



Draft Final-Form Rulemaking

Chapter 145. Interstate Pollution Transport Reduction

Subchapter E. CO₂ Budget Trading Program

Environmental Justice Advisory Board
May 20, 2021

Tom Wolf, Governor

Patrick McDonnell, Secretary

Climate Change Impacts on Pennsylvania

- **Flooding is currently the highest-risk hazard** facing Pennsylvania, and flood risks are projected to increase; at the same time, risks from **increasing average temperatures and heat waves** could rise to be as high as flooding is today by mid-century
- **Heat waves will become increasingly common** and will create particular health and economic risks for vulnerable populations
- **All hazards could affect public health negatively**—especially heat waves, increasing temperatures, and flooding
- **Climate change will not affect all Pennsylvanians equally.** Some may be more at risk because of their location (and inability to relocate), income, housing, health, or other factors
- **Landslides and sea level rise can cause severe impacts in the locations where they occur,** but pose relatively low risks statewide
- **Severe tropical storms, flooding, and landslides already pose risks,** and these could become more likely or severe in the future

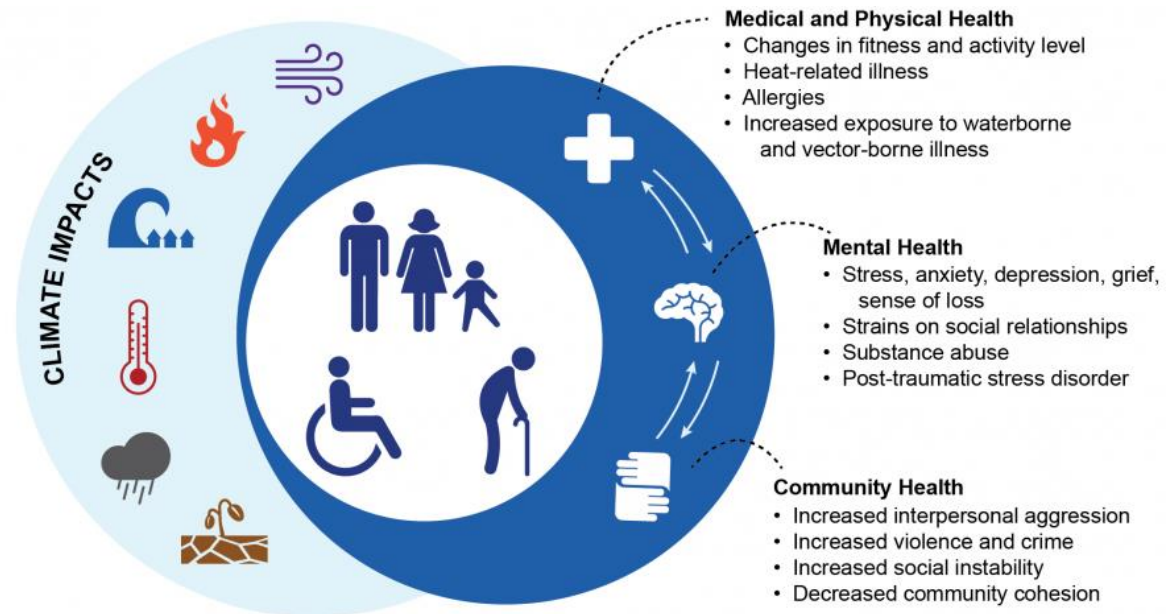


Unequal Impacts from Climate Change

Underlying health conditions, age, race, limited access to air conditioning, outdoor employment (e.g., farm labor or logging), and living in urban areas can all increase risk to heat-related health conditions

Populations at greater risk from heat include:

