justice concerns in this Commonwealth. The Board received comments requesting that the Department monitor for any local air quality impacts resulting from this final-form rulemaking in environmental justice areas. The Board also received comments requesting that a portion of the auction proceeds be spent on projects located in environmental justice communities. Additionally, the Board received comments requesting that the Department continue to engage in public outreach with environmental justice communities throughout the implementation of this final-form rulemaking. In response to these comments, the Department developed three Equity Principles which have been incorporated under section D of this preamble. The Equity Principles consist of inclusively gathering and meaningfully considering input from environmental justice community members, mitigating any adverse impacts on human health in environmental justice communities and distributing environmental and economic benefits of auction proceeds in communities that have been disproportionately impacted by air pollution. The Board also adds language to this final-form rulemaking indicating that the Department will assess air emissions data each year to determine whether areas of this Commonwealth have been disproportionately impacted by increased air pollution as a result of implementation of this final-form rulemaking. Additionally, the Department is committed to allocating a portion of the auction proceeds to further eliminate air pollution in environmental justice communities.

During the comment period, the Board also sought comment on potential approaches that would assist the transition of workers and communities in a just and equitable manner as this Commonwealth continues on a path to cleaner electricity generation. The Board received comments expressing concern about the dependence certain communities have on fossil fuel-fired EGUs. Commentators noted that school districts, small businesses, municipalities, parks and recreation areas and other

community pillars depend on the economic productivity of these facilities. The concern is particularly acute in areas containing a concentrated number of fossil fuel-fired EGUs.

Many commentators implied that this final-form rulemaking would be the singular cause of economic challenges to fossil fuel-fired EGUs, specifically coal-fired EGUs, while other commentators recognized that these facilities are projected to cease operations in the near future with or without the implementation of this final-form rulemaking. Nonetheless, commentators acknowledged the economic impact of these facilities and recognized a need to both create a transition plan and invest auction proceeds in these communities. Specifically, commentators recommended a transition plan that includes economic diversification and workforce development that will lead to immediate job transition for workers employed at facilities expected to close in the near future. Commentators also recommended using auction proceeds as authorized under the APCA to invest in these communities in ways that would provide for job training and economic growth.

In response to these comments, the Department partnered with the Delta Institute, a nonprofit organization that has worked with communities to solve complex environmental challenges since 1998, to evaluate the potential impacts of a changing energy sector on this Commonwealth's energy workers and the surrounding communities. The Delta Institute is engaging with fossil fuel communities to understand the interdependence with large fossil fuel-fired EGUs, as well as surrounding communities, and to explore potential economic diversification strategies. Included in this engagement is discussions with community members representing nonprofit organizations, labor, workforce development boards, research institutions, regional planning commissions, universities, private citizens, utility providers, community organizations, industry groups, economic development entities, consumer advocates, environmental justice stakeholders and many others representing all the regions of this Commonwealth, including communities with significant employment in the fossil fuel sector. The Delta Institute's efforts, in coordination with the Department, will culminate in the development of a set of Guiding Principles and a final strategy document that will be used to guide the Department's implementation of this final-form rulemaking, including the investment of auction proceeds in projects that benefit communities dependent on fossil fuel-fired EGUs.

During the comment period, the Board also sought comment on ways to appropriately address the benefits of cogeneration in this Commonwealth, including the allocation of CO_2 allowances similar to the waste coal set-aside provision. The Board received comments requesting that the cogeneration set-aside, now the combined heat and power set-aside, be expanded to include more than useful thermal energy or electricity provided to a co-located facility. In response to comments, the Board included two tiers for the retirement of CO_2 allowances from the combined heat and power set-aside account in this final-form rulemaking. Under the first tier, which is an addition at final-form, applicable combined heat and power units may request that the Department retire CO_2 allowances equal to the total amount of CO_2 emitted as a result of providing all useful thermal energy and electricity during each allocation year. Under the second tier, which was included in the proposed rulemaking, applicable combined heat and power units may request that the Department retire CO_2 allowances equal to the partial amount of CO_2 emitted as a result of supplying useful thermal energy or electricity, or both, to an interconnected industrial, institutional or commercial facility during the allocation year. This two-tier approach aligns the overall environmental benefits of CHP units with the CO_2 allowances that may be requested.

Numerous members of the General Assembly expressed their support of this final-form rulemaking and this Commonwealth's participation in RGGI. Some even highlighted that polling consistently shows that more than 70% of the residents in this Commonwealth strongly support action on climate change and that this final-form rulemaking has diverse support from businesses and institutions to environmental nonprofits and health organizations. Members also stressed that it is crucial to address climate change, lower emissions of harmful air pollutants, particularly given the COVID-19 pandemic, and consider environmental justice concerns. They noted that RGGI has proven successful and that RGGI participation will provide a multitude of benefits to public health, safety and welfare, as well as benefits to the environment and the economy. In particular, they stated that participating in RGGI will spur additional investments in renewable energy throughout this Commonwealth, ensuring that this Commonwealth's vital position in National energy markets is maintained. They also emphasized that reducing CO_2 emissions from the power generation sector would improve the environment for this Commonwealth's citizens and make this Commonwealth a more sustainable and innovative place in the future. In response, the Board acknowledges these comments and thanks the members for their support.

IRRC asks the Board to explain whether the regulation is in the public interest, particularly given the House and Senate ERE Committee objections noted in their disapproval letters, which are discussed as follows and addressed in the comment and response document.

In response, the Board explains how this final-form rulemaking is in the public interest. As required under section 745.5b of the RRA (71 P.S. § 745.5b), to determine whether a regulation is in the public interest, IRRC must first determine whether the agency has the statutory authority to promulgate the regulation and whether the regulation conforms to the intent of the General Assembly when it enacted the enabling statute. As discussed previously, the Board has the authority to promulgate this final-form rulemaking under section 5(a)(1) of the APCA. Additionally, this final-form rulemaking is consistent with the purpose of the APCA and the intent of the General Assembly. That is, among other things, to protect the air resources of the Commonwealth to the degree necessary for the protection of public health, safety and well-being of its citizens. 35 P.S. § 4002(a). Moreover, several members of the General Assembly, including minority members of the ERE Committees, provided supportive comments, specifically noting that the Board has the authority under the APCA to promulgate this final-form rulemaking and that it is in the public interest.

In determining whether a regulation is in the public interest, IRRC also must consider the additional criteria for review of regulations outlined under section 745.5b(b) of the RRA. The Board explains as follows how this final-form rulemaking satisfies the review criteria in detailed responses to comments and specifically notes the following: First, this final-form rulemaking will have a positive economic and fiscal impact on this Commonwealth. For example, the economic modeling conducted for this final-form rulemaking shows that this Common-

wealth's participation in RGGI will lead to a net increase of more than 30,000 jobs and spur further economic growth in this Commonwealth as it will result in an additional $1.9 billion to the Gross State Product. Second, this final-form rulemaking protects the public health, safety and welfare and the environment from harmful CO_2 pollution from fossil fuel-fired EGUs. For instance, the Department calculated that if 188 million tons of CO_2 are avoided through 2030 then this Commonwealth's residents would see cumulative health benefits amounting to $2.79—$6.3 billion. Third, the requirements of this final-form rulemaking are both reasonable and feasible. One of the most cost-effective emissions reduction strategies to limit CO_2 emissions is through an electricity sector cap and trade program. Fourth, this final-form rulemaking does not represent a policy decision of such a substantial nature that it requires legislative review. That is, the General Assembly has already provided the Board with broad authority to promulgate this final-form rulemaking. Fifth, the Board has responded to the comments, objections and recommendations of the ERE Committees in this final-form rulemaking and associated comment and response document. Where warranted, changes are made to this final-form rulemaking in response to those comments. Sixth, the Board and the Department complied with the RRA and IRRC's regulations throughout the rulemaking process. Seventh, this final-form rulemaking is supported by a plethora of acceptable data and an extensive modeling effort as discussed throughout this preamble. Finally, while there is not a less costly or less intrusive method of achieving the goal of this final-form rulemaking, since a cap and trade program is the most effective means of reducing CO_2 emissions, provisions are included in this final-form rulemaking to address any impact on small business stationary sources.

Further, the Commonwealth Court has found that the regulation of air pollution has long been a valid public interest. See e.g., *Bortz Coal Co., v. Commonwealth*, 279 A.2d 388, 391 (Pa. Cmwlth. 1971); *DER v. Pennsylvania Power Co.*, 384 A.2d 273, 284 (Pa. Cmwlth. 1978); *Commonwealth v. Bethlehem Steel Corporation*, 367 A.2d 222, 225 (Pa. 1976). Moreover, the Commonwealth Court has endorsed the Department's position that the General Assembly, through the APCA, gave the agency the authority to reduce GHG emissions, including CO_2. *Funk v. Wolf*, 144 A.3d 228, 250 (Pa. Cmwlth. 2016).

1. Comments, objections or recommendations of the House and Senate ERE Committees.

IRRC noted that under the RRA, the comments, objections or recommendations of a Legislative Committee is one of the criteria that IRRC must consider when determining if a regulation is in the public interest. In response, the specific comments, objections and recommendations noted by IRRC will be addressed in turn as follows.

a. *The Board has the statutory authority under the APCA to promulgate this final-form rulemaking.*

The House and Senate ERE Committees objected to this final-form rulemaking stating that the Board lacks statutory authority under the APCA (35 P.S. §§ 4001—4015) to promulgate the regulation.

In response, the Board has the authority to promulgate this final-form rulemaking under the APCA. Through the APCA, the Legislature granted the Department and the Board the authority to protect the air resources of this Commonwealth for the protection of public health, safety and the environment. Section 5(a)(1) of the APCA provides the Board with broad authority to adopt rules and regulations for the prevention, control, reduction and abatement of air pollution in this Commonwealth. In *Marcellus Shale Coalition v. Department of Environmental Protection*, 216 A.3d 448 (Cmwlth. Ct. 2019), the Commonwealth Court outlined the test for determining whether a legislative rulemaking has statutory authority. To determine whether a regulation is adopted within an agency's granted power, the Commonwealth Court stated that it looks to the statutory authority authorizing the agency to promulgate the legislative rule and examines that language to determine whether the rule falls within that grant of authority. The Court also found that the legislature's delegation must be clear and unmistakable. In particular, the Court considers the letter of the statutory delegation to create the rule and the purpose of the statute and its reasonable effect. Id. As this final-form rulemaking would limit CO_2 pollution by regulating CO_2 emitted from fossil fuel-fired EGUs to ensure protection of public health, welfare and the environment, this final-form rulemaking is clearly within the Board's granted authority under the APCA and advances the purposes of the APCA to abate air pollution.

b. *The auction proceeds are a fee under the APCA.*

The House and Senate ERE Committees objected to this final-form rulemaking stating that the proceeds generated through the auction procedures of the rulemaking and RGGI are not a fee under the APCA, but rather an illegal tax.

In response, the auction proceeds amount to fees authorized under section 6.3(a) of the APCA and not an illegal tax. Section 6.3(a) of the APCA provides the Department with the authority to establish fees to support the air pollution control program. The Department is limited by its existing statutory authority under section 9.2(a) of the APCA (35 P.S. § 4009.2) to only use fees for "the elimination of air pollution." Since the auction proceeds generated as a result of this final-form rulemaking would be used to reduce GHG emissions, further eliminating air pollution, the fees would be used to support the air pollution control program in accordance with section 6.3(a) of the APCA. There is also existing case law that supports the conclusion that auction proceeds are a fee, including *National Biscuit Company v. Philadelphia*, 98 A.2d 182 (Pa. 1953) and *White v. Com. Medical Professional Liability Catastrophe Loss Fund*, 571 A.2d 9 (Pa. Cmwlth. 1990).

Under RGGI, regulated EGUs are required to purchase one CO_2 allowance per ton of CO_2 they emit through multistate auctions or on the secondary market. The proceeds of the multistate auctions and the secondary market are then provided back to the participating states. The purchase of CO_2 allowances generating auction proceeds is a fee because these purchases are one component of the "regulatory measures intended to cover the cost of administering a regulatory scheme authorized under the police power of the government." See *City of Philadelphia v. Southeastern Pennsylvania Transp. Auth.*, 303 A.2d 247, 251 (Pa. Cmwlth. 1973). As mentioned previously, RGGI provides a "two-prong" approach to reducing CO_2 emissions from fossil fuel-fired EGUs. The second prong involves the proper investment of the auction proceeds to further reduce CO_2 emissions, as well as other harmful GHG emissions. This investment therefore fulfills the purpose and administration of this final-form rulemaking. This final-form rulemaking does not create a tax which is a "revenue-producing measure authorized under the tax-

ing power of the government." Id. The intent of RGGI is not to generate revenue for general government or public purposes, but to achieve a common goal of reducing CO_2 emissions from EGUs.

Moreover, none of the 11 participating states consider their CO_2 budget trading program regulations, or the RGGI program overall, as establishing a tax. Also, no court has determined that RGGI amounts to a tax. Recently in *California Chamber of Commerce v. State Air Res. Bd.*, 10 Cal. App. 5th 604, 650, 216 Cal. Rptr. 3d 694, 728 (Cal. Ct. App. 2017), the California court determined that the California Air Resource Board's cap and invest program did not create a tax.

c. *The virtual public hearings were held in accordance with the APCA.*

The House and Senate ERE Committees objected to this final-form rulemaking stating the Department violated the APCA's mandate for public hearings to be held in impacted communities. They also noted that citizens without internet access or broadband capability were excluded from participating in the virtual hearings that were held. A few other commentators also believe that the APCA requires the Board to hold in-person public hearings.

In response, the APCA does not require the Board to hold "in-person" public hearings. Section 7(a) of the APCA (35 P.S. § 4007(a)) states "Public hearings shall be held by the board or by the department, acting on behalf and at the direction or request of the board, in any region of the Commonwealth affected before any rules or regulations with regard to the control, abatement, prevention or reduction of air pollution are adopted for that region or subregion." The commentators and legislators seem to be interpreting the phrase "in any region of the Commonwealth affected" in section 7(a) as creating a requirement for "in-person" public hearings. The Board disagrees with this interpretation and contends that the intent of the statutory language is to ensure that a public hearing is held in a location that is actually impacted by a regulation. For instance, section 7(a) would prevent the Board from holding one public hearing in Harrisburg for a regulation that only impacts the Northwest region.

For this final-form rulemaking, the Board satisfies the public hearing requirement in section 7(a) of the APCA by holding ten well-attended virtual public hearings. As this final-form rulemaking impacts the entire Commonwealth, the virtual public hearings were accessible Statewide. The virtual public hearings were a necessity due to the COVID-19 pandemic and allowed hundreds of residents in this Commonwealth to deliver their comments without exposing themselves or their families to a widespread, communicable disease. To ensure that all residents in this Commonwealth had access to the ten virtual public hearings for this final-form rulemaking, the Department and the Board made the hearings accessible by means of any phone connection, including landline and cellular service, or internet connection. The public hearings were also held at varying times, including evening hours, so that members of the public could provide testimony outside of typical work hours. For the first time, the Department was able to provide real time English to Spanish translation during the virtual public hearings. Altogether, the Board and the Department saw record participation during the virtual public hearings and over 445 members of the public provided testimony on this final-form rulemaking. The Department also received feedback from many participants that the use of a virtual public hearing platform was preferred and resulted in savings, in both time and money, for many residents who did not have to drive or find a way to attend a public hearing. Additionally, as with all the Department's rulemakings, members of the public also had the opportunity to provide written comments by regular mail, the Department's eComment system or e-mail during the comment period.

d. *This final-form rulemaking will have a positive fiscal impact on this Commonwealth's economy.*

The House and Senate ERE Committees objected to this final-form rulemaking stating it will have a negative fiscal impact on this Commonwealth's economy. In particular, they argue that the coal industry, fossil fuel-fired EGUs, large industrial users of electricity, small businesses, labor unions and individuals will be harmed financially.

In response, the Board explains that the implementation of this final-form rulemaking will provide public health, environmental and economic benefits to this Commonwealth. The Department calculates that if 188 million tons of CO_2 are avoided through 2030 then this Commonwealth's residents would see cumulative health benefits amounting to $2.79—$6.3 billion. This equates to a range of $232—$525 million annually and is an extremely conservative estimate given these health benefits are only those benefits tied to the reduction of co-pollutants (NO_x, SO_2 and $PM_{2.5}$) and exclude the additional benefits provided from the reduction in CO_2 emissions. Further, calculations using the social cost of carbon would result in significantly higher benefit values for this final-form rulemaking.

The economic modeling conducted shows that this Commonwealth's participation in RGGI will lead to a net increase of more than 30,000 jobs and add $1.9 billion to the Gross State Product. Additionally, an independent study by Penn State University's Center for Environmental Law and Policy confirms the economic benefits accruing as a result of this Commonwealth's participation in RGGI and suggests positive economic impacts beyond even those calculated by the Department. See Penn State University Center for Energy Law and Policy, Prospects for Pennsylvania in the Regional Greenhouse Gas Initiative Working Paper, December 2020, https://sites.psu.edu/celp/files/2021/01/CELP_RGGI.pdf. In particular, the Penn State University study indicates that between 2022 and 2030 this Commonwealth's participation in RGGI will yield $2.6 billion in net economic benefits to the power sector within this Commonwealth. This study determined that economic benefits to electricity market participants include the higher net profits to the generation sector (additional revenue arising from higher wholesale electricity prices less new costs from the purchase of CO_2 allowances) and CO_2 allowance proceeds accruing to CO_2 allowance holders. Economic costs predominantly reflect the higher costs of purchasing bulk power by load-serving entities and direct access consumers in the PJM regional electricity market. This analysis is narrower in scope than the Department's modeling but remains demonstrative of the positive economic impacts of this final-form rulemaking.

In 2010, coal generation accounted for 47% of the energy generated in this Commonwealth and by 2019, coal generation had decreased to 17%. The Department's modeling indicates that this trend will continue with the majority of coal generation (with the exception of waste coal) ceasing by 2025. This is the current trajectory of coal which has been on the decline for decades, and in 2014 was finally usurped by natural gas as the leading

source of energy generation in this Commonwealth. These impacts are not resulting from RGGI participation as they will occur regardless of the implementation of this final-form rulemaking. However, RGGI participation presents an opportunity to assist transitioning communities, which would not exist without this final-form rulemaking.

While fossil fuel-fired EGUs subject to this final-form rulemaking will have costs associated with the purchase of CO_2 allowances, in most cases this minimal cost will be passed onto consumers. Cost impacts as a result of implementation of this final-form rulemaking are minimal and are less than the typical seasonal swing in electricity prices. Wholesale power prices ($/MWh) are expected to be no more than 2.4% higher in 2022 and no more than 1.7% higher by 2030. These prices reflect the cost of a cap and trade program and are not reflective of the investment of the auction proceeds. Significant investments of the auction proceeds in the energy sector in this Commonwealth will have a price suppressing impact further decreasing any potential price impacts.

Additionally, based on information contained within the PUC's 2020 Rate Comparison Report, a small commercial customer's usage is the closest aligned with a small business as defined by the United States Small Business Administration, though it is not an exact match. See Pennsylvania PUC, 2020 Rate Comparison Report, https://www.puc.pa.gov/General/publications_reports/pdf/Rate_Comparison_Rpt2020.pdf. The PUC report indicates that average 2019 electricity consumption for this customer class is 1,000 kilowatt-hour/month (kWh/month) with total monthly bills ranging from $106.29 to $143.49, depending on the Electric Distribution Company service territory and the corresponding electricity rate. Using the same assumptions regarding the composition of an electric bill as used previously, a small commercial customer using 1,000 kWh/month could expect to see a potential increase of $1.28 to $1.72 per month in 2022.

According to the PUC, a large commercial customer using 200,000 kWh/month has a monthly bill ranging from $11,788.08 to $21,043.18. These customers could expect to see a 2022 potential price increase of $141 to $253 per month, again depending on their electric service territory and associated rates.

The Board understands the concerns that have been expressed regarding impacts on employees in this Commonwealth's energy sector. As mentioned previously, while there will be expansion and contraction within the energy sector as a result of implementation of this final-form rulemaking, this Commonwealth's participation in RGGI will lead to a net increase of more than 30,000 jobs. The Department has partnered with the Delta Institute to evaluate the potential impacts of a changing energy sector on this Commonwealth's energy workers and the surrounding communities. This will assist the Department in identifying community-driven ways to assist this Commonwealth's transition to a cleaner energy economy.

e. *CO_2 is an "air pollutant" as defined under the APCA, and despite leakage, this final-form rulemaking will significantly reduce GHG emissions.*

The House and Senate ERE Committees objected to this final-form rulemaking stating CO_2 is not an "air pollutant" as defined by the APCA. They stated that the proposal does not prevent or reduce GHGs because generation will shift to fossil fuel-fired EGUs in other states and emissions from those EGUs will pollute the environment of the Commonwealth. This is referred to as leakage. Any reduction of pollution would be insignificant; thus, this final-form rulemaking fails to meet the APCA's standard that regulations must produce a meaningful reduction of "air pollution."

In response, the Board finds that CO_2 is in fact a regulated "air pollutant." Section 5(a)(1) of the APCA provides the Board with authority to regulate CO_2 emissions. CO_2 falls under the definition of "air pollution" in section 3 of the APCA. First, CO_2 is a gas, and falls within the definition of "air contaminant" under section 3 of the APCA, which is defined as "[s]moke, dust, fume, gas, odor, mist, radioactive substance, vapor, pollen or any combination thereof." By extension, CO_2 is also "air contamination" under section 3 of the APCA, which is defined as "[t]he presence in the outdoor atmosphere of an air contaminant which contributes to any condition of air pollution." The term "air pollution" is defined as "[t]he presence in the outdoor atmosphere of any form of contaminant. . .in such place, manner or concentration inimical or which may be inimical to the public health, safety or welfare or which is or may be injurious to human, plant or animal life or to property or which unreasonably interferes with the comfortable enjoyment of life or property." Therefore, CO_2 is also considered to be "air pollution" under the APCA. CO_2 is also a Federally regulated air pollutant under the CAA. See *Massachusetts v. EPA*, 549 U.S. 497 (2007). Moreover, the EPA has issued an Endangerment Finding for CO_2 emissions resulting from fossil fuel-fired EGUs. See 80 FR 64509 (October 23, 2015); *Am. Lung Ass'n v. Env't Prot. Agency*, 985 F.3d 914 (D.C. Cir. 2021).

While there is a potential for leakage as outlined in the Department's modeling for this final-form rulemaking, this potential leakage does not undermine the value of the significant benefits that will accrue to this Commonwealth and its residents as a result of this final-form rulemaking. The potential for CO_2 reductions in this Commonwealth by 2030 ranges from 97 million to 227 million tons. These emissions reductions will occur in this Commonwealth despite any generation changes that may occur in other states. The meaningful reductions of air pollution stemming from this final-form rulemaking have also been confirmed by independent power sector modeling conducted by PJM and the Penn State University Center for Energy Law and Policy. The Department further discusses the topic of leakage as follows.

f. *The modeling used by EQB to justify this final-form rulemaking is up to date, takes into account "leakage" and provides an accurate estimate of the economic impact of this final-form rulemaking.*

The House and Senate ERE Committees objected to this final-form rulemaking stating that the modeling used by the Board to justify the rulemaking is outdated and does not provide an accurate estimate of the economic impact that the rulemaking will have. They also state that the modeling does not account for leakage.

The Board received thoughtful comments and feedback on the 2020 power sector modeling results through the Department's extensive advisory committee meetings, webinars and the public comment period. The Board understood the concerns raised and wanted to make sure the modeling was as current as possible to ensure that all the provisions of this final-form rulemaking, specifically the starting CO_2 allowance budget, were still appropriate when this final-form rulemaking is implemented in 2022. Additionally, the Board wanted to verify previous conclusions based on the modeling. For this final-form rulemaking, the Department conducted additional power sec-

tor modeling which verified earlier modeling conclusions, confirming the 78 million CO_2 allowance budget for 2022 and the significant potential for CO_2 emissions reductions in this Commonwealth. The updated modeling also showed that in comparison to the previous 2020 round of modeling, impacts on natural gas generation, this Commonwealth's energy exports and electricity prices are even less than the slight impacts anticipated by the previous modeling. Furthermore, the modeling confirmed that the retirement of coal-fired EGUs in this Commonwealth will occur within a shorter time horizon. According to the updated modeling, most of the coal-fired generation in this Commonwealth will cease by 2025 in no part due to this final-form rulemaking, but rather decreased demand for electricity resulting in part from the COVID-19 pandemic and its impacts on the energy markets.

The Department's modeling used the Integrated Planning Model (IPM), which provides long-term projections of plant dispatch, capacity expansion and retirement, market prices and emissions projections for the power sector across the country. This specific analysis focused on this Commonwealth, the PJM states and the current states participating in RGGI. The results of the modeling include electricity transmission both into and out of this Commonwealth and the larger PJM and Eastern Interconnect regions. These values allow the Department to evaluate the changes in generation and the flows of electricity between states and across the region. It is through this data that the Department is able to evaluate the potential for and magnitude of emissions shifts within the region.

The Department's modeling indicates that there may be some future emissions leakage in terms of additional fossil fuel emissions outside of this Commonwealth's borders. Emissions leakage is the shifting of emissions from states with carbon pricing to states without carbon pricing. This leakage has no bearing on the environmental, health or economic benefits of this final-form rulemaking, and merely means that a portion of the emissions reductions achieved within this Commonwealth may shift to other states or areas without carbon pricing. Additionally, this final-form rulemaking will result in a net emissions reduction of 28 million tons of CO_2 across the broader PJM region through 2030.

It is important to note that the modeling results assume the only policy change impacting the power sector in the region between 2021 and 2030 is this Commonwealth's participation in RGGI. The Department finds that extremely unlikely given the ongoing efforts by PJM, the Federal Energy Regulatory Commission (FERC) and the Federal government. The Department has been an active participant in PJM's Carbon Pricing Senior Task Force (CPSTF), which is conducting additional modeling in an effort to better understand and control leakage across the entire PJM region. The FERC hosted a carbon pricing technical conference in the Fall of 2020, resulting in a policy statement requesting public comment on issues such as how to address shifting generation amongst states as a result of carbon pricing. Lastly, the Federal administration is seeking to reduce carbon emissions from the electric power sector, specifically aiming to produce 80% of the Nation's electricity from zero-carbon sources. The Department anticipates actions at the regional and Federal level will mitigate potential leakage impacts that may result from this final-form rulemaking.

Although there is the potential for leakage as confirmed in both the original and updated modeling results, this leakage does not undermine the benefits of this final-form rulemaking to this Commonwealth, nor to the broader PJM region and Eastern Interconnection. The Department's modeling has not only accounted for leakage, but Department staff have actively engaged with stakeholders, PJM Interconnection and electricity generators specifically to discuss options for leakage mitigation.

g. *This final-form rulemaking should proceed despite announcements of Federal climate change policies.*

The House and Senate ERE Committees objected to this final-form rulemaking stating that the Federal government is moving forward with climate change policies. In response, while the current Federal Administration is currently in the process of developing climate change policies, there is no guarantee that those policies will come to fruition. For instance, the Obama Administration's regulation to control GHG emissions from existing fossil fuel-fired EGUs, commonly known as the Clean Power Plan, was stayed by the United States Supreme Court and later repealed and replaced by the Trump Administration's ACE rule. The Board contends that addressing the impacts of climate change is too pressing of an issue to wait any longer. As one of the top GHG emitting states in the country, the Board has a compelling interest to reduce GHG emissions to address climate change and protect public health, welfare and the environment.

h. *The benefits of this final-form rulemaking outweigh potential costs, including during the time of the COVID-19 pandemic.*

The House and Senate ERE Committees objected to this final-form rulemaking stating that the potential costs of the rulemaking outweigh any meaningful benefits that may result from it, especially during the time of the COVID-19 pandemic.

Emerging evidence links chronic exposure to air pollution with higher rates of morbidity and mortality from COVID-19. The current pandemic underscores the need for further emissions reductions. See Harvard University Study "Fine particulate matter and COVID-19 mortality in the United States: A national study on long-term exposure to air pollution and COVID-19 mortality in the United States", 2020, https://projects.iq.harvard.edu/covid-pm.

The implementation of this final-form rulemaking will have climate, environmental and health benefits. While there is a cost associated with implementation, the benefits far outweigh any costs. Although the methodology to determine climate and environmental impacts are complicated, calculating the health benefits is quite simple. The Department calculated the health impacts associated with the emissions reductions stemming from the implementation of this final-form rulemaking using the EPA's Benefit-per-Ton and Incidence-per-Ton (IPT) methodology. The Department calculated that if 188 million tons of CO_2 are avoided through 2030 then this Commonwealth's residents would see cumulative health benefits amounting to $2.79—$6.3 billion. This equates to a range of $232—$525 million annually and is an extremely conservative estimate given these health benefits are only those benefits tied to the reduction of co-pollutants (NO_2, SO_x and $PM_{2.5}$) and exclude the additional benefits provided from the reduction in CO_2 emissions. Further, calculations using the social cost of carbon would result in significantly higher benefit values for this final-form rulemaking.

The analysis conducted by Penn State University's Center for Energy Law and Policy estimated the health

benefits of this Commonwealth's participation in RGGI to be on the order of $1 billion to $4 billion per year over the initial decade of this Commonwealth's RGGI participation, specifically noting the conservative nature of the Department's calculations. Implementation of this final-form rulemaking does come with increased costs, in terms of impacts on electricity prices. Updated modeling shows that the impact on wholesale power prices is estimated to be 2.42% in 2022 and 1.73% by 2030. These minimal price impacts are exclusive of the price-suppressing impacts of any investments to be made in the energy sector using the auction proceeds.

The Department's economic modeling shows that even with consideration of these electricity price increases, this Commonwealth's participation in RGGI will lead to a net increase of more than 30,000 jobs and add $1.9 billion to the Gross State Product. While implementation of this final-form rulemaking is not without cost, the economic and health benefits are considerable and far outweigh any implementation costs.

2. This final-form rulemaking does not represent a policy decision of such a substantial nature that it requires legislative review.

IRRC questions whether the regulation represents a policy decision of such a substantial nature that it requires legislative review. IRRC also notes that a Senate letter signed by 29 members states the following: "The proposed regulation joining Pennsylvania to RGGI represents the single, most significant energy policy reform since the deregulation of electric generation in the 1990's." IRRC also mentions the passage of House Bill 2025 of the 2019-2020 session and that 10 of the 11 states that currently participate in RGGI have done so with specific authority granted by their respective legislative branches. Additionally, IRRC notes that three advisory committees declined to support the proposed rulemaking. IRRC asks the Board to explain why it is appropriate to implement this carbon trading program through executive order and the rulemaking process instead of the legislative process.

In response, this final-form rulemaking is not a policy decision of such a substantial nature that it requires legislative review. The General Assembly provided the Board with broad authority to regulate sources of air pollution under the APCA. This final-form rulemaking directly falls within that statutory grant of authority as CO_2 emissions cause harmful air pollution. The APCA does not limit the Board in how it may regulate a source of pollution. This is shown by the Board's history of promulgating different types of regulations, including command and control and cap and trade regulations under the broad authority of section 5(a)(1) of the APCA. If House Bill 2025 had not been vetoed by the Governor, it would have taken away the Board's existing statutory authority to regulate CO_2 emissions. The bill went beyond preventing this Commonwealth from participating in RGGI to prohibit the Board from promulgating any regulation to address CO_2 emissions unless and until the General Assembly passed future authorizing legislation. This would have been extremely detrimental to the Department's efforts to address GHG emissions and climate change impacts. However, as explained previously, the General Assembly provided the Board with the authority to promulgate this final-form rulemaking through the expansive language in the APCA.

Through Executive Order 2019-07, Governor Tom Wolf directed the Department to develop and present to the Board a rulemaking to abate, control or limit CO_2 emissions from fossil-fuel-fired EGUs, as authorized by the APCA. In other words, the Department was directed to use its existing statutory authority, the APCA, to implement this final-form rulemaking. The Executive Order was an indication from the Governor that addressing CO_2 emissions from the electricity sector is necessary. However, this final-form rulemaking is not being implemented under the Executive Order as it is being implemented under the APCA, specifically sections 5(a)(1) and 6.3(a).

Although most of the participating states were directed to participate in RGGI through specific legislation, that does not necessarily mean that their environmental agencies lacked regulatory authority. It is more of an indication of the willingness to address climate change in those states. Furthermore, as discussed previously, four of the Department's advisory committees voted to support the Department's recommendation to move this final-form rulemaking forward to the Board. This includes the three advisory committees, AQTAC, SBCAC and CAC, which had voted against supporting the proposed rulemaking.

3. This final-form rulemaking sufficiently protects public health, safety and welfare and this Commonwealth's natural resources.

IRRC notes that some commentators have provided suggestions for amending the regulation to provide further environmental protections. These suggestions include: modifying or eliminating set-aside allowances for certain industries; inclusion of data collection mechanisms to ensure emissions are not shifted to generation facilities that fall below the 25 MW threshold of this final-form rulemaking because the facilities could have a negative impact on environmental justice communities; and ensuring that imported power does not contribute to leakage. IRRC also encourages the Board to consider all the recommendations provided by commentators as a means of further protecting the public health, safety and welfare of citizens of this Commonwealth and its natural resources and meeting the goal of this final-form rulemaking.

The Board has considered all the recommendations provided by commentators as a means of further protecting the public health, safety and welfare of citizens of this Commonwealth and its natural resources and meeting the goal of this final-form rulemaking. The Board made the following changes to this final-form rulemaking in response to comments. The Board increases the value of the waste coal set-aside in response to comments received to account for the continued operation of one waste coal-fired unit and to better reflect the operation levels of the waste coal-fired units in this Commonwealth. The waste coal set-aside is increased from 9.3 million CO_2 allowances in the proposed rulemaking to 12.8 million CO_2 allowances in this final-form rulemaking.

The Board received extensive comments on the cogeneration set-aside and made changes in response to those comments. Additionally, commentators expressed the potential for unintended consequences in the form of emissions increases potentially by disincentivizing the operation of current cogeneration facilities and the addition of future facilities. The Board was asked to clarify what was meant by cogeneration and to expand the set-aside to cover the full emissions of facilities that meet certain emissions criteria. In response, the Board clarifies that its intent was to be inclusive of CHP units and as a result changed the name of the set-aside to clarify that it was not applicable to all cogeneration, but specifically to CHP units as defined in this final-form rulemaking. Addition-

ally, the Board responds to the request for an expanded set-aside by including two tiers for qualifying CHP units to apply for CO_2 allowances to be retired on their behalf.

Commentators also requested additional clarification on the functioning of the strategic use set-aside. In response, the Department clarifies the objectives for the set-aside, provided additional specifics on the types of qualifying projects and outlined the application process by which an entity could submit a project for consideration to the Department. The Board also received comments that the scope of the limited exemption from the applicability requirements was too narrow and that the term "manufacturing facility" should be replaced with "industrial, institutional or commercial" facility. The Board makes this change in this final-form rulemaking in response to comments.

There were concerns expressed during the comment period regarding the impact of cap and trade programs on environmental justice communities. Environmental justice and other stakeholders specifically requested that the Department closely monitor the impacts of this final-form rulemaking on air quality in this Commonwealth, particularly in environmental justice communities. In response, the Board adds a provision for an annual air quality impact assessment in this final-form rulemaking. In response to comments received both prior to and during the public comment period, the Department, in partnership with external stakeholders develops equity principles for this final-form rulemaking. Through the establishment of these principles and their implementation, the Department pledges to inclusively gather public input on the rule and mitigate any adverse impacts with a focus on environmental justice communities.

The Board received comments urging additional flexibility in terms of the implementation date for this final-form rulemaking. Some commentators requested that the Board consider a mid-year start date if January 1, 2022, is not possible to avoid a delay in implementation until January 1 of the following year. In response, the Board adds quarterly CO_2 allowance budgets for 2022 which identify the starting CO_2 allowance budget for the beginning of each quarter. These budgets are based on the starting CO_2 allowance budget of 78 million CO_2 allowances and allocated to each quarter based on the seasonal emissions distributions during the past 5 years. For example, rather than assigning a value of 25% to each quarter, the value for each quarter is calculated based on historic emissions. The Department relied on actual historic emissions from the past 5 years to properly assign a quarterly emissions value.