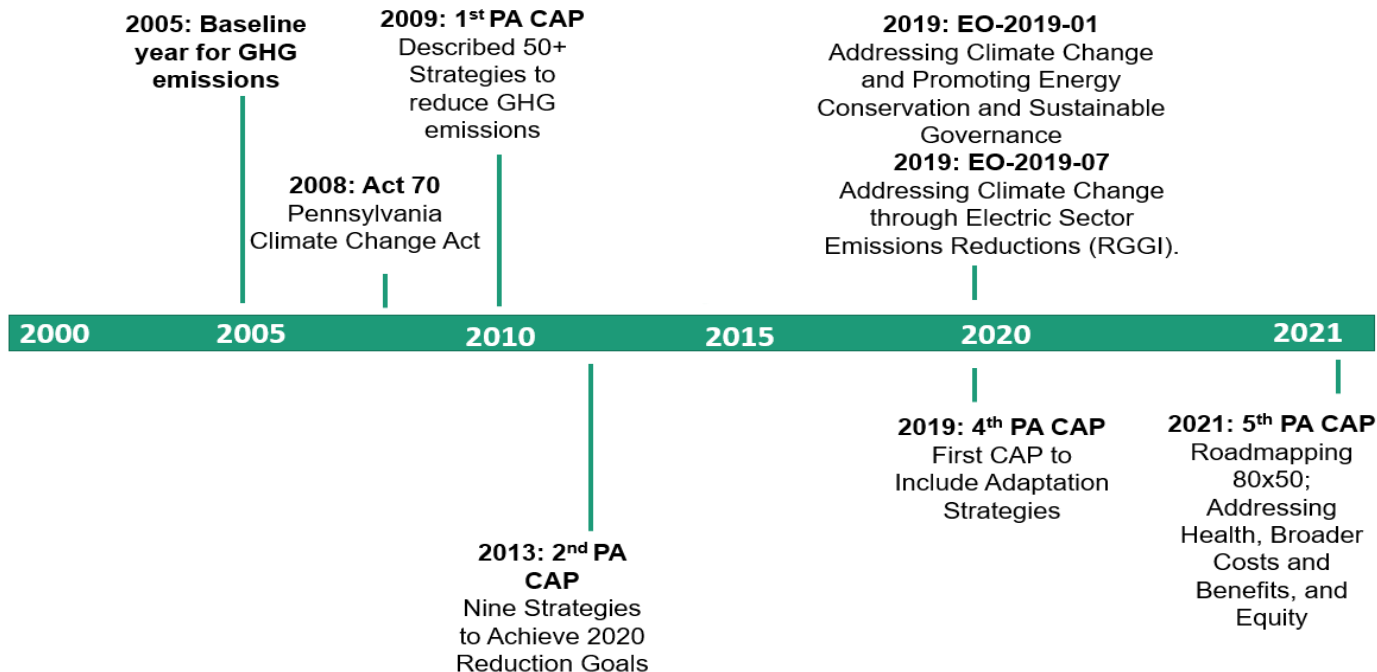
- The elderly
- Low-income communities
- Pregnant women
- Individuals with cardio-vascular disease
- Outdoor workers



Pennsylvania's Emission Reduction Goals

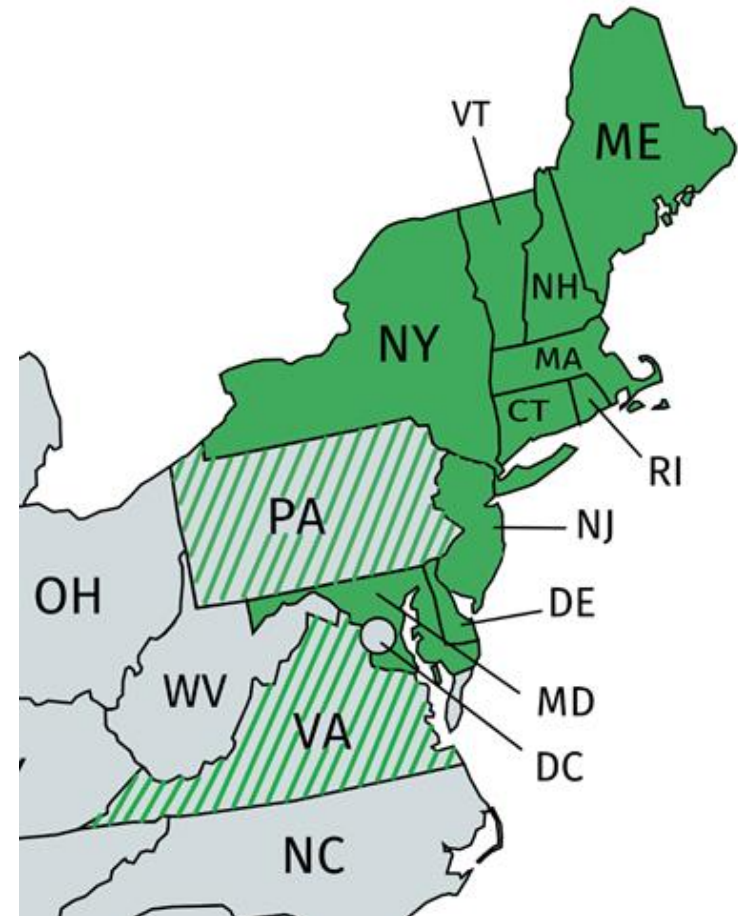
It was for these reasons that Governor Wolf set the first ever statewide GHG emission reduction goals of 26% by 2025 and 80% by 2050 from 2005 levels.