4. The Board has the statutory authority to promulgate this final-form rulemaking.

IRRC asks the Board to consider all of the arguments on both sides of the statutory authority issues and provide a point-by-point analysis of why this final-form rulemaking is within the statutory authority granted by the APCA and also consistent with the intent of the General Assembly when that statute was enacted.

The Board has provided a point-by-point analysis of its statutory authority and explained how this final-form rulemaking is consistent with the intent of the General Assembly under the subsection titled Authority to limit CO_2 emissions and to participate in RGGI through this final-form rulemaking. Specifically, the Board explained how section 5(a)(1) of the APCA provides the Board with broad authority to promulgate regulations for the "prevention, control, reduction and abatement of air pollution." The Board also explained in that subsection how CO_2 is included in the definition of "air pollution" under section 3 of the APCA. Additionally, the Board explained how the auction proceeds are a fee authorized under section 6.3(a), and not an illegal tax as some commentators have claimed. Further, the Board addresses leakage concerns in detailed responses as follows.

Members of the General Assembly and others have argued that the Department is violating section 4(24) of the APCA (35 P.S. § 4004(24)) by not submitting the interstate air pollution control compact or agreement to the General Assembly. Section 4(24) of the APCA provides that the Department shall "[c]ooperate with the appropriate agencies of the United States or of other states or any interstate agencies with respect to the control, prevention, abatement and reduction of air pollution, and where appropriate formulate interstate air pollution control compacts or agreements for the submission thereof to the General Assembly." However, as states do not sign any sort of agreement or compact to participate in RGGI, there is no agreement to submit to the General Assembly under section 4(24) of the APCA. Instead, the key piece to becoming a "participating state," as the term is defined in this final-form rulemaking, is the establishment of a corresponding regulation as part of the CO_2 Budget Trading Program. While this final-form rulemaking provides for this Commonwealth's participation in RGGI by establishing a corresponding regulation, it does not amount to an agreement or compact subject to legislative approval.

RGGI is also not an interstate air pollution control compact. Instead it is a regional initiative, where participating states develop regulations that are capable of linking with similar regulations in other states. States may withdraw from participation at any time. A state may participate in RGGI once it meets the definition of a "participating state," meaning the state has promulgated a regulation consistent with the RGGI Model Rule and has executed a service contract with RGGI, Inc.

Moreover, the APCA does not require the Board to hold "in-person" public hearings. Section 7(a) of the APCA states "[p]ublic hearings shall be held by the board or by the department, acting on behalf and at the direction or request of the board, in any region of the Commonwealth affected before any rules or regulations with regard to the control, abatement, prevention or reduction of air pollution are adopted for that region or subregion." The commentators and legislators seem to be interpreting the phrase "in any region of the Commonwealth affected" in section 7(a) as creating a requirement for "in-person" public hearings. The Board disagrees with this interpretation and contends that the intent of the statutory language is to ensure that a public hearing is held in a location that is actually impacted by a regulation. For instance, section 7(a) would prevent the Board from holding one public hearing in Harrisburg for a regulation that only impacts the Northwest region. For this final-form rulemaking, the Board satisfied the public hearing requirement in section 7(a) of the APCA by holding ten well-attended virtual public hearings. As this final-form rulemaking impacts the entire Commonwealth, the virtual public hearings were accessible Statewide.

5. This final-form rulemaking is consistent with the intent of the General Assembly.

IRRC questions whether the regulation is consistent with the intent of the General Assembly. The commentator notes that the current balance of the Clean Air Fund is approximately $26 million dollars and that the Depart-

ment anticipates that this final-form rulemaking will raise over $2 billion dollars between 2022 and 2030. IRRC is concerned that the General Assembly did not contemplate or envision the Clean Air Fund growing to that amount and that it could be spent at the discretion of the Secretary under the guidance provided by a regulation (Chapter 143) promulgated over 40 years ago. IRRC asks the Board to explain how this process of collecting proceeds and distributing funds of this magnitude is consistent with the intent of the General Assembly when the APCA was enacted.

As the Board explained under the subsection titled Authority to limit CO_2 emissions and to participate in RGGI through this final-form rulemaking, this final-form rulemaking is consistent with the intent of the General Assembly. The Board is acting within the existing statutory authority granted by the General Assembly. Section 6.3(a) of the APCA provides the Board with broad authority to establish fees to support the air pollution control program authorized by the APCA and not covered by fees required by section 502(b) of the CAA. As provided under section 9.2(a) of the APCA, all auction proceeds will be used to support the elimination of air pollution and in furtherance of the purpose of the APCA. While the auction proceeds may appear to be significant, the fee amounts are necessary to further achieve through investments the GHG emission reductions needed to address climate change and protect public health and welfare.

IRRC notes that many of the commentators that support this final-form rulemaking provided suggestions on how the auction proceeds could be allocated. Some of the suggestions would appear to be outside of the parameters established by Chapter 143. IRRC agrees with comments submitted by the Pennsylvania Office of Consumer Advocate that suggest the Department should "seek further authority" to allow for a broader use of the auction proceeds. Alternatively, IRRC suggests that the Department could initiate a rulemaking to amend existing Chapter 143 to allow for a broader use of the proceeds.

In response, the Board and the Department are not planning on seeking further authority for the use of the auction proceeds as the authority provided under section 9.2(a) of the APCA is quite broad. Section 9.2(a) allows the Department to use fees to further eliminate air pollution in this Commonwealth. As required under section 9.2(a) of the APCA, the Board adopted Chapter 143 to further provide for the management and use of the money in the Clean Air Fund. Section 143.1(a) states that "[m]onies paid into the Clean Air Fund may be disbursed at the discretion of the Secretary for use in the elimination of air pollution." See 25 Pa. Code § 143.1(a). Under § 143.1(b), the "full and normal range of activities" of the Department are considered to contribute to the elimination of air pollution. Section 143.1(b) also includes a nonexclusive list of purposes that the Clean Air Fund monies can be used for, including the purchase of contractual services and payment of the costs of a public project necessary to abate air pollution. Section 143.1(b) therefore specifically provides for the Department to both use the auction proceeds to invest in projects that further reduce GHG emissions and to contract with RGGI, Inc. for administrative and technical support services. For these reasons, the Board and the Department do not find it necessary to seek further authority or to initiate a rulemaking to amend Chapter 143. However, if the General Assembly enacts legislation that extends the Department's authority to use the auction proceeds, the Department would be able to further assist transitioning workers and environmental justice communities.

6. Need for this final-form rulemaking; economic or fiscal impact.

IRRC questions whether the regulation is needed and asks the Board to address the economic and fiscal impact. IRRC notes that questions raised about the need for this final-form rulemaking are numerous but revolve around two main issues. The first, as noted by the Senate ERE Committee, is the fact that CO_2 emissions from fossil fuel power generation in this Commonwealth have been reduced by 38% since 2008. This reduction trend is likely to continue because of the price of natural gas and the development of renewable energy. Second, this final-form rulemaking will push the generation of electricity to states like West Virginia and Ohio that do not participate in RGGI. If these states increase their production of fossil fuel-generated electricity, as predicted by some commentators, the overall health benefits to this region of the country, and this Commonwealth specifically, will be minimal and come at a steep economic cost.

This final-form rulemaking is needed to reduce CO_2 emissions in this Commonwealth. This Commonwealth has established Statewide goals to reduce GHG emissions economy-wide by 26% by 2025 and 80% by 2050 in comparison to 2005 levels. While this Commonwealth has achieved reductions from all sectors, including the power sector, more is needed to meet these goals, set to avoid the worst impacts of climate change. This Commonwealth's participation in RGGI would provide significant assurance that prudent investments of the auction proceeds coupled with other GHG abatement activities will allow this Commonwealth to remain on track to reach the 2025 reduction goal. Without the reductions associated with the implementation of this final-form rulemaking, this Commonwealth will fail to reach even the interim GHG reduction goal established for this Commonwealth.

While emissions from the generation sector have decreased since 2008, the current trajectory of emissions reductions in the power sector is not sustainable. There are few remaining coal-fired EGUs, which based on updated modeling are anticipated to cease most, if not all, generation by 2025. The air emissions gains that were realized through fuel switching (coal to natural gas) and replacing aging coal-fired facilities with new natural gas plants have mostly occurred. Moving forward a new approach is needed to achieve further reductions. Historic trends provide no guarantee of what the emissions profile for this Commonwealth's electricity sector will look like in the future. For example, electricity generation is very sensitive to the costs of inputs, the major input of which is fuel. As this Commonwealth has seen over the last year, the COVID-19 pandemic led to an increase in natural gas prices, in turn generating electricity with natural gas became more expensive and in response production of electricity using coal as an input increased. In turn this led to an increase in emissions in this Commonwealth. Even though demand for electricity decreased, the method and fuel from which that electricity was created was more energy-intensive and emissions-intensive, leading to increased emissions even when the overall demand for electricity had decreased. The energy market is very dynamic, and historic emissions trends and profiles are not indicative of future trends, not without concrete targets and goals regarding emissions reductions. RGGI is a proven market-based program, and one that recognizes that CO_2 emissions from fossil fuel-fired EGUs exist, and the cost of this pollution should be factored into the price of that electricity. This allows this Commonwealth to value the real cost of electricity generation when the cost of these emissions is factored in

and helps position this Commonwealth to remain competitive in an ever-evolving energy market where clean energy is highly valued both in this Commonwealth and in the other states to which the Commonwealth exports electricity.

The Department's power sector modeling indicates a potential for emissions and generation leakage, meaning that some of the emissions decrease in this Commonwealth, tied to decreased generation in this Commonwealth, may be made up for by increased generation in other states across the region. This shift most often occurs between states that have implemented carbon pricing programs (like RGGI) and those states that do not have carbon pricing. The modeling indicates that this Commonwealth's participation in RGGI could lead to between 97 million and 227 million tons of CO_2 reductions between 2022 and 2030. These emissions reductions are going to occur in this Commonwealth and are not tied to or dependent on actions by other surrounding states. When this Commonwealth implements this final-form rulemaking, significant CO_2 emissions reductions occur within this Commonwealth. Tied to these significant emissions reductions are the resulting health impacts. The Department calculates that if 188 million tons of CO_2 are avoided through 2030 then this Commonwealth's residents would see cumulative health benefits amounting to $2.79—$6.3 billion. Penn State University's study projected even higher health benefits, on the order of $1—$4 billion per year over the initial decade of this Commonwealth's RGGI participation, specifically noting the conservative nature of the Department's calculations. These health benefits accrue within this Commonwealth as a result of this regulation, and again are not tied to decisions by outside actors.

Where leakage becomes a consideration is when the focus on emissions reductions is outside of this Commonwealth and across a broader region, for example, the PJM Interconnection, the regional transmission organization consisting of parts of 13 states and the District of Columbia. The potential for an evaluation of leakage has been a focus of PJM since the creation of RGGI as PJM has some member states that participate in RGGI (have a carbon price) and some that do not (have no carbon price). To more thoroughly study the potential for leakage and the magnitude of that leakage, PJM created the CPSTF. The CPSTF, in which the Department has been an active participant, has examined the impacts of both the recent entry of Virginia into RGGI and also the potential impacts of this Commonwealth's participation in RGGI. PJM's independent power sector modeling came to the same conclusions as the Department's modeling, that though there was some potential for leakage, this did not undermine the significant emissions reduction potential within this Commonwealth, nor did it undermine emissions benefits across the PJM region. See PJM Interconnection, Issue Charge of the Carbon Pricing Senior Task Force, 2019, www.pjm.com/-/media/committees-groups/task-forces/cpstf/postings/issue-charge.ashx?la=en. Even with the potential for leakage, PJM determined that, in addition to significant benefits within this Commonwealth, there was a net benefit across the PJM region as well. When this is extrapolated further to the Eastern Interconnection, there continues to be a net benefit, the value of which decreases as the lens through which the reductions are viewed becomes wider.

In addition to the modeling conducted by the Department and PJM, the report by the Penn State University Center for Energy Law and Policy also addresses leakage. Their associated modeling confirms the potential for leakage, and bolsters results from PJM and the Department in confirming that despite leakage, CO_2 emissions in the multi-state PJM region decline following this Commonwealth participating in RGGI. Though some emissions may shift to other states, the potential increases in other states' emissions do not absorb the emissions reductions occurring in this Commonwealth. This Commonwealth's EGUs with close proximity to abundant and inexpensive natural gas have a competitive advantage over similar operations in other states. While some other states may experience some increased emissions, again any increase in emissions in the region is out-measured by the decrease in this Commonwealth, thereby resulting in net benefits across the region. Additionally, these leakage estimates and models are based on current and predicted market conditions based on existing laws and policies, exclusive of any further regional or National action on carbon pricing which would minimize or entirely eliminate the potential for leakage.

The Department compiled a Pennsylvania RGGI Modeling Report which provides a detailed explanation of modeling processes, assumptions, inputs and outputs to provide a broad understanding of the results. This summary report and all the modeling results and recordings of the public webinars providing further explanation of key results are available on the Department's RGGI webpage located at https://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/RGGI/PA_RGGI_Modeling_Report.pdf.

IRRC agrees that the goal of reducing GHGs through RGGI and this final-form rulemaking is laudable. However, IRRC mentions that the declining emissions from fossil fuel-fired EGUs that has occurred over recent years without participation in RGGI and the leakage that will occur if this Commonwealth does join RGGI raises the question of whether this final-form rulemaking and its potential benefits are needed compared to the potential negative fiscal impact that is predicted by the Committees, certain legislators and some members of the regulated community. To assist IRRC in determining if this final-form rulemaking is in the public interest, IRRC asks the Board to explain why the benefits of this final-form rulemaking outweigh the costs associated with its implementation.

The benefits of this final-form rulemaking far exceed any associated costs. According to the Department's 2021 Pennsylvania Climate Impacts Assessment, climate change is already having a negative impact on this Commonwealth with wide-ranging economic impacts, from disruptions to recreation and tourism to agriculture and infrastructure service disruptions. Furthermore, climate change will not affect all residents of this Commonwealth equally. Some may be more at risk because of their location, income, housing, health or other factors. As this Commonwealth works to reduce its climate risks, steps should be taken to ensure that these inequitable impacts are addressed and that efforts to address climate change do not inadvertently exacerbate inequities. The harm is already being felt by this Commonwealth's most vulnerable residents, and the Commonwealth must not delay implementation as this final-form rulemaking is clearly in the public interest. As mentioned previously, failure to implement this final-form rulemaking, or even a delay in implementation will cause this Commonwealth to miss its 2025 interim GHG reduction goal with concerns regarding the trajectory toward meeting the 2050 goal.

As CO_2 budget sources would need one allowance for each ton of CO_2 emitted, the owners or operators would

need to acquire 61 million CO_2 allowances at the estimated 2022 allowance price of $3.24 (2017 $/ton). If these CO_2 allowances were all purchased at quarterly multistate auctions in 2022, the total purchase cost would be $198 million. The CO_2 budget sources would then most likely incorporate this compliance cost into their offer price for electricity. The price of electricity is then passed onto electric consumers. However, that does not mean that $198 million will be passed on to this Commonwealth's electric consumers as 25% of this Commonwealth's electricity is sold out of State.

Even if assuming the $198 million is the annual price tag of the program, which as explained previously is an over estimation, the resulting public health benefits alone are estimated to be higher at $232—$525 million annually. The value of partial benefits already exceeds the cost of the program, and this does not account for the total environmental, health and economic benefits of CO_2 reductions, nor does it include the benefits of the reinvestment of the quarterly auction proceeds, a major economic driver.

The independent Penn State University study also confirms that the climate benefits for this Commonwealth exceed the monetary costs of participation in RGGI. Penn State University's analysis projected even higher health benefits, on the order of $1—$4 billion per year over the initial decade of this Commonwealth's RGGI participation, specifically noting the conservative nature of the Department's calculations. Looking at the benefits even through the narrow lens of health benefits, the benefits exceed the costs, with additional benefits accruing from the reinvestment of the auction proceeds. This is consistent with the actual results of participation for the existing participating states over the last decade.

7. This final-form rulemaking is supported by acceptable data.

IRRC questions whether the regulation is supported by acceptable data. IRRC also notes that commentators have raised concerns about the modeling employed by the Board to quantify the economic and health benefits of this final-form rulemaking. They question if the data considered is acceptable and appropriate. First and foremost, commentators are concerned that the underlying assumptions and data used for the modeling have not been made available to the public. IRRC urges the Board to share the underlying assumptions and data used for its modeling and address the following issues to demonstrate the validity of the data upon which the regulation is based:

a) Emissions reductions in the Commonwealth have been overstated because of leakage; therefore, the monetized health benefits are also overstated.

b) The modeling compares cumulative data for the time from 2019—2030, but the Commonwealth will not join RGGI until 2022.

c) The model uses an estimate of future natural gas prices which could be much lower than predicted.

d) The model does not account for new natural gas generation, but it does account for new renewable generation.

e) The modeling was conducted before New Jersey and Virginia joined RGGI.

f) The actual cost of buying an allowance will be higher than projected.

g) The modeling fails to account for the economic downturn related to the COVID-19 pandemic.

h) The model fails to account for the expansion of other Federal and State regulations and initiatives that impact the production and distribution of electricity.

In response, the Department has been transparent in terms of the modeling and the inputs and assumptions that went into the modeling, both for the original 2020 modeling and the updated 2021 modeling runs as well. The underlying data and assumptions are sound, and the Department's modeling aligns with the real-world benefits that have accrued to the RGGI participating states. Modeling results, assumptions and raw data have been made available to the public through the Department's web site in several areas and has been presented and discussed with thousands of stakeholders through the course of this final-form rulemaking. The Department has also held individual meetings with stakeholders and the modeling contractor when requested to make sure that all questions and inquiries regarding the modeling were thoroughly answered. The modeling information posted to the Department's web site consists of comprehensive spreadsheets containing all the assumptions and raw data upon which the Department's analyses and conclusions were based.

The Department also compiled a Pennsylvania RGGI Modeling Report which provides a detailed explanation of modeling processes, assumptions, inputs and outputs to provide a broad understanding of the results. This summary report, all the modeling results and recordings of the public webinars providing further explanation of key results are available on the Department's RGGI webpage located at www.dep.pa.gov/RGGI.

The Board addresses the issues noted by IRRC and other commentators individually as follows in a)—h) to demonstrate the validity of the data upon which this final-form rulemaking is based.

a) In response, the modeling indicates that this Commonwealth's participation in RGGI could lead to between 97 million and 227 million tons of CO_2 reductions between 2022 and 2030. The Department's modeling indicates what emissions reductions will occur in this Commonwealth. These are not based on regional benefits, but State benefits alone. When this Commonwealth implements this final-form rulemaking, significant CO_2 emissions reductions occur within this Commonwealth. Tied to these significant emissions reductions are the resulting health impacts. The Department calculated that if 188 million tons of CO_2 are avoided through 2030 then resident's in this Commonwealth would see cumulative health benefits amounting to $2.79—$6.3 billion. Penn State University's study projected even higher health benefits, on the order of $1—$4 billion per year over the initial decade of this Commonwealth's RGGI participation, specifically noting the conservative nature of the Department's calculations. These health benefits accrue within this Commonwealth as a result of implementation of this final-form rulemaking, and if anything, the Department's health benefits are understated.

b) In response, when evaluating the impacts of RGGI participation on the power sector, there are two separate modeling runs or scenarios. The first scenario, the Reference Case or Business-as-Usual Case projects what this Commonwealth's power sector will look like in the future without this Commonwealth's participation in RGGI, and the Policy Case or the RGGI case projects what this Commonwealth's power sector will look like with RGGI participation. These two modeling cases are then compared to help project the impacts of RGGI participation on electric transmission and generation and electric sec-

tor emissions, among others in this Commonwealth. When this modeling was first completed in 2020 for the proposed rulemaking, the most recent year of available data was 2019. Therefore, the 2019 data was included in the 2020 round of modeling. While the time period for the IPM analysis was 2019 through 2030, the modeling specifically provided projections for 2020, 2022, 2025, 2028 and 2030. When the modeling was updated in early 2021 for this final-form rulemaking, the most recent year of available data was 2020. Therefore, the 2020 data was included in the 2021 round of modeling and as such the time period for the updated IPM analysis was 2020 through 2030.

The time period for the IPM analysis includes years prior to the implementation of this final-form rulemaking for two reasons. First, as stated, the only available data for each round of modeling was either 2019 or 2020. Second, the Policy Case assumes this final-form rulemaking will be in effect in 2022, so the modeling needs to account for certain assumptions, for example legal or policy requirements that are projected to change, in years before 2022. This accounts for any differences between the Reference Case and the Policy Case in years prior to 2022. Lastly, these assumptions are not only a factor in the Department's modeling, but can also be seen by the functioning of the actual energy market. For example, on March 13, 2020, Energy Harbor, the owner of the Beaver Valley nuclear power plant, responsible for 1,845 MW of carbon-free generation, withdrew its closure announcement, specifically citing this Commonwealth's intended participation in RGGI as a key determinant in continuing operations.

c) In response, the modeling includes natural gas prices that are the average of the Annual Energy Outlook (AEO) Reference Case and the High Gas Resources Case which are published annually by the EIA. The AEO Reference Case is used as a starting point, and then averaged with the High Gas Resources Case because of this Commonwealth's location within the shale region. This hybrid method is used because neither the AEO Reference Case nor the AEO High Gas Resources Case are singularly representative of gas prices in this Commonwealth. Averaged together, the two cases provide as accurate a forecast as possible for modeling purposes. However, the Board notes that these are forecasted prices and there is a possibility that future prices could vary.

d) In response, the modeling accounts for all available data for new generation within this Commonwealth and the surrounding states despite the fuel source. The specific list of projects that were included as firm capacity additions for this Commonwealth is included in the publicly available modeling results on the "Assumptions Overview- Firm Capacity Changes in PA" tab on the Department's RGGI webpage located at www.dep.pa.gov/RGGI. In the 2020 power sector modeling, the Department included 3,131 MW of new natural gas-combined cycle capacity and 251 MW of new solar-generation capacity.

e) In response, in the Reference Case for the modeling, RGGI was modeled as an 11-state program, including the 9 states participating in RGGI at the end of 2019—Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont. Additionally, New Jersey and Virginia were included in the modeling as projected to begin participation on January 1, 2020, and January 1, 2021, respectively. In particular, the starting CO_2 allowance budget for New Jersey was input at 18 million short tons, and the starting CO_2 allowance budget for Virginia was input at 27.16 million short tons. The IPM Policy Case uses similar assumptions as the Reference Case with the key difference being that it assumes that this Commonwealth will begin participation in RGGI on January 1, 2022.

f) In response, the RGGI auction clearing prices in late 2020 and early 2021 had a higher price compared to the projected CO_2 allowance prices in the Department's 2020 modeling. The difference between projected CO_2 allowance prices and actual CO_2 allowance prices can be due to a number of factors, including the end of the RGGI 3-year control period, the change of the Federal administration and the fact that Virginia began participating in RGGI at the start of 2021, among others. The IPM model generates a CO_2 allowance price based on actual market fundamentals, including the projected supply and demand of CO_2 allowances during the modeling period. However, the model does not take into account behavioral considerations that impact auction bidder behavior and expectations. Bidder expectations can influence the CO_2 allowance price, and therefore lead to a difference from the projected CO_2 allowance price.

g) In response, the Board and the Department received comments and feedback on the power sector modeling through our extensive advisory committee meetings, webinars, public hearings and the formal public comment period. Understanding the concerns that were raised, the Department conducted a second round of modeling to ensure that the modeling was as up to date as possible, specifically to confirm that the starting CO_2 allowance budget for 2022 and other components of this final-form rulemaking were still appropriate. In February of 2021, the Department updated the power sector modeling assumptions and inputs previously included in the 2020 round of modeling. These assumptions and inputs include the following: updated PJM electricity demand forecast, 2021 AEO Natural Gas Prices, updated capacity additions and retirements, updated technology costs and revisions to State law and policies which encompasses the new in-State generation requirement for Tier II resources under the Alternative Energy Portfolio Standards Act (73 P.S. §§ 1648.1—1648.9).

Most notably, the main difference in the modeling assumptions between 2020 and 2021 was the demand forecast for electricity. As a direct impact of the COVID-19 pandemic, the projections for the future demand of electricity are below the 2020 projections made prior to the onset of the pandemic. In sum, while the original 2020 modeling did not account for the impacts of the COVID-19 pandemic, the updated 2021 modeling conducted for this final-form rulemaking includes those impacts.

h) In response, the IPM model properly takes into account the expansion of other Federal and State regulations and initiatives that impact the production and distribution of electricity. IPM is a dynamic linear programming model that generates optimal decisions under the assumption of perfect foresight. It determines the least-cost method of meeting energy and peak-demand requirements over a specified period. In its solution, the model considers several key operating or regulatory constraints that are placed on the power, emissions and fuel markets. The constraints include, but are not limited to, emission limits, transmission capabilities, renewable generation requirements and fuel market constraints. The model is designed to accommodate complex treatment of emission regulations involving trading, banking and special provisions affecting emission allowances, as well as

traditional command-and-control emission policies. The specific Federal and State laws and policies that are included in the modeling runs are outlined on the "Assumptions Overview" tab in the Department's RGGI webpage located at www.dep.pa.gov/RGGI, the very first tab located in each of the modeling results files.

8. This final-form rulemaking will not have a negative economic or fiscal impact to this Commonwealth.

IRRC notes that there is no consensus on how this final-form rulemaking will affect the economy of this Commonwealth. IRRC asks the Board to review the concerns of those commentators that have raised issues related to the effect on the economy and provide updated and revised information in the Regulatory Analysis Form (RAF) related to the potential economic and fiscal impact of this final-form rulemaking. In particular, commentators believe that the requirement to purchase allowances by coal and older natural gas-fired EGUs will result in those units becoming uneconomical to operate. As a result, these EGUs will close, impacting the coal mining industry of this Commonwealth and hundreds of small businesses and labor unions that support those industries. Another concern is that the price of electricity will increase. The price that electric utilities pay for electricity from fossil fuel-fired generators will increase and the additional cost will be passed on to residential, commercial and industrial rate payers. Low-income residents and those economically affected by the COVID-19 pandemic, small businesses and large industrial users will be impacted. Large industrial users of electricity may base a decision to locate or relocate a business based on the price of electricity in this Commonwealth. Additionally, IRRC mentions that commentators also note that local governments where the coal-related industries and small businesses operate will be negatively impacted because of the tax loss that will result from this final-form rulemaking. One commentator has stated that the fiscal impact of this final-form rulemaking will be the loss of over 8,000 jobs, the loss of $2.82 billion in total economic impact, the loss of $539 million in employee compensation and the loss of $34.2 million in State and local tax revenue. However, other commentators believe any potential economic disruption caused by this final-form rulemaking will be negligible because of growth of other segments of the economy.

In response, the Department's updated 2021 modeling shows that most if not all the coal-fired generation in this Commonwealth, except for waste coal-fired facilities, will cease generation by 2025. These are the results of the Business-as-Usual or Reference case which does not take into consideration the impacts of this Commonwealth's participation in RGGI on the power sector. Notably, this is a divergence from the results of the Business-as-Usual or Reference case from the 2020 modeling which had projected that coal generation was expected to cease by 2030, though this Commonwealth's participation in RGGI and the associated CO_2 allowance price were previously shown to accelerate these retirements to some extent.

As explained in detail in prior responses, the Department's economic modeling shows that this Commonwealth's participation in RGGI will lead to a net increase of more than 30,000 jobs and an addition of $1.9 billion to the Gross State Product, a measurement of the value of the State's economy, indicating economic growth. The Department's modeling incorporates any impacts to economic activity, divestment and loss of tax base that would occur as a result of this final-form rulemaking. Further, the Department's modeling projects this Commonwealth will continue to have lower electricity prices than nearly all of the participating states from 2022 through 2030, demonstrating the continued advantage of operating a business in this Commonwealth relative to nearby states.

Additionally, Penn State University's study confirms the economic benefits accruing as a result of this Commonwealth's participation in RGGI and suggests positive economic impacts beyond even those calculated by the Department. Penn State University indicates that between 2022 and 2030, this Commonwealth's participation in RGGI will yield $2.6 billion in net economic benefit to this Commonwealth. These have also been the results reported by the participating states and summarized in the RGGI review conducted by the Analysis Group.

In an independent and nonpartisan evaluation of the first three control periods in RGGI, the Analysis Group, one of the largest economic consulting firms globally, found that the participating states experienced economic benefits in all three control periods while reducing CO_2 emissions. The participating states added between $1.3 billion and $1.6 billion in net economic value during each of the three control periods. The participating states also showed growth in economic output, increased jobs and reduced long-run wholesale electricity costs. In sum, RGGI has helped the participating states create jobs, save money for consumers and improve public health while reducing power sector emissions and transitioning to a cleaner electric grid.

The Board agrees with other commentators that any potential economic disruption caused by this final-form rulemaking will be negligible because of growth of other segments of the economy.

9. This final-form rulemaking complies with the provisions of the RRA.

IRRC requests additional information and more complete answers to the following sections of the RAF, in addition to the more thorough analysis regarding potential fiscal or economic impact requested. First, section 17 of the RAF asks an agency to identify the financial, economic and social impact of the regulation on individuals, small businesses, businesses and labor organizations and other public and private organizations. It also asks an agency to evaluate the benefits expected as a result of the regulation. The Board provides a detailed explanation of the expected environmental, health and economic benefits of the regulation for society as a whole. It also provides a dollar estimate of the potential cost to residential customers in terms of monthly electricity bills. However, the explanation does not provide a similar estimate for small businesses and other businesses. IRRC asks the Board to provide that information in the RAF submitted with this final-form rulemaking. Second, section 19 of the RAF asks an agency to estimate any costs or savings to the regulated community associated with legal, accounting or consulting procedures. IRRC asks the Board to estimate the cost associated with an owner or operator having an account representative required to participate in allowance auctions under RGGI.

In response, the Board added supplementary information to the responses to sections 17 and 19 of the RAF. The Board particularly added more detail regarding the estimates for small businesses and other businesses. Additionally, potential costs and savings to the regulated community are discussed in more detail in the RAF, including the estimated cost associated with an owner or operator having an account representative required to participate in the multistate auctions under RGGI.

10. This final-form rulemaking will not negatively impact small businesses and provisions have been made to assist small business stationary sources with compliance.

IRRC questions whether a less costly or less intrusive alternative method of achieving the goal of the regulation has been considered for the regulation impacting small businesses. IRRC asks the Board to consider the following options, and if it decides to proceed with this final-form rulemaking, provide an explanation of why these alternatives are not appropriate. First suggestion is do nothing: A comment letter signed by 40 Representatives of the General Assembly states that the current regulatory environment and existing market forces have already significantly reduced CO_2 emissions in this Commonwealth. The "status quo is a far less costly and intrusive method than RGGI at achieving tremendous reductions in carbon emissions." Second, the letter states the Department could achieve its objective with a "gradually declining CO_2 emissions budget without the exorbitant costs proposed by this submission." This could be accomplished by calculating a price to auction emissions that would cover the cost needed to administer RGGI.

As mentioned in the Board's prior responses, status quo will not achieve the emissions reductions needed to protect public health and the environment, nor are current measures adequate to address climate change. The Department's modeling effort as mentioned previously included two separate modeling runs, the first of which is (a) the reference case which reflects business-as-usual with no regulatory or policy changes, and (b) the policy case which is reflective of the impacts of this final-form rulemaking. In comparing these modeling scenarios, without this final-form rulemaking in place, this Commonwealth will emit 97—227 million tons of CO_2 more than with the implementation of this final-form rulemaking. Additionally, residents of this Commonwealth will not benefit from improved air quality or realize the economic, job impacts or health benefits that result from this final-form rulemaking.

Furthermore, rather than benefitting from implementation of this final-form rulemaking, there will be a deleterious impact on the environment, health and the economy without this meaningful and decisive action. Business-as-usual or status quo does not address climate change in a meaningful way. While there may be emissions reductions in the future, they do not occur at the rate or level at which is required to avoid the worst impacts of climate change. Additionally, as a Commonwealth we will not be capable of honoring our commitment to address climate change and will fall short of meeting the interim 2025 GHG reduction goal.

Part of what makes RGGI economically efficient is that it is a regional program, allowing for EGUs to achieve least-cost compliance by buying and selling CO_2 allowances whether in multistate auctions or in the secondary market. CO_2 allowances are fungible, meaning that though this Commonwealth has an established CO_2 allowance budget for each year, this Commonwealth's CO_2 allowances are available to meet the compliance obligations in any other participating state and vice versa. Therefore, emissions from this Commonwealth's power sector are not limited strictly to the amount of this Commonwealth's CO_2 allowances. This cooperation allows EGUs more flexibility in terms of compliance and allows the market to signal entrance and exit of generation. In this respect, the market assists in achieving least-cost compliance for all participating states. Furthermore, strategic investments of the auction proceeds within this Commonwealth reduce GHG emissions even further than this Commonwealth's annual CO_2 allowance budget alone.

11. Implementation procedures for the set-aside provisions and limited exemption.

IRRC asks the Board to respond to technical comments for and against the set-aside provisions and comments requesting full exemptions instead of set-asides. Additionally, IRRC asks the Board to respond to technical comments suggesting ways to improve the implementation of the set-asides and exemptions.

Each state has the authority and discretion as to how CO_2 allowances are treated which is memorialized in each state's CO_2 Budget Trading Program regulation. Allocation of the CO_2 allowances is just one mechanism through which states further public policy goals. For example, each state must decide how to make the CO_2 allowances available. In addition to states offering CO_2 allowances for sale through the multistate auctions, most participating states also opt to have set-aside accounts. These states specifically carve out or "set aside" a portion of the state's CO_2 allowance budget to assist certain sectors with part or all of their compliance obligations or allow other sectors to monetize the CO_2 allowances for further investment.

In this final-form rulemaking, the Board provides three set-aside options, which are discussed in detail in this preamble. First, the Board is setting aside CO_2 allowances to assist this Commonwealth's waste coal-generation sector with compliance with this final-form rulemaking. While waste coal facilities are not exempt from this final-form rulemaking, the Department will oversee the sector's compliance using CO_2 allowances that have specifically been carved out or "set aside" for this purpose. In other words, the compliance costs for waste coal-fired EGUs will be minimal.

At the beginning of each compliance year, the Department will set-aside CO_2 allowances for the waste coal facilities, thereby eliminating the need for the facilities to purchase these allowances in either the multistate auctions or on the secondary market. The waste coal set-aside is equal to 12.8 million tons of CO_2 emissions, an increase from the 9.3 million as outlined in the proposed rulemaking, in response to comments received during the public comment period. Some commentators requested an increase in the set-aside allocation to allow for future expansion of the waste coal industry, while others requested that the set-aside allocation be reduced or completely eliminated. In response, the Department slightly increases the value of the set-aside to account for a facility previously marked for closure that will now remain in operation and to better reflect the operation levels of the waste coal-fired units in this Commonwealth.

Much like the comments received on the waste coal set-aside, the Board received comments asking for both the expansion and elimination of the cogeneration (now CHP) set-aside. Furthermore, commentators asked for clarification as to what facilities would qualify for the set-aside and how those calculations would be performed. In response to comments, the Board changes the name and description of the set-aside to clarify that the specific type of cogeneration facilities the set-aside covers are CHP facilities.

Some commentators requested the elimination of the CHP set-aside, indicating the anti-competitive nature of this set-aside. In response, the Board notes that facilities

that would qualify for this set-aside are not strictly electricity producers in the plainest sense, but have onsite generation that is feeding an interconnected facility. In other words, while these facilities do have some electricity that is sold to the grid, that is not the key focus of their business model nor is the amount of electricity sold to the grid in a volume that allocation of CO_2 allowances would create an anti-competitive environment.

Comments were also made requesting that the Board expand the value of the CHP set-aside to account not only for a portion of the qualifying facility's compliance obligation, but to account for all of a qualifying facility's compliance obligation. Commentators indicated that without a full set-aside the Department may be creating a disincentive for existing CHP facilities to operate efficiently and a potential disincentive for the future buildout of additional CHP facilities. The commentators emphasized that this runs counter to the recommendations outlined in the Department's Climate Action Plan and the PUC's Policy Statement on Combined Heat and Power. Commentators indicated that any disincentive for these facilities to operate at anything but peak efficiency was undermining the environmental benefits of CHP and may lead to other facilities with higher emissions intensity generating the lost electricity.

In response, the Board includes a two-tier approach to the CHP set-aside whereby facilities meeting strict efficiency criteria may be eligible for a full set-aside, while other qualifying CHP facilities that do not meet those criteria may qualify for the partial set-aside. This allows for efficient operation of existing CHP facilities and does not interfere with the potential for future buildout of CHP in this Commonwealth.

The Board received comments asking that rather than depositing undistributed CO_2 allowances from the waste coal set-aside account into the strategic use set-aside account, that the strategic use set-aside account have its own independent CO_2 allowance allocation. In response, the Board notes that the Department has the flexibility in future years to deposit CO_2 allowances into the strategic use set-aside if the undistributed CO_2 allowances are not sufficient to support activity in this set-aside account. Because the Department has this flexibility already, the Board decided to maintain the allowance allocation structure as proposed.

Furthermore, comments were received asking that the Board add a new set-aside or modify the strategic use set-aside to develop a Voluntary Renewable Energy Set-aside akin to those established by a few of the participating states. In response, the Board elects to keep the strategic use set-aside as proposed, with some clarifications to explain that renewable and other nonemitting energy technologies would qualify for allocation of allowances under the strategic use set-aside. Rather than restrict the types of projects that would qualify for allowances, the Board elects to keep the broader, more inclusive nature of the strategic use set-aside.

The Board also received comments requesting that the process by which applicants could apply for allowance allocations be more clearly outlined in the regulation. The Board responded with modifications to the regulation clearly outlining the set-aside application process and requirements. An additional requirement was added clarifying that CO_2 allowances are distributed upon the completion of a project which is not legally required. Projects that are completed for compliance purposes or as the result of settlements do not qualify for an allocation of allowances under the strategic use set-aside account.

IRRC asks the Board to consider delaying the implementation of this final-form rulemaking for 1 year. IRRC suggests that this additional time would allow the regulated community an opportunity to adjust their business plans to account for the potential increased costs associated with this Commonwealth joining RGGI.

The Board understands the concerns expressed by IRRC and other commentators, however, this Commonwealth cannot wait any longer to address CO_2 emissions from fossil fuel-fired EGUs. On October 3, 2019, it was announced that the Department was going to begin this final-form rulemaking process, which provided more than 2 years' notice to the regulated community of the forthcoming regulation. As has been stated previously, further delay would compromise this Commonwealth's ability to meet the GHG emissions reductions goals, and cause harm to public health and the environment which the Department is responsible for protecting under the APCA. Furthermore, due to the nature of compliance in the RGGI program, the first real compliance deadline occurs more than a year after the anticipated January 1, 2022, start date, further extending the compliance horizon for covered facilities.

RGGI operates on a 3-year compliance schedule whereby only partial compliance is required within the first 2 years, and then full compliance is required after the end of the third year. The current RGGI 3-year compliance period began in 2021, so 2021 and 2022 are interim compliance years while 2023 is a full compliance year. What this means is that facilities only need to acquire 50% of the necessary CO_2 allowances during the interim compliance years, but need to hold 100% of CO_2 allowances for the entire 3-year control period by March 1 of the following year.

For example, while January 1, 2022, or the first day of the next calendar quarter following publication is the date upon which the CO_2 requirements begin for this Commonwealth, the first compliance deadline is not until more than a year later on March 1, 2023, with full compliance not required until March 1, 2024, providing ample time to comply.

12. Provisions of this final-form rulemaking are amended for clarity.

IRRC says the applicability provision under § 145.304 is unclear because it does not specify that only units that are operating would have to comply with the regulation. IRRC suggests that the final regulation be amended to improve the clarity of this requirement. In response, the Board amended § 145.304 to remove the language related to a unit operating at any time on or after January 1, 2005, to clarify that only fossil fuel-fired EGUs currently operating in this Commonwealth need to comply with this final-form rulemaking.

IRRC is concerned that § 145.314 (relating to account certificate of representation) does not require the owner or operator of a unit to verify anything. Section 145.314 specifies what must be included in a complete account certificate of representation for a CO_2 authorized account representative or a CO_2 authorized alternate account representative. IRRC recommends that this final-form regulation is amended to require the owner or operator of a unit to sign or verify in some manner that the representative is authorized to represent their interests under the CO_2 budget trading program.

In response, the Board notes that in addition to the language pertaining to the account representatives in § 145.314, there is language in § 145.311 (relating to

authorization and responsibilities of the CO_2 authorized account representative) providing that "the representative of the CO_2 budget source shall be selected by an agreement binding on the owner or operator of the source and all CO_2 budget units at the source and must act in accordance with the certificate of representation under § 145.314." Additionally, the owner or operator should already have a designated representative who submits data to the EPA on behalf of the owner or operator. To participate in COATS, a representative of the CO_2 budget source must complete a Certificate of Representation form and submit the form to the EPA. The account representative listed on the form for a CO_2 budget source must match the representative for that facility in the EPA's Clean Air Market Division system. The regulatory language in §§ 145.311 and 145.314 is also consistent with the existing language in the Board's NO_x Budget Trading Program regulation in Chapter 145, Subchapter A and the RGGI Model Rule.

G. *Benefits, Costs and Compliance*

The CO_2 emission reductions accomplished through implementation of this final-form rulemaking would benefit the health and welfare of the approximately 12.8 million residents and the numerous animals, crops, vegetation and natural areas of this Commonwealth by reducing the amount of climate change causing pollution resulting from the regulated sources.

Reduction of CO_2 emissions

This final-form rulemaking includes a CO_2 emission budget which declines by approximately 20 million short tons from 2022 to 2030 within this Commonwealth. However, this Commonwealth projects to reduce its CO_2 emissions from EGUs within this Commonwealth by between 97 million short tons and 227 million short tons as a direct result of participation in RGGI. This results in CO_2 reductions in this Commonwealth and a net benefit to the entire PJM region. The Department's modeling shows that this Commonwealth makes these significant emission reductions while maintaining historic electric generation levels, enhancing this Commonwealth's status as a leading net energy exporter and creating economic opportunities.

The CO_2 emission reductions resulting from this final-form rulemaking are substantial and are the catalyst needed to meet the climate goals for this Commonwealth, as outlined in Executive Order 2019-01 codified in 4 Pa. Code §§ 5.1001—5.1009 (relating to Governor's Green Government Council), to reduce net GHG emissions Statewide by 26% by 2025 from 2005 levels and by 80% by 2050 from 2005 levels. A predicted reduction from the 2021 modeling of approximately 11 million metric tons of CO_2 per year due to this Commonwealth's potential participation in RGGI provides significant assurance that along with prudent investments of auction proceeds and other GHG abatement activities, this Commonwealth will remain on track to reach the 2025 net GHG reduction goal.

While efforts to model impacts of this final-form rulemaking focused on this Commonwealth, the impacts on the participating states in the PJM region, which consists of all or parts of 13 states and the District of Columbia, were also considered. Historically, the RGGI program has experienced some emissions leakage. Emissions leakage is the shifting of emissions from states with carbon pricing to states without carbon pricing. The Department's modeling indicates that there may be some future emissions leakage in terms of additional fossil fuel emissions outside of this Commonwealth's borders. Despite the leakage, this Commonwealth's participation in RGGI would result in a net emissions reduction of 28 million tons of CO_2 across PJM for the period between 2021 and 2030.

It is important to note that the modeling results assume the only policy change impacting the power sector in the region between 2021 and 2030 is this Commonwealth's participation in RGGI. The Department finds that extremely unlikely given the ongoing efforts by PJM, the FERC and the Federal government. The Department has been an active participant in PJM's CPSTF which is conducting additional modeling in an effort to better understand and control leakage across the entire PJM region. The FERC hosted a carbon pricing technical conference in the Fall of 2020, resulting in a policy statement requesting public comment on issues such as how to address shifting generation amongst states as a result of carbon pricing. Lastly, the Federal administration is seeking to reduce carbon emissions from the electric power sector, specifically aiming to produce 80% of the Nation's electricity from zero-carbon sources. The Department anticipates actions at the regional and Federal level will mitigate potential leakage impacts that may result from this final-form rulemaking.

The participating states together, including this Commonwealth, will achieve regional CO_2 emissions reductions of 30% by 2030. According to data from the World Bank, by 2022, based on Gross Domestic Product (GDP), the participating states would comprise the third largest economy in the world. See The World Bank, Calculation based on GDP (current US$), 2019, https://data.worldbank.org/indicator/NY.GDP.MKTP.CD. These CO_2 emission reductions are even more significant when viewed from this collective impact. Reductions in CO_2 emissions will help decrease the adverse impacts of climate change on human health, the environment and the economy. Specifically, CO_2 emission reductions may decrease costs from extreme weather events and climate-related ailments that also result in increased health care costs.

Health benefits of this final-form rulemaking

According to the NCA4, climate-driven changes in weather, human activity and natural emissions are all expected to impact future air quality across the United States. Many emission sources of GHGs also emit air pollutants that harm human health. Controlling these common emission sources would both mitigate climate change and have immediate benefits for air quality and human health. The energy sector, which includes energy production, conversion and use, accounts for 84% of GHG emissions as well as 80% of emissions of NO_x and 96% of SO_2. Specifically, mitigating GHGs can lower emissions of SO_2, NO_x, PM, ozone and PM precursors and other hazardous pollutants, reducing the risks to human health from air pollution.

While this final-form rulemaking requires CO_2 emission reductions, co-pollutants will also be reduced, because multiple pollutants are emitted from fossil fuel-fired EGUs. While the benefits of the cumulative CO_2 emission reductions will be tremendous, the Department also estimates that this final-form rulemaking will lead to a reduction of co-pollutants as well. Based on the 2020 modeling, this final-form rulemaking would provide public health benefits due to the expected reductions in emissions of CO_2 and the ancillary emission reductions or co-benefits of SO_2 and NO_x reductions. The Department's

2020 modeling projects cumulative emission reductions of 112,000 tons of NO_x and around 67,000 tons of SO_2 over the decade.

The Department used the EPA's Regional IPT methodology which calculates total avoided incidences of major health issues, and calculation of avoided lost work and school days due to reduced emissions. Based on an assumption that 188 million tons of CO_2 emissions are avoided through 2030, the Department estimates that between 283 and 641 premature deaths will be avoided in this Commonwealth due to emission reductions resulting directly from this final-form rulemaking. Children and adults alike will suffer less from respiratory illnesses, 30,000 less incidences of upper and lower respiratory symptoms which leads to reduced emergency department visits and avoided hospital admissions. Healthier children will be able to play more, as incidences of minor restricted-activity days decline on the order of almost 500,000 days between now and 2030. Adults would be healthier as well which results in over 83,000 avoided lost workdays due to health impacts. The public health benefits to this Commonwealth of these avoided SO_2 and NO_x emissions range between $2.79—$6.3 billion by 2030, averaging between $232—$525 million per year.

A 2017 independent study by Abt Associates, a global research firm focused on health and environmental policy, on the "Analysis of the Public Health Impacts of the Regional Greenhouse Gas Initiative, 2009—2014" showed that participating states gained significant health benefits in the first 6 years of RGGI implementation alone. From 2009—2014, the participating states avoided around 24% of CO_2 emissions that would have otherwise been emitted during that period, resulting in around $5 billion in avoided health related costs. See Abt Associates, "Analysis of the Public Health Impacts of the Regional Greenhouse Gas Initiative, 2009—2014," January 2017, https://www.abtassociates.com/sites/default/files/files/Projects/executive%20summary%20RGGI.pdf. Since this final-form rulemaking would lead to a 31% reduction of projected CO_2 emissions, or avoided emissions, over the next decade, this Commonwealth is likely to see similar gains in health benefits.

A recent study led by researchers from the Columbia Center for Children's Environmental Health at Columbia University's Mailman School of Public Health (Columbia study), published on July 29, 2020, on the "Co-Benefits to Children's Health of the United States Regional Greenhouse Gas Initiative" indicates that the health benefits from RGGI are even more significant than estimated in 2017 by Abt Associates. The Columbia study concluded that the co-pollutant reductions resulting from RGGI have provided considerable child health benefits to participating and neighboring states. In particular, between 2009 and 2014, RGGI resulted in an estimated 537 avoided cases of childhood asthma, 112 avoided preterm births, 98 avoided cases of autism spectrum disorder and 56 avoided cases of term low birthweight. Those child health benefits also have significant economic value, estimated at $199.6—$358.2 million between 2009 and 2014 alone. However, the researchers note that the actual health benefits are even greater than estimated because the analysis does not capture the future health benefits related to reductions in childhood $PM_{2.5}$ exposure and mitigating climate change, such as fewer heat-related illnesses or cases of vector-borne disease to which children are especially vulnerable. See Frederica Perera, David Cooley, Alique Berberian, David Mills and Patrick Kinney, "Co-Benefits to Children's Health of the U.S. Regional Greenhouse Gas Initiative," Environmental Health Perspectives, Vol. 128, No. 7, July 2020, https://ehp.niehs.nih.gov/doi/10.1289/EHP6706.

Benefits of continued waste coal-pile remediation

While this Commonwealth's participation in RGGI will have tangible health, environmental and economic benefits, the inclusion of the waste coal set-aside has the additional benefit of avoiding unintended impacts to this generation sector, so that the environmental benefits of continuing to remediate this Commonwealth's legacy waste coal piles may continue. For context, since 1988 a total of 160.7 million tons of waste coal has been removed and burned to generate electricity, with an additional 200 million tons of coal ash beneficially used at mine sites. One of the important environmental benefits that waste coal ash provides is the neutralization of acid mine drainage, due to the use of limestone as an emission reduction additive during the combustion process. Of this Commonwealth's over 13,000 acres of waste coal piles cataloged by the Department, 3,700 acres have been reclaimed with roughly 9,000 acres remaining. Additionally, of the piles that remain, approximately 40 of them have ignited, and continually burn which significantly impacts local air quality as well as the Commonwealth's efforts to meet and maintain compliance with the NAAQS.

Benefits of CHP

As discussed previously, this final-form rulemaking provides a set-aside and limited exemption for CHP which will benefit existing systems while encouraging new installations in this Commonwealth. CHP units use energy efficiently by simultaneously producing electricity and useful thermal energy from the same fuel source. CHP captures the wasted heat energy that is typically lost through power generation, using it to provide cost-effective heating and cooling to factories, businesses, universities and hospitals. CHP units are able to use less fuel compared to other fossil fuel-fired EGUs to produce a given energy output. Less fuel being burned results in fewer air pollutant emissions, including CO_2 and other GHGs. In addition to reducing emissions, CHP benefits the economy and businesses by improving manufacturing competitiveness through increased energy efficiency and providing a way for businesses to reduce energy costs while enhancing energy reliability. Because CHP units are interconnected with a facility, the electricity consumed on-site is not reduced due to line losses, and climate change resiliency is increased.

Benefits of RGGI participation

As previously mentioned, cap and trade programs have an established track record as economically efficient, market-driven mechanisms for reducing pollution in a variety of contexts. Other countries and states have found that cap and trade programs are effective methods to achieve significant GHG emission reductions. RGGI is one of the most successful cap and trade programs and it is well-established with an active carbon trading market for the northeastern United States. This successful market-based program has significantly reduced and continues to reduce emissions. The participating states have collectively reduced power sector CO_2 pollution by over 45% since 2009, while experiencing per capita GDP growth and reduced energy costs. The program design of RGGI would enable the Board to regulate CO_2 emissions from the power sector in a way that is economically efficient, thereby driving long-term investments in cleaner sources of energy.

Part of what makes RGGI economically efficient is that it is a regional cap and invest program, which allows

EGUs to achieve least-cost compliance by buying and selling allowances in a multistate auction or in regional secondary markets. RGGI CO_2 allowances are fungible across the participating states, meaning that though this Commonwealth would have an established allowance budget for each year, this Commonwealth's allowances are available to meet the compliance obligations in any other RGGI state and vice versa at the option of the regulated sources. Therefore, CO_2 emissions from this Commonwealth's power sector are not limited to strictly the amount of this Commonwealth's CO_2 allowances. This cooperation allows EGUs more flexibility in terms of compliance and allows the market to continue to signal entrance and exit of generation. Though each state has its own annual allocation, compliance occurs at the regional level rather than on a state-by-state basis. In this respect, the market assists in achieving least-cost compliance for all participating states.

Another benefit of participating in multistate auctions run by RGGI, Inc. is that RGGI, Inc. has retained the services of an independent market monitor to monitor the auction, CO_2 allowance holdings and CO_2 allowance transactions, among other activities. The market monitor provides independent expert monitoring of the competitive performance and efficiency of the RGGI allowance market. This includes identifying attempts to exercise market power, collude or otherwise manipulate prices in the auction or the secondary market, or both, making recommendations regarding proposed market rule changes to improve the efficiency of the market for RGGI CO_2 allowances, and assessing whether the auctions are administered in accordance with the noticed auction rules and procedures. The market monitor will monitor bidder behavior in each auction and report to the participating states any activities that may have a material impact on the efficiency and performance of the auction. The participating states, through RGGI, Inc., release a Market Monitor Report shortly after each CO_2 allowance auction. The Market Monitor Report includes aggregate information about the auction, including the dispersion of projected demand, the dispersion of bids and a summary of bid prices, showing the minimum, maximum, average and clearing price and the CO_2 allowances awarded.

RGGI has helped the participating states create jobs, save money for consumers and improve public health, while reducing power sector emissions and transitioning to a cleaner electric grid. In an independent and nonpartisan evaluation of the first three control periods in RGGI, the Analysis Group, one of the largest economic consulting firms globally, found that the participating states experienced economic benefits in all three control periods, while reducing CO_2 emissions. The participating states added between $1.3 billion and $1.6 billion in net economic value during each of the three control periods. The participating states also showed growth in economic output, increased jobs and reduced long-run wholesale electricity costs. See Analysis Group, "The Economic Impacts of the Regional Greenhouse Gas Initiative on Northeast and Mid-Atlantic States," https://www.analysisgroup.com/Insights/cases/the-economic-impacts-of-the-regional-greenhouse-gas-initiative-on-northeast-and-mid-atlantic-states/.

A recent report from the Acadia Center, a nonprofit organization committed to advancing the clean energy future, titled "The Regional Greenhouse Gas Initiative: 10 Years in Review," shows that CO_2 emissions from power plants in the participating states have decreased 47%, which is 90% faster than in the rest of the country. The participating states were able to achieve that significant reduction while the GDP grew by 47%, outpacing the rest of the country by 31%.

RGGI has also driven substantial reductions in harmful co-pollutants, making the region's air cleaner and its people healthier. Additionally, proceeds from RGGI auctions generated nearly $3.3 billion in state investments from 2009 to 2019. See Acadia Center, "The Regional Greenhouse Gas Initiative 10 Years in Review," 2019, https://acadiacenter.org/wp-content/uploads/2019/09/Acadia-Center_RGGI_10-Years-in-Review_2019-09-17.pdf.

For comparison, according to the Department's 2019 GHG Inventory Report from 2005 to 2016, this Commonwealth reduced its net emissions by 33.5% while the participating states reduced CO_2 pollution from covered sources by over 45% over the same period. Additionally, this reduction was achieved while the region's per-capita GDP has continued to grow, highlighting the synergies between environmental protection and economic development.

Additionally, this final-form rulemaking may create economic opportunities for clean energy businesses. By establishing a cost for emitting CO_2, and pricing this externality into the energy market, the CO_2 Budget Trading Program will provide a market incentive for developing and deploying technologies that improve the fuel efficiency of electric generation, generate electricity from noncarbon-emitting resources, reduce CO_2 emissions from combustion sources and encourage carbon capture and sequestration. The energy efficiency sector is the largest component of all energy jobs in this Commonwealth and the renewable energy sector contains some of the fastest growing jobs in the country.

Investment of auction proceeds benefits consumers and the economy

The proceeds generated from this final-form rulemaking would be invested into programs that would reduce air pollution and create positive economic impacts in this Commonwealth. The Department plans to develop a draft plan for public comment outlining reinvestment options separate from this final-form rulemaking. However, the Department conducted modeling to estimate the economic impacts of this final-form rulemaking. The Department analyzed the net economic benefits of the program investments using the Regional Economic Model, Inc. model. The extensive economic modeling will help the Department determine the best ways to invest the auction proceeds in this Commonwealth to maximize emission reductions and economic benefits. The modeling anticipates that in the first year of participation in RGGI, hundreds of millions of dollars in auction proceeds will be generated for the use in the elimination of air pollution in this Commonwealth. The auction proceeds would be spent on programs related to the regulatory goal, and the Department modeled a scenario in which the proceeds are invested in energy efficiency, renewable energy and GHG abatement.

The proceeds will aid this Commonwealth in the transition toward a clean energy economy. In 2015, the EPA noted that the energy market was moving toward cleaner sources of energy and states needed to make plans for and invest in the next generation of power production, particularly considering that current assets and infrastructure were aging. By strategically investing the proceeds, this Commonwealth can help ensure that, as new investments are being made, they are integrated with the need to address GHG pollution from the electric genera-

tion sector. See 80 FR 64661, 64678 (October 23, 2015). These energy transitions are occurring both in this Commonwealth and Nationally.

Nationally, the last 10 years have seen coal's position steadily erode due to a combination of low electricity demand, mounting concern over climate and increased competition from natural gas and renewables. The same is true for coal generation in this Commonwealth. Since 2005, electricity generation in this Commonwealth has shifted from higher carbon-emitting electricity generation sources, such as coal, to lower and zero emissions generation sources, such as natural gas, and renewable energy. Between now and 2030, coal generation is expected to decline dramatically. In 2010, coal generation represented 47% of this Commonwealth's generation portfolio and is expected to decline to roughly 1% of this Commonwealth's generation portfolio in 2030. This shift away from coal-fired generation occurs irrespective of this Commonwealth's participation in RGGI. Anticipating the need for transition, for these communities and employees, auction proceeds can be used to mitigate these impacts and assist communities and families through the energy transition. This could include repowering of the existing coal-fired power plants to natural gas, investments in worker training or other community-based support programs.

The Department would invest a portion of the proceeds in energy efficiency initiatives because energy efficiency is a low-cost resource for achieving CO_2 emission reductions while reducing peak demand and ultimately reducing electricity costs. Lower energy costs create numerous benefits across the economy, allowing families to invest in other priorities and businesses to expand. Energy efficiency savings can be achieved cost-effectively by upgrading appliances and lighting, weatherizing and insulating buildings, upgrading HVAC and improving industrial processes. Additionally, all consumers benefit from energy efficiency programs, not just direct program participants because focused investment in energy efficiency can lower peak electricity demand and can decrease overall electricity costs which results in savings for all energy consumers. Additionally, energy efficiency projects are labor-intensive which create local jobs and boost local economy. For instance, projects involving home retrofits directly spur employment gains in the housing and construction industries.

Investing a portion of the auction proceeds into energy efficiency initiatives is also crucial to addressing the impacts of climate change on consumers. According to the NCA4, rising temperatures are projected to reduce the efficiency of power generation while increasing energy demands, resulting in higher electricity costs. Energy efficiency will help lessen those impacts by putting downward pressure on both demand and electricity costs.

Historically, the participating states have invested a significant portion of their auction proceeds in energy efficiency programs. According to RGGI's 2018 Investment Report, over the lifetime of the installed measures, the investments made in energy efficiency in 2018 alone are projected to save participants over $1.2 billion on energy bills, providing benefits to more than 115,000 participating households and 1,200 participating businesses. The investments are also projected to further avoid the release of 1.4 million short tons of CO_2 pollution. See RGGI, Inc., The Investment of RGGI Proceeds in 2018, July 2020, https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2018.pdf.

The Department would also invest a portion of the proceeds in clean and renewable electricity generation, such as energy derived from clean or zero emissions sources, including geothermal, hydropower, solar and wind. Clean and renewable energy systems reduce reliance on fossil fuels and provide climate resilience benefits, including reduced reliance on centralized power. They also offer the opportunity to save money on electricity costs by installing onsite renewable energy and also reduce power lost through transmission and distribution. Investing in clean and renewable projects will help this Commonwealth meet its climate goals, drive in-State investments and job creation and lessen the pressure on the CO_2 allowance budget by generating more electricity without additional emissions.

The participating states invested 19% of their 2018 auction proceeds in clean and renewable energy projects. Over the lifetime of the projects installed in 2018, these investments are projected to offset about $600 million in energy expenses for households and businesses. The investments are also projected to avoid the release of 1.9 million short tons of CO_2 emissions.

The Department would also invest a portion of the proceeds in GHG abatement initiatives. GHG abatement includes a broad category of projects encompassing other ways of reducing GHGs, apart from energy efficiency and clean and renewable energy. Examples of potential programs in this Commonwealth include abandoned oil and gas well plugging, electric vehicle infrastructure, carbon capture, utilization and storage, combined heat and power, energy storage, repowering projects and vocational trainings, among others.

For reference, in 2018, an estimated 20% of RGGI investments were made in GHG abatement programs and projects. For the duration of the project lifetime, those investments are expected to avoid over 1.2 million short tons of CO_2 emissions across the region.

In the 2020 modeling, the Department modeled an investment scenario with 31% of annual proceeds for energy efficiency, 32% for renewable energy, 31% for GHG abatement and 6% for any programmatic costs related to administration and oversight of the CO_2 Budget Trading Program (5% for the Department and 1% for RGGI, Inc). These programmatic costs are in line with the historical amounts reserved by the participating states.

The results of the 2020 modeling show that this final-form rulemaking will not only combat climate change and improve air quality, but also provide positive economic value to this Commonwealth. The modeling estimates that from 2022 to 2030, this final-form rulemaking would lead to an increase in Gross State Product of $1.9 billion and a net increase of over 30,000 jobs in this Commonwealth. The Department's modeling also indicates that investments from this final-form rulemaking would spur an addition of 9.4 gigawatts of renewable energy and result in a load reduction of 29 terawatt hours of electricity from energy efficiency projects.

Benefits of cap and trade v. traditional command and control

In 2003, the EPA issued "A Guide to Designing and Operating a Cap and Trade Program for Pollution Control," in which the EPA detailed the benefits of cap and trade programs and the advantages they provide over more traditional approaches to environmental regulation. By establishing an emissions budget, cap and trade programs can provide a greater level of environmental certainty than other environmental policy options. The regulated sources, across the region, must procure allow-

ances to cover emissions or risk being penalized for lack of compliance. Traditional command and control regulations, on the other hand, tend to rely on variable emission rates and usually only regulated existing or new sources. However, under cap and trade programs, new and existing sources must comply with the emissions budget. A cap and trade program may also encourage sources to achieve emission reductions in anticipation of future compliance, resulting in the earlier achievement of environmental and human health benefits. In fact, the Department's modeling shows that this is occurring as this Commonwealth prepares to participate in RGGI in 2022.

The EPA also noted in the guide that banking of allowances, which this final-form rulemaking allows, provides an additional incentive to reduce emissions earlier than required. Banking provides flexibility by allowing sources to save unused allowances for use in a later compliance period when the emissions budget is lower and the costs to reduce emissions may be higher. With command and control, the regulating authority specifies sector-wide technology and performance standards that each of the affected sources must meet, whereas cap and trade provides sources with the flexibility to choose the technologies that minimize their costs while achieving their emission target. Cap and trade programs also provide more accountability than a command and control program. Under this final-form rulemaking and other cap and trade programs, sources must account for every ton of emissions they emit by acquiring allowances. On the other hand, command and control programs tend to rely on periodic inspections and assumptions that control technology is functioning properly to show compliance. See EPA, "Tools of the Trade: A Guide to Designing and Operating a Cap and Trade Program for Pollution Control," June 2003, EPA430-B-03-002, https://www.epa.gov/sites/production/files/2016-03/documents/tools.pdf.

Compliance costs

This final-form rulemaking applies to owners or operators of fossil fuel-fired EGUs, within this Commonwealth, with a nameplate capacity equal to or greater than 25 MWe. This final-form rulemaking is designed to effectuate least cost CO_2 emission reductions for the years 2022 through 2030 within this Commonwealth. In addition to purchasing CO_2 allowances and completing offset projects to generate CO_2 offset allowances, CO_2 budget units may reduce their compliance obligations by reducing CO_2 emissions through other alternatives such as heat rate improvements, fuel switching and co-firing of biofuels.

To comply with this final-form rulemaking, each CO_2 budget unit within this Commonwealth will need to acquire CO_2 allowances equal to its CO_2 emissions. If CO_2 allowances are purchased through the multistate auctions, the owner or operator of a CO_2 budget unit will pay the auction allowance price, currently around $5 per ton, for each ton of CO_2 the unit emits. As mentioned previously, reserved CO_2 CCR allowances can be released into the auction if allowance prices exceed predefined price levels, meaning emission reduction costs are higher than projected. The total cost of purchasing allowances will therefore vary per unit based on how much CO_2 the unit emits and the allowance price. The owner or operator may also purchase CO_2 allowances on the secondary market where they could potentially purchase CO_2 allowances at a price lower than the RGGI allowance price. CO_2 allowances also have no expiration date and can be acquired and banked to defray future compliance costs.

Since the Department will allocate CO_2 allowances to waste coal-fired units each year up to 12.8 million CO_2 allowances sector-wide, waste coal-fired units will incur minimal compliance costs. Owners or operators of waste coal-fired units will only need to purchase CO_2 allowances if the set-aside amount is exceeded. However, waste coal-fired units still have to comply with the other components of the regulation, including incorporating the CO_2 budget trading programs into their permits.

This final-form rulemaking will require the owner or operator of an applicable source to submit a complete application for a new, renewed or modified permit and pay the associated fee. The application must be submitted by the later of 6 months after the effective date of the final-form rulemaking or 12 months before the date on which the CO_2 budget source, or a new unit at the source, commences operation.

The Department estimates that the costs related to monitoring, recordkeeping and reporting will be minimal as this final-form rulemaking utilizes current methods and, in most instances, will require no additional emissions reporting. For instance, the continuous emission monitoring required under this final-form rulemaking is already in existence at the regulated source and the necessary emissions data is currently reported to the EPA. There may be minimal programmatic costs related to the submittal of compliance certification reports and auction, account and offset project-related forms.

Compliance costs will vary by CO_2 budget unit as the amount of CO_2 emitted is the primary driver of compliance costs. Overall CO_2 emissions are impacted by operational decisions such as run time, and by emissions intensity which varies by fuel type, and abatement technology employed. Additionally, certain sources may be eligible for set-aside allowances at no cost.

In 2022, this Commonwealth's CO_2 emissions from CO_2 budget sources are estimated to be 61 million short tons. Given the 3-year compliance schedule, all 61 million CO_2 allowances will not need to be purchased in the first year. The total amount of CO_2 allowances available will decline as the amount of CO_2 emissions in this Commonwealth decline.

As CO_2 budget sources would need one allowance for each ton of CO_2 emitted, the owners or operators would need to acquire 61 million CO_2 allowances at the estimated 2022 allowance price of $3.24 (2017$/ton). If these CO_2 allowances were all purchased at quarterly multistate auctions in 2022, the total purchase cost would be approximately $198 million. The CO_2 budget sources would then most likely incorporate this compliance cost into their offer price for electricity. The price of electricity is then passed onto electric consumers. However, that does not mean that $198 million will be passed onto this Commonwealth's electric consumers.

Electric consumer impact

Based on the Department's 2021 modeling, it can be expected that at least 25% of the cost of compliance would be borne by out-of-State electric consumers. In 2022, this Commonwealth's net electricity exports are estimated at 51,000 gigawatt hours (GWh), representing 25% of this Commonwealth's 2022 electricity generation of 201,221 GWh. As a result, without factoring in the strategic investment of auction proceeds, the remaining 75% of the cost of compliance or $149 million would be borne by this Commonwealth. This percentage is also dependent on the CO_2 emissions intensity of the exported generation.

According to the EIA, the major components of the United States' average price of electricity in 2020 were 56% generation, 31% distribution and 13% transmission

costs. See EIA, Electricity explained: Factors affecting electricity prices, Major components of the U.S. average price of electricity, 2020, https://www.eia.gov/energyexplained/electricity/prices-and-factors-affecting-prices.php. This final-form rulemaking would only impact the generation portion of a consumer electric bill, which is a little more than half of the bill. The Department's 2021 modeling estimates that in 2022, wholesale energy prices will be 2.4% higher with RGGI participation. That amounts to a roughly 1.2% increase in the average retail electricity rate, which is less than the swing in prices traditionally seen as a result of seasonal fluctuations in the energy market.

The average residential electric consumer in this Commonwealth spends from $97.04 to $136.60 per month depending on whether they heat their homes with electricity or another fuel source. Although electricity rates vary in this Commonwealth by Electric Distribution Company service territories, these bill amounts represent the average electricity rates across this Commonwealth.

If this final-form rulemaking is implemented and this Commonwealth begins participating in RGGI in 2022, residential electric consumer bills will increase by an estimated 1.2% in the short-term. This amounts to an additional $1.17 to $1.65 per month depending on the home heating source. However, the Department's 2020 modeling shows that this minor increase is temporary. As shown in the 2020 modeling, as a result of the fee investments from the auction proceeds, by 2030, energy prices will fall below business-as-usual prices resulting in future consumer electricity cost savings. This means electric consumers will see greater electric bill savings in the future than if this final-form rulemaking were not implemented.

Additionally, based on information contained within the PUC's 2020 Rate Comparison Report, a small commercial customer's usage is the closest aligned with a small business as defined by the United States Small Business Administration, though it is not an exact match. See Pennsylvania PUC, 2020 Rate Comparison Report. https://www.puc.pa.gov/General/publications_reports/pdf/Rate_Comparison_Rpt2020.pdf. The PUC report indicates that average 2019 electricity consumption for this customer class is 1,000 kWh/month with total monthly bills ranging from $106.29 to $143.49 depending on the Electric Distribution Company service territory and the corresponding electricity rate. Using the same assumptions regarding the composition of an electric bill as used previously, a small commercial customer using 1,000 kWh/month could expect to see a potential increase of $1.28 to $1.72 per month in 2022.

According to the PUC, a large commercial customer using 200,000 kWh/month has a monthly bill ranging from $11,788.08 to $21,043.18. These customers could expect to see a 2022 potential price increase of $141 to $253 per month, again depending on their electric service territory and associated rates.

Compliance assistance plan

The Department will continue to educate and assist the public and the regulated community in understanding the requirements and how to comply with them throughout the rulemaking process. The Department will continue to work with the Department's provider of Small Business Stationary Source Technical and Environmental Compliance Assistance. These services are currently provided by the Environmental Management Assistance Program (EMAP) of the Pennsylvania Small Business Development Centers. The Department has partnered with EMAP to fulfill the Department's obligation to provide confidential technical and compliance assistance to small businesses as required by the APCA, section 507 of the CAA (42 U.S.C.A. § 7661f) and authorized by the Small Business and Household Pollution Prevention Program Act (35 P.S. §§ 6029.201—6029.209).

In addition to providing one-on-one consulting assistance and onsite assessments, EMAP also operates a toll-free phone line to field questions from small businesses in this Commonwealth, as well as businesses wishing to start up in or relocate to this Commonwealth. EMAP operates and maintains a resource-rich environmental assistance web site and distributes an electronic newsletter to educate and inform small businesses about a variety of environmental compliance issues.

Paperwork requirements

The recordkeeping and reporting requirements for owners and operators of applicable sources under this final-form rulemaking are minimal because the records required align with the records already required to be kept for emission inventory purposes and for other Federal and State requirements.

H. *Pollution Prevention*

The Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101—13109) established a National policy that promotes pollution prevention as the preferred means for achieving State environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance.

This final-form rulemaking will help ensure that the citizens of this Commonwealth will benefit from reduced emissions of CO_2 from regulated sources. Reduced levels of CO_2 would promote healthful air quality and ensure the continued protection of the environment and public health and welfare.

I. *Sunset Review*

The Board is not establishing a sunset date for this final-form rulemaking, since it is needed for the Department to carry out its statutory authority. When published as a final-form rulemaking in the *Pennsylvania Bulletin*, the Department will closely monitor its effectiveness and recommend updates to the Board as necessary.

J. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on October 21, 2020, the Department submitted a copy of the notice of proposed rulemaking, published at 50 Pa.B. 6212, to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the House and Senate Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing this final-form rulemaking, the Department has considered all comments from IRRC, the House and Senate Committees and the public.