- Pennsylvania has been releasing a climate plan every three years to identify the best ways to reduce emissions and meet those targets – and RGGI participation is critical action to meet them.

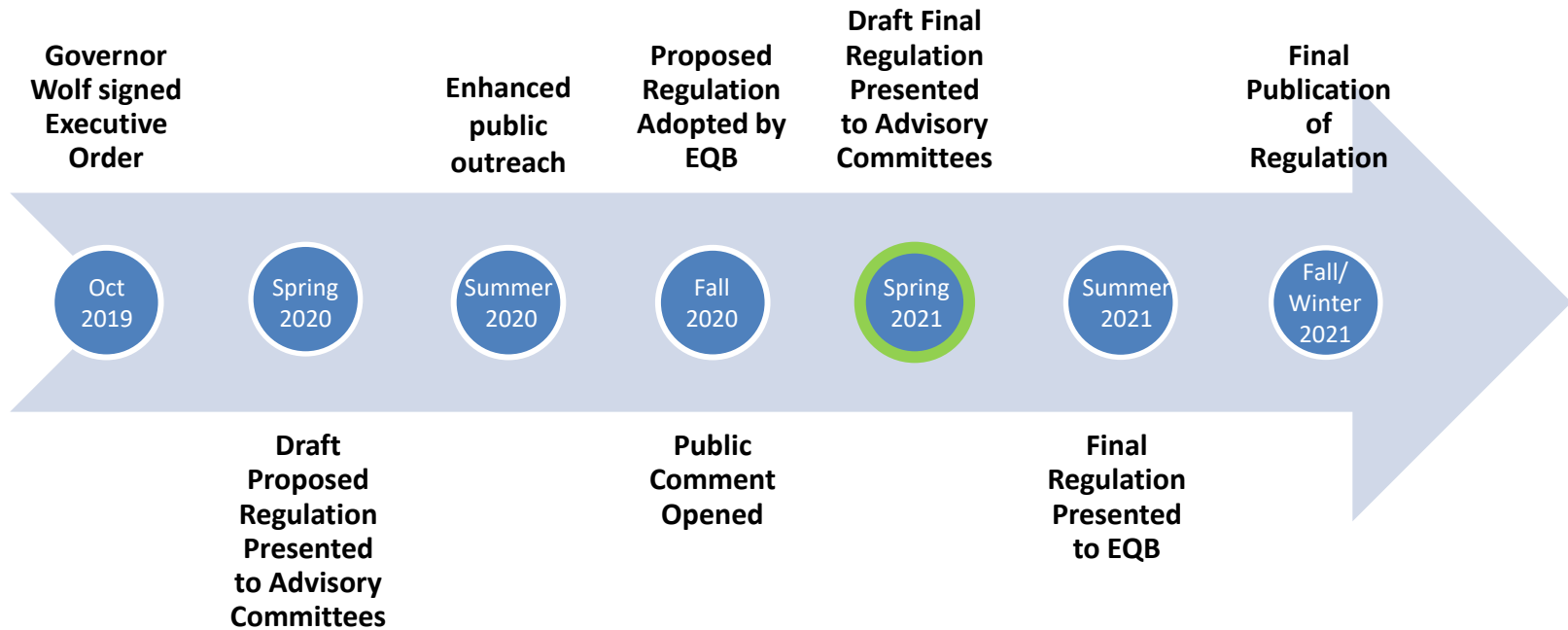


Regional Greenhouse Gas Initiative

- 11 Independent State Programs
 - VA began participating in 2021
- Cap on CO₂ emissions from power sector
- Most CO₂ allowances sold at auction
- Markets are Linked through:
 - Consistent Regulations
 - Reciprocal Acceptance of CO₂ allowances
- No central RGGI Authority
 - States oversee program jointly
 - DEP & PUC on Executive Board
 - RGGI Inc. provides administrative and technical support



Implementation Timeline



Public Comment Overview

Public Comment Period

- The Public Comment Period opened on November 7, 2020 and ten public hearings were held to gather input on the proposed regulation. Two hearings were held on each of these dates:
 - December 8, 2020 – 82 testifiers
 - December 9, 2020 – 81 testifiers
 - December 10, 2020 – 91 testifiers
 - December 11, 2020 – 94 testifiers
 - December 14, 2020 – 101 testifiers
- The public comment period closed on January 14, 2021.
- The comment period for the [Independent Regulatory Review Commission \(IRRC\)](#) closed on February 16, 2021.

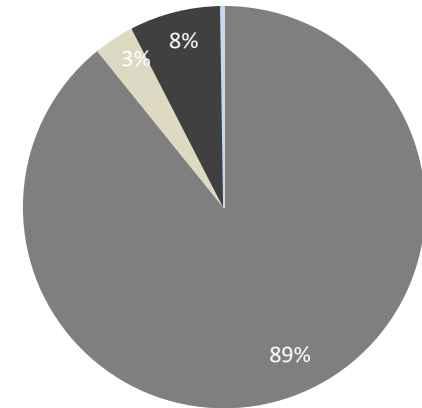
Availability of Public Comments

Independent Regulatory Review Commission (IRRC)
www.irrc.state.pa.us/regulations/find_a_regulation.cfm
Search Regulation # 3274

Department of Environmental Protection
www.ahs.dep.pa.gov/eComment/
“Pennsylvania CO₂ Budget Trading Program”

Summary of Public Comments

Received 14,038 comments through online submission, testimony, email, and written comments across 69-day comment period.