Under section 5.1(e) of the Regulatory Review Act, IRRC met on September 1, 2021, and approved this final-form rulemaking. This final-form rulemaking is deemed approved by the General Assembly.

(*Editor's Note*: This final-form rulemaking is the subject of litigation before the Commonwealth Court in *McDonnell v. Pennsylvania Legislative Reference Bureau*, 41 MD 2022, which involves the interpretation of the Regulatory Review Act, and the timelines and date on which the regulation was deemed approved by the General Assembly.)

K. *Findings of the Board*

The Board finds that:

(1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240), referred to as the Commonwealth Documents Law, (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder at 1 Pa. Code §§ 7.1 and 7.2 (relating to notice of proposed rulemaking required; and adoption of regulations).

(2) At least a 60-day public comment period was provided as required by law and all comments were considered.

(3) This final-form rulemaking does not enlarge the purpose of the proposed rulemaking published at 50 Pa.B. 6212.

(4) These regulations are reasonably necessary and appropriate for administration and enforcement of the authorizing acts identified in section C of this preamble.

L. *Order of the Board*

The Board, acting under the authorizing statutes, orders that:

(a) The regulations of the Department, 25 Pa. Code Chapter 145, are amended by adding §§ 145.301—145.307, 145.311—145.316, 145.321—145.323, 145.331, 145.332, 145.341—145.343, 145.351—145.358, 145.361—145.363, 145.371—145.377, 145.381, 145.382, 145.391—145.397 and 145.401—145.409 to read as set forth in Annex A.

(b) The Chairperson of the Board shall submit this final-form rulemaking to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.

(c) The Chairperson of the Board shall submit this final-form rulemaking to IRRC and the House and Senate ERE Committees as required by the RRA (71 P.S. §§ 745.1—745.14).

(d) The Chairperson of the Board shall certify this final-form rulemaking and deposit it with the Legislative Reference Bureau as required by law.

(e) This final-form rulemaking shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

PATRICK McDONNELL,
Chairperson

(*Editor's Note*: See 51 Pa.B. 6115 (September 18, 2021) for IRRC's approval order.)

Fiscal Note: Fiscal Note 7-559 remains valid for the final adoption of the subject regulations.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE III. AIR RESOURCES

CHAPTER 145. INTERSTATE POLLUTION TRANSPORT REDUCTION

Subchapter E. CO_2 BUDGET TRADING PROGRAM

GENERAL PROVISIONS

Sec.
145.301. Purpose.
145.302. Definitions.
145.303. Measurements, abbreviations and acronyms.
145.304. Applicability.
145.305. Limited exemption for CO_2 budget units with electrical output to the electric grid restricted by permit conditions.
145.306. Standard requirements.
145.307. Computation of time.

CO_2 AUTHORIZED ACCOUNT REPRESENTATIVE FOR A CO_2 BUDGET SOURCE

Sec.
145.311. Authorization and responsibilities of the CO_2 authorized account representative.
145.312. CO_2 authorized alternate account representative.
145.313. Changing the CO_2 authorized account representative and the CO_2 authorized alternate account representative; changes in the owner or operator.
145.314. Account certificate of representation.
145.315. Objections concerning the CO_2 authorized account representative.
145.316. Delegation of authority to make electronic submissions and review information in COATS.

PERMITS

Sec.
145.321. General requirements for a permit incorporating CO_2 Budget Trading Program requirements.
145.322. Submission of an application for a new, renewed or modified permit incorporating CO_2 Budget Trading Program requirements.
145.323. Contents of an application for a permit incorporating CO_2 Budget Trading Program requirements.

COMPLIANCE CERTIFICATION

Sec.
145.331. Compliance certification report.
145.332. Department action on compliance certifications.

CO_2 ALLOWANCE ALLOCATIONS

Sec.
145.341. Pennsylvania CO_2 Budget Trading Program base budget.
145.342. CO_2 allowance allocations.
145.343. Distribution of CO_2 allowances in the air pollution reduction account.

CO_2 ALLOWANCE TRACKING SYSTEM

Sec.
145.351. CO_2 Allowance Tracking System (COATS) accounts.
145.352. Establishment of accounts.
145.353. COATS responsibilities of CO_2 authorized account representative and CO_2 authorized alternate account representative.
145.354. Recordation of CO_2 allowance allocations.
145.355. Compliance.
145.356. Banking.
145.357. Account error.
145.358. Closing of general accounts.

CO_2 ALLOWANCE TRANSFERS

Sec.
145.361. Submission of CO_2 allowance transfers.
145.362. Recordation.
145.363. Notification.

MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS

AUCTION OF CO_2 CCR AND ECR ALLOWANCES

CO_2 EMISSIONS OFFSET PROJECTS

CO_2 ALLOWANCE AUCTIONS

GENERAL PROVISIONS

§ 145.301. Purpose.

This subchapter establishes the Pennsylvania component of the CO_2 Budget Trading Program, which is designed to reduce anthropogenic emissions of CO_2, a greenhouse gas, from CO_2 budget sources in a manner that is protective of public health, welfare and the environment.

§ 145.302. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

Account number—The identification number given by the Department or its agent to each CO_2 Allowance Tracking System (COATS) account.

Acid rain emissions limitation—A limitation on emissions of sulfur dioxide or NO_x under the Acid Rain Program under Title IV of the Clean Air Act (42 U.S.C.A. §§ 7651—7651o).

Acid Rain Program—A multi-state sulfur dioxide and NO_x air pollution control and emission reduction program established by the Administrator under Title IV of the Clean Air Act and 40 CFR Parts 72—78.

Adjustment for banked allowances—An adjustment that may be applied to the Pennsylvania CO_2 Budget Trading Program base budget for an allocation year to address CO_2 allowances held in general and compliance accounts, including compliance accounts established under the CO_2 Budget Trading Program, but not including accounts opened by participating states, that are in addition to the aggregate quantity of emissions from all CO_2 budget sources in all of the participating states at the end of the control period immediately preceding the allocation year and as reflected in the CO_2 Allowance Tracking System on March 15 of the year following the control period.

Administrator—The Administrator of the EPA or the Administrator's authorized representative.

Agent—A qualified entity that may assist the Department with technical and administrative support functions in accordance with the requirements of this subchapter.

Air pollution reduction account—The general account established by the Department from which CO_2 allowances will be sold or distributed to provide funds for use in the elimination of air pollution in accordance with the act and Chapter 143 (relating to disbursements from the clean air fund) and the administration of the Pennsylvania component of the CO_2 Budget Trading Program.

Allocate or *allocation*—The determination by the Department of the number of CO_2 allowances to be recorded in the compliance account of a CO_2 budget source, the waste coal set-aside account, the strategic use set-aside account, the combined heat and power set-aside account, the air pollution reduction account, or the general account of the sponsor of an approved CO_2 emissions offset project.

Allocation year—A calendar year for which the Department allocates or awards CO_2 allowances under §§ 145.341 and 145.391—145.397 (relating to Pennsylvania CO_2 Budget Trading Program base budget; and CO_2 emissions offset projects). The allocation year of each CO_2 allowance is reflected in the unique identification number given to the allowance under § 145.354(c) (relating to recordation of CO_2 allowance allocations).

Allowance auction or *auction*—A bidding process in which the Department or its agent offers CO_2 allowances for sale.

Ascending price, multiple-round auction—A bidding process that starts with an opening price that increases each round by predetermined increments. In each round, a bidder offers the quantity of CO_2 allowances the bidder is willing to purchase at the posted price. Rounds continue as long as demand exceeds the quantity of CO_2 allowances offered for sale. At the completion of the final round, CO_2 allowances will be allocated by one of three methods:

(i) At the final price to remaining bidders and unsold CO_2 allowances to be withheld for a future auction.

(ii) At the penultimate price, first to final round bidders and then to bidders in the penultimate round in chronological order of bid during the penultimate round for all remaining CO_2 allowances.

(iii) According to an alternative mechanism designed to effectuate the objectives of this subchapter.

Attribute—A characteristic associated with electricity generated using a particular renewable fuel, such as its generation date, facility geographic location, unit vintage, emissions output, fuel, state program eligibility, or other characteristic that can be identified, accounted for and tracked.

Attribute credit—A unit that represents the attributes related to 1 MW-hour of electricity generation.

Automated Data Acquisition and Handling System—The component of the continuous emissions monitoring system, or other emissions monitoring system approved for use under § 145.371 (relating to general monitoring requirements), designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors and other component parts of the monitoring system to produce a

continuous record of the measured parameters in the measurement units required by § 145.371.

Award—The determination by the Department of the number of CO_2 offset allowances to be recorded in the general account of a project sponsor under § 145.397 (relating to award and recordation of CO_2 offset allowances). Award is a type of allocation.

Beneficial interest—A profit, benefit or advantage resulting from the ownership of a CO_2 allowance.

Bidder—A qualified participant who has met the requirements of §§ 145.405 and 145.406 (relating to auction participant requirements; and auction participant qualification) and has been determined by the Department to be eligible to participate in a specified CO_2 allowance auction under § 145.406.

Boiler—An enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam or other medium.

CEMS—continuous emissions monitoring system—The equipment required under § 145.371 to sample, analyze, measure and provide, by means of readings recorded at least once every 15 minutes, using an automated data acquisition and handling system, a permanent record of stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon dioxide concentration, as applicable, in a manner consistent with 40 CFR Part 75 (relating to continuous emission monitoring) and § 145.371. The following systems are types of continuous emissions monitoring systems required under § 145.371:

(i) A flow monitoring system, consisting of a stack flow rate monitor and an automated data acquisition and handling system and providing a permanent, continuous record of stack gas volumetric flow rate, in standard cubic feet per hour.

(ii) A nitrogen oxides emissions rate (or NO_x-diluent) monitoring system, consisting of a NO_x pollutant concentration monitor, a diluent gas (CO_2 or O_2) monitor, and an automated data acquisition and handling system and providing a permanent, continuous record of NO_x concentration, in parts per million, diluent gas concentration, in percent CO_2 or O_2; and NO_x emissions rate, in pounds per million British thermal units (lb/MMBtu).

(iii) A moisture monitoring system, as defined in 40 CFR 75.11(b)(2) (relating to specific provisions for monitoring SO_2 emissions) and providing a permanent, continuous record of the stack gas moisture content, in percent H_2O.

(iv) A carbon dioxide monitoring system, consisting of a CO_2 pollutant concentration monitor (or an oxygen monitor plus suitable mathematical equations from which the CO_2 concentration is derived) and an automated data acquisition and handling system and providing a permanent, continuous record of CO_2 emissions, in percent CO_2.

(v) An oxygen monitoring system, consisting of an O_2 concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of O_2, in percent O_2.

COATS—CO_2 allowance tracking system—

(i) A system by which the Department or its agent records allocations, deductions and transfers of CO_2 allowances under the CO_2 Budget Trading Program.

(ii) The system may also be used to track all of the following:

(A) CO_2 emissions offset projects.

(B) CO_2 allowance prices.

(C) Emissions from affected sources.

COATS account—An account established by the Department or its agent for purposes of recording the allocation, holding, transferring or deducting of CO_2 allowances. The tracking system may also be used to track CO_2 offset allowances, CO_2 allowance prices and emissions from affected sources.

CO_2 allowance—A limited authorization by the Department or a participating state under the CO_2 Budget Trading Program to emit up to 1 ton of CO_2, subject to all applicable limitations contained in this subchapter.

CO_2 allowance auction or *auction*—The sale of CO_2 allowances through competitive bidding as administered in accordance with §§ 145.401—145.409 (relating to CO_2 allowance auctions).

CO_2 allowance deduction or *deduct CO_2 allowances*—The permanent withdrawal of CO_2 allowances by the Department or its agent from a COATS compliance account to account for one of the following:

(i) The number of tons of CO_2 emitted from a CO_2 budget source for a control period or an interim control period, determined in accordance with § 145.371.

(ii) The forfeit or retirement of CO_2 allowances as provided by this subchapter.

CO_2 allowances held or *hold CO_2 allowances*—The CO_2 allowances recorded by the Department or its agent or submitted to the Department or its agent for recordation, in accordance with §§ 145.351 and 145.361 (relating to CO_2 Allowance Tracking System (COATS) accounts; and submission of CO_2 allowance transfers), in a COATS account.

CO_2 allowance price—The price for CO_2 allowances in the CO_2 Budget Trading Program for a particular time period as determined by the Department, calculated based on a volume-weighted average of transaction prices reported to the Department, and taking into account prices as reported publicly through reputable sources.

CO_2 allowance transfer deadline—Midnight of the March 1 occurring after the end of the relevant control period and each relevant interim control period or, if that March 1 is not a business day, midnight of the first business day thereafter and is the deadline by which CO_2 allowances must be submitted for recordation in a CO_2 budget source's compliance account in order for the source to meet the CO_2 requirements of § 145.306(c) (relating to standard requirements) for the control period and each interim control period immediately preceding the deadline.

CO_2 authorized account representative—

(i) For a CO_2 budget source and each CO_2 budget unit at the source, the person who is authorized by the owner or operator of the source and all CO_2 budget units at the source, in accordance with § 145.311 (relating to authorization and responsibilities of the CO_2 authorized account representative), to represent and legally bind each owner and operator in matters pertaining to the CO_2 Budget Trading Program.

(ii) For a general account, the person who is authorized under §§ 145.351—145.358 (relating to CO_2 allowance

tracking system) to transfer or otherwise dispose of CO_2 allowances held in the general account.

CO_2 authorized alternate account representative—

(i) For a CO_2 budget source and each CO_2 budget unit at the source, the alternate person who is authorized by the owner or operator of the source and all CO_2 budget units at the source, in accordance with § 145.311, to represent and legally bind each owner and operator in matters pertaining to the CO_2 Budget Trading Program.

(ii) For a general account, the alternate person who is authorized under §§ 145.351—145.358 to transfer or otherwise dispose of CO_2 allowances held in the general account.

CO_2 budget emissions limitation—For a CO_2 budget source, the tonnage equivalent, in CO_2 emissions in a control period or an interim control period, of the CO_2 allowances available for compliance deduction for the source for a control period or an interim control period.

CO_2 budget permit condition—The portion of the permit issued by the Department under Chapter 127 (relating to construction, modification, reactivation and operation of sources) to the owner or operator of a CO_2 budget source which specifies the CO_2 Budget Trading Program requirements applicable to the CO_2 budget source.

CO_2 budget source—A facility that includes one or more CO_2 budget units.

CO_2 Budget Trading Program—A multi-state CO_2 air pollution control and emissions reduction program established under this subchapter and corresponding regulations in other participating states as a means of reducing emissions of CO_2 from CO_2 budget sources.

CO_2 budget unit—A unit that is subject to the CO_2 Budget Trading Program requirements under § 145.304 (relating to applicability).

CO_2 CCR allowance or *CO_2 cost containment reserve allowance*—A CO_2 allowance that is offered for sale at an auction by the Department for the purpose of containing the cost of CO_2 allowances.

CO_2 CCR trigger price or *CO_2 cost containment reserve trigger price*—The minimum price at which CO_2 CCR allowances are offered for sale by the Department or its agent at an auction.

CO_2 ECR allowance or *CO_2 emissions containment reserve allowance*—A CO_2 allowance that is withheld from sale at an auction by the Department for the purpose of additional emission reduction in the event of lower than anticipated emission reduction costs.

CO_2 ECR trigger price or *CO_2 emissions containment reserve trigger price*—The price below which CO_2 allowances will be withheld from sale by the Department or its agent at an auction.

CO_2e—CO_2 equivalent—The quantity of a given greenhouse gas multiplied by its global warming potential.

CO_2 offset allowance—A CO_2 allowance that is awarded to the sponsor of a CO_2 emissions offset project under § 145.397 and is subject to the relevant compliance deduction limitations of § 145.355(a)(3) (relating to compliance).

Combined cycle system—A system comprised of one or more combustion turbine, heat recovery steam generator and steam turbine configured to improve overall efficiency of electricity generation or steam production.

Combined heat and power set-aside account—A general account established by the Department for the allocation of CO_2 allowances in an amount sufficient to retire CO_2 allowances equal to the CO_2 emissions from combined heat and power units under § 145.342(k) (relating to CO_2 allowance allocations).

Combined heat and power unit—An electric-generating unit that simultaneously produces both electricity and useful thermal energy.

Combustion turbine—An enclosed fossil or other fuel-fired device that is comprised of a compressor, if applicable, a combustor and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

Commence commercial operation—With regard to a unit that serves a generator, to have begun to produce steam, gas or other heated medium used to generate electricity for sale or use, including test generation.

(i) For a unit that is a CO_2 budget unit under § 145.304 on the date the unit commences commercial operation, the date shall remain the unit's date of commencement of commercial operation even if the unit is subsequently modified, reconstructed or repowered.

(ii) For a unit that is not a CO_2 budget unit under § 145.304 on the date the unit commences commercial operation, the date the unit becomes a CO_2 budget unit under § 145.304 is the unit's date of commencement of commercial operation.

Commence operation—To have begun any mechanical, chemical or electronic process, including, with regard to a unit, start-up of the unit's combustion chamber.

(i) For a unit that is a CO_2 budget unit under § 145.304 on the date of commencement of operation, the date shall remain the unit's date of commencement of operation even if the unit is subsequently modified, reconstructed or repowered.

(ii) For a unit that is not a CO_2 budget unit under § 145.304 on the date of commencement of operation, the date the unit becomes a CO_2 budget unit under § 145.304 shall be the unit's date of commencement of operation.

Compliance account—A COATS account, established by the Department or its agent for a CO_2 budget source under § 145.351, that holds CO_2 allowances available for use by the owner or operator of the source for a control period and each interim control period for the purpose of meeting the CO_2 requirements of § 145.306(c).

Control period—A 3-calendar-year period. The fifth control period is from January 1, 2021, through December 31, 2023, inclusive. Each subsequent sequential 3-calendar-year period is a separate control period.

Decay rate—The amount of a gas removed from the atmosphere over a number of years.

Descending price, multiple-round auction—An auction that starts with a high provisional price, which falls in each round by predetermined increments. In each round, a bidder can lock in the purchase of some number of CO_2 allowances at the current provisional price and wait for the price to fall. Rounds continue so long as the number of CO_2 allowances locked-in is less than the quantity of CO_2 allowances offered for sale.

Discriminatory price, sealed-bid auction—A single-round, sealed-bid auction in which a bidder may submit multiple bids for CO_2 allowances at different prices. The price paid by winning bidders with the highest bids for CO_2 allowances is their own bid price.

Electronic submission agent—The person who is delegated authority by a CO_2 authorized account representative or a CO_2 authorized alternate account representative to make an electronic submission to the Department or its agent under this subchapter.

Eligible biomass—

(i) Sustainably harvested woody and herbaceous fuel sources that are available on a renewable or recurring basis, including dedicated energy crops and trees, agricultural food and feed crop residues, aquatic plants, unadulterated wood and wood residues, animal wastes, other clean organic wastes not mixed with other solid wastes, biogas and other neat liquid biofuels derived from these fuel sources.

(ii) This term does not include old growth timber.

Excess emissions—The amount of CO_2 emissions, in tons, emitted by a CO_2 budget source during a control period that exceeds the CO_2 budget emissions limitation for the source.

Excess interim emissions—The amount of CO_2 emissions, in tons, emitted by a CO_2 budget source during an interim control period multiplied by 0.50 that exceeds the CO_2 budget emissions limitation for the source.

GWP—Global Warming Potential—

(i) A measure of the radiative efficiency or heat-absorbing ability of a particular gas relative to that of CO_2 after taking into account the decay rate of each gas relative to that of CO_2.

(ii) GWPs used in this subchapter are consistent with the values used in the Intergovernmental Panel on Climate Change, Fifth Assessment Report.

General account—A COATS account established by the Department under § 145.351 that is not a compliance account.

Gross generation—The electrical output in MWe at the terminals of the generator.

Interim control period—A calendar-year period, during each of the first and second calendar years of each control period. The first interim control period for the fifth control period starts on January 1, 2021, and ends on December 31, 2021, inclusive. The second interim control period for the fifth control period starts on January 1, 2022, and ends on December 31, 2022, inclusive. Each successive 3-year control period will have 2 interim control periods, comprised of each of the first 2 calendar years of that control period.

Legacy emissions—The amount of CO_2 emissions in tons equal to the highest year of CO_2 emissions from a waste coal-fired unit during the 10-year period beginning January 1, 2010, through December 31, 2019, as determined by the Department.

Life-of-the-unit contractual arrangement—A unit participation power sales agreement under which a customer reserves, or is entitled to receive, a specified amount or percentage of nameplate capacity or associated energy from any specified unit under a contract for:

(i) The life of the unit.

(ii) A cumulative term of no less than 30 years, including a contract that permits an election for early termination.

(iii) A period equal to or greater than 25 years or 70% of the economic useful life of the unit determined as of the time the unit is built, with option rights to purchase or release some portion of the nameplate capacity and associated energy generated by the unit at the end of the period.

Maximum potential hourly heat input—An hourly heat input used for reporting purposes when a unit lacks certified monitors to report heat input. If the unit intends to use 40 CFR Part 75, Appendix D (relating to optional SO_2 emissions data protocol for gas-fired and oil-fired units) to report heat input, this value shall be calculated, in accordance with 40 CFR Part 75, using the maximum fuel flow rate and the maximum gross calorific value. If the unit intends to use a flow monitor and a diluent gas monitor, this value shall be reported, in accordance with 40 CFR Part 75, using the maximum potential flow rate and either the maximum CO_2 concentration in percent CO_2 or the minimum O_2 concentration in percent O_2.

Minimum reserve price—The price for calendar year 2021 is $2.38. Each calendar year thereafter, the minimum reserve price shall be 1.025 multiplied by the minimum reserve price from the previous calendar year, rounded to the nearest whole cent.

Monitoring system—A monitoring system that meets the requirements of this subchapter, including a CEMS, an excepted monitoring system or an alternative monitoring system.

Nameplate capacity—The maximum electrical output in MWe that a generator can sustain over a specified period of time when not restricted by seasonal or other deratings as measured in accordance with the United States Department of Energy standards.

Notice of CO_2 allowance auction—The notification for a specific auction or auctions issued under § 145.404 (relating to auction notice).

Operator—A person who operates, controls or supervises a CO_2 budget unit or a CO_2 budget source and shall include, but not be limited to, a holding company, utility system or plant manager of the unit or source.

Owner—Any of the following persons:

(i) A holder of any portion of the legal or equitable title in a CO_2 budget unit or a CO_2 budget source.

(ii) A holder of a leasehold interest in a CO_2 budget unit or a CO_2 budget source, other than a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based, either directly or indirectly, upon the revenues or income from the CO_2 budget unit.

(iii) A purchaser of power from a CO_2 budget unit under a life-of-the-unit contractual arrangement in which the purchaser controls the dispatch of the unit.

(iv) With respect to any general account, a person who has an ownership interest with respect to the CO_2 allowances held in the general account and who is subject to the binding agreement for the CO_2 authorized account representative to represent that person's ownership interest with respect to CO_2 allowances.

Participating state—A state that has established a corresponding regulation as part of the CO_2 Budget Trading Program.

Pennsylvania CO_2 Budget Trading Program adjusted budget—The annual amount of CO_2 tons available in Pennsylvania for allocation in a given allocation year, in accordance with the CO_2 Budget Trading Program, determined in accordance with § 145.342. CO_2 offset allowances allocated to project sponsors and CO_2 CCR allowances offered for sale at an auction are separate from and

additional to CO_2 allowances allocated from the Pennsylvania CO_2 Budget Trading Program adjusted budget.

Pennsylvania CO_2 Budget Trading Program base budget—The annual amount of CO_2 tons available in Pennsylvania for allocation in a given allocation year, in accordance with the CO_2 Budget Trading Program and as specified in § 145.341. CO_2 offset allowances allocated to project sponsors and CO_2 CCR allowances offered for sale at an auction are separate from and additional to CO_2 allowances allocated from the Pennsylvania CO_2 Budget Trading Program base budget.

Qualified participant—A person who has submitted a qualification application under § 145.406(a) and that the Department determines to be qualified to participate in CO_2 allowance auctions under § 145.406(e).

Receive or *receipt of*—When referring to the Department or its agent, to come into possession of a document, information or correspondence, whether sent in writing or by authorized electronic transmission, as indicated in an official correspondence log, or by a notation made on the document, information or correspondence, by the Department or its agent in the regular course of business.

Recordation, record or *recorded*—With regard to CO_2 allowances, the movement of CO_2 allowances by the Department or its agent from one COATS account to another, for purposes of allocation, transfer or deduction.

Reserve price—The minimum acceptable price for each CO_2 allowance offered for sale in a specific auction. The reserve price at an auction is either the minimum reserve price or the CCR trigger price, as specified in § 145.382 (relating to general requirements).

Reviewer—The individual who is delegated authority by a CO_2 authorized account representative or a CO_2 authorized alternate account representative to review information in COATS under this subchapter.

Source—A governmental, institutional, commercial or industrial structure, installation, plant, building or facility that emits or has the potential to emit any air pollutant. A source, including a source with multiple units, shall be considered a single facility.

Strategic use set-aside account—A general account established by the Department for the distribution of CO_2 allowances to reduce greenhouse gas emissions through energy efficiency measures, renewable or noncarbon-emitting energy technologies or innovative greenhouse gas emissions abatement technologies with significant greenhouse gas reduction potential.

Ton or *tonnage*—A short ton that is 2,000 pounds or 0.9072 metric ton.

Total useful energy—The sum of useful thermal energy and gross generation.

Undistributed CO_2 allowance—A CO_2 allowance originally allocated to a set-aside account under § 145.342 that was not distributed.

Uniform-price, sealed-bid auction—A single-round, sealed-bidding process in which a bidder may submit multiple bids at different prices. The price paid by all successful bidders will be uniform and equal to the highest rejected bid price.

Unit—A fossil fuel-fired stationary boiler, combustion turbine or combined cycle system.

Unit operating day—A calendar day in which a unit combusts any fuel.

Unsold CO_2 allowance—A CO_2 allowance that has been made available for sale in an auction conducted by the Department or its agent, but not sold.

Useful thermal energy—

(i) Energy in the form of direct heat, steam, hot water, air or other thermal form which is applied for a useful purpose in an industrial, institutional or commercial process.

(ii) This term does not include steam made available for electricity production.

Waste coal—The coal disposed or abandoned prior to July 31, 1982, or disposed of thereafter in a permitted coal refuse disposal site regardless of when disposed of and used to generate electricity, as defined in the definition of "alternative energy sources" under section 2 of the Alternative Energy Portfolio Standards Act (73 P.S. § 1648.2).

Waste coal-fired—The combustion of waste coal or, if in combination with any other fuel, waste coal comprises 75% or greater of the annual heat input on a Btu basis. Facilities combusting waste coal shall use at a minimum a circulating fluidized bed boiler and be outfitted with a limestone injection system and a fabric filter particulate removal system.

Waste coal set-aside account—A general account established by the Department for the allocation of CO_2 allowances in an amount sufficient to provide CO_2 allowances equal to the legacy emissions from all waste coal-fired units under § 145.342(i).

§ 145.303. Measurements, abbreviations and acronyms.

Measurements, abbreviations and acronyms used in this subchapter are defined as follows:

CH_4—methane.

hr—hour.

lb—pounds.

MMBtu—Million Btu.

MW—megawatt.

MWe—megawatt electrical.

§ 145.304. Applicability.

(a) *CO_2 budget unit.* Beginning April 23, 2022, this subchapter applies to an owner or operator of a unit that serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe.

(b) *CO_2 budget source.* Any source that includes one or more CO_2 budget units shall be a CO_2 budget source, subject to the requirements of this subchapter.

§ 145.305. Limited exemption for CO_2 budget units with electrical output to the electric grid restricted by permit conditions.

(a) *Exemption.* Notwithstanding § 145.304 (relating to applicability), a CO_2 budget source that has a permit issued by the Department containing a condition restricting the supply of the CO_2 budget unit's annual electrical output to the electric grid to no more than 10% of the annual gross generation of the unit, or restricting the supply less than or equal to 15% of its annual total useful energy to any entity other than the industrial, institutional or commercial facility to which the CO_2 budget source is interconnected and which complies with subsection (c), shall be exempt from the requirements of this subchapter, except for the provisions of this section,

§§ 145.302, 145.303, and 145.307 (relating to definitions; measurements, abbreviations and acronyms; and computation of time) and, if applicable because of the allocation of CO_2 allowances during the pre-exemption time period, §§ 145.341, 145.351 and 145.361 (relating to Pennsylvania CO_2 Budget Trading Program base budget; CO_2 Allowance Tracking System (COATS) accounts; and submission of CO_2 allowance transfers).

(b) *Effective date.* The exemption under subsection (a) shall become effective as of the January 1 on or after the date on which the restriction on the percentage of annual gross generation that may be supplied to the electric grid and the provisions in the permit required under subsection (a) become final.

(c) *Compliance.*

(1) The owner or operator of a CO_2 budget unit exempt under subsection (a) shall comply with the restriction on the percentage of annual gross generation that may be supplied to the electric grid described in subsection (a).

(2) The owner or operator of a CO_2 budget unit exempt under subsection (a) shall report to the Department the amount of annual gross generation and the amount of annual gross generation supplied to the electric grid during the calendar year by the following March 1.

(3) For a period of 10 years from the date the records are created, the owner or operator of a CO_2 budget unit exempt under subsection (a) shall retain, at the source that includes the unit, records demonstrating that the conditions of the permit under subsection (a) were met. The Department may, in writing, extend the 10-year period for keeping records, at any time prior to the end of the period. The owner or operator bears the burden of proof that the unit met the restriction on the percentage of annual gross generation that may be supplied to the electric grid.

(4) The owner or operator and, to the extent applicable, the CO_2 authorized account representative of a CO_2 budget unit exempt under subsection (a) shall comply with the requirements of this subchapter concerning all time periods for which the exemption is not in effect, even if the requirements arise, or must be complied with, after the exemption takes effect.

(5) A CO_2 budget unit exempt under subsection (a) will lose its exemption, on the earlier of the following dates:

(i) The restriction on the percentage of annual gross generation that may be supplied to the electric grid described in subsection (a) is removed from the unit's permit or otherwise becomes no longer applicable in any year that commences on or after April 23, 2022.

(ii) The unit fails to comply or the owner or operator fails to meet their burden of proving that the unit is complying with the restriction on the percentage of annual gross generation that may be supplied to the electric grid described in subsection (a) during any year that commences on or after April 23, 2022.

(6) A unit that loses its exemption in accordance with paragraph (5) shall be subject to the requirements of this subchapter. For the purposes of this subchapter, the unit shall be treated as commencing operation on the date the unit loses its exemption.

§ 145.306. Standard requirements.

(a) *Permit requirements.*

(1) The owner or operator of each CO_2 budget source shall have a CO_2 budget permit condition in their permit required under Chapter 127 (relating to construction, modification, reactivation and operation of sources) and shall submit to the Department the following:

(i) A complete application for a new, renewed or modified permit under § 145.323 (relating to contents of an application for a permit incorporating CO_2 Budget Trading Program requirements) in accordance with the deadlines specified in § 145.322 (relating to submission of an application for a new, renewed or modified permit incorporating CO_2 Budget Trading Program requirements).

(ii) Any supplemental information that the Department determines is necessary to review the permit application and issue or deny a permit, permit renewal or permit modification that includes CO_2 Budget Trading Program requirements.

(2) The owner or operator of each CO_2 budget source required to have a permit under Chapter 127 shall ensure that the permit incorporates the requirements of the CO_2 Budget Trading Program and shall operate the CO_2 budget source and each CO_2 budget unit at the source in compliance with the permit.

(b) *Monitoring requirements.*

(1) The owner or operator and, to the extent applicable, the CO_2 authorized account representative of each CO_2 budget source and each CO_2 budget unit at the source, shall comply with the monitoring requirements of §§ 145.371—145.377 (relating to monitoring, reporting and recordkeeping requirements).

(2) The Department will use the emissions measurements recorded and reported in accordance with §§ 145.371—145.377 to determine the unit's compliance with the CO_2 requirements under subsection (c).

(3) The Department will use the emissions measurements recorded and reported to the Department under this article to determine whether areas of this Commonwealth have been disproportionately impacted by increased air pollution as a result of implementation of this subchapter. The Department will publish notice of the availability of a report of the emissions measurements and the determination in the *Pennsylvania Bulletin* on an annual basis. The report will include the following:

(i) Baseline air emissions data from each CO_2 budget unit for the calendar year prior to the year Pennsylvania becomes a participating state.

(ii) Annual emissions measurements recorded and reported to the Department from each CO_2 budget unit.

(c) *CO_2 requirements.* A CO_2 budget unit shall be subject to the CO_2 requirements starting on July 1, 2022, or the date on which the unit commences operation, whichever is later.

(1) For the purpose of determining compliance with paragraph (2), total tons for a control period or an interim control period shall be calculated as the sum of all recorded hourly emissions or the tonnage equivalent of the recorded hourly emissions rates, in accordance with §§ 145.371—145.377. The Department will round total CO_2 emissions to the nearest whole ton, so that any fraction of a ton equal to or greater than 0.50 ton is deemed to equal 1 ton and any fraction of a ton less than 0.50 ton is deemed to equal zero tons.

(2) The owner or operator of each CO_2 budget source and each CO_2 budget unit at the source shall, as of the CO_2 allowance transfer deadline, hold CO_2 allowances available for compliance deductions under § 145.355 (relating to compliance), in the source's compliance account, as follows:

(i) For a control period, the amount of CO_2 allowances held shall be no less than the total CO_2 emissions for the control period from all CO_2 budget units at the source, less the CO_2 allowances deducted to meet the requirements of subparagraph (ii), with respect to the previous 2 interim control periods, as determined in accordance with §§ 145.351—145.358 (relating to CO_2 allowance tracking system) and §§ 145.371—145.377.

(ii) For an interim control period, the amount of CO_2 allowances held shall be no less than the total CO_2 emissions for the interim control period from all CO_2 budget units at the source multiplied by 0.50, as determined in accordance with §§ 145.351—145.358 and 145.371—145.377.

(3) Each ton of CO_2 emitted in excess of the CO_2 budget emissions limitation for a control period shall constitute a separate violation of this subchapter and the act.

(4) Each ton of excess interim emissions shall constitute a separate violation of this subchapter and the act.

(5) CO_2 allowances shall be held in, deducted from, or transferred among COATS accounts in accordance with §§ 145.341—145.343 (relating to CO_2 allowance allocations), 145.351—145.358, 145.361—145.363 (relating to CO_2 allowance transfers) and 145.397 (relating to award and recordation of CO_2 offset allowances).

(6) A CO_2 allowance shall not be deducted, to comply with the requirements under this subsection, for a control period or interim control period that ends prior to the year for which the CO_2 allowance was allocated.

(7) A CO_2 offset allowance shall not be deducted, to comply with the requirements under this subsection, beyond the applicable percent limitations in § 145.355(a)(3).

(8) A CO_2 allowance is a limited authorization by the Department or a participating state to emit 1 ton of CO_2 in accordance with the CO_2 Budget Trading Program. No provision of the CO_2 Budget Trading Program, this subchapter, an application for a new, renewed or modified permit to incorporate the requirements of the CO_2 Budget Trading Program, a permit that includes the requirements of the CO_2 Budget Trading Program, or any provision of law shall be construed to limit the authority of the Department or a participating state to terminate or limit the authorization.

(9) A CO_2 allowance under the CO_2 Budget Trading Program does not constitute a property right.

(d) *Excess emissions requirements.* The owner or operator of a CO_2 budget source that has excess emissions in any control period or excess interim emissions for any interim control period shall do the following:

(1) Forfeit the CO_2 allowances required for deduction under § 145.355(d)(1) and (2).

(2) Pay any fine, penalty or assessment or comply with any other remedy imposed under § 145.355(d)(3).

(e) *Recordkeeping and reporting requirements.*

(1) Except as provided in subparagraph (i), the owner or operator of the CO_2 budget source and each CO_2 budget unit at the source shall maintain at a central location and provide upon request by the Department the following documents for 10 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 10 years, in writing by the Department.

(i) The account certificate of representation for the CO_2 authorized account representative for the CO_2 budget source and each CO_2 budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with § 145.314 (relating to account certificate of representation). The certificate and documents shall be retained beyond the 10-year period until the documents are superseded because of the submission of a new account certificate of representation changing the CO_2 authorized account representative.

(ii) The emissions monitoring information, in accordance with §§ 145.371—145.377 and 40 CFR 75.57 (relating to general recordkeeping provisions).

(iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the CO_2 Budget Trading Program.

(iv) Copies of the documents used to complete an application for a new or modified permit that incorporates the requirements of the CO_2 Budget Trading Program and any submission under the CO_2 Budget Trading Program or to demonstrate compliance with the requirements of the CO_2 Budget Trading Program.

(2) The CO_2 authorized account representative of a CO_2 budget source and each CO_2 budget unit at the source shall submit the reports and compliance certifications required under this subchapter, including the requirements under §§ 145.331 and 145.332 (relating to compliance certification report; and Department action on compliance certifications).

(f) *Liability.*

(1) Except as provided under § 127.403 (relating to permitting of sources operating lawfully without a permit), a permit revision may not excuse any violation of the requirements of this subchapter that occurs prior to the date that the revision takes effect.

(2) Any provision of this subchapter that applies to a CO_2 authorized account representative shall apply to the owner or operator of the source and of the CO_2 budget units at the source.

(3) Any provision of this subchapter that applies to a CO_2 budget source shall also apply to the owner or operator of the source and of the CO_2 budget units at the source.

(4) Any provision of this subchapter that applies to a CO_2 budget unit shall also apply to the owner or operator of the unit.

(g) *Effect on other authorities.* No provision of this subchapter, a permit application or a permit shall be construed as exempting or excluding the owner or operator and, to the extent applicable, the CO_2 authorized account representative, from compliance with any provision of the act, the Clean Air Act or the regulations promulgated under the Clean Air Act or the act.

§ 145.307. Computation of time.

(a) Unless otherwise stated, any time period scheduled, under the CO_2 Budget Trading Program, to begin on the occurrence of an act or event shall begin on the day the act or event occurs.

(b) Unless otherwise stated, any time period scheduled, under the CO_2 Budget Trading Program, to begin before the occurrence of an act or event shall be computed so that the period ends the day before the act or event occurs.

(c) Unless otherwise stated, if the final day of any time period, under the CO_2 Budget Trading Program, falls on a weekend or a State or Federal holiday, the time period shall be extended to the next business day.

CO_2 AUTHORIZED ACCOUNT REPRESENTATIVE FOR A CO_2 BUDGET SOURCE

§ 145.311. Authorization and responsibilities of the CO_2 authorized account representative.

(a) Except as provided under § 145.312 (relating to CO_2 authorized alternate account representative), each CO_2 budget source, including all CO_2 budget units at the source, shall have only one CO_2 authorized account representative, with regard to all matters under the CO_2 Budget Trading Program concerning the source or any CO_2 budget unit at the source.

(b) The CO_2 authorized account representative of the CO_2 budget source shall be selected by an agreement binding on the owner or operator of the source and all CO_2 budget units at the source and must act in accordance with the certificate of representation under § 145.314 (relating to account certificate of representation).

(c) Upon receipt by the Department or its agent of a complete account certificate of representation under § 145.314, the CO_2 authorized account representative of the source shall represent and, by their representations, actions, inactions or submissions, legally bind each owner and operator of the CO_2 budget source represented and each CO_2 budget unit at the source in all matters pertaining to the CO_2 Budget Trading Program, notwithstanding any agreement between the CO_2 authorized account representative and the owner or operator. The owner or operator shall be bound by any decision or order issued to the CO_2 authorized account representative by the Department or a court regarding the source or unit.

(d) The Department will issue a permit that incorporates the requirements of the CO_2 Budget Trading Program and establish a COATS account for a CO_2 budget source only after the Department or its agent has received a complete account certificate of representation under § 145.314 for a CO_2 authorized account representative of the source and the CO_2 budget units at the source.

(e) Each submission under the CO_2 Budget Trading Program shall be submitted, signed and certified by the CO_2 authorized account representative for each CO_2 budget source on behalf of which the submission is made. Each submission shall include the following certification statement by the CO_2 authorized account representative:

"I am authorized to make this submission on behalf of the owner or operator of the CO_2 budget sources or CO_2 budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties under 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities) for submitting false statements and information or omitting required statements and information."

(f) The Department or its agent will accept or act on a submission made on behalf of the owner or operator of a CO_2 budget source or a CO_2 budget unit only if the submission has been made, signed and certified in accordance with subsection (e).

§ 145.312. CO_2 authorized alternate account representative.

(a) An account certificate of representation may designate only one CO_2 authorized alternate account representative who may act on behalf of the CO_2 authorized account representative. The agreement by which the CO_2 authorized alternate account representative is selected shall include a procedure for authorizing the CO_2 authorized alternate account representative to act instead of the CO_2 authorized account representative.

(b) Upon receipt by the Department or its agent of a complete account certificate of representation under § 145.314 (relating to account certificate of representation), any representation, action, inaction or submission by the CO_2 authorized alternate account representative shall be deemed to be a representation, action, inaction or submission by the CO_2 authorized account representative.

(c) Except in this section and §§ 145.311(a), 145.313, 145.314 and 145.352, whenever the term "CO_2 authorized account representative" is used in this subchapter, the term shall include the CO_2 authorized alternate account representative.

§ 145.313. Changing the CO_2 authorized account representative and the CO_2 authorized alternate account representative; changes in the owner or operator.

(a) *Changing the CO_2 authorized account representative.* The CO_2 authorized account representative may be changed at any time upon receipt by the Department or its agent of a superseding complete account certificate of representation under § 145.314 (relating to account certificate of representation). Notwithstanding a change, the representations, actions, inactions and submissions by the previous CO_2 authorized account representative or CO_2 authorized alternate account representative prior to the time and date when the Department or its agent receives the superseding account certificate of representation shall be binding on the new CO_2 authorized account representative and the owner or operator of the CO_2 budget source and the CO_2 budget units at the source.

(b) *Changing the CO_2 authorized alternate account representative.* The CO_2 authorized alternate account representative may be changed at any time upon receipt by the Department or its agent of a superseding complete account certificate of representation under § 145.314. Notwithstanding a change, the representations, actions, inactions and submissions by the previous CO_2 authorized alternate account representative prior to the time and date when the Department or its agent receives the superseding account certificate of representation shall be binding on the new CO_2 authorized alternate account representative and the owner or operator of the CO_2 budget source and the CO_2 budget units at the source.

(c) *Changes in the owner or operator.*

(1) If a new owner or operator of a CO_2 budget source or a CO_2 budget unit is not included in the list of owners and operators submitted in the account certificate of representation, the new owner or operator shall be deemed to be subject to and bound by the account certificate of representation, the representations, actions, inactions and submissions of the CO_2 authorized account representative and any CO_2 authorized alternate account representative of the source or unit, and the decisions,

orders, actions and inactions of the Department, as if the new owner or operator were included in the list.

(2) Within 30 days following any change in the owner or operator of a CO_2 budget source or a CO_2 budget unit, including the addition of a new owner or operator, the CO_2 authorized account representative or CO_2 authorized alternate account representative shall submit a revision to the account certificate of representation amending the list of owners and operators to include the change.

§ 145.314. Account certificate of representation.

(a) A complete account certificate of representation for a CO_2 authorized account representative or a CO_2 authorized alternate account representative shall include the following elements in a format prescribed by the Department or its agent:

(1) Identification of the CO_2 budget source and each CO_2 budget unit at the source for which the account certificate of representation is submitted.

(2) The name, address, e-mail address and telephone number of the CO_2 authorized account representative and any CO_2 authorized alternate account representative.

(3) A list of the owners and operators of the CO_2 budget source and of each CO_2 budget unit at the source.

(4) The following certification statement by the CO_2 authorized account representative and any CO_2 authorized alternate account representative:

"I certify that I was selected as the CO_2 authorized account representative or CO_2 authorized alternate account representative, as applicable, by an agreement binding on the owner or operator of the CO_2 budget source and each CO_2 budget unit at the source. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO_2 Budget Trading Program on behalf of the owner or operator of the CO_2 budget source and of each CO_2 budget unit at the source and that each owner and operator shall be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Department or a court regarding the source or unit."

(5) The signature of the CO_2 authorized account representative and any CO_2 authorized alternate account representative and the dates signed.

(b) Unless otherwise required by the Department or its agent, documents of agreement referred to in the account certificate of representation shall not be submitted to the Department or its agent. The Department and its agent are not under any obligation to review or evaluate the sufficiency of documents of agreement, if submitted.

§ 145.315. Objections concerning the CO_2 authorized account representative.

(a) Once a complete account certificate of representation under § 145.314 (relating to account certificate of representation) has been submitted and received, the Department and its agent will rely on the account certificate of representation unless the Department or its agent receives a superseding complete account certificate of representation under § 145.314.

(b) Except as provided in § 145.313(a) or (b) (relating to changing the CO_2 authorized account representative and the CO_2 authorized alternate account representative; changes in the owner or operator), an objection or other communication submitted to the Department or its agent concerning the authorization, or any representation, action, inaction or submission of the CO_2 authorized account representative will not affect any representation, action, inaction or submission of the CO_2 authorized account representative or the finality of a decision or order by the Department or its agent under the CO_2 Budget Trading Program.

(c) The Department and its agent will not adjudicate any private legal dispute concerning the authorization or any representation, action, inaction or submission of a CO_2 authorized account representative, including private legal disputes concerning the proceeds of CO_2 allowance transfers.

§ 145.316. Delegation of authority to make electronic submissions and review information in COATS.

(a) A CO_2 authorized account representative or a CO_2 authorized alternate account representative may delegate, to one or more persons, their authority to make an electronic submission to the Department or its agent under this subchapter.

(b) To delegate authority to make an electronic submission to the Department or its agent, the CO_2 authorized account representative or CO_2 authorized alternate account representative must submit to the Department or its agent a notice of delegation, in a format prescribed by the Department that includes the following:

(1) The name, address, e-mail address and telephone number of the delegating CO_2 authorized account representative or CO_2 authorized alternate account representative.

(2) The name, address, e-mail address and telephone number of each electronic submission agent.

(3) For each electronic submission agent, a list of the type of electronic submissions under subsection (a) for which authority is delegated.

(4) The following certification statements by the delegating CO_2 authorized account representative or CO_2 authorized alternate account representative:

(i) "I agree that any electronic submission to the Department or its agent that is by the electronic submission agent identified in this notice of delegation and of a type listed for the electronic submission agent in this notice of delegation and that is made when I am a CO_2 authorized account representative or CO_2 authorized alternate account representative and before this notice of delegation is superseded by another notice of delegation under subsection (d) shall be deemed to be an electronic submission by me."

(ii) "Until this notice of delegation is superseded by another notice of delegation under subsection (d), I agree to maintain an e-mail account and to notify the Department or its agent immediately of any change in my e-mail address unless all delegation authority by me under this subsection is terminated."

(c) A notice of delegation submitted under subsection (b) will be effective, with regard to the CO_2 authorized account representative or CO_2 authorized alternate account representative identified in the notice, upon receipt of the notice by the Department or its agent and until receipt by the Department or its agent of a superseding notice of delegation by the CO_2 authorized account representative or CO_2 authorized alternate account representative. The superseding notice of delegation may replace any previously identified electronic submission agent, add a new electronic submission agent or eliminate entirely any delegation of authority.

(d) Any electronic submission covered by the certification under subsection (b)(4) and made in accordance with a notice of delegation effective under subsection (b) shall be deemed to be an electronic submission by the CO_2 authorized account representative or CO_2 authorized alternate account representative submitting the notice of delegation.

(e) A CO_2 authorized account representative or a CO_2 authorized alternate account representative may delegate, to one or more persons, their authority to review information in COATS under this subchapter.

(f) To delegate authority to review information in COATS under subsection (e), the CO_2 authorized account representative or CO_2 authorized alternate account representative must submit to the Department or its agent a notice of delegation, in a format prescribed by the Department that includes the following:

(1) The name, address, e-mail address and telephone number of the delegating CO_2 authorized account representative or CO_2 authorized alternate account representative.

(2) The name, address, e-mail address and telephone number of each reviewer.

(3) For each reviewer, a list of the type of information under subsection (e) for which authority is delegated.

(4) The following certification statements by the delegating CO_2 authorized account representative or CO_2 authorized alternate account representative:

(i) "I agree that any information that is reviewed by the reviewer identified in this notice of delegation and of a type listed for the information accessible by the reviewer in this notice of delegation and that is made when I am a CO_2 authorized account representative or CO_2 authorized alternate account representative and before this notice of delegation is superseded by another notice of delegation under subsection (g) shall be deemed to be a review by me."

(ii) "Until this notice of delegation is superseded by another notice of delegation under subsection (g), I agree to maintain an e-mail account and to notify the Department or its agent immediately of any change in my e-mail address unless all delegation authority by me under this subsection is terminated."

(g) A notice of delegation submitted under subsection (f) shall be effective, with regard to the CO_2 authorized account representative or CO_2 authorized alternate account representative identified in the notice, upon receipt of the notice by the Department or its agent and until receipt by the Department or its agent of a superseding notice of delegation by the CO_2 authorized account representative or CO_2 authorized alternate account representative. The superseding notice of delegation may replace any previously identified reviewer, add a new reviewer or eliminate entirely any delegation of authority.

PERMITS

§ 145.321. General requirements for a permit incorporating CO_2 Budget Trading Program requirements.

(a) Except as provided under § 127.403 (relating to permitting of sources operating lawfully without a permit), each CO_2 budget source must have a permit issued by the Department under Chapter 127 (relating to construction, modification, reactivation and operation of sources).

(b) The permit for each CO_2 budget source shall contain all applicable CO_2 Budget Trading Program requirements.

§ 145.322. Submission of an application for a new, renewed or modified permit incorporating CO_2 Budget Trading Program requirements.

(a) For any CO_2 budget source, the owner or operator shall submit a complete permit application under Chapter 127 (relating to construction, modification, reactivation and operation of sources) incorporating the CO_2 Budget Trading Program requirements in this subchapter to the Department by the later of the following:

(1) Six months after April 23, 2022.

(2) Twelve months before the date on which the CO_2 budget source or a new unit at the source commences operation.

(b) If the Department approves the incorporation of CO_2 Budget Trading Program requirements into a permit, the Department will establish permit conditions in the permit that will enable the Department to readily verify whether emissions from the source operations meet the requirements of this subchapter. Such permit conditions will set forth replicable procedures, including monitoring, source emissions testing and recordkeeping and reporting procedures, sufficient to ensure that emissions are quantified and recorded and that compliance with the emissions limitation under this subchapter is enforceable.

§ 145.323. Contents of an application for a permit incorporating CO_2 Budget Trading Program requirements.

A complete permit application shall include the following concerning the CO_2 budget source for which the application is submitted, in a format prescribed by the Department:

(1) Identification of the CO_2 budget source, including plant name and the Office of Regulatory Information Systems or facility code assigned to the source by the Energy Information Administration of the United States Department of Energy, if applicable.

(2) Identification of each CO_2 budget unit at the CO_2 budget source.

(3) The standard requirements under § 145.306 (relating to standard requirements).

(4) The compliance certification requirements under § 145.331 (relating to compliance certification report).

(5) The compliance requirements under § 145.355 (relating to compliance).

(6) The monitoring, recordkeeping and reporting requirements under §§ 145.371—145.377 (relating to monitoring, reporting and recordkeeping requirements).

COMPLIANCE CERTIFICATION

§ 145.331. Compliance certification report.

(a) *Applicability and deadline.* For each control period, except for an interim control period, in which a CO_2 budget source is subject to the CO_2 requirements of § 145.306(c) (relating to standard requirements), the CO_2 authorized account representative of the source shall submit a compliance certification report to the Department by March 1 following the relevant control period.

(b) *Contents of report.* The CO_2 authorized account representative shall include in the compliance certification report under subsection (a) the following:

(1) Identification of the CO_2 budget source and each CO_2 budget unit at the source.

(2) At the CO_2 authorized account representative's option, the serial numbers of the CO_2 allowances that are to be deducted from the source's compliance account under § 145.355 (relating to compliance) for the control period or an interim control period, including the serial numbers of any CO_2 offset allowances that are to be deducted subject to the limitations of § 145.355(a)(3).

(3) The compliance certification under subsection (c).

(c) *Compliance certification.* In the compliance certification report under subsection (a), the CO_2 authorized account representative shall certify, based on reasonable inquiry of those persons with primary responsibility for operating the source and the CO_2 budget units at the source in compliance with the CO_2 Budget Trading Program, whether the source and each CO_2 budget unit at the source for which the compliance certification is submitted was operated during the calendar years covered by the report in compliance with the requirements of the CO_2 Budget Trading Program, including the following:

(1) Whether the CO_2 budget source was operated in compliance with the CO_2 requirements of § 145.306(c).

(2) Whether the monitoring plan applicable to each unit at the source has been maintained to reflect the actual operation and monitoring of the unit and contains the information necessary to attribute CO_2 emissions to the unit, in accordance with §§ 145.371—145.377 (relating to monitoring, reporting and recordkeeping requirements).

(3) Whether all the CO_2 emissions from the units at the source were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with §§ 145.371—145.377. If conditional data were reported, the owner or operator shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions have been made.

(4) Whether the facts that form the basis for certification under §§ 145.371—145.377 of each monitor at each unit at the source, or for using an excepted monitoring method or alternative monitoring method approved under §§ 145.371—145.377, if any, have changed.

(5) If a change is required to be reported under paragraph (4), specify the nature of the change, the reason for the change, when the change occurred and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor recertification.

§ 145.332. Department action on compliance certifications.

(a) The Department or its agent may review and conduct independent audits concerning any compliance certification or any other submission under the CO_2 Budget Trading Program and make appropriate adjustments of the information in the compliance certification or other submission.

(b) The Department or its agent may deduct CO_2 allowances from or transfer CO_2 allowances to a CO_2 budget source's compliance account based on the information in the compliance certification or other submission, as adjusted under subsection (a).

CO_2 ALLOWANCE ALLOCATIONS

§ 145.341. Pennsylvania CO_2 Budget Trading Program base budget.

(a) For 2022, if Pennsylvania is a participating state on January 1, 2022, the Pennsylvania CO_2 Budget Trading Program base budget is 78 million tons. If Pennsylvania is a participating state after January 1, 2022, then the Pennsylvania CO_2 Budget Trading Program base budget for 2022 will be one of the following:

(1) If Pennsylvania is a participating state after January 1, 2022, but before or on April 1, 2022, then the Pennsylvania CO_2 Budget Trading Program base budget is 57,954,000 tons.

(2) If Pennsylvania is a participating state after April 1, 2022, but before or on July 1, 2022, then the Pennsylvania CO_2 Budget Trading Program base budget is 40,716,000 tons.

(3) If Pennsylvania is a participating state after July 1, 2022, but before or on October 1, 2022, then the Pennsylvania CO_2 Budget Trading Program base budget is 18,564,000 tons.

(b) For 2023, the Pennsylvania CO_2 Budget Trading Program base budget is 75,510,630 tons.

(c) For 2024, the Pennsylvania CO_2 Budget Trading Program base budget is 73,021,260 tons.

(d) For 2025, the Pennsylvania CO_2 Budget Trading Program base budget is 70,531,890 tons.

(e) For 2026, the Pennsylvania CO_2 Budget Trading Program base budget is 68,042,520 tons.

(f) For 2027, the Pennsylvania CO_2 Budget Trading Program base budget is 65,553,150 tons.

(g) For 2028, the Pennsylvania CO_2 Budget Trading Program base budget is 63,063,780 tons.

(h) For 2029, the Pennsylvania CO_2 Budget Trading Program base budget is 60,574,410 tons.

(i) For 2030 and each succeeding calendar year, the Pennsylvania CO_2 Budget Trading Program base budget is 58,085,040 tons.

§ 145.342. CO_2 allowance allocations.

(a) *General allocations.* The Department will allocate CO_2 allowances representing 100% of the tons for each allocation year from the Pennsylvania CO_2 Budget Trading Program base budget set forth in § 145.341 (relating to Pennsylvania CO_2 Budget Trading Program base budget) to the air pollution reduction account, less those CO_2 allowances set aside each allocation year under subsection (b).

(b) *Set-aside allocations.*

(1) *Waste coal set-aside account.* The Department will allocate CO_2 allowances to a waste coal set-aside account for each allocation year from the Pennsylvania CO_2 Budget Trading Program base budget set forth in § 145.341, as provided under subsection (i).

(2) *Strategic use set-aside account.* The Department will allocate undistributed CO_2 allowances to the strategic use set-aside account for each allocation year from the waste coal set-aside account, as provided under subsection (j).

(3) *Combined heat and power set-aside account.* The Department will allocate CO_2 allowances to a combined heat and power set-aside account for each allocation year

from the Pennsylvania CO_2 Budget Trading Program base budget set forth in § 145.341, as provided under subsection (k).

(c) *CO_2 allowances available for allocation.* For each allocation year, the Pennsylvania CO_2 Budget Trading Program adjusted budget shall be the maximum number of CO_2 allowances available for allocation in a given allocation year, except for CO_2 offset allowances and CO_2 CCR allowances. In any year in which there is no adjusted budget, the adjusted budget shall equal the base budget.

(d) *Cost Containment Reserve (CCR) allocation.* To contain the cost of CO_2 allowances, the Department will allocate CO_2 CCR allowances, separate from and additional to the Pennsylvania CO_2 Budget Trading Program base budget set forth in § 145.341, to the air pollution reduction account. The Department will allocate CO_2 CCR allowances by doing the following:

(1) The Department will initially allocate CCR allowances for calendar year 2022 in an amount equal to 10% of the Pennsylvania CO_2 Budget Trading Program base budget for 2022 set forth in § 145.341(a).

(2) On or before January 1, 2023, and on or before January 1 of each calendar year thereafter, the Department will allocate current vintage year CCR allowances equal to 10% of the Pennsylvania CO_2 Budget Trading Program base budget for the calendar year and withdraw the number of CO_2 CCR allowances that remain in the air pollutant reduction account at the end of the prior calendar year.

(e) *Emissions Containment Reserve (ECR) Withholding.* To provide additional emissions reductions in the event of lower than anticipated emissions reduction costs, the Department will convert and transfer any CO_2 allowances that have been withheld from any auction into the Pennsylvania ECR account. The Department will withhold CO_2 ECR allowances by doing the following:

(1) If the condition in § 145.382(d)(1) (relating to general requirements) is met at an auction, then the maximum number of CO_2 ECR allowances that will be withheld from that auction will be equal to 10% of the Pennsylvania CO_2 Budget Trading Program base budget for that calendar year minus the total quantity of CO_2 ECR allowances that have been withheld from any prior auction in that calendar year. Any CO_2 ECR allowances withheld from an auction will be transferred into the Pennsylvania ECR account.

(2) CO_2 allowances that have been transferred into the Pennsylvania ECR account will remain in the Pennsylvania ECR account as CO_2 ECR allowances and not be withdrawn.

(f) *Adjustment for banked allowances.* The Department may determine whether any adjustments for banked allowances will be made by using the following formula:

$$ABA = ((A - AE)/Y) \times RS\%$$

Where:

ABA = The adjustment for banked allowances quantity in tons.

A (adjustment) = The total quantity of CO_2 allowances of vintage years held in general and compliance accounts, including compliance accounts established under the CO_2 Budget Trading Program, but not including accounts opened by participating states, as reflected in COATS.

AE (adjustment emissions) = The total quantity of emissions from all CO_2 budget sources in all participating states, reported under the CO_2 Budget Trading Program as reflected in COATS prior to the year of the adjustment.

RS% = The Commonwealth's adjustment year budget divided by the adjustment year regional budget.

Y = The time period in years over which the adjustment occurs.

(g) *CO_2 Budget Trading Program adjusted budget.* The Department may establish the Pennsylvania CO_2 Budget Trading Program adjusted budget for an allocation year by the following formula:

$$AB = BB - ABA$$

Where:

AB = The Pennsylvania CO_2 Budget Trading Program adjusted budget.

BB = The Pennsylvania CO_2 Budget Trading Program base budget.

ABA = The adjustment for banked allowances quantity in tons.

(h) *Publication*. If the Department determines to adjust the budget for banked allowances under subsections (f) and (g), the Department will publish in the *Pennsylvania Bulletin* the CO_2 Budget Trading Program adjusted budget for the allocation year.

(i) *Waste coal set-aside allocation.* The waste coal set-aside allocation will consist of tons from the Pennsylvania CO_2 Budget Trading Program base budget set forth in § 145.341, as applicable. The Department will administer the waste coal set-aside account in accordance with the following:

(1) *Applicability.* This subsection applies to waste coal-fired units located in Pennsylvania that commenced operation on or before April 23, 2022, that are subject to the CO_2 Budget Trading Program requirements under § 145.304 (relating to applicability).

(2) *General account.* The Department will open and manage a general account for the waste coal set-aside account.

(3) *Allowance transfer.* Except for 2022, by March 1 of each calendar year, the Department may transfer a portion of the CO_2 allowances allocated to the air pollution reduction account to the waste coal set-aside account in an amount equal to legacy emissions from waste coal-fired units applicable under paragraph (1). The Department has determined that the total amount of legacy emissions equal 12.8 million tons.

(4) *Compliance allocation.* Except for 2022 and a year with an exceedance of legacy emissions under paragraph (5), by March 1 of each calendar year, the Department will allocate CO_2 allowances from the waste coal set-aside account to the compliance account of each waste coal-fired unit in an amount equal to the actual number of CO_2 emissions in tons emitted from the waste coal-fired unit during the previous year.

(i) After allocating CO_2 allowances under this paragraph, the Department will transfer any undistributed CO_2 allowances from the waste coal set-aside account to the strategic use set-aside account.

(ii) CO_2 allowances allocated under this subsection must only be used for compliance with the CO_2 budget emissions limitation for the waste coal-fired unit. The sale or transfer of CO_2 allowances from the unit's compliance account will be considered a violation of this subchapter.

(5) *Exception for exceedance of legacy emissions.* If the total actual CO_2 emissions from waste coal-fired units exceed 12.8 million tons during a calendar year, the Department will account for the exceedance as follows:

(i) By February 15 of the year following the exceedance, the Department will determine the difference between each unit's legacy emissions and the unit's actual emissions during the previous year.

(ii) By February 15 of the year following the exceedance, the Department will allocate CO_2 allowances from the waste coal set-aside account to the compliance account of each waste coal-fired unit in an amount equal to the actual number of CO_2 emissions in tons emitted from the waste coal-fired unit during the previous year minus the exceedance of legacy emissions.

(iii) After the allocation under subparagraph (ii), if there are CO_2 allowances remaining in the waste coal set-aside account, the Department may distribute CO_2 allowances to each waste coal-fired unit requiring CO_2 allowances to meet the CO_2 requirements under § 145.306(c) (relating to standard requirements) in an amount proportionate to the exceedance.

(iv) By the CO_2 allowance transfer deadline of the year following the exceedance, the owner or operator of each waste coal-fired unit requiring additional CO_2 allowances to satisfy the CO_2 requirements under § 145.306(c) must transfer CO_2 allowances for compliance deductions under § 145.355 (relating to compliance) to the compliance account of the unit.

(6) *Set-aside termination.* If no CO_2 allowances are allocated under paragraph (4) in any calendar year due to the fact that there were no actual CO_2 emissions from waste coal-fired units subject to this subsection, then the CO_2 allowances remaining in the waste coal set-aside account will be transferred to the strategic use set-aside account. No additional CO_2 allowances will be allocated to the waste coal set-aside account under paragraph (3), and the Department will close the waste coal set-aside account.

(j) *Strategic use set-aside allocation.* The strategic use set-aside allocation will consist of undistributed CO_2 allowances from the waste coal set-aside account. The Department will administer the strategic use set-aside account in accordance with the following:

(1) *General account.* The Department will open and manage a general account for the strategic use set-aside account.

(2) *Allowance transfer.* By April 1 of each calendar year, the Department will transfer undistributed CO_2 allowances allocated to the waste coal set-aside account to the strategic use set-aside account.

(3) *Allocation to eligible projects.* The Department may distribute CO_2 allowances from the strategic use set-aside account to eligible projects located in Pennsylvania that result in a greenhouse gas emission reduction benefit including the following:

(i) Implementation of energy efficiency measures.

(ii) Implementation of renewable or noncarbon-emitting energy technologies.

(iii) Development of innovative greenhouse gas emissions abatement technologies with significant greenhouse gas reduction potential.

(4) *Strategic use application.* To apply for CO_2 allowances, the owner of an eligible project shall submit to the Department a complete application, in a format prescribed by the Department, that includes the following:

(i) Documentation that the project will result in greenhouse gas emission reductions.

(ii) Identification of the general account for the eligible project.

(iii) Specification of the number of CO_2 allowances being requested.

(iv) The calculations and supporting data used to determine the greenhouse gas emission reductions and an explanation of the data and the methods on which the calculations are based.

(5) *CO_2 allowance determination.* After verifying that the information submitted in the application under paragraph (4) is complete and accurate, the Department will determine the number of CO_2 allowances to distribute based on the greenhouse gas emission reductions achieved. The Department will distribute the allotted CO_2 allowances upon completion of the eligible project.

(6) *General requirements.* The Department will not award CO_2 allowances to an eligible project that is required under any local, State or Federal law, regulation, or administrative or judicial order.

(7) *Use of CO_2 allowances.* The owner of an eligible project may sell, transfer or submit a written request to the Department to retire allocated CO_2 allowances.

(8) *Transfer or retirement of CO_2 allowances.* At the end of each control period, the Department may retire or transfer to the air pollution reduction account any undistributed CO_2 allowances from the strategic use set-aside account.

(k) *Combined heat and power set-aside allocation.* The combined heat and power set-aside allocation will consist of tons from the Pennsylvania CO_2 Budget Trading Program base budget set forth in § 145.341, as applicable. The Department will administer the combined heat and power set-aside account in accordance with the following:

(1) *Applicability.* This subsection applies to combined heat and power units located in Pennsylvania that are subject to the CO_2 Budget Trading Program requirements under § 145.304 (relating to applicability).

(2) *General account.* The Department will open and manage a general account for the combined heat and power set-aside account.

(3) *CO_2 allowance retirement.* The Department will retire CO_2 allowances for a CO_2 budget unit that is a combined heat and power unit. Based on information provided under paragraph (4), the CO_2 authorized account representative of a CO_2 budget unit may request one of the following:

(i) Retirement of CO_2 allowances equal to the total amount of CO_2 emitted as a result of providing useful thermal energy or electricity, or both, during the allocation year.

(ii) Retirement of CO_2 allowances equal to the partial amount of CO_2 emitted as a result of supplying useful thermal energy or electricity, or both, to an interconnected industrial, institutional or commercial facility during the allocation year.

(4) *CO_2 allowance retirement application.* By January 30 of the year following the allocation year for which the retirement of CO_2 allowances is being requested, the CO_2 authorized account representative seeking the retirement

of CO_2 allowances for a combined heat and power unit shall submit to the Department a complete application, in a format prescribed by the Department, that includes the following:

(i) Documentation that the CO_2 budget unit is a combined heat and power unit that satisfies the applicability under paragraph (1).

(ii) Identification of the compliance account for the CO_2 budget unit.

(iii) Identification of the allocation year for which the retirement of CO_2 allowances request is being made.

(iv) Specification of the amount of the retirement of CO_2 allowances being requested, as determined under paragraph (5).

(v) The calculations and supporting data used to determine the amount of the retirement of CO_2 allowances being requested and an explanation of the data and the methods on which the calculations are based.

(vi) If the CO_2 budget unit is requesting retirement of CO_2 allowances under paragraph (3)(i), then the application must include the following:

(A) Documentation that the useful thermal energy is at least 25% of the total energy output of the combined heat and power unit on an annual basis.

(B) Documentation that the overall efficiency of the combined heat and power unit is at least 60% on an annual basis.

(C) The percentage of useful thermal energy and overall efficiency must be calculated as follows:

Percentage of UTE = UTE / (UTE + TEO) × 100

OE = ((UTE + TEO) / HI) × 100

Where:

UTE = Useful Thermal Energy (MMBtu)

OE = Overall Efficiency

TEO = Total Electrical Output (MMBtu) = GG × 3.412

GG = Gross Generation (MWe)

HI = Total Heat Input (MMBtu)

(vii) If the CO_2 budget unit is requesting retirement of CO_2 allowances under paragraph (3)(ii), then the application must include documentation of the amount of useful thermal energy or electricity, or both, supplied to an interconnected industrial, institutional or commercial facility.

(5) *CO_2 allowance retirement determination.* After verifying that the information submitted in the application under paragraph (4) is complete and accurate, the Department will determine the number of CO_2 allowances to retire on behalf of a CO_2 budget unit that meets the applicability requirements under paragraph (1) and the application requirements under paragraph (4).

(i) For a CO_2 budget unit that meets the application requirements under paragraph (4)(vi), the Department will retire the number of CO_2 allowances equal to the amount of CO_2 that is emitted as a result of providing useful thermal energy or electricity, or both, during the allocation year.

(ii) For a CO_2 budget unit that meets the application requirements under paragraph (4)(vii), the Department will retire the number of CO_2 allowances equal to the amount of useful thermal energy or electricity, or both, supplied to an interconnected industrial, institutional or commercial facility during the allocation year.

(iii) The owner or operator of each CO_2 budget unit requiring additional CO_2 allowances to satisfy the CO_2 requirements under § 145.306(c) shall transfer CO_2 allowances for compliance deductions under § 145.355 (relating to compliance) to the compliance account of the unit.

(6) *Retirement and transfer of CO_2 allowances.* At the end of each control period or interim control period, the Department will retire CO_2 allowances from the combined heat and power set-aside account in an amount equal to the determination under paragraph (5) for each CO_2 budget unit. The Department will transfer any remaining CO_2 allowances to the air pollution reduction account to be available for auction.

§ 145.343. Distribution of CO_2 allowances in the air pollution reduction account.

(a) Except for the CO_2 allowances allocated to the waste coal set-aside account under § 145.342(i) (relating to CO_2 allowance allocations), the strategic use set-aside account under § 145.342(j) and the combined heat and power set-aside account under § 145.342(k), the Department will make all CO_2 allowances for an allocation year that are held in the air pollution reduction account for that allocation year available for purchase or auction by no later than the December 31 of the calendar year that corresponds to that allocation year.

(b) The Department will administer the air pollution reduction account so that CO_2 allowances will be sold in a transparent allowance auction. The proceeds of the auction will be used in the elimination of air pollution in accordance with the act and Chapter 143 (relating to disbursements from the Clean Air Fund) and for programmatic costs associated with the CO_2 Budget Trading Program.

(c) The Department or its agent, will not be obligated to sell any CO_2 allowances for less than the reserve price.

(d) The Department may transfer to the air pollution reduction account undistributed or unsold CO_2 allowances at the end of each control period, including CO_2 allowances allocated to the waste coal set-aside account under § 145.342(i), the strategic use set-aside account under § 145.342(j) and the combined heat and power set-aside account under § 145.342(k).

CO_2 ALLOWANCE TRACKING SYSTEM

§ 145.351. CO_2 Allowance Tracking System (COATS) accounts.

(a) *Nature and function of compliance accounts.* Consistent with § 145.352(a) (relating to establishment of accounts), the Department or its agent will establish one compliance account for each CO_2 budget source. Allocations of CO_2 allowances under §§ 145.341—145.343 (relating to CO_2 allowance allocations) and deductions or transfers of CO_2 allowances under §§ 145.332, 145.355 and 145.357 (relating to Department action on compliance certifications; compliance; and account error) or §§ 145.361—145.363 (relating to CO_2 allowance transfers) will be recorded in the compliance accounts.

(b) *Nature and function of general accounts.* Consistent with § 145.352(b), the Department or its agent will establish, upon request, a general account for any person. Transfers of CO_2 allowances under §§ 145.361—145.363 will be recorded in the general account.

§ 145.352. Establishment of accounts.

(a) *Compliance accounts.* Upon receipt of a complete account certificate of representation under § 145.314 (relating to account certificate of representation), the Department or its agent will establish a compliance account for each CO_2 budget source for which the account certificate of representation was submitted.