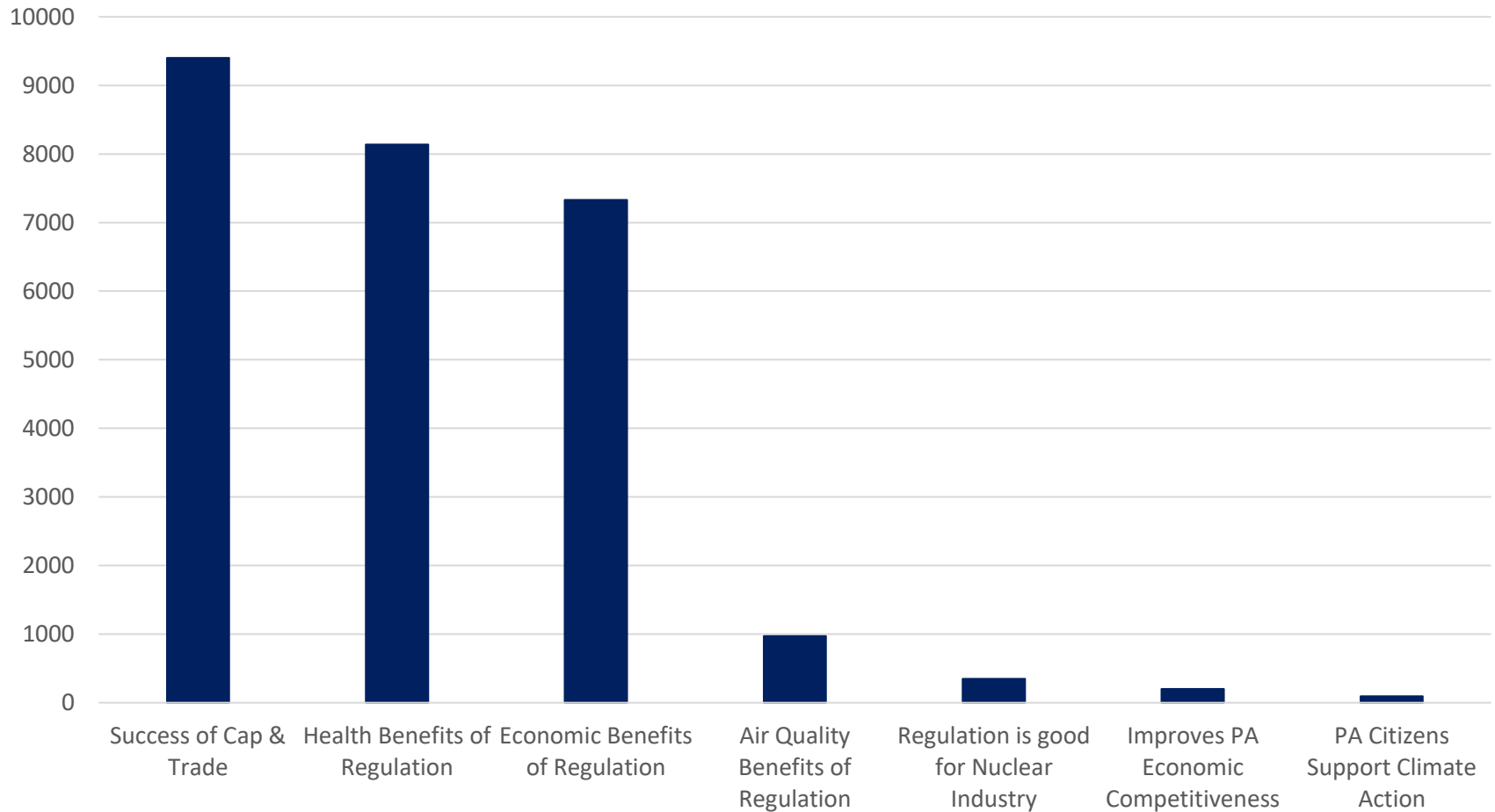


■ Email ■ Testimony ■ Online ■ Hard Copy

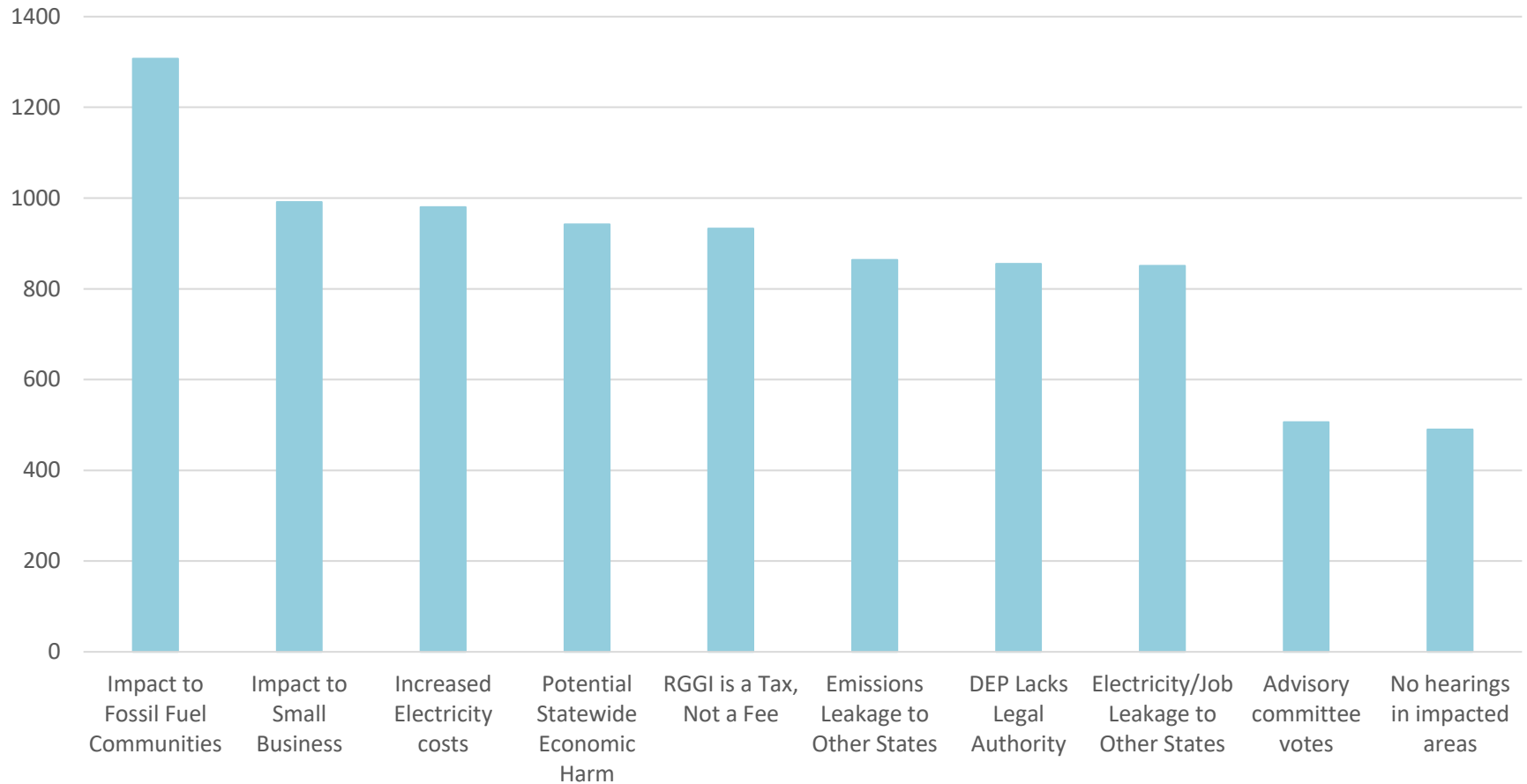
Received comments from across Pennsylvania, representing many groups and communities, including:

- PA Legislators
- Municipalities
- School Districts
- Faith-based groups
- Community groups
- Labor Unions
- Environmental Groups
- Industry
- Academia
- Non-profits
- Consumer Groups
- Students
- Tourism Bureaus
- Medical Community
- Building Trades

Top Supportive Comments Topics



Top Adverse Comment Topics



Comments on Regulatory Language

Received numerous comments on specific regulatory changes, including:

- Allowance budget should be decreased if it is too high, with some recommending automatic mechanism to lower allowance budget.
- Combined Heat and Power set aside should be increased, decreased, or eliminated.
- Some commenters stated Waste Coal set aside should be decreased or removed, while others recommend an increase.
- Regulation should include Voluntary Renewable Energy set aside.
- Strategic Use set aside should remain independent of Waste Coal set aside.
- Regulation should include emissions impact monitoring.
- Air pollution permitting process should include more input.

Engagement with EJ Communities

Active participation and meaningful engagement by EJ Communities – DEP and OEJ have been working collaboratively with EJ Community Partners to gather meaningful input and recommendations about RGGI.

DEP has initiated opportunities for active participation and engagement in decision making by EJ community stakeholders.

- Consideration of EJAB Recommendations – EJAB provided initial recommendations about inclusion of environmental justice and equity in RGGI
- Develop Equity Principles – EJAB and other Community partners helped shape creation of RGGI equity principles
- Commitment to planning investment of RGGI proceeds - Working with EJ partners to shape the process and design for investment allowance auction proceeds.

Engagement with EJ Communities

- Public Webinar Outreach
- RGGI Presentations
- EJAB Engagement
- Delta Institute
- Dickinson College Research
- RGGI Investment Planning



Power Sector Modeling- 2021 Update

2021 Power Sector Modeling

The Department completed updated power sector modeling to ensure use of the most recent laws, policy changes, inputs & assumptions.

- **Power Sector Modeling**

- Used same, advanced modeling software, Integrated Planning Model (IPM[®]), as original effort.
- Included updated data, assumptions, and inputs that reflect recent changes in power sector.
- Power sector modeling only, did not include economic modeling.
- Results include a reference case (without regulation) and a policy case (with regulation) going out to 2030.
- Results are publicly available on DEP RGGI webpage.