(b) *General accounts.*

(1) *Complete application*. Any person may apply to open a general account for the purpose of holding and transferring CO_2 allowances by submitting a complete application for a general account to the Department or its agent that includes the following:

(i) The name, mailing address, e-mail address and telephone number of the CO_2 authorized account representative and any CO_2 authorized alternate account representative.

(ii) The organization name and type of organization.

(iii) A list of all persons subject to a binding agreement for the CO_2 authorized account representative or any CO_2 authorized alternate account representative to represent their ownership interest with respect to the CO_2 allowances held in the general account.

(iv) The following certification statement by the CO_2 authorized account representative and any CO_2 authorized alternate account representative:

"I certify that I was selected as the CO_2 authorized account representative or the CO_2 authorized alternate account representative by an agreement that is binding on all persons who have an ownership interest with respect to CO_2 allowances held in the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO_2 Budget Trading Program on behalf of all persons and that each person shall be fully bound by my representations, actions, inactions or submissions and by any order or decision issued to me by the Department or its agent or a court regarding the general account."

(v) The signature of the CO_2 authorized account representative and any CO_2 authorized alternate account representative and the dates signed.

(vi) Unless otherwise required by the Department or its agent, documents of agreement referred to in the application for a general account should not be submitted to the Department or its agent. The Department and its agent are not under any obligation to review or evaluate the sufficiency of any documents of agreement, if submitted.

(2) *Authorization of CO_2 authorized account representative.*

(i) Upon receipt by the Department or its agent of a complete application for a general account under paragraph (1), the Department or its agent will establish a general account for the person for whom the application is submitted.

(ii) The CO_2 authorized account representative and any CO_2 authorized alternate account representative for the general account shall represent and, by their representations, actions, inactions or submissions, legally bind each person who has an ownership interest with respect to CO_2 allowances held in the general account in all matters pertaining to the CO_2 Budget Trading Program, notwithstanding an agreement between the CO_2 authorized account representative or any CO_2 authorized alternate account representative and the person. This person shall be bound by any order or decision issued to the CO_2 authorized account representative or any CO_2 authorized alternate account representative by the Department or its agent or a court regarding the general account.

(iii) Any representation, action, inaction or submission by any CO_2 authorized alternate account representative shall be deemed to be a representation, action, inaction or submission by the CO_2 authorized account representative.

(iv) Each submission concerning the general account shall be submitted, signed and certified by the CO_2 authorized account representative or any CO_2 authorized alternate account representative for the persons having an ownership interest with respect to CO_2 allowances held in the general account. Each submission shall include the following certification statement by the CO_2 authorized account representative or any CO_2 authorized alternate account representative:

"I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the CO_2 allowances held in the general account. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties under 18 Pa.C.S. § 4904 for submitting false statements and information or omitting required statements and information."

(v) The Department or its agent will accept or act on a submission concerning the general account only if the submission has been made, signed and certified in accordance with subparagraph (iv).

(3) *Changing CO_2 authorized account representative and CO_2 authorized alternate account representative; changes in persons with ownership interest.*

(i) The CO_2 authorized account representative or the CO_2 authorized alternate account representative for a general account may be changed at any time upon receipt by the Department or its agent of a superseding complete application for a general account under paragraph (1). Notwithstanding a change, the representations, actions, inactions and submissions by the previous CO_2 authorized account representative, or the previous CO_2 authorized alternate account representative, prior to the time and date when the Department or its agent receives the superseding application for a general account shall be binding on the new CO_2 authorized account representative or the new CO_2 authorized alternate account representative and the persons with an ownership interest with respect to the CO_2 allowances in the general account.

(ii) A revision of ownership listing shall include the following:

(A) If a new person having an ownership interest with respect to CO_2 allowances in the general account is not included in the list of persons in the application for a general account, the new person shall be deemed to be subject to and bound by the application for a general account, the representations, actions, inactions and submissions of the CO_2 authorized account representative and any CO_2 authorized alternate account representative, and the decisions, orders, actions and inactions of the Department or its agent, as if the new person were included in the list.

(B) Within 30 days following any change in the persons having an ownership interest with respect to CO_2 allowances in the general account, including the addition or deletion of persons, the CO_2 authorized account representative or any CO_2 authorized alternate account representative shall submit a revision to the application for a general account amending the list of persons having an ownership interest with respect to the CO_2 allowances in the general account to include the change.

(4) *Objections concerning CO_2 authorized account representative.*

(i) Once a complete application for a general account under paragraph (1) has been submitted and received, the Department or its agent will rely on the application until a superseding complete application for a general account under paragraph (3)(i) is received by the Department or its agent.

(ii) Except as provided in paragraph (3)(i) and (ii), no objection or other communication submitted to the Department or its agent concerning the authorization, or any representation, action, inaction or submission of the CO_2 authorized account representative or any CO_2 authorized alternate account representative for a general account will affect any representation, action, inaction or submission of the CO_2 authorized account representative or any CO_2 authorized alternate account representative or the finality of any decision or order by the Department or its agent under the CO_2 Budget Trading Program.

(iii) The Department or its agent will not adjudicate a private legal dispute concerning the authorization or any representation, action, inaction or submission of the CO_2 authorized account representative or any CO_2 authorized alternate account representative for a general account, including private legal disputes concerning the proceeds of CO_2 allowance transfers.

(5) *Delegation by CO_2 authorized account representative and CO_2 authorized alternate account representative.*

(i) A CO_2 authorized account representative or a CO_2 authorized alternate account representative may delegate, to one or more persons, their authority to make an electronic submission to the Department or its agent under § 145.361 (relating to submission of CO_2 allowance transfers).

(ii) To delegate authority to make an electronic submission to the Department or its agent in accordance with subparagraph (i), the CO_2 authorized account representative or CO_2 authorized alternate account representative must submit to the Department or its agent a notice of delegation, in a format prescribed by the Department that includes the following:

(A) The name, address, e-mail address and telephone number of the CO_2 authorized account representative or CO_2 authorized alternate account representative.

(B) The name, address, e-mail address and telephone number of each electronic submission agent.

(C) For each electronic submission agent, a list of the type of electronic submissions under subparagraph (i) for which authority is delegated.

(D) The following certification statements by the delegating CO_2 authorized account representative or CO_2 authorized alternate account representative:

(I) "I agree that any electronic submission to the Department or its agent that is by an electronic submission agent identified in this notice of delegation and of a type listed for the electronic submission agent in this notice of delegation and that is made when I am a CO_2 authorized account representative or CO_2 authorized alternate account representative before this notice of delegation is superseded by another notice of delegation under 25 Pa. Code § 145.352(b)(5)(ii) shall be deemed to be an electronic submission by me."

(II) "Until this notice of delegation is superseded by another notice of delegation under 25 Pa. Code § 145.352(b)(5)(ii), I agree to maintain an e-mail account and to notify the Department or its agent immediately of any change in my e-mail address unless all delegation authority by me under subsection (b)(5)(ii) is terminated."

(iii) A notice of delegation submitted under subparagraph (ii) shall be effective, with regard to the delegating CO_2 authorized account representative or CO_2 authorized alternate account representative identified in the notice, upon receipt of the notice by the Department or its agent and until receipt by the Department or its agent of a superseding notice of delegation by the CO_2 authorized account representative or CO_2 authorized alternate account representative. The superseding notice of delegation may replace any previously identified electronic submission agent, add a new electronic submission agent, or eliminate entirely any delegation of authority.

(iv) Any electronic submission covered by the certification in clause (D) and made in accordance with a notice of delegation effective under subparagraph (ii) shall be deemed to be an electronic submission by the CO_2 authorized account representative or CO_2 authorized alternate account representative submitting the notice of delegation.

(c) *Account identification.* The Department or its agent will assign a unique identifying number to each account established under subsections (a) or (b).

§ 145.353. COATS responsibilities of CO_2 authorized account representative and CO_2 authorized alternate account representative.

Following the establishment of a COATS account, the submissions to the Department or its agent pertaining to the account, including submissions concerning the deduction or transfer of CO_2 allowances in the account, shall be made only by the CO_2 authorized account representative or CO_2 authorized alternate account representative for the account.

§ 145.354. Recordation of CO_2 allowance allocations.

(a) Except for 2022, by January 1 of each calendar year, the Department or its agent will record the CO_2 allowances allocated for the air pollution reduction account under § 145.342(a) (relating to CO_2 allowance allocations).

(b) By January 1 of each calendar year, the Department or its agent will record the CO_2 allowances allocated for the waste coal set-aside account under § 145.342(b)(1), for the strategic use set-aside account under § 145.342(b)(2) and for the combined heat and power set-aside account under § 145.342(b)(3) for the year after the last year for which CO_2 allowances were previously allocated to the set-aside account.

(c) The Department or its agent will assign each CO_2 allowance a serial number that will include digits identifying the year for which the CO_2 allowance is allocated.

§ 145.355. Compliance.

(a) *Allowances available for compliance deduction.* The CO_2 allowances are available to be deducted for compli-

ance with the CO_2 requirements under § 145.306(c) (relating to standard requirements) for a control period or an interim control period only if the CO_2 allowances meet the following:

(1) The CO_2 allowances, other than CO_2 offset allowances, are allocated for a prior control period, the same control period or the interim control period for which the allowances will be deducted.

(2) The CO_2 allowances are held in the CO_2 budget source's compliance account as of the CO_2 allowance transfer deadline for that control period or the interim control period or are transferred into the compliance account by a CO_2 allowance transfer correctly submitted for recordation under § 145.361 (relating to submission of CO_2 allowance transfers) by the CO_2 allowance transfer deadline for that control period or the interim control period.

(3) For CO_2 offset allowances, the number of CO_2 offset allowances available to be deducted for a CO_2 budget source to comply with the CO_2 requirements under § 145.306(c) for a control period or an interim control period may not exceed 3.3% of the CO_2 budget source's CO_2 emissions for that control period or 3.3% of 0.50 times the CO_2 budget source's CO_2 emissions for an interim control period, as determined in accordance with §§ 145.351—145.358 (relating to CO_2 allowance tracking system) and 145.371—145.377 (relating to monitoring, reporting and recordkeeping requirements).

(4) The CO_2 allowances are not necessary for deductions for excess emissions for a prior control period under subsection (d).

(b) *Deductions for compliance.* Following the recordation, in accordance with § 145.362 (relating to recordation), of CO_2 allowance transfers submitted for recordation in the CO_2 budget source's compliance account by the CO_2 allowance transfer deadline for a control period or interim control period, the Department or its agent will deduct CO_2 allowances available under subsection (a) to cover the source's CO_2 emissions for the control period or interim control period, as follows:

(1) Until the amount of CO_2 allowances deducted equals the number of tons of total CO_2 emissions, or 0.50 times the number of tons of total CO_2 emissions for an interim control period, less any CO_2 emissions attributable to the burning of eligible biomass, determined in accordance with §§ 145.371—145.377, from all CO_2 budget units at the CO_2 budget source for the control period or interim control period.

(2) Until there are no more CO_2 allowances remaining in the compliance account that are available to be deducted under subsection (a), if there are insufficient CO_2 allowances to complete the deductions in paragraph (1).

(c) *Allowance identification.*

(1) The CO_2 authorized account representative for a CO_2 budget source's compliance account may identify by serial number the CO_2 allowances to be deducted from the compliance account for emissions or excess emissions for a control period or an interim control period in accordance with subsection (b) or subsection (d). The identification shall be made in the compliance certification report submitted in accordance with § 145.331 (relating to compliance certification report).

(2) The Department or its agent will deduct CO_2 allowances for a control period or an interim control period from the CO_2 budget source's compliance account, in the absence of an identification or in the case of a partial identification of available CO_2 allowances by serial number under paragraph (1), in the following order:

(i) CO_2 offset allowances subject to the relevant compliance deduction limitations under subsection (a)(3) will be deducted in chronological order. In the event that some, but not all, CO_2 offset allowances from a particular allocation year are to be deducted, CO_2 offset allowances will be deducted by serial number, with lower serial number allowances deducted before higher serial number allowances.

(ii) CO_2 allowances, other than CO_2 offset allowances, that are available for deduction under subsection (a) will be deducted in chronological order. In the event that some, but not all, CO_2 allowances from a particular allocation year are to be deducted, CO_2 allowances will be deducted by serial number, with lower serial number allowances deducted before higher serial number allowances.

(d) *Deductions for excess emissions.*

(1) After making the deductions for compliance under subsection (b), the Department or its agent will deduct from the CO_2 budget source's compliance account a number of CO_2 allowances, equal to 3 times the number of the CO_2 budget source's excess emissions.

(2) If the compliance account does not contain sufficient CO_2 allowances to cover 3 times the number of the CO_2 budget source's excess emissions, the CO_2 budget source shall immediately transfer CO_2 allowances into its compliance account in an amount equal to 3 times the number of the CO_2 budget source's excess emissions. No CO_2 offset allowances may be deducted to account for the source's excess emissions.

(3) A CO_2 allowance deduction required under paragraph (1) will not affect the liability of the owner or operator of the CO_2 budget source or the CO_2 budget units at the source for any fine, penalty or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under the Clean Air Act or the act. The following guidelines will be followed by the Department in assessing fines, penalties or other obligations:

(i) For purposes of determining the number of days of violation, if a CO_2 budget source has excess emissions for a control period or an interim control period, each day in the control period or an interim control period constitutes a day of violation unless the owner or operator of the unit demonstrates that a lesser number of days should be considered.

(ii) Each ton of excess emissions is a separate violation.

(e) *Recordation.* The Department or its agent will record in the appropriate compliance account all deductions from the account under subsections (b)—(d).

(f) *Action by the Department on submissions.*

(1) The Department may review and conduct independent audits concerning any submission under the CO_2 Budget Trading Program and make appropriate adjustments of the information in the submissions.

(2) The Department may deduct CO_2 allowances from or transfer CO_2 allowances to a CO_2 budget source's compliance account based on information in the submissions, as adjusted under paragraph (1).

§ 145.356. Banking.

A CO_2 allowance that is held in a compliance account or a general account will remain in the account until the

CO_2 allowance is deducted or transferred under § 145.332, § 145.355, § 145.357 or §§ 145.361—145.363 (relating to Department action on compliance certifications; compliance; account error; and CO_2 allowance transfers).

§ 145.357. Account error.

The Department or its agent may correct any error in a COATS account. Within 10 business days of making the correction, the Department or its agent will notify the CO_2 authorized account representative for the account.

§ 145.358. Closing of general accounts.

(a) The CO_2 authorized account representative of a general account may instruct the Department or its agent to close the account by submitting a statement requesting deletion of the account from COATS and by correctly submitting for recordation under § 145.361 (relating to submission of CO_2 allowance transfers) a CO_2 allowance transfer of all CO_2 allowances in the account to one or more other COATS account.

(b) If a general account shows no activity for 1 year or more and does not contain any CO_2 allowances, the Department or its agent may notify the CO_2 authorized account representative for the account that the account will be closed in COATS following 30 business days after the notice is sent. The Department or its agent will close the account after the 30-day period unless before the end of the 30-day period the Department or its agent receives a correctly submitted transfer of CO_2 allowances into the account under § 145.361 or a statement submitted by the CO_2 authorized account representative requesting that the account should not be closed. The Department or its agent will have sole discretion to determine if the owner or operator of the unit demonstrated that the account should not be closed.

CO_2 ALLOWANCE TRANSFERS

§ 145.361. Submission of CO_2 allowance transfers.

The CO_2 authorized account representatives seeking recordation of a CO_2 allowance transfer shall submit the transfer to the Department or its agent. The CO_2 allowance transfer shall include the following, in a format prescribed by the Department:

(1) The numbers identifying the accounts of the transferor and transferee.

(2) A specification by serial number of each CO_2 allowance to be transferred.

(3) The printed name and signature of the CO_2 authorized account representative of the transferor account and the date signed.

(4) The date of the completion of the last sale or purchase transaction for the CO_2 allowance, if any.

(5) The purchase or sale price of the CO_2 allowance that is the subject of a sale or purchase transaction under paragraph (4).

§ 145.362. Recordation.

(a) Within 5 business days of receiving a CO_2 allowance transfer, except as provided in subsection (b), the Department or its agent will record a CO_2 allowance transfer by moving each CO_2 allowance from the account of the transferor to the account of the transferee as specified by the request, if the following are met:

(1) The transfer is correctly submitted under § 145.361 (relating to submission of CO_2 allowance transfers).

(2) The account of the transferor includes each CO_2 allowance identified by serial number in the transfer.

(b) A CO_2 allowance transfer into or out of a compliance account that is submitted for recordation following the CO_2 allowance transfer deadline and that includes any CO_2 allowance allocated for a control period or interim control period prior to or the same as the control period or interim control period to which the CO_2 allowance transfer deadline applies will not be recorded until after completion of the process in § 145.355(b) (relating to compliance).

(c) A CO_2 allowance transfer submitted for recordation that fails to meet the requirements of subsection (a) will not be recorded.

§ 145.363. Notification.

(a) *Notification of recordation.* Within 5 business days of recordation of a CO_2 allowance transfer under § 145.362 (relating to recordation), the Department or its agent will notify each party to the transfer. Notice will be given to the CO_2 authorized account representative of the account of the transferor and the CO_2 authorized account representative of the account of the transferee.

(b) *Notification of non-recordation.* Within 10 business days of receipt of a CO_2 allowance transfer that fails to meet the requirements of § 145.362(a), the Department or its agent will notify the CO_2 authorized account representative of the account of the transferor and the CO_2 authorized account representative of the account of the transferee of the following:

(1) A decision not to record the transfer.

(2) The reasons for the non-recordation.

(c) *Resubmission.* Nothing in this section precludes the resubmission of a CO_2 allowance transfer for recordation following notification under subsection (b).

MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS

§ 145.371. General monitoring requirements.

The owner or operator, and to the extent applicable, the CO_2 authorized account representative of a CO_2 budget unit, shall comply with the monitoring, recordkeeping and reporting requirements as provided in this section and §§ 145.372—145.377 and all applicable sections of 40 CFR Part 75 (relating to continuous emission monitoring). Where referenced in §§ 145.371—145.377 (relating to monitoring, reporting and recordkeeping requirements), the monitoring requirements of 40 CFR Part 75 shall be adhered to in a manner consistent with the purpose of monitoring and reporting CO_2 mass emissions under this subchapter. For purposes of complying with these requirements, the definitions in § 145.302 (relating to definitions) and in 40 CFR 72.2 (relating to definitions) apply, and the terms "affected unit," "designated representative" and "continuous emissions monitoring system" in 40 CFR Part 75 shall be replaced by the terms "CO_2 budget unit," "CO_2 authorized account representative" and "continuous emissions monitoring system," respectively, as defined in § 145.302. For units not subject to an acid rain emissions limitation, the term "Administrator" in 40 CFR Part 75 shall be replaced with "the Administrator, Department or its agent." The owner or operator of a CO_2 budget unit who monitors a unit that is not a CO_2 budget unit pursuant to the common, multiple or bypass stack procedures in 40 CFR 75.72(b)(2)(ii) (relating to determination of NO_x mass emissions for common stack and multiple stack configurations) or 40 CFR 75.16(b)(2)(ii)(B) (relating

to special provisions for monitoring emissions from common, bypass, and multiple stacks for SO_2 emissions and heat input determinations) as pursuant to 40 CFR 75.13 (relating to specific provisions for monitoring CO_2 emissions) for purposes of complying with this subchapter, shall monitor and report CO_2 mass emissions from a unit that is not a CO_2 budget unit in accordance with the monitoring, reporting and recordkeeping requirements for a CO_2 budget unit under §§ 145.371—145.377.

(1) *Requirements for installation, certification and data accounting.* The owner or operator of each CO_2 budget unit must meet the following:

(i) Install all monitoring systems necessary to monitor CO_2 mass emissions in accordance with 40 CFR Part 75, except for equation G-1. This includes all systems required to monitor CO_2 concentration, stack gas flow rate, O_2 concentration, heat input and fuel flow rate, in accordance with 40 CFR Part 75, Subpart H (relating to NO_x mass emissions provisions).

(ii) Successfully complete all certification tests required under § 145.372 (relating to initial certification and recertification procedures) and meet all other provisions of this subchapter and 40 CFR Part 75 applicable to the monitoring systems under subparagraph (i).

(iii) Record, report and quality-assure the data from the monitoring systems under subparagraph (i).

(2) *Compliance dates.* The owner or operator of a CO_2 budget unit shall meet the monitoring system certification and other requirements of paragraph (1) and shall record, report and quality-assure data from the monitoring systems under paragraph (1)(i) according to the following schedule:

(i) Except for a CO_2 budget unit under subparagraph (ii), a CO_2 budget unit that commences commercial operation before October 25, 2021, shall comply with this section and §§ 145.372—145.377 by April 23, 2022.

(ii) A CO_2 budget unit that commences commercial operation on or after October 25, 2021, shall comply with the requirements of this section and §§ 145.372—145.377 by the later of the following dates:

(A) April 23, 2022.

(B) The earlier of:

(I) 90-unit operating days after the date on which the unit commences commercial operation.

(II) 180 calendar days after the date on which the unit commences commercial operation.

(iii) The owner or operator of a CO_2 budget unit for which construction of a new stack or flue installation is completed after the applicable deadline under subparagraphs (i) or (ii) by the earlier of:

(A) 90-unit operating days after the date on which emissions first exit to the atmosphere through the new stack or flue.

(B) 180 calendar days after the date on which emissions first exit to the atmosphere through the new stack or flue.

(3) *Reporting data.*

(i) Except as provided in subparagraph (ii), the owner or operator of a CO_2 budget unit that does not meet the applicable compliance date set forth in paragraph (2) for any monitoring system under paragraph (1)(i) shall, for each monitoring system, determine, record and report maximum potential, or as appropriate minimum potential, values for CO_2 concentration, CO_2 emissions rate, stack gas moisture content, fuel flow rate, heat input and any other parameter required to determine CO_2 mass emissions under 40 CFR 75.31(b)(2) or (c)(3) (relating to initial missing data procedures), or 40 CFR Part 75, Appendix D, section 2.4 (relating to optional SO_2 emissions data protocol for gas-fired and oil-fired units), regarding missing data procedures, as applicable.

(ii) The owner or operator of a CO_2 budget unit that does not meet the applicable compliance date set forth in paragraph (2)(iii) for any monitoring system under paragraph (1)(i) shall, for each monitoring system, determine, record and report substitute data using the applicable missing data procedures in 40 CFR Part 75, Subpart D (relating to missing data substitution procedures) or Appendix D, instead of the maximum potential, or as appropriate minimum potential, values for a parameter if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation under paragraph (2)(iii).

(A) A CO_2 budget unit subject to an acid rain emissions limitation that qualifies for the optional SO_2, NO_x and CO_2 emissions calculations for low mass emissions (LME) units under 40 CFR 75.19 (relating to optional SO_2, NO_x, and CO_2 emissions calculation for low mass emissions (LME) units) and report emissions for the acid rain program using the calculations under 40 CFR 75.19, shall also use the CO_2 emissions calculations for LME units under 40 CFR 75.19 for purposes of compliance with this subchapter.

(B) A CO_2 budget unit subject to an acid rain emissions limitation that does not qualify for the optional SO_2, NO_x and CO_2 emissions calculations for LME units under 40 CFR 75.19, shall not use the CO_2 emissions calculations for LME units under 40 CFR 75.19 for purposes of compliance with this subchapter.

(C) A CO_2 budget unit not subject to an acid rain emissions limitation shall qualify for the optional CO_2 emissions calculation for LME units under 40 CFR 75.19, if the unit emits less than 100 tons of NO_x annually and no more than 25 tons of SO_2 annually.

(4) *Prohibitions.*

(i) An owner or operator of a CO_2 budget unit may not use an alternative monitoring system, alternative reference method or another alternative for the required CEMS without having obtained prior written approval in accordance with § 145.376 (relating to petitions).

(ii) An owner or operator of a CO_2 budget unit may not operate the unit so as to discharge, or allow to be discharged, CO_2 emissions to the atmosphere without accounting for the emissions in accordance with the applicable provisions of this subchapter and 40 CFR Part 75.

(iii) An owner or operator of a CO_2 budget unit may not disrupt the CEMS, a portion thereof or another approved emissions monitoring method, and thereby avoid monitoring and recording CO_2 mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing or maintenance is performed in accordance with the applicable provisions of this subchapter and 40 CFR Part 75.

(iv) An owner or operator of a CO_2 budget unit may not retire or permanently discontinue use of the CEMS, any

component thereof or another approved emissions monitoring system under this subchapter, except under one of the following circumstances:

(A) The owner or operator is monitoring emissions from the unit with another certified monitoring system approved, in accordance with the applicable provisions of this subchapter and 40 CFR Part 75, by the Department for use at the unit that provides emissions data for the same pollutant or parameter as the retired or discontinued monitoring system.

(B) The CO_2 authorized account representative submits notification of the date of certification testing of a replacement monitoring system in accordance with § 145.372(d)(3)(i) (relating to initial certification and recertification procedures).

§ 145.372. Initial certification and recertification procedures.

(a) *Exemption.* The owner or operator of a CO_2 budget unit shall be exempt from the initial certification requirements for a monitoring system under § 145.371(1)(i) (relating to general monitoring requirements) if the following conditions are met:

(1) The monitoring system has been previously certified in accordance with 40 CFR Part 75 (relating to continuous emission monitoring).

(2) The applicable quality-assurance and quality-control requirements of 40 CFR 75.21 (relating to quality assurance and quality control requirements) and 40 CFR Part 75, Appendix B (relating to quality assurance and quality control procedures) and Appendix D (relating to optional SO_2 emissions data protocol for gas-fired and oil-fired units) are fully met for the certified monitoring system described in paragraph (1).

(b) *Applicability.* The recertification provisions of this section shall apply to a monitoring system under § 145.371(1)(i) that is exempt from initial certification requirements under subsection (a).

(c) *Petitions.* Notwithstanding subsection (a), if the Administrator approved a petition under 40 CFR 75.72(b)(2)(ii) or 40 CFR 75.16(b)(2)(ii)(B) (relating to determination of NO_x mass emissions for common stack and multiple stack configurations; and special provisions for monitoring emissions from common, bypass, and multiple stacks for SO_2 emissions and heat input determinations) as pursuant to 40 CFR 75.13 (relating to specific provisions for monitoring CO_2 emissions) for apportioning the CO_2 emissions rate measured in a common stack or a petition under 40 CFR 75.66 (relating to petitions to the administrator) for an alternative requirement in 40 CFR Part 75, the CO_2 authorized account representative shall submit the petition to the Department under § 145.376(a) (relating to petitions) to determine if the approval applies under the CO_2 Budget Trading Program.

(d) *Certification and recertification.* Except as provided in subsection (a), the owner or operator of a CO_2 budget unit shall comply with the initial certification and recertification procedures for a CEMS and an excepted monitoring system under 40 CFR Part 75, Appendix D and under § 145.371(1)(i). The owner or operator of a CO_2 budget unit that qualifies to use the low mass emissions excepted monitoring methodology in 40 CFR 75.19 (relating to optional SO_2, NO_x, and CO_2 emissions calculation for low mass emissions (LME) units) or that qualifies to use an alternative monitoring system under 40 CFR Part 75, Subpart E (relating to alternative monitoring systems) shall comply with the procedures in subsections (e) or (f), respectively.

(1) *Requirements for initial certification.* The owner or operator of a CO_2 budget unit shall ensure that each CEMS required under § 145.371(1)(i), including the automated data acquisition and handling system, successfully completes all of the initial certification testing required under 40 CFR 75.20 (relating to initial certification and recertification procedures) by the applicable deadlines specified in § 145.371(2). In addition, whenever the owner or operator installs a monitoring system to meet the requirements of this subchapter in a location where no monitoring system was previously installed, initial certification in accordance with 40 CFR 75.20 is required.

(2) *Requirements for recertification.*

(i) Whenever the owner or operator makes a replacement, modification or change to a certified CEMS under § 145.371(1)(i) that the Administrator or the Department determines significantly affects the ability of the system to accurately measure or record CO_2 mass emissions or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or 40 CFR Part 75, Appendix B, the owner or operator shall recertify the monitoring system according to 40 CFR 75.20(b).

(ii) For a system using stack measurements including stack flow, stack moisture content, CO_2 or O_2 monitors, whenever the owner or operator makes a replacement, modification or change to the flue gas handling system or the unit's operation that the Administrator or the Department determines to significantly change the flow or concentration profile, the owner or operator shall recertify the CEMS according to 40 CFR 75.20(b).

(3) *Approval process for initial certification and recertification.*

(i) *Notification of certification.* The CO_2 authorized account representative shall submit to the Department and the appropriate EPA Regional Office a written notice of the dates of certification in accordance with § 145.374 (relating to notifications).

(ii) *Certification application.* The CO_2 authorized account representative shall submit to the Department a certification application for each monitoring system required under 40 CFR 75.63 (relating to initial certification or recertification application). A complete certification application shall include the information specified in 40 CFR 75.63.

(iii) *Provisional certification data.* The provisional certification date for a monitor shall be determined in accordance with 40 CFR 75.20(a)(3). A provisionally certified monitor may be used under the CO_2 budget Trading Program for a period not to exceed 120 days after receipt by the Department of the complete certification application for the monitoring system or component thereof under subparagraph (ii). Data measured and recorded by the provisionally certified monitoring system or component thereof, in accordance with the requirements of 40 CFR Part 75, will be considered valid quality-assured data (retroactive to the date and time of provisional certification), if the Department does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of receipt of the complete certification application by the Department.

(iv) *Certification application approval process.* The Department will issue a written notice of approval or disapproval of the certification application to the owner or

operator within 120 days of receipt of the complete certification application under subparagraph (ii). If the Department does not issue the notice within the 120-day period, each monitoring system which meets the applicable performance requirements of 40 CFR Part 75 and is included in the certification application will be deemed certified for use under the CO_2 Budget Trading Program.

(A) *Approval notice.* If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR Part 75, the Department will issue a written notice of approval of the certification application within 120 days of receipt.

(B) *Incomplete application notice.* If the certification application is not complete, the Department will issue a written notice of incompleteness that sets a date by which the CO_2 authorized account representative must submit the additional information required to complete the certification application. If the CO_2 authorized account representative does not comply with the notice of incompleteness by the specified date, then the Department may issue a notice of disapproval under clause (C). The 120-day review period may not begin prior to receipt of a complete certification application.

(C) *Disapproval notice.* If the certification application shows that any monitoring system or component thereof does not meet the performance requirements of 40 CFR Part 75, or if the certification application is incomplete and the requirement for disapproval under clause (B) is met, then the Department will issue a written notice of disapproval of the certification application. Upon issuance of the notice of disapproval, the provisional certification is invalidated by the Department and the data measured and recorded by each uncertified monitoring system or component thereof will not be considered valid quality-assured data beginning with the date and hour of provisional certification. The owner or operator shall follow the procedures for loss of certification in subparagraph (v) for each monitoring system or component thereof which is disapproved for initial certification.

(D) *Audit decertification.* The Department may issue a notice of disapproval of the certification status of a monitor in accordance with § 145.373(b) (relating to out-of-control periods).

(v) *Procedures for loss of certification.* If the Department issues a notice of disapproval of a certification application under subparagraph (iv)(C) or a notice of disapproval of certification status under subparagraph (iv)(D), the following apply:

(A) The owner or operator shall substitute the following values, for each disapproved monitoring system, for each hour of unit operation during the period of invalid data beginning with the date and hour of provisional certification and continuing until the time, date and hour specified under 40 CFR 75.20(a)(5)(i) or (g)(7):

(I) For a unit using or intending to monitor for CO_2 mass emissions using heat input or for a unit using the low mass emissions excepted methodology under 40 CFR 75.19, the maximum potential hourly heat input of the unit.

(II) For a unit intending to monitor for CO_2 mass emissions using a CO_2 pollutant concentration monitor and a flow monitor, the maximum potential concentration of CO_2 and the maximum potential flow rate of the unit under 40 CFR Part 75, Appendix A, section 2.1 (relating to specifications and test procedures).

(B) The CO_2 authorized account representative shall submit a notification of certification retest dates and a new certification application in accordance with subparagraphs (i) and (ii).

(C) The owner or operator shall repeat all certification tests or other requirements that were failed by the monitoring system, as indicated in the Department's notice of disapproval, no later than 30-unit operating days after the date of issuance of the notice of disapproval.

(e) *Initial certification and recertification procedures for low mass emissions units using the excepted methodologies under § 145.371(3)(ii).* The owner or operator of a unit qualified to use the low mass emissions excepted methodology under § 145.371(3)(ii) shall meet the applicable certification and recertification requirements of 40 CFR 75.19(a)(2), 40 CFR 75.20(h) and this section. If the owner or operator of the unit elects to certify a fuel flow meter system for heat input determinations, the owner or operator shall also meet the certification and recertification requirements in 40 CFR 75.20(g).

(f) *Certification and recertification procedures for an alternative monitoring system.* The CO_2 authorized account representative of each unit for which the owner or operator intends to use an alternative monitoring system approved by the Administrator and, if applicable, by the Department under 40 CFR Part 75, Subpart E shall comply with the applicable notification and application procedures of 40 CFR 75.20(f).

§ 145.373. Out-of-control periods.

(a) *Quality assurance requirements.* Whenever a monitoring system fails to meet the quality assurance and quality control requirements or data validation requirements of 40 CFR Part 75 (relating to continuous emission monitoring), data shall be substituted using the applicable procedures in 40 CFR Part 75, Subpart D (relating to missing data substitution procedures) or Appendix D (relating to optional SO_2 emissions data protocol for gas-fired and oil-fired units).

(b) *Audit decertification.* Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under § 145.372 (relating to initial certification and recertification procedures) or the applicable provisions of 40 CFR Part 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Department will issue a notice of disapproval of the certification status of the monitoring system. For the purposes of this paragraph, an audit shall be either a field audit or an audit of any information submitted to the Department or the Administrator. By issuing the notice of disapproval, the Department revokes prospectively the certification status of the monitoring system. The data measured and recorded by the monitoring system will not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests for the monitoring system. The owner or operator shall follow the initial certification or recertification procedures in § 145.372 for each disapproved monitoring system.

§ 145.374. Notifications.

The CO_2 authorized account representative for a CO_2 budget unit shall submit written notice to the Department and the Administrator in accordance with 40 CFR 75.61 (relating to notifications).

§ 145.375. Recordkeeping and reporting.

(a) *General provisions.* The CO_2 authorized account representative shall comply with the recordkeeping and reporting requirements in this section, the applicable recordkeeping and reporting requirements under 40 CFR 75.73 (relating to recordkeeping and reporting) and with the requirements of § 145.311(e) (relating to authorization and responsibilities of the CO_2 authorized account representative).

(b) *Monitoring plans.* The owner or operator of a CO_2 budget unit shall submit a monitoring plan in the manner prescribed in 40 CFR 75.62 (relating to monitoring plan submittals).

(c) *Certification applications.* The CO_2 authorized account representative shall submit an application to the Department within 45 days after completing all CO_2 monitoring system initial certification or recertification tests required under § 145.372 (relating to initial certification and recertification procedures) including the information required under 40 CFR 75.63 (relating to initial certification or recertification application) and 40 CFR 75.53(g) and (h) (relating to monitoring plan).

(d) *Quarterly reports.* The CO_2 authorized account representative shall submit quarterly reports, as follows:

(1) The CO_2 mass emissions data for the CO_2 budget unit, in an electronic format prescribed by the Administrator unless otherwise prescribed by the Administrator or the Department for each calendar quarter.

(2) The CO_2 authorized account representative shall submit each quarterly report to the Administrator and the Department or its agent within 30 days following the end of the calendar quarter covered by the report. Quarterly reports shall be submitted in the manner specified in 40 CFR Part 75, Subpart H (relating to NO_x mass emissions provisions) and 40 CFR 75.64 (relating to quarterly reports) and for each CO_2 budget unit, or group of units using a common stack, and shall include all the data and information required in 40 CFR Part 75, Subpart G (relating to reporting requirements), except for opacity, heat input, NO_x and SO_2 provisions.

(3) The CO_2 authorized account representative shall submit to the Administrator or the Department a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all the unit's emissions are correctly and fully monitored. The certification shall state that the following conditions have been met:

(i) The monitoring data submitted were recorded in accordance with the applicable requirements of this subchapter and 40 CFR Part 75 (relating to continuous emission monitoring), including the quality assurance procedures and specifications.

(ii) For a unit with add-on CO_2 emissions controls and for all hours where data are substituted in accordance with 40 CFR 75.34(a)(1) (relating to units with add-on emission controls), the add-on emissions controls were operating within the range of parameters listed in the quality assurance/quality control program under 40 CFR Part 75, Appendix B (relating to quality assurance and quality control procedures) and the substitute values do not systematically underestimate CO_2 emissions.

(iii) The CO_2 concentration values substituted for missing data under 40 CFR Part 75, Subpart D (relating to missing data substitution procedures) do not systematically underestimate CO_2 emissions.

§ 145.376. Petitions.

(a) Except as provided in subsection (c), the CO_2 authorized account representative of a CO_2 budget unit that is subject to an acid rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 (relating to petitions to the administrator) and to the Department requesting approval to apply an alternative to any requirement of 40 CFR Part 75 (relating to continuous emission monitoring).

(b) Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with this subchapter only to the extent that the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

(c) The CO_2 authorized account representative of a CO_2 budget unit that is not subject to an acid rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the Department requesting approval to apply an alternative to any requirement of 40 CFR Part 75. Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with this subchapter only to the extent that the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

(d) In the event that the Administrator declines to review a petition under subsection (c), the CO_2 authorized account representative of a CO_2 budget unit that is not subject to an acid rain emissions limitation may submit a petition to the Department requesting approval to apply an alternative to any requirement of §§ 145.371—145.377 (relating to monitoring, reporting and recordkeeping requirements). That petition shall contain all of the relevant information specified in 40 CFR 75.66. Application of an alternative to any requirement of §§ 145.371—145.377 is in accordance with §§ 145.371—145.377 only to the extent that the petition is approved in writing by the Department.

(e) The CO_2 authorized account representative of a CO_2 budget unit that is subject to an acid rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the Department requesting approval to apply an alternative to a requirement concerning any additional CEMS required under the common stack provisions of 40 CFR 75.72 (relating to determination of NO_x mass emissions for common stack and multiple stack configurations) or a CO_2 concentration CEMS used under 40 CFR 75.71(a)(2) (relating to specific provisions for monitoring NO_x and heat input for the purpose of calculating NO_x mass emissions). Application of an alternative to any requirement is in accordance with §§ 145.371—145.377 only to the extent the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

§ 145.377. CO_2 budget units that co-fire eligible biomass.

(a) The CO_2 authorized account representative of a CO_2 budget unit that co-fires eligible biomass as a compliance mechanism under this subchapter shall report the following information to the Department or its agent for each calendar quarter:

(1) For each shipment of solid eligible biomass fuel fired at the CO_2 budget unit:

(i) The total eligible biomass fuel input, on an as-fired basis, in pounds.

(ii) The moisture content, on an as-fired basis, as a fraction by weight.

(2) For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit:

(i) The density of the biogas, on an as-fired basis, in pounds per standard cubic foot.

(ii) The moisture content of the biogas, on an as-fired basis, as a fraction by total weight.

(iii) The total eligible biomass fuel input, in standard cubic feet.

(3) For each distinct type of eligible biomass fuel fired at the CO_2 budget unit:

(i) The dry basis carbon content of the fuel type, as a fraction by dry weight.

(ii) The dry basis higher heating value, in MMBtu per dry pound.

(iii) The total dry basis eligible biomass fuel input, in pounds, calculated in accordance with subsection (b).

(iv) The total eligible biomass fuel heat input, in MMBtu, calculated in accordance with subsection (d)(1).

(v) A chemical analysis, including heating value and carbon content.

(4) The total amount of CO_2 emitted from the CO_2 budget unit due to firing eligible biomass fuel, in tons, calculated in accordance with subsection (c).

(5) The total amount of heat input to the CO_2 budget unit due to firing eligible biomass fuel, in MMBtu, calculated in accordance with subsection (d)(2).

(6) A description and documentation of the monitoring technology employed, and a description and documentation of the fuel sampling methodology employed, including sampling frequency and carbon ash testing.

(b) An owner or operator of a CO_2 budget unit shall calculate and submit to the Department or its agent on a quarterly basis the total dry weight for each distinct type of eligible biomass fired by the CO_2 budget unit during the reporting quarter. The total dry weight shall be determined for each fuel type as follows:

(1) For solid fuel types:

$$F_j = \sum_{i=1}^{m} (1 - M_i) \times F_i$$

Where:

Fj = Total eligible biomass dry basis fuel input (lbs) for fuel type j.

Fi = Eligible biomass as fired fuel input (lbs) for fired shipment i.

Mi = Moisture content (fraction) for fired shipment i.

i = Fired fuel shipment.

j = Fuel type.

m = Number of shipments.

(2) For gaseous fuel types:

Fj = Dj × Vj × (1 − Mj)

Where:

Fj = Total eligible biomass dry basis fuel input (lbs) for fuel type j.

Dj = Density of biogas (lbs/scf) for fuel type j.

Vj = Total volume (scf) for fuel type j.

Mj = Moisture content (fraction) for fuel type j.

j = Fuel type.

(c) CO_2 emissions due to firing of eligible biomass shall be determined as follows:

(1) For any full calendar quarter during which no fuel other than eligible biomass is combusted at the CO_2 budget unit, as measured and recorded in accordance with §§ 145.371—145.377 (relating to monitoring, reporting and recordkeeping requirements).

(2) For any full calendar quarter during which fuels other than eligible biomass are combusted at the CO_2 budget unit, as determined using the following equation:

$$CO_2\ tons = \sum_{j=1}^{n} F_j \times C_j \times O_j \times \frac{44}{12} \times 0.0005$$

Where:

CO_2 tons = CO_2 emissions due to firing of eligible biomass for the reporting quarter.

Fj = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in subsection (b).

Cj = Carbon fraction (dry basis) for fuel type j.

Oj = Oxidation factor for eligible biomass fuel type j, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash, as determined under subsection (a)(3)(v); for gaseous eligible biomass fuels, a default oxidation factor of 0.995 may be used.

44/12 = The number of tons of carbon dioxide that are created when 1 ton of carbon is combusted.

0.0005 = The number of short tons which is equal to 1 pound.

j = Fuel type.

n = Number of distinct fuel types.

(d) Heat input due to firing of eligible biomass for each quarter shall be determined as follows:

(1) For each distinct fuel type:

Hj = Fj × HHVj

Where:

Hj = Heat input (MMBtu) for fuel type j.

Fj = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in subsection (b).

HHVj = Higher heating value (MMBtu/lb), dry basis, for fuel type j, as determined through chemical analysis.

j = Fuel type.

(2) For all fuel types:

$$Heat\ input\ MMBtu = \sum_{i=1}^{n} H_j$$

Where:

Hj = Heat input (MMBtu) for fuel type j.

j = Fuel type.

n = Number of distinct fuel types.

AUCTION OF CO_2 CCR AND ECR ALLOWANCES

§ 145.381. Purpose.

The following requirements shall apply to each allowance auction. The Department or its agent may specify additional information in the auction notice for each auction. This additional information may include the time and location of the auction, auction rules, registration deadlines and any additional information deemed necessary or useful.

§ 145.382. General requirements.

(a) In the auction notice for each auction, the Department or its agent shall include the following:

(1) The number of CO_2 allowances offered for sale at the auction, not including any CO_2 CCR allowances.

(2) The number of CO_2 CCR allowances that will be offered for sale at the auction if the condition in subsection (b)(1) is met.

(3) The minimum reserve price for the auction.

(4) *The CCR trigger price for the auction.* The CCR trigger price in calendar year 2022 shall be $13.91. Each calendar year after 2022, the CCR trigger price shall be 1.07 multiplied by the CCR trigger price from the previous calendar year, rounded to the nearest whole cent, as shown in Table 1.

Table 1. CO_2 CCR Trigger Price

2023	*2024*	*2025*	*2026*	*2027*	*2028*	*2029*	*2030*
$14.88	$15.92	$17.03	$18.22	$19.50	$20.87	$22.33	$23.89

(5) The maximum number of CO_2 allowances that may be withheld from sale at the auction if the condition in subsection (d)(1) is met.

(6) *The ECR trigger price for the auction.* The ECR trigger price in calendar year 2022 shall be $6.42. Each calendar year after 2022, the ECR trigger price shall be 1.07 multiplied by the ECR trigger price from the previous calendar year, rounded to the nearest whole cent, as shown in Table 2.

Table 2. CO_2 ECR Trigger Price

2023	*2024*	*2025*	*2026*	*2027*	*2028*	*2029*	*2030*
$6.87	$7.35	$7.86	$8.41	$9.00	$9.63	$10.30	$11.02

(b) For the sale of CO_2 CCR allowances, the Department or its agent will do the following:

(1) CO_2 CCR allowances will only be sold at an auction in which the total demand for allowances, above the CCR trigger price, exceeds the number of CO_2 allowances available for purchase at the auction, not including any CO_2 CCR allowances.

(2) If the condition in paragraph (1) is met at an auction, then the number of CO_2 CCR allowances offered for sale by the Department or its agent at the auction will be equal to the number of CO_2 CCR allowances in the air pollution reduction account at the time of the auction.

(3) After all of the CO_2 CCR allowances in the air pollution reduction account have been sold in a given calendar year, no additional CO_2 CCR allowances will be sold at any auction for the remainder of that calendar year, even if the condition in paragraph (1) is met at an auction.

(4) At an auction in which CO_2 CCR allowances are sold, the reserve price for the auction shall be the CCR trigger price.

(5) If the condition in paragraph (1) is not satisfied, no CO_2 CCR allowances will be offered for sale at the auction and the reserve price for the auction will be equal to the minimum reserve price.

(c) The Department or its agent will implement the reserve price in the following manner:

(1) No CO_2 allowances will be sold at any auction for a price below the reserve price for that auction.

(2) If the total demand for CO_2 allowances at an auction is less than or equal to the total number of CO_2 allowances made available for sale in that auction, then the auction clearing price for the auction shall be the reserve price.

(d) For the withholding of CO_2 ECR allowances from an auction, the Department or its agent will do the following:

(1) CO_2 ECR allowances will only be withheld from an auction if the demand for allowances would result in an auction clearing price that is less than the ECR trigger price prior to the withholding from the auction of any ECR allowances.

(2) If the condition in paragraph (1) is met at an auction, then the maximum number of CO_2 ECR allowances that may be withheld from that auction will be equal to the quantity in § 145.342(e)(1) (relating to CO_2 allowance allocations) minus the total quantity of CO_2 ECR allowances that have been withheld from any prior auction in that calendar year. The Department will transfer any CO_2 ECR allowances withheld from an auction into the Pennsylvania ECR Account.

CO_2 EMISSIONS OFFSET PROJECTS

§ 145.391. Purpose.

The Department may award CO_2 offset allowances to sponsors of CO_2 emissions offset projects that have reduced or avoided atmospheric loading of CO_2, CO_2e or sequestered carbon as demonstrated in accordance with the applicable provisions of §§ 145.391—145.397 (relating to CO_2 emissions offset projects). The requirements of §§ 145.391—145.397 seek to ensure that CO_2 offset allowances awarded represent CO_2 equivalent emission reductions or carbon sequestration that are real, addi-

tional, verifiable, enforceable and permanent within the framework of a standards-based approach. Subject to the relevant compliance deduction limitations of § 145.355(a)(3) (relating to compliance), CO_2 offset allowances may be used by any CO_2 budget source for compliance purposes.

§ 145.392. Definitions.

The following words and terms, when used in §§ 145.391—145.397 (relating to CO_2 emissions offset projects), have the following meanings, unless the context clearly indicates otherwise:

AEPS—Alternative energy portfolio standards—Standards establishing that a certain amount of energy sold from alternative energy sources, as defined under section 2 of the Alternative Energy Portfolio Standards Act (73 P.S. § 1648.2), is included as part of the sources of electric generation by electric utilities within this Commonwealth.

Anaerobic digester—A device that promotes the decomposition of organic material to simple organics and gaseous biogas products, in the absence of elemental oxygen, usually accomplished by means of controlling temperature and volume, and that includes a methane recovery system.

Anaerobic digestion—The decomposition of organic material including manure brought about through the action of microorganisms in the absence of elemental oxygen.

Anaerobic storage—Storage of organic material in an oxygen-free environment, or under oxygen-free conditions, including holding tanks, ponds and lagoons.

Biogas—Gas resulting from the decomposition of organic matter under anaerobic conditions, the principle constituents of which are methane and carbon dioxide.

Conflict of interest—A situation that may arise with respect to an individual in relation to any specific project sponsor, CO_2 emissions offset project or category of offset projects, such that the individual's other activities or relationships with other persons or organizations render or may render the individual incapable of providing an impartial certification opinion, or otherwise compromise the individual's objectivity in performing certification functions.

Forest offset project—An offset project involving reforestation, improved forest management or avoided conversion.

Forest offset project data report—The report prepared by a project sponsor each year that provides the information and documentation required by §§ 145.391—145.397 or the forest offset protocol.

Forest offset protocol—The protocol titled "Regional Greenhouse Gas Initiative Offset Protocol U.S. Forest Projects," published by the participating states on June 12, 2013.

Independent verifier—An individual that has been approved by the Department or its agent to conduct verification activities.

Intentional reversal—Any reversal caused by a forest owner's negligence, gross negligence or willful intent, including harvesting, development and harm to the area within the offset project boundary.

Market penetration rate—A measure of the diffusion of a technology, product or practice in a defined market, as represented by the percentage of annual sales for a product or practice, or as a percentage of the existing installed stock for a product or category of products, or as the percentage of existing installed stock that utilizes a practice.

Offset project—

(i) All equipment, materials, items or actions directly related to the reduction of CO_2e emissions or the sequestration of carbon specified in a consistency application submitted under § 145.394 (relating to application process).

(ii) This term does not include equipment, materials, items or actions unrelated to an offset project reduction of CO_2e emissions or the sequestration of carbon but occurring at a location where an offset project occurs, unless specified in § 145.395 (relating to CO_2 emissions offset project standards).

Project commencement—

(i) For an offset project involving physical construction, other work at an offset project site or installation of equipment or materials, the date of the beginning of the activity.

(ii) For an offset project that involves the implementation of a management activity or protocol, the date on which the activity is first implemented or the protocol is first utilized.

(iii) For an offset project involving reforestation, improved forest management or avoided conversion, the date specified in section 3.2 of the forest offset protocol.

Project sponsor—The sponsor of an offset project under §§ 145.391—145.397.

Regional-type anaerobic digester—An anaerobic digester using feedstock from more than one agricultural operation or importing feedstock from more than one agricultural operation.

Reporting period—The period of time covered by a forest offset project data report. The first reporting period for a forest offset project in an initial crediting period may consist of 6 to 24 consecutive months; all subsequent reporting periods in an initial crediting and all reporting periods in any renewed crediting period must consist of 12 consecutive months.

Reversal—A greenhouse gas emission reduction or greenhouse gas removal enhancement for which CO_2 offset allowances have been issued that is subsequently released or emitted back into the atmosphere due to any intentional or unintentional circumstance.

System benefit fund—Any fund collected directly from retail electricity or natural gas ratepayers.

Total solids—The total of all solids in a sample, including the total suspended solids, total dissolved solids and volatile suspended solids.

Unintentional reversal—Any reversal, including wildfires, insects or disease, that is not the result of the forest owner's negligence, gross negligence or willful intent.

Verification—The confirmation by an independent verifier that certain parts of a CO_2 emissions offset project consistency application and measurement, monitoring or verification report conforms to the requirements of §§ 145.391—145.397.

Volatile solids—The fraction of total solids that is comprised primarily of organic matter as defined in EPA Method Number 160.4, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020).

§ 145.393. General requirements.

(a) *Eligibility.* To qualify for the award of CO_2 offset allowances, offset projects shall satisfy all the applicable requirements of §§ 145.391—145.397 (relating to CO_2 emissions offset projects).

(1) *Offset project types.* The following types of offset projects are eligible for the award of CO_2 offset allowances:

(i) Landfill methane capture and destruction.

(ii) Sequestration of carbon due to reforestation, improved forest management or avoided conversion.

(iii) Avoided methane emissions from agricultural manure management operations.

(2) *Offset project locations.* To qualify for the award of CO_2 offset allowances, an offset project must be located in:

(i) This Commonwealth.

(ii) Partly in this Commonwealth and partly in one or more other participating states, provided that more of the CO_2e emissions reduction or carbon sequestration due to the offset project is projected to occur in this Commonwealth than in any other participating state.

(b) *Project sponsor.* Any person may act as the sponsor of an offset project, provided that person meets the requirements under § 145.394 (relating to application process).

(c) *General additionality requirements.* Except as provided under § 145.395 (relating to CO_2 emissions offset project standards), the Department will not award CO_2 offset allowances to an offset project that meets the following:

(1) An offset project that is required under any local, state or Federal law, regulation, or administrative or judicial order. If an offset project receives a consistency determination under § 145.394 and is later required by local, state or Federal law, regulation, or administrative or judicial order, then the offset project will remain eligible for the award of CO_2 offset allowances until the end of its current allocation period but its eligibility will not be extended for an additional allocation period.

(2) An offset project that includes an electric generation component, unless the project sponsor transfers legal rights to any and all attribute credits, other than the CO_2 offset allowances awarded under § 145.397 (relating to award and recordation of CO_2 offset allowances), generated from the operation of the offset project that may be used for compliance with AEPS or a regulatory requirement, to the Department or its agent.

(3) An offset project that receives funding or other incentives from any system benefit fund or other incentives provided through revenue from the auction or sale of CO_2 allowances in the air pollution reduction account under § 145.342(a) (relating to CO_2 allowance allocations).

(4) An offset project that is awarded credits or allowances under any other mandatory or voluntary greenhouse gas program, except as described in § 145.395(b)(10).

(d) *Maximum allocation periods for offset projects.*

(1) *Maximum allocation periods.* Except as provided in paragraph (2), the Department may award CO_2 offset allowances under § 145.397 for an initial 10-year allocation period. At the end of the initial 10-year allocation period, the Department may award CO_2 offset allowances for a second 10-year allocation period, provided the project sponsor has submitted a consistency application under § 145.394 prior to the expiration of the initial allocation period, and the Department has issued a consistency determination under § 145.394(e)(2).

(2) *Maximum allocation period for sequestration of carbon due to reforestation, improved forest management or avoided conversion.* The Department may award CO_2 offset allowances under § 145.397 for any project involving reforestation, improved forest management or avoided conversion for an initial 25-year allocation period. At the end of the initial 25-year allocation period, or any subsequent crediting period, the Department may award CO_2 offset allowances for a subsequent 25-year allocation period, provided the project sponsor has submitted a consistency application for the offset project under § 145.394 prior to the expiration of the initial allocation period, and the Department has issued a consistency determination under § 145.394(e)(2).

(e) *Offset project audit.* A project sponsor shall provide in writing, an access agreement to the Department granting the Department or its agent access to the physical location of the offset project to inspect for compliance with §§ 145.391—145.397.

(f) *Ineligibility due to noncompliance.*

(1) If at any time the Department determines that a project sponsor has not complied with the requirements of §§ 145.391—145.397, then the Department may revoke and retire any and all CO_2 offset allowances in the project sponsor's account.

(2) If at any time the Department determines that an offset project does not comply with the requirements of §§ 145.391—145.397, then the Department may revoke any approvals it has issued relative to the offset project.

§ 145.394. Application process.

(a) *Establishment of general account.* The sponsor of an offset project must establish a general account under § 145.352(b) (relating to establishment of accounts). Submissions to the Department required for the award of CO_2 offset allowances under §§ 145.391—145.397 (relating to CO_2 emissions offset projects) must be from the CO_2 authorized account representative for the general account of the project sponsor.

(b) *Consistency application deadlines.* A consistency application for an offset project shall be submitted, in a format prescribed by the Department and consistent with the requirements of this section by the following deadlines:

(1) For an offset project not involving reforestation, improved forest management or avoided conversion, by the date that is 6 months after the offset project is commenced.

(2) For an offset project involving reforestation, improved forest management or avoided conversion the consistency application, by the date that is one year after the offset project is commenced, except as provided under § 145.395(b)(9) (relating to CO_2 emissions offset project standards).

(3) The Department will deny any consistency application that fails to meet the deadlines in this subsection.

(c) *Consistency application contents.* For an offset project, the consistency application must include the following:

(1) The project sponsor's name, address, e-mail address, telephone number, facsimile transmission number and account number.

(2) The offset project description as required by the relevant provisions under § 145.395.

(3) A demonstration that the offset project meets all applicable requirements in §§ 145.391—145.397.

(4) The emissions baseline determination as required by the relevant provisions under § 145.395.

(5) An explanation of how the projected reduction or avoidance of atmospheric loading of CO_2 or CO_2e or the sequestration of carbon is to be quantified, monitored and verified as required by the relevant provisions under § 145.395.

(6) A completed consistency application agreement signed by the project sponsor that reads as follows:

"The undersigned project sponsor recognizes and accepts that the application for, and the receipt of, CO_2 offset allowances under the CO_2 Budget Trading Program is predicated on the project sponsor following all the requirements of §§ 145.391—145.397. The undersigned project sponsor holds the legal rights to the offset project or has been granted the right to act on behalf of a party that holds the legal rights to the offset project. I understand that eligibility for the award of CO_2 offset allowances under §§ 145.391—145.397 is contingent on meeting the requirements of §§ 145.391—145.397. I authorize the Department or its agent to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in this application. I understand that this right to audit shall include the right to enter the physical location of the offset project. I submit to the legal jurisdiction of the Commonwealth of Pennsylvania."

(7) A statement and certification report signed by the offset project sponsor certifying that all offset projects for which the sponsor has received CO_2 offset allowances under §§ 145.391—145.397, under the sponsor's ownership or control or under the ownership or control of any entity which controls, is controlled by, or has common control with the sponsor are in compliance with all applicable requirements of the CO_2 Budget Trading Program in all participating states.

(8) A verification report and certification statement signed by an independent verifier accredited under § 145.396 (relating to accreditation of independent verifiers) that expresses that the independent verifier has reviewed the entire application and evaluated the following in relation to the applicable requirements at § 145.393 (relating to general requirements) and § 145.395, and any applicable guidance issued by the Department:

(i) The adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable eligibility requirements of §§ 145.393 and 145.395.

(ii) The adequacy and validity of information supplied by the project sponsor to demonstrate baseline emissions under the applicable requirements under § 145.395.

(iii) The adequacy of the monitoring and verification plan submitted under the applicable requirements under § 145.395.

(iv) Any other evaluations and statements as may be required by the Department.

(9) Disclosure of any voluntary or mandatory programs, other than the CO_2 Budget Trading Program, to which greenhouse gas emissions data related to the offset project has been or will be reported.

(d) *Consistency application submitted in another state.* The Department will not accept as submitted a consistency application for an offset project if a consistency application has already been submitted for the same project, or any portion of the same project, in another participating state, unless the consistency application was rejected by another participating state solely because more of the CO_2e emissions reduction or carbon sequestration resulting from the offset project is projected to occur in this Commonwealth than in any other participating state.

(e) *Department action on consistency applications.*

(1) *Completeness determination.* Within 30 days following receipt of the consistency application submitted under subsection (b), the Department will notify the project sponsor whether the consistency application is complete. A complete consistency application is one that is in a form prescribed by the Department and is determined by the Department to contain all applicable information and documentation required by §§ 145.391—145.397. In no event will a completeness determination prevent the Department from requesting additional information to make a consistency determination under paragraph (2).

(2) *Consistency determination.* Within 90 days of making the completeness determination under paragraph (1), the Department will issue a determination as to whether the offset project is consistent with the requirements of § 145.393 and this section and the requirements of the applicable offset project standard of § 145.395. For any offset project found to lack consistency with these requirements, the Department will inform the project sponsor of the offset project's deficiencies.

§ 145.395. CO_2 emissions offset project standards.

(a) *Landfill methane capture and destruction.* To qualify for the award of CO_2 offset allowances under §§ 145.391—145.397 (relating to CO_2 emissions offset projects), an offset project that captures and destroys methane from a landfill shall meet the requirements of this subsection and all other applicable requirements of §§ 145.391—145.397.

(1) *Eligibility.* An offset project shall occur at a landfill that is not subject to the New Source Performance Standards for municipal solid waste landfills, 40 CFR Part 60, Subpart Cc and Subpart WWW (relating to emission guidelines and compliance times for municipal solid waste landfills; and standards of performance for municipal solid waste landfills that commenced construction, reconstruction, or modification on or after May 30, 1991, but before July 18, 2014).

(2) *Offset project description.* The project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the eligibility requirements of paragraph (1). The project narrative shall include the following:

(i) Identification of the owner or operator of the offset project.

(ii) Location and specifications of the landfill where the offset project will occur, including waste in place.

(iii) Identification of the owner or operator of the landfill where the offset project will occur.

(iv) Specifications of the equipment to be installed and a technical schematic of the offset project.

(3) *Emissions baseline determination.* The emissions baseline shall represent the potential fugitive landfill emissions of CH_4, in tons of CO_2e, as represented by the CH_4 collected and metered for thermal destruction as part of the offset project and calculated as follows:

Emissions (tons CO_2e) = (V × M × (1 − OX) × GWP)/2000

Where:

V = Volume of CH_4 collected (ft^3).

M = Mass of CH_4 per cubic foot (0.04246 lbs/ft^3 default value at 1 atmosphere, 20°C).

OX = Oxidation factor (0.10), representing estimated portion of collected CH_4 that would have eventually oxidized to CO_2 if not collected.

GWP = CO_2e global warming potential of CH_4 (28).

(4) *Calculating emissions reductions.* Emissions reductions shall be determined based on potential fugitive CH_4 emissions that would have occurred at the landfill if metered CH_4 collected from the landfill for thermal destruction as part of the offset project was not collected and destroyed. CO_2e emissions reductions shall be calculated as follows:

Emissions (tons CO_2e) = (V × M × (1 − OX) × $_{Cef}$ × GWP)/2000

Where:

V = Volume of CH_4 collected (ft^3).

M = Mass of CH_4 per cubic foot (0.04246 lbs/ft^3 default value at 1 atmosphere and 20°C).

OX = Oxidation factor (0.10), representing estimated portion of collected CH_4 that would have eventually oxidized to CO_2 if not collected.

Cef = Combustion efficiency of methane control technology (0.98).

GWP = CO_2e global warming potential of CH_4 (28).

(5) *Monitoring and verification requirements.* An offset project shall employ a landfill gas collection system that provides continuous metering and data computation of landfill gas volumetric flow rate and CH_4 concentration. Annual monitoring and verification reports shall include monthly volumetric flow rate and CH_4 concentration data, including documentation that the CH_4 was actually supplied to the combustion source. Monitoring and verification is also subject to the following:

(i) As part of the consistency application, the project sponsor shall submit a monitoring and verification plan that includes a quality assurance and quality control program associated with equipment used to determine landfill gas volumetric flow rate and CH_4 composition. The monitoring and verification plan shall also include provisions for ensuring that measuring and monitoring equipment is maintained, operated and calibrated based on manufacturer recommendations, as well as provisions for the retention of maintenance records for audit purposes. The monitoring and verification plan shall be certified by an independent verifier accredited under § 145.396 (relating to accreditation of independent verifiers).

(ii) The project sponsor shall annually verify landfill gas CH_4 composition through landfill gas sampling and independent laboratory analysis using applicable EPA laboratory test methods.

(b) *Sequestration of carbon due to reforestation, improved forest management or avoided conversion.* To qualify for the award of CO_2 offset allowances under §§ 145.391—145.397, an offset project that involves reforestation, improved forest management, or avoided conversion shall meet all requirements of this subsection and the forest offset protocol, and all other applicable requirements of §§ 145.391—145.397.

(1) *Eligibility.* A forest offset project shall satisfy all eligibility requirements of the forest offset protocol and this subsection.

(2) *Offset project description.* The project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the eligibility requirements of paragraph (1). The offset project description must include all information identified in sections 8.1 and 9.1 of the forest offset protocol, and any other information deemed necessary by the Department.

(3) *Carbon sequestration baseline determination.* Baseline onsite carbon stocks shall be determined as required by sections 6.1.1, 6.1.2, 6.2.1, 6.2.2, 6.2.3, 6.3.1 and 6.3.2 of the forest offset protocol, as applicable.

(4) *Calculating carbon sequestered.* Net greenhouse gas reductions and greenhouse gas removal enhancements shall be calculated as required by section 6 of the forest offset protocol. The project's risk reversal rating shall be calculated using the forest offset protocol Determination of a Forest Project's Reversal Risk Rating assessment worksheet.

(5) *Monitoring and verification requirements.* Monitoring and verification are subject to the following:

(i) Monitoring and verification reports shall include all forest offset project data reports submitted to the Department, including any additional data required by section 9.2.2 of the forest offset protocol.

(ii) The consistency application shall include a monitoring and verification plan certified by an independent verifier accredited under § 145.396 and shall consist of a forest carbon inventory program, as required by section 8.1 of the forest offset protocol.

(iii) Monitoring and verification reports shall be submitted not less than every 6 years, except that the first monitoring and verification report for reforestation projects must be submitted within 12 years of project commencement.

(6) *Forest Offset Project Data Reports.* A project sponsor shall submit a forest offset project data report to the Department for each reporting period. Each forest offset project data report must cover a single reporting period. Reporting periods must be contiguous and there must be no gaps in reporting once the first reporting period has commenced.

(7) *Conversion.* Prior to the award of CO_2 offset allowances under § 145.397 (relating to award and recordation of CO_2 offset allowances), or to any surrender of allowances under § 145.395(b)(8)(ii)(C) (relating to CO_2 emissions offset project standards), any quantity expressed in metric tons, or metric tons of CO_2e, shall be converted to tons using the conversion factor specified in § 145.302 (relating to definitions).

(8) *Carbon sequestration permanence.* The project sponsor shall meet the following requirements to address reversals of sequestered carbon.

(i) *Unintentional reversals.* The project sponsor shall address an unintentional reversal of sequestered carbon as follows:

(A) Notify the Department of the reversal and provide an explanation for the nature of the unintentional reversal within 30 calendar days of its discovery.

(B) Submit to the Department a verified estimate of current carbon stocks within the offset project boundary within 1 year of the discovery of the unintentional reversal.

(ii) *Intentional reversals.* The project sponsor shall address an intentional reversal of sequestered carbon as follows:

(A) Notify the Department in writing of the intentional reversal and provide a written description and explanation of the intentional reversal within 30 calendar days of the intentional reversal.

(B) Submit to the Department a verified estimate of current carbon stocks within the offset project boundary within 1 year of the occurrence of an intentional reversal.

(C) If an intentional reversal occurs, and CO_2 offset allowances have been awarded to the offset project, the forest owner must surrender to the Department or its agent for retirement a quantity of CO_2 allowances corresponding to the quantity of CO_2e tons reversed within 6 months of notification by the Department.

(I) The Department will provide notification after the project sponsor has submitted a verified estimate of carbon stocks to the Department, or if the project sponsor fails to submit verified estimate of carbon stocks after 1 year has elapsed since the occurrence of the intentional reversal.

(II) If the forest owner does not surrender valid CO_2 allowances to the Department within 6 months of notification by the Department, the forest owner will be subject to enforcement action and each CO_2e ton of carbon sequestration intentionally reversed will constitute a separate violation of this subchapter and the act.

(D) *Project Termination Requirements.*

(I) The project sponsor must surrender to the Department or its agent for retirement a quantity of CO_2 allowances in the amount calculated under project termination provisions in the forest offset protocol within 6 months of project termination.

(II) If the project sponsor does not surrender to the Department or its agent a quantity of CO_2 allowances in the amount calculated under project termination provisions in the forest offset protocol within 6 months of project termination, the project sponsor will be subject to enforcement action and each CO_2 offset allowance not surrendered will constitute a separate violation of this subchapter and the act.

(iii) *Disposition of Forest Sequestration Projects After a Reversal.* The Department will terminate a forest offset project if a reversal lowers the forest offset project's actual standing live carbon stocks below its project baseline standing live carbon stocks.

(9) *Timing of forest offset projects.* The Department may award CO_2 offset allowances under § 145.397 only for forest offset projects that are initially commenced on or after January 1, 2014.

(10) *Projects that Have Been Awarded Credits by a Voluntary Greenhouse Gas Reduction Program.* The provisions of §§ 145.393(c)(4) and 145.394(b)(2) (relating to general requirements; and application process) shall not apply to forest projects that have been awarded credits under a voluntary greenhouse gas reduction program. For those projects, the number of CO_2 offset allowances will be calculated under the requirements of this subsection, without regard to quantity of credits that were awarded to the project under the voluntary program, provided that the project satisfies the following:

(i) Other general requirements of §§ 145.391—145.397, including all specific requirements of this subsection, for all reporting periods for which the project has been awarded credits under a voluntary greenhouse gas program and also intends to be awarded CO_2 offset allowances under § 145.397.

(ii) At the time of submittal of the consistency application for the project, the project sponsor submits forest offset data reports and a monitoring and verification report covering all reporting periods for which the project has been awarded credits under a voluntary greenhouse gas program and also intends to be awarded CO_2 offset allowances under § 145.397. Forest offset data reports and monitoring and verification reports must meet all requirements of paragraphs (5) and (6).

(iii) The voluntary greenhouse gas program has published information to allow the Department to verify the information included in the consistency application and the consistency application includes information sufficient to allow the Department to determine the following:

(A) The offset project has met all legal and contractual requirements to allow it to terminate its relationship with the voluntary greenhouse gas program and the termination has been completed.

(B) The project sponsor or voluntary greenhouse gas program has cancelled or retired all credits that were awarded for carbon sequestration that occurred during the time periods for which the project intends to be awarded CO_2 offset allowances under § 145.397, and the credits were cancelled or retired for the sole purpose of allowing the project to be awarded CO_2 offset allowances under § 145.397.

(c) *Avoided methane emissions from agricultural manure management operations.* To qualify for the award of CO_2 offset allowances under §§ 145.391—145.397, an offset project that captures and destroys methane from animal manure and organic food waste using anaerobic digesters shall meet the requirements of this subsection and all other applicable requirements of §§ 145.391—145.397.

(1) *Eligibility.* To be eligible for CO_2 offset allowances, an offset project under this subsection shall:

(i) Consist of the destruction of that portion of methane generated by an anaerobic digester that would have been generated in the absence of the offset project through the uncontrolled anaerobic storage of manure or organic food waste.

(ii) Employ only manure-based anaerobic digester systems using livestock manure as the majority of digester feedstock, defined as more than 50% of the mass input into the digester on an annual basis. Organic food waste used by an anaerobic digester shall only be that which would have been stored in anaerobic conditions in the absence of the offset project.

(2) *Exceptions to the general requirements.* The provisions of § 145.393(c)(2) and (3) shall not apply to an agricultural manure management offset project that meets the following:

(i) The offset project is located in a participating state that has a market penetration rate for anaerobic digester projects of 5% or less. The market penetration determination shall utilize the most recent market data available at the time of submission of the consistency application under § 145.394 and shall be determined as follows:

$$MP\ (\%) = MG_{AD} / MG_{STATE}$$

Where:

MG_{AD} = Average annual manure generation for the number of dairy cows and swine serving all anaerobic digester projects in the applicable state at the time of submission of a consistency application under § 145.394.

MG_{STATE} = Average annual manure production of all dairy cows and swine in the participating state at the time of submission of a consistency application under § 145.394.

(ii) The offset project is located at a farm with 4,000 or less head of dairy cows, or a farm with equivalent animal units, assuming an average live weight for dairy cows in pounds per cow of 1,400 pounds, or, if the project is a regional-type anaerobic digester, total annual manure input to the digester is designed to be less than the average annual manure produced by a farm with 4,000 or less head of dairy cows, or a farm with equivalent animal units, assuming an average live weight for dairy cows in pounds per cow of 1,400 pounds.

(3) *Offset project description.* The project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the eligibility requirements of paragraph (1). The offset project narrative shall include the following:

(i) Identification of the owner or operator of the offset project.

(ii) Location and specifications of the facility where the offset project will occur.

(iii) Identification of the owner or operator of the facility where the offset project will occur.

(iv) Specifications of the equipment to be installed and a technical schematic of the offset project.