Modeling: Revised Assumptions & Inputs

- Reference Case (Business-as-Usual)
 - Updated PJM Demand Forecast
 - 2021 AEO Natural Gas Prices
 - Updated capacity additions and retirements
 - Revisions to state laws & policies
 - Updated NREL technology costs
 - New in-state generation requirement- AEPS Tier II
- Policy Case (RGGI)- includes all updates above AND
 - Adjusted Waste Coal Set-Aside Amount
 - New CHP Set-Aside Amount

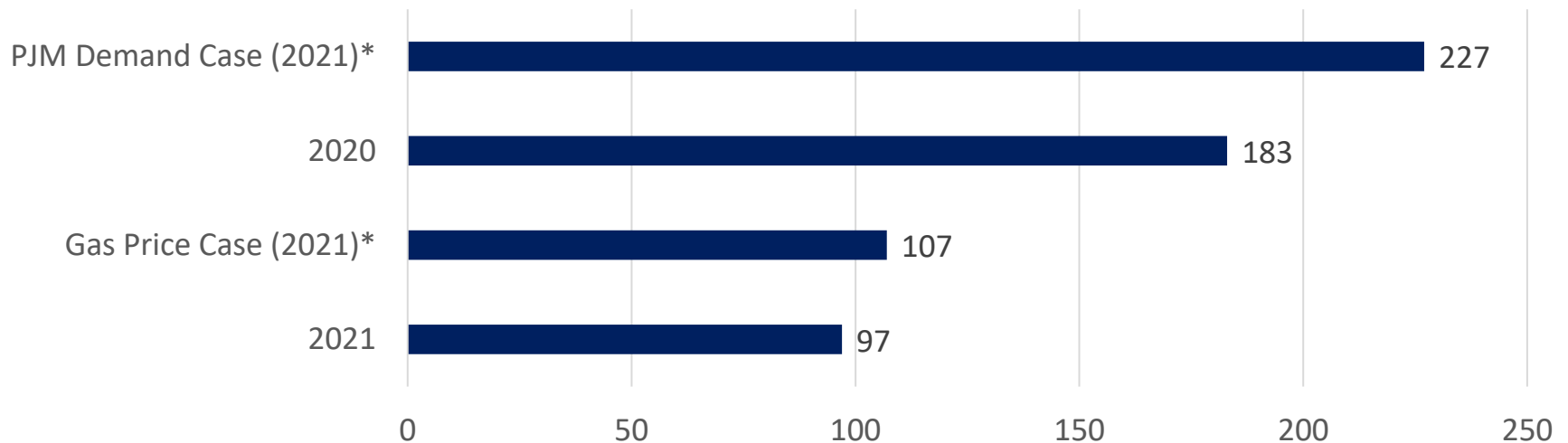
2021 Modeling Results Key Takeaways

- 1. Confirmed Starting Allowance Budget:** Original allowance budget confirmed at 78 million tons of CO₂.
- 2. Significant Avoided Emissions through RGGI participation:** All modeling shows that PA would experience significant CO₂ reductions as a RGGI participating state.
- 3. Sharp Decline in Coal Generation by 2025:** Overall PA coal generation decreases significantly with or without RGGI participation.
- 4. Limited Impact on Natural Gas Generation:** Minor overall impact on natural gas generation with RGGI participation.
- 5. PA Remains a Leading Energy Exporter:** Updated modeling showing a smaller impact on exports due to RGGI participation.
- 6. Similar Minimal Impact on Electricity Prices Compared to Past Modeling:** PA's wholesale power prices are projected to be slightly higher in the policy case, as seen with the 2020 modeling. This does not account for future program investments, which can reduce prices.