(v) Location and specifications of the facilities from which anaerobic digester influent will be received, if different from the facility where the offset project will occur.

(4) *Emissions baseline determination.* The emissions baseline shall represent the potential emissions of the CH_4 that would have been produced in a baseline scenario under uncontrolled anaerobic storage conditions and released directly to the atmosphere in the absence of the offset project.

(i) Baseline CH_4 emissions shall be calculated as follows:

$$E_b = (V_m \times M)/2000 \times GWP$$

Where:

E_b = Potential CO_2e emissions due to calculated CH_4 production under site-specific anaerobic storage and weather conditions (tons).

V_m = Volume of CH_4 produced each month from decomposition of volatile solids in a baseline uncontrolled anaerobic storage scenario under site-specific storage and weather conditions for the facility at which the manure or organic food waste is generated (ft^3).

M = Mass of CH_4 per cubic foot (0.04246 lb/ft^3 default value at one atmosphere and 20°C).

GWP = Global warming potential of CH_4 (28).

(ii) The estimated amount of volatile solids decomposed each month under the uncontrolled anaerobic storage baseline scenario in kilograms (kg) shall be calculated as follows:

$$VS_{dec} = VS_{avail} \times f$$

Where:

VS = Volatile solids as determined from the equation:

$$VS = M_m \times TS\% \times VS\%$$

Where:

M_m = Mass of manure or organic food waste produced per month (kg).

TS% = Concentration (%) of total solids in manure or organic food waste as determined through EPA 160.3 testing method (EPA Method Number 160.3, Methods for the Chemical Analysis of Water and Wastes (EPA/600/4-79/020)).

VS% = Concentration (%) of volatile solids in total solids as determined through EPA 160.4 testing method (EPA Method Number 160.4, Methods for the Chemical Analysis of Water and Wastes (EPA/600/4-79/020)).

VS_{avail} = Volatile solids available for decomposition in manure or organic food waste storage each month as determined from the equation:

$$VS_{avail} = VS_p + 1/2\ VS_{in} - VS_{out}$$

Where:

VS_p = Volatile solids present in manure or organic food waste storage at beginning of month (left over from previous month) (kg).

VS_{in} = Volatile solids added to manure or organic food waste storage during the course of the month (kg). The factor of 1/2 is multiplied by this number to represent the average mass of volatile solids available for decomposition for the entire duration of the month.

VS_{out} = Volatile solids removed from the manure or organic food waste storage for land application or export (assumed value based on standard farm practice).

f = van't Hoff-Arrhenius factor for the specific month as determined using the equation below. Using a base temperature of 30°C, the equation is as follows:

$$f = \exp\ \{[E(T_2 - T_1)]/[(GC \times T_1 \times T2)]\}$$

Where:

f = Conversion efficiency of VS to CH_4 per month.

E = Activation energy constant (15,175 cal/mol).

T_2 = Average monthly ambient temperature for facility where manure or organic food waste is generated (converted from degrees Celsius to degrees Kelvin) as determined from the nearest National Weather Service certified weather station (if reported temperature °C > 5 °C; if reported temperature °C < 5 °C, then f = 0.104).

T_1 = 303.15 (30°C converted to °K).

GC = Ideal gas constant (1.987 cal/K mol).

(iii) The volume of CH_4 produced in cubic feet (ft^3) from decomposition of volatile solids shall be calculated as follows:

$$V_m = (VS_{dec} \times B_o) \times 35.3147$$

Where:

V_m = Volume of CH_4 (ft^3).

VS_{dec} = Volatile solids decomposed (kg).

B_o = Manure or organic food waste type-specific maximum methane generation constant (m^3 CH_4/kg VS decomposed). For dairy cow manure, B_o = 0.24 m^3 CH_4/kg VS decomposed. The methane generation constant for other types of manure shall be those cited at the EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990—2010, Annex 3, Table A 180 (EPA, February 2017), unless the project sponsor proposes an alternate methane generation constant and that alternate is approved by the Department. If the project sponsor proposes to use a methane generation constant other than the ones found in the previously-cited reference, the project sponsor must provide justification and documentation to the Department.

(5) *Calculating emissions reductions.* Emissions reductions shall be calculated as follows:

$ER_t = E_b - E_p$

Where:

ER_t = CO_2e emissions reductions due to project activities (tons).

E_b = Potential CO_2e emissions due to calculated CH_4 production under site-specific anaerobic storage and weather conditions (tons).

E_p = CO_2e emissions due to project activities additional to baseline (tons), including manure transportation, flaring, venting and effluent management.

(6) *Transport CO_2 emissions.* Emissions reductions may not exceed the potential emissions of the anaerobic digester, as represented by the annual volume of CH_4 produced by the anaerobic digester, as monitored under paragraph (5). CO_2 emissions due to transportation of manure and organic food waste from the site where the manure and organic food waste was generated to the anaerobic digester shall be subtracted from the emissions calculated under paragraph (4)(i)—(iii). Transport CO_2 emissions shall be determined through one of the following methods:

(i) Documentation of transport fuel use for all shipments of manure and organic food waste from off-site to the anaerobic digester during each reporting year and a log of transport miles for each shipment. Off-site is defined as a location that is not contiguous with the property where the anaerobic digester is located. CO_2 emissions shall be determined through the application of an emissions factor for the fuel type used. If this option is chosen, the following emissions factors shall be applied as appropriate:

(A) Diesel fuel: 22.912 lbs. CO_2/gallon.

(B) Gasoline: 19.878 lbs. CO_2/gallon.

(C) Other fuel: submitted emissions factor approved by the Department.

(ii) Documentation of total tons of manure and organic food waste transported from off-site for input into the anaerobic digester during each reporting year, as monitored under paragraph (7)(i), and a log of transport miles and fuel type used for each shipment. CO_2 emissions shall be determined through the application of a ton-mile transport emission factor for the fuel type used. If this option is chosen, the following emissions factors shall be applied as appropriate for each ton of manure delivered and multiplied by the number of miles transported:

(A) Diesel fuel: 0.131 lb. CO_2 per ton-mile.

(B) Gasoline: 0.133 lb. CO_2 per ton-mile.

(C) Other fuel: submitted emissions factor approved by the Department.

(7) *Monitoring and verification requirements.* An offset project shall employ a system that provides metering of biogas volumetric flow rate and determination of CH_4 concentration. Annual monitoring and verification reports shall include monthly biogas volumetric flow rate and CH_4 concentration determination. Monitoring and verification shall also meet the following:

(i) If the offset project is a regional-type anaerobic digester, manure and organic food waste from each distinct source supplying to the anaerobic digester shall be sampled monthly to determine the amount of volatile solids present. Any emissions reduction will be calculated according to mass of manure and organic food waste in kilograms (kg) being digested and percentage of volatile solids present before anaerobic digestion, consistent with the requirements under subparagraph (iii) and paragraph (4) and apportioned accordingly among sources. The project sponsor shall provide supporting material and receipts tracking the monthly receipt of manure and organic food waste in kilograms (kg) used to supply the anaerobic digester from each supplier.

(ii) If the offset project includes the anaerobic digestion of organic food waste eligible under paragraph (1)(ii), organic food waste shall be sampled monthly to determine the amount of volatile solids present before anaerobic digestion, consistent with the requirements under subparagraph (iii) and paragraph (4), and apportioned accordingly.

(iii) The project sponsor shall submit a monitoring and verification plan as part of the consistency application that includes a quality assurance and quality control program associated with equipment used to determine biogas volumetric flow rate and CH_4 composition. The monitoring and verification plan shall be specified in accordance with the applicable monitoring requirements listed in Table 3. The monitoring and verification plan shall also include provisions for ensuring that measuring and monitoring equipment is maintained, operated and calibrated based on manufacturer's recommendations, as well as provisions for the retention of maintenance records for audit purposes. The monitoring and verification plan shall be certified by an independent verifier accredited under § 145.396.

Table 3. Monitoring requirements

Parameter	*Measurement Unit*	*Frequency of Sampling*	*Sampling Methods*
Influent flow (mass) into the digester	Kilograms (kg) per month (wet mass)	Monthly total into the digester	In descending order of preference: 1) Recorded mass 2) Digester influent pump flow 3) Livestock population and application of American Society of Agricultural and Biological Engineers (ASABE) standard (ASAE D384.2, March 2005)
Influent total solids concentration (TS)	Percent (of sample)	Monthly, depending upon recorded variations	EPA Method Number 160.3, Methods for the Chemical Analysis of Water and Wastes (EPA/600/4-79/020)
Influent volatile solids (VS) concentration	Percent (of TS)	Monthly, depending upon recorded variations	EPA Method Number 160.4, Methods for the Chemical Analysis of Water and Wastes (EPA/600/4-79/020)
Average monthly ambient temperature	Temperature °C	Monthly (based on farm averages)	Closest National Weather Service—certified weather station
Volume of biogas produced by digester	Standard cubic feet (scf)	Continuous, totalized monthly	Flow meter
Methane composition of biogas produced by digester	Percent (of sample)	Quarterly	Bag sampling and third party laboratory analysis using applicable EPA test methods

§ 145.396. Accreditation of independent verifiers.

(a) *Standards for accreditation.* An independent verifier may be accredited by the Department to provide verification services as required of a project sponsor under this subchapter, provided that an independent verifier meets all the requirements of this section.

(1) *Verifier minimum requirements.* Each accredited independent verifier shall demonstrate knowledge of the following:

(i) Utilizing engineering principles.

(ii) Quantifying greenhouse gas emissions.

(iii) Developing and evaluating air emissions inventories.

(iv) Auditing and accounting principles.

(v) Information management systems.

(vi) The requirements of this subchapter.

(vii) Such other qualifications as may be required by the Department to provide competent verification services as required for individual offset categories under § 145.395 (relating to CO_2 emissions offset project standards).

(2) *Organizational qualifications.* An accredited independent verifier shall demonstrate that they meet the following:

(i) No direct or indirect financial relationship, beyond a contract for provision of verification services, with any offset project developer or project sponsor.

(ii) Employ staff with professional licenses, knowledge and experience appropriate to the specific category of offset projects under § 145.395 that they seek to verify.

(iii) Hold a minimum of $1 million of professional liability insurance. If the insurance is in the name of a related entity, the verifier shall disclose the financial relationship between the verifier and the related entity, and provide documentation supporting the description of the relationship.

(iv) Implementation of an adequate management protocol to identify potential conflicts of interest with regard to an offset project, offset project developer or project sponsor, or any other party with a direct or indirect financial interest in an offset project that is seeking or has been granted approval of a consistency application under § 145.394(e) (relating to application process), and remedy any conflicts of interest prior to providing verification services.

(3) *Pre-qualification of verifiers.* The Department may require prospective verifiers to successfully complete a training course, workshop or test developed by the Department or its agent, prior to submitting an application for accreditation.

(b) *Application for accreditation.* An application for accreditation shall not contain any proprietary information and shall include the following:

(1) The applicant's name, address, e-mail address, telephone number and facsimile transmission number.

(2) Documentation that the applicant has at least 2 years of experience in each of the knowledge areas specified at subsection (a)(1)(i)—(v), and as may be required under subsection (a)(1)(vii).

(3) Documentation that the applicant has successfully completed the requirements at subsection (a)(3), as applicable.

(4) A sample of at least one work product that provides supporting evidence that the applicant meets the requirements at subsection (a)(1) and (2). The work product shall have been produced, in whole or part, by the applicant and shall consist of a final report or other material provided to a client under contract in previous work. For a work product that was jointly produced by the applicant and another entity, the role of the applicant in the work product shall be clearly explained.

(5) Documentation that the applicant holds professional liability insurance as required under subsection (a)(2)(iii).

(6) Documentation that the applicant has implemented an adequate management protocol to address and remedy any conflict of interest issues that may arise, as required under subsection (a)(2)(iv).

(c) *Department action on applications for accreditation.* The Department will approve or deny a complete application for accreditation within 45 days after submission. Upon approval of an application for accreditation, the independent verifier shall be accredited for a period of 3 years from the date of application approval.

(d) *Reciprocity.* Independent verifiers accredited in other participating states may be deemed to be accredited in this Commonwealth, at the discretion of the Department.

(e) *Conduct of an accredited verifier.*

(1) Prior to engaging in verification services for an offset project sponsor, the accredited verifier shall disclose all relevant information to the Department to allow for an evaluation of potential conflict of interest with respect to an offset project, offset project developer or project sponsor. The accredited verifier shall disclose information concerning its ownership, past and current clients, related entities, as well as any other facts or circumstances that have the potential to create a conflict of interest.

(2) An accredited verifier shall have an ongoing obligation to disclose to the Department any facts or circumstances that may give rise to a conflict of interest with respect to an offset project, offset project developer or project sponsor.

(3) The Department may reject a verification report and certification statement from an accredited verifier, submitted as part of a consistency application required under § 145.394(b) or submitted as part of a monitoring and verification report submitted under § 145.397(b) (relating to award and recordation of CO_2 offset allowances), if the Department determines that the accredited verifier has a conflict of interest related to the offset project, offset project developer or project sponsor.

(4) The Department may revoke the accreditation of a verifier at any time for the following:

(i) Failure to fully disclose any issues that may lead to a conflict of interest situation with respect to an offset project, offset project developer or project sponsor.

(ii) The verifier is no longer qualified due to changes in staffing or other criteria.

(iii) Negligence or neglect of responsibilities pursuant to the requirements of this subchapter.

(iv) Intentional misrepresentation of data or other intentional fraud.

§ 145.397. Award and recordation of CO_2 offset allowances.

(a) *Award of CO_2 offset allowances.* Following the issuance of a consistency determination under § 145.394(e)(2) (relating to application process) and the approval of a monitoring and verification report under the provisions of subsection (f), the Department will award one CO_2 offset allowance for each ton of demonstrated reduction in CO_2 or CO_2e emissions or sequestration of CO_2.

(b) *Recordation of CO_2 offset allowances.* After CO_2 offset allowances are awarded under subsection (a), the Department will record the CO_2 offset allowances in the project sponsor's general account.

(c) *Deadlines for submittal of monitoring and verification reports.*

(1) For an offset project undertaken prior to April 23, 2022, the project sponsor shall submit the monitoring and verification report covering the pre-2022 period by October 20, 2022.

(2) For an offset project undertaken on or after April 23, 2022, the project sponsor shall submit the monitoring and verification report within 6 months following the completion of the last calendar year during which the offset project achieved CO_2e reductions or sequestration of CO_2 for which the project sponsor seeks the award of CO_2 offset allowances.

(d) *Contents of monitoring and verification reports.* For an offset project, the monitoring and verification report must include the following:

(1) The project sponsor's name, address, e-mail address, telephone number, facsimile transmission number and account number.

(2) The CO_2 emissions reduction or CO_2 sequestration determination as required by the relevant provisions of § 145.395 (relating to CO_2 emissions offset project standards), including a demonstration that the project sponsor complied with the required quantification, monitoring and verification procedures under § 145.395, as well as those outlined in the consistency application approved under § 145.394(e)(2).

(3) A signed certification statement that reads "The undersigned project sponsor hereby confirms and attests that the offset project upon which this monitoring and verification report is based is in full compliance with all of the requirements of §§ 145.391—145.397. The project sponsor holds the legal rights to the offset project or has been granted the right to act on behalf of a party that holds the legal rights to the offset project. I understand that eligibility for the award of CO_2 offset allowances under §§ 145.391—145.397 is contingent on meeting the requirements of §§ 145.391—145.397. I authorize the Department or its agent to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in the consistency application that was the subject of a consistency determination by the Department. I understand that this right to audit shall include the right to enter the physical location of the offset project and to make available to the Department or its agent any and all documentation relating to the offset project at the Department's request. I submit to the legal jurisdiction of the Commonwealth of Pennsylvania."

(4) A certification signed by the project sponsor certifying that all offset projects for which the sponsor has received CO_2 offset allowances under this subchapter or similar provisions in the rules of other participating states, under the sponsor's ownership or control or under the ownership or control of any entity which controls, is controlled by, or has common control with the sponsor are in compliance with all applicable requirements of the CO_2 Budget Trading Program in all participating states.

(5) A verification report and certification statement signed by an independent verifier accredited under § 145.396 (relating to accreditation of independent verifiers) that documents that the independent verifier has reviewed the monitoring and verification report and evaluated the following in relation to the applicable requirements at § 145.395, and any applicable guidance issued by the Department:

(i) The adequacy and validity of information supplied by the project sponsor to determine CO_2 emissions reductions or CO_2 sequestration under the applicable requirements at § 145.395.

(ii) The adequacy and consistency of methods used to quantify, monitor and verify CO_2 emissions reductions and CO_2 sequestration in accordance with the applicable requirements at § 145.395 and as outlined in the consistency application approved under § 145.394(e)(2).

(iii) The adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable eligibility requirements under § 145.395.

(iv) Other evaluations and verification reviews as may be required by the Department.

(6) Disclosure of any voluntary or mandatory programs, other than the CO_2 Budget Trading Program, to which greenhouse gas emissions data related to the offset project has been or will be reported.

(e) *Prohibition against filing monitoring and verification reports in more than one participating state.* The Department will only accept a monitoring and verification report for an offset project that has received a consistency determination under § 145.394(e)(2) and will not accept a monitoring and verification report for an offset project that has received a consistency determination in other participating states.

(f) *Department action on monitoring and verification reports.*

(1) A complete monitoring and verification report is one that is in an approved form and is determined by the Department to be complete for the purpose of commencing review of the monitoring and verification report. In no event shall a completeness determination prevent the Department from requesting additional information needed by the Department to approve or deny a monitoring and verification report.

(2) Within 45 days following receipt of a complete report, the Department will approve or deny a complete monitoring and verification report, in a format approved by the Department, filed with the Department under subsections (c) and (d).

CO_2 ALLOWANCE AUCTIONS

§ 145.401. Auction of CO_2 allowances.

(a) Except as provided under subsection (b), the Department will participate in a multistate CO_2 allowance auction in coordination with other participating states based on the following:

(1) A multistate auction capability and process is in place for the participating states.

(2) The multistate auction can provide benefits to this Commonwealth that meet or exceed the benefits conferred on Pennsylvania through its own Pennsylvania-run auction process.

(3) The multistate auction process is consistent with the process described in §§ 145.401—145.409 (relating to CO_2 allowance auctions).

(4) The multistate auction process includes monitoring of each CO_2 allowance auction by an independent monitor to identify any collusion, market power or price manipulation.

(b) Should the Department find that the conditions in subsection (a) are no longer met, the Department may determine to conduct a Pennsylvania-run auction in accordance with §§ 145.341—145.343 (relating to Pennsylvania CO_2 Budget Trading Program base budget; CO_2 allowance allocations; and distribution of CO_2 allowances in the air pollution reduction account) and 145.401—145.409.

(c) The Department may delegate the implementation and administrative support functions for any CO_2 allowance auction conducted under §§ 145.401—145.409 to an agent qualified to conduct auctions, including a regional entity, provided that the agent shall perform all functions under the direction and oversight of the Department.

(d) The Department will retain its authority to enforce compliance with all sections of this subchapter and will retain control over the proceeds associated with the sale of Pennsylvania CO_2 allowances, whether sold in a multistate or Pennsylvania CO_2 allowance auction, and will credit the proceeds to the Clean Air Fund established under the act.

§ 145.402. Auction format.

(a) The format of a CO_2 allowance auction will be one or more of the following:

(1) Uniform-price sealed-bid.

(2) Discriminatory price sealed-bid.

(3) Ascending price, multiple-round.

(4) Descending price, multiple-round.

(b) CO_2 allowances will be auctioned in lots of 1,000 CO_2 allowances, unless the volume of CO_2 allowances auctioned requires an individual lot size smaller than 1,000.

(c) The Department will establish a reserve price for each CO_2 allowance auction, which will be either the minimum reserve price or the CCR trigger price, as specified under § 145.382 (relating to general requirements), Table 1 (relating to CO_2 CCR trigger price) and §§ 145.381 and 145.382 (relating to purpose; and general requirements).

§ 145.403. Auction timing and CO_2 allowance submission schedule.

(a) A CO_2 allowance auction will be held no less frequently than annually, and as frequently as the Department determines is necessary and practical to ensure the availability of CO_2 allowances to CO_2 budget units and CO_2 budget sources and to support the effective functioning of the CO_2 allowance market.

(b) Prior to the end of each control period or interim control period, the Department will make available for sale by auction, all CO_2 allowances held in the air pollution reduction account that are designated for the allocation years associated with that control period or interim control period. This will not include CO_2 allowances set aside in the waste coal set-aside account under § 145.342(i) (relating to CO_2 allowance allocations), the strategic use set-aside account under § 145.342(j) or the combined heat and power set-aside account under § 145.342(k).

(c) The number of CO_2 allowances to be made available for sale in an auction will be disclosed in the notice of CO_2 allowance auction issued under § 145.404 (relating to auction notice).

(d) An auction of CO_2 allowances will include a CO_2 cost containment reserve and a CCR trigger price, as provided under § 145.342.

§ 145.404. Auction notice.

(a) A notice of each CO_2 allowance auction will be provided no later than 45 days prior to the date upon which the auction will be conducted.

(b) In addition to the information specified under § 145.382(a) (relating to general requirements), the notice of a CO_2 allowance auction will include the following:

(1) The date, time and location of the CO_2 allowance auction.

(2) The format for the CO_2 allowance auction.

(3) The categories of bidders who will be eligible to bid.

(4) The number and allocation years of Pennsylvania CO_2 allowances to be auctioned.

(5) The minimum reserve price.

(6) All information regarding the CO_2 cost containment reserve, required to be in the notice under § 145.382(a).

(7) The procedures for conducting the CO_2 allowance auction, including the required bid submission format and process, and information regarding financial settling of CO_2 allowance payments.

(8) All CO_2 allowance auction participation requirements.

(9) The amount and type of financial security required and instructions for submitting acceptable financial surety.

(10) Participation limits, including bidding limits that may apply to an individual bidder or a group of related bidders.

(11) Application instructions for applying to participate in the CO_2 allowance auction.

(12) Identification of a Pennsylvania auction contact person for further information.

(13) Other pertinent rules or procedures of the auction as may be required to ensure a transparent, fair and competitive auction.

§ 145.405. Auction participant requirements.

(a) To be classified by the Department as a bidder eligible to participate in a specific CO_2 allowance auction, a qualified participant must meet the following:

(1) Be a member of a category of those eligible to participate in the specified CO_2 allowance auction as indicated by the notice of CO_2 allowance auction issued under § 145.404(b) (relating to auction notice).

(2) Open and maintain a compliance account or general account, established under § 145.351 (relating to CO_2 allowance tracking system (COATS) accounts).

(3) Submit financial security, such as a bond, cash, certified funds or an irrevocable stand-by letter of credit, in a manner and form acceptable to the Department, as specified in the notice of CO_2 allowance auction issued under § 145.404(b).

(b) The Department will announce the categories of parties that are eligible to participate in a specific CO_2 allowance auction as part of the notice of the CO_2 allowance auction, provided that an owner or operator of a CO_2 budget unit located in this Commonwealth is always eligible to participate in a CO_2 allowance auction.

(c) For a CO_2 allowance auction, the following categories of parties may be eligible to participate:

(1) The owner or operator of a CO_2 budget unit located in this Commonwealth.

(2) The owner or operator of a CO_2 budget unit located in a participating state.

(3) A broker.

(4) An environmental organization.

(5) A financial or investment institution.

(6) Any other market participant, as may be specified in the notice of the CO_2 allowance auction.

§ 145.406. Auction participant qualification.

(a) A person who intends to participate in a CO_2 allowance auction shall submit a qualification application to the Department, in the form and manner specified in the notice of the CO_2 allowance auction.

(b) The deadline for submitting a qualification application will be established in the notice of the CO_2 allowance auction.

(c) As part of a qualification application, an applicant shall provide information and documentation relating to the ability and authority of the applicant to execute bids and honor contractual obligations, including the following:

(1) Identification by the applicant of either a compliance account or general account established under § 145.351 (relating to CO_2 allowance tracking system (COATS) accounts) and identification of the CO_2 authorized account representative for the compliance account or general account.

(2) Information and documentation regarding the corporate identity, ownership, affiliations and capital structure of the entity represented by the applicant.

(3) Identification of any indictment or felony conviction of the applicant or any member, director, principal, partner or officer of the entity represented by the applicant or any affiliate or related entity.

(4) Identification of any previous or pending investigation of the applicant or the entity represented by the applicant or any affiliate or related entity, with respect to any alleged violation of any rule, regulation or law associated with any commodity market or exchange.

(5) Other information and declarations as the Department determines may be required of an applicant to ensure the integrity of the CO_2 allowance auction process.

(d) The Department will determine whether a qualification application is complete, or incomplete, or otherwise deficient. If the Department determines that an application is incomplete or otherwise deficient, the applicant will be given 10 business days to provide additional information to the Department to complete the application or remedy any application deficiency.

(e) The Department will review a complete qualification application, make a determination as to whether the applicant is qualified to participate in the CO_2 allowance auction and notify the applicant in writing not later than 15 days before the CO_2 allowance auction.

(f) The Department may deny qualification to an applicant based on information submitted in a qualification application to ensure the integrity of the CO_2 allowance auction process in accordance with the requirements and procedures for auctions established under §§ 145.405, 145.407 and 145.408 (relating to auction participant requirements; submission of financial security; and bid submittal requirements).

(g) The Department may revoke the qualification status of a qualified participant, if the participant fails to comply with the applicable requirements of this subchapter, or if the Department determines that they have knowingly provided false or misleading information or withheld pertinent information from the qualification application submitted under subsection (a). The Department may also prohibit the qualified participant from participating in a future CO_2 allowance auction where the Department determines that the prior conduct could compromise the integrity of a subsequent CO_2 allowance auction.

(h) A qualified participant will remain qualified to participate in future CO_2 allowance auctions after the Department's qualification determination, provided that there has been no material change to the information supplied to the Department in the qualification application submitted under subsection (a). If there is a material change to the information in the qualification application submitted under subsection (a), the qualification status will expire as of the date of the change, pending the submission of a new qualification application under subsection (a) and a determination by the Department that the applicant is qualified to participate in a CO_2 allowance auction.

(i) Prior to each CO_2 allowance auction, a qualified participant who intends to participate in the auction shall notify the Department, through a notice of intent to bid, that they intend to participate in the upcoming CO_2 allowance auction. The notice shall be submitted to the Department by the same date as that required for submitting a qualification application established in the notice of the CO_2 allowance auction.

(j) As part of a notice of intent to bid submitted to the Department under subsection (i), a qualified participant shall notify the Department whether there has been a material change to the information supplied in the qualification application submitted under subsection (a).

§ 145.407. Submission of financial security.

(a) To participate in a CO_2 allowance auction, a qualified participant shall provide financial security to the Department, including a bond, cash, certified funds or an irrevocable stand-by letter of credit, in a form and manner prescribed by the Department in the notice of the CO_2 allowance auction.

(b) The Department will approve the qualified participant to participate as a bidder in the specified CO_2 allowance auction after the Department has approved the financial security submitted under subsection (a). The eligibility to bid in any auction shall be limited to the level of financial security provided.

(c) A qualified participant who submits financial security may request return of the financial security at any time prior to or following a CO_2 allowance auction, subject to the following limitations:

(1) A request for the return of financial security prior to a CO_2 allowance auction will result in the Department revoking approval to participate in the CO_2 allowance auction, as of the date of the request.

(2) The Department will not return the financial security if the Department has a current or pending claim to the financial security as a result of the failure of the bidder to abide by the requirements of this subchapter or to pay the full amount of a submitted bid when payment is due.

§ 145.408. Bid submittal requirements.

(a) A bidder shall submit a bid, in a form and manner prescribed by the Department, in an amount that does not exceed the amount of financial security provided to the Department.

(b) A bidder, including any affiliate or agent of the bidder, or any combination of bidders with related beneficial interests, shall purchase no more than 25% of the CO_2 allowances offered for sale in a CO_2 allowance auction. The limitation, which will not be increased by CCR allowances, will be published in the auction notice under § 145.404(b) (relating to auction notice).

(c) A bidder shall not use or employ any manipulative, misleading or deceptive practice in connection with its prequalification application or purchase of CO_2 allowances from the Department, including, any practice that contravenes or violates any applicable Federal or participating state law, rules or regulation.

(d) A bid submitted at a CO_2 allowance auction is a binding offer for the purchase of CO_2 allowances.

§ 145.409. Approval of auction results.

(a) An independent monitor, such as a certified public accounting firm or similar entity, shall observe the conduct and outcome of each auction and issue a report to the Department in accordance with professional auditing standards addressing whether the auction was conducted in accordance with the procedures and requirements under §§ 145.341—145.343 and 145.401—145.408 (relating to CO_2 allowance allocations; and CO_2 allowance auctions) and this section and whether there was any indication of collusive behavior among auction participants or attempts at market manipulation that impacted the results of the auction.

(b) The independent monitor shall monitor allowance market data and information known to the Department, including CO_2 allowance transactions and associated pricing reported in COATS, and other relevant data and information to ensure fair competition, efficient pricing and protection against collusive or manipulative behavior in the CO_2 allowance auctions and the CO_2 Budget Trading Program.

(c) The Department may approve the outcome of a CO_2 allowance auction following the completion of the auction, based on an evaluation of the report from the independent monitor.

(d) Upon receipt and approval by the Department of the report and upon payment in full by successful bidders, the Department or its agent shall transfer and record the corresponding CO_2 allowances to the compliance or general account of each successful bidder.

(e) After the Department has approved the results of a CO_2 allowance auction, the Department will make available the auction clearing price and the number of CO_2 allowances sold in the auction.

[Pa.B. Doc. No. 22-625. Filed for public inspection April 22, 2022, 9:00 a.m.]

Title 55—HUMAN SERVICES

DEPARTMENT OF HUMAN SERVICES

[55 PA. CODE CHS. 123 AND 133]

Definitions and Redetermination

Statutory Authority

The Department of Human Services (Department) amends Chapters 123 and 133 (relating to definitions; and redetermining eligibility) as set forth in Annex A under the authority of §§ 201(2), 403(b) and 432.2 of the Human Services Code (62 P.S. §§ 201(2), 403(b) and 432.2). Notice of proposed rulemaking was published at 50 Pa.B. 7193 (December 19, 2020).

Purpose of this Final-Form Rulemaking

The purpose of this final-form rulemaking is to expand the types of interviews available to Temporary Assistance for Needy Families (TANF) applicants and recipients to meet application and redetermination requirements. This final-form rulemaking removes the need for a face-to-face interview and adds a definition for "personal interview," which enables TANF applicants and recipients to participate in required interviews by phone, in person or by other means approved by the Department. This change makes the TANF interview process more flexible, efficient and accessible for applicants and recipients.

Affected Individuals and Organizations

This final-form rulemaking affects TANF applicants and recipients.

Accomplishments and Benefits

These final-form amendments make the TANF interview process more flexible, and accessible for applicants and recipients. The change also makes the TANF review process more flexible and efficient for the Department. With these changes, the required personal interview may be in person, by telephone or by other means approved by the Department. With expanded interview options, the Department may plan with applicants and recipients the most convenient and efficient type of personal interview. For applicants and recipients, these options can save time and avoid the extra travel and childcare expenditures they might have with face-to-face interviews.

Contact Persons

For questions concerning this final-form rulemaking, contact Cathy Buhrig, Department of Human Services, Office of Income Maintenance, 1006 Hemlock Drive, Room 230, P.O. Box 2675, Harrisburg, PA 17110 or RA-oimcomments@pa.gov. Persons with a disability who require an auxiliary aid or service may use the Pennsylvania Hamilton Relay Service (800) 654-5984 (TDD users) or (800) 654-5988 (voice users).

Fiscal Impact

There are no costs associated with this final-form rulemaking. This final-form rulemaking may result in travel cost savings for applicants and recipients. Applicants and recipients may also avoid travel and childcare expenditures and lost wages from unpaid leave time.

Public Comment

Public meetings or community participation processes were not used to develop this final-form rulemaking. The Department received one public comment from the Homeless Assistance Program (HAP), and one comment from the House Health Committee in support of the final-form amendments that would provide expanded interviews. There were no comments received from the Independent Regulatory Review Commission (IRRC), other legislators or other State agencies. The Department made no changes in response to the two favorable comments received.

Regulatory Review Act

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on December 7, 2020, the Department submitted notice of proposed rulemaking, published at 50 Pa.B. 7193, to IRRC for review and comment and the Chairpersons of the House Committee on Health and the Senate Committee on Health and Human Services on February 17, 2021, for review and comment.

Under section 5(c) of the Regulatory Review Act, the Department submitted to IRRC and the Committees copies of comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulemaking, the Department has considered all comments from IRRC, the House and Senate Committees and the public.

Under section 5.1(j.2) of the Regulatory Review Act, (71 P.S. § 745.5a(j.2)) on March 9, 2022, the final-form rulemaking was deemed approved by the House and Senate Committees. Under section 5(g) of the Regulatory Review Act, the final-form rulemaking was deemed approved by IRRC effective March 10, 2022.

Findings

The Department finds:

(a) The public notice of intention to amend the administrative regulation by this order has been given under §§ 201 and 202 of the act of July 31, 2018 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202), referred to as the Commonwealth Documents Law and the regulations at 1 Pa. Code §§ 7.1 and 7.2 (relating to notice of proposed rulemaking required; and adoption of regulations).

(b) A public comment period was provided as required by law and all comments were considered in drafting this final-form rulemaking.

(c) That the adoption of this final-form rulemaking in the manner provided by this order is necessary and appropriate for the administration and enforcement of §§ 201(2), 403(b) and 432.2 of the Human Services Code.

Order

The Department acting under §§ 201(2), 403(b) and 432.2 of the Human Services Code orders:

(a) The regulations of the Department, 55 Pa. Code Chapters 123 and 133, are amended by amending §§ 123.22 and 133.23, to read as set forth in Annex A, with ellipses referring to the existing text of the regulations.

(b) The Secretary of the Department shall submit this final-form rulemaking to the Offices of General Counsel and Attorney General for approval as to legality and form as required by law.

(c) The Department shall submit this final-form rulemaking to IRRC and the Legislative Standing Committees as required by law.

(d) The Secretary of the Department shall certify and deposit this final-form rulemaking with the Legislative Reference Bureau as required by law.

(e) This final-form rulemaking shall take effect upon publication in the *Pennsylvania Bulletin*.

MEG SNEAD,
Acting Secretary

Fiscal Note: Fiscal Note 14-550 remains valid for the final adoption of the subject regulations.

Annex A

TITLE 55. HUMAN SERVICES

PART II. PUBLIC ASSISTANCE MANUAL

Subpart B. INTAKE AND REDETERMINATION

CHAPTER 123. DEFINITIONS

TANF/GA INTAKE AND REDETERMINATION DEFINITIONS

§ 123.22. Definitions.

The following words and terms, when used in this chapter and Chapters 125, 133 and 141 (relating to application process; redetermining eligibility; and general eligibility provisions), have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Application interview—A personal interview between an applicant and an eligibility worker, to gather and record information and to secure verification needed to establish eligibility.

* * * * *

Monthly assistance payment—The amount of money issued monthly that is based on the family size allowance plus, if applicable, a special need allowance, reduced by the net income of the budget group.

Personal interview—A meeting or discussion between an applicant or recipient and an eligibility worker, in person, by telephone or by other means approved by the Department.

Reapplication—A completed, signed form approved by the Department which is filed with the CAO by a recipient and used for a complete redetermination of continued eligibility of a budget group.

* * * * *

Screening interview—A personal interview between the applicant and an eligibility worker which includes a review of the application to assure that information necessary to determine eligibility is provided prior to determining a person ineligible or prior to scheduling an application interview.

CHAPTER 133. REDETERMINING ELIGIBILITY

REDETERMINING ELIGIBILITY PROVISIONS FOR TANF/GA

§ 133.23. Requirements.

* * * * *

(c) *Redetermination contacts.* The Department shall schedule and conduct a personal interview with the recipient.

(d) *Controls for redeterminations.* To carry out the function of redetermining eligibility, a central control of necessary future actions is maintained to provide a method whereby reasonably predictable changes in the total caseload can be acted on within appropriate time limits.

[Pa.B. Doc. No. 22-626. Filed for public inspection April 22, 2022, 9:00 a.m.]