Key Takeaways: PA Avoided Emissions

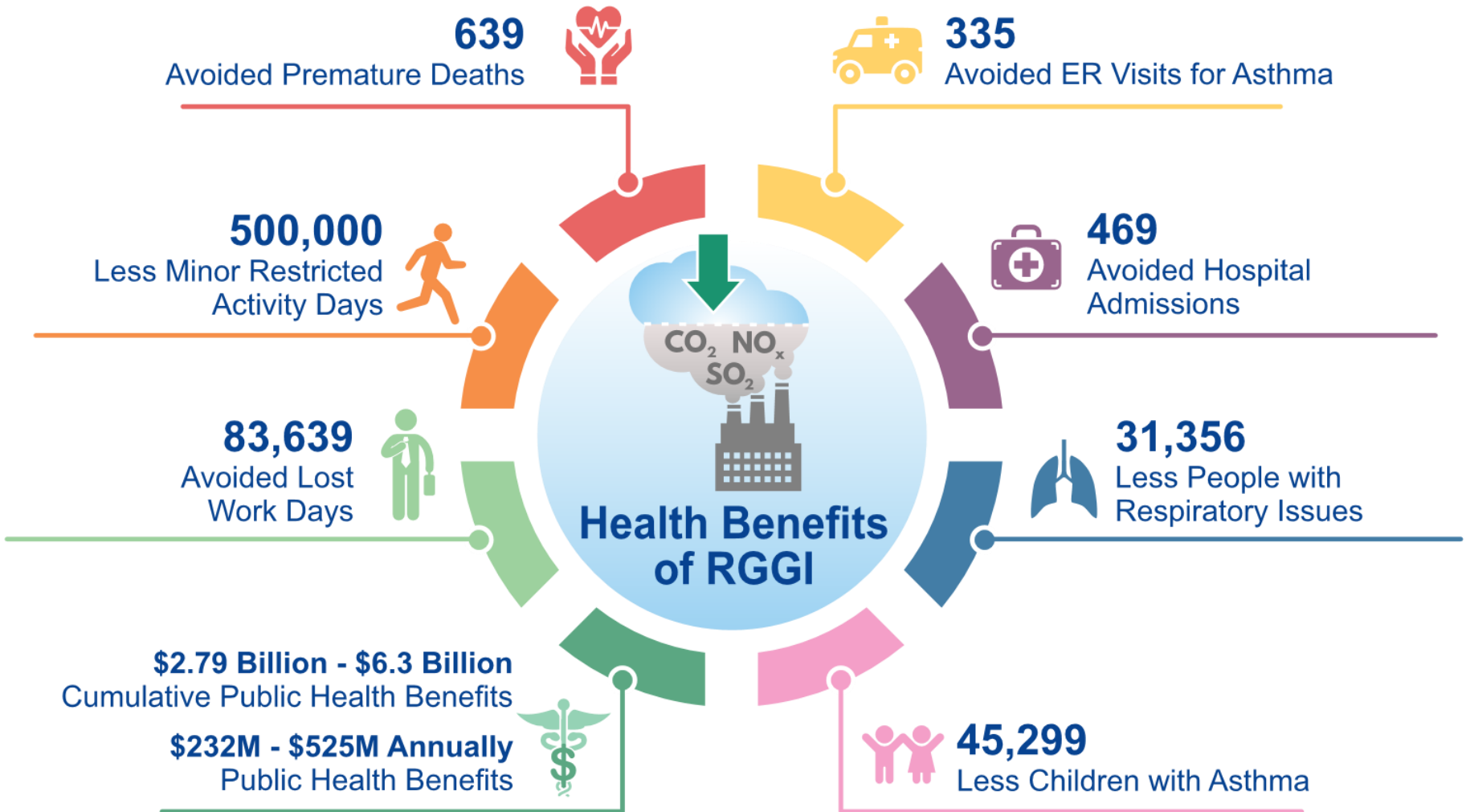
- All modeling confirms significant avoided CO₂ emissions for Pennsylvania resulting from RGGI participation– ranging from nearly 100 million to 225 millions tons reduced between now and 2030.
- Updated modeling results heavily impacted by Alternative Energy Portfolio Standards Act legislation relating to Tier II requirements, decreased regional electricity demand, and fluctuating natural gas prices.

Cumulative Avoided Emissions (million tons CO₂) 2021-2030



**These avoided emissions results were based on the difference between a reference case and a policy case that were the same as the 2021 case, except with a different electricity demand or natural gas price assumption.*

Health Benefits of RGGI



Regulatory Changes from Proposed to Final

Summary of Regulatory Changes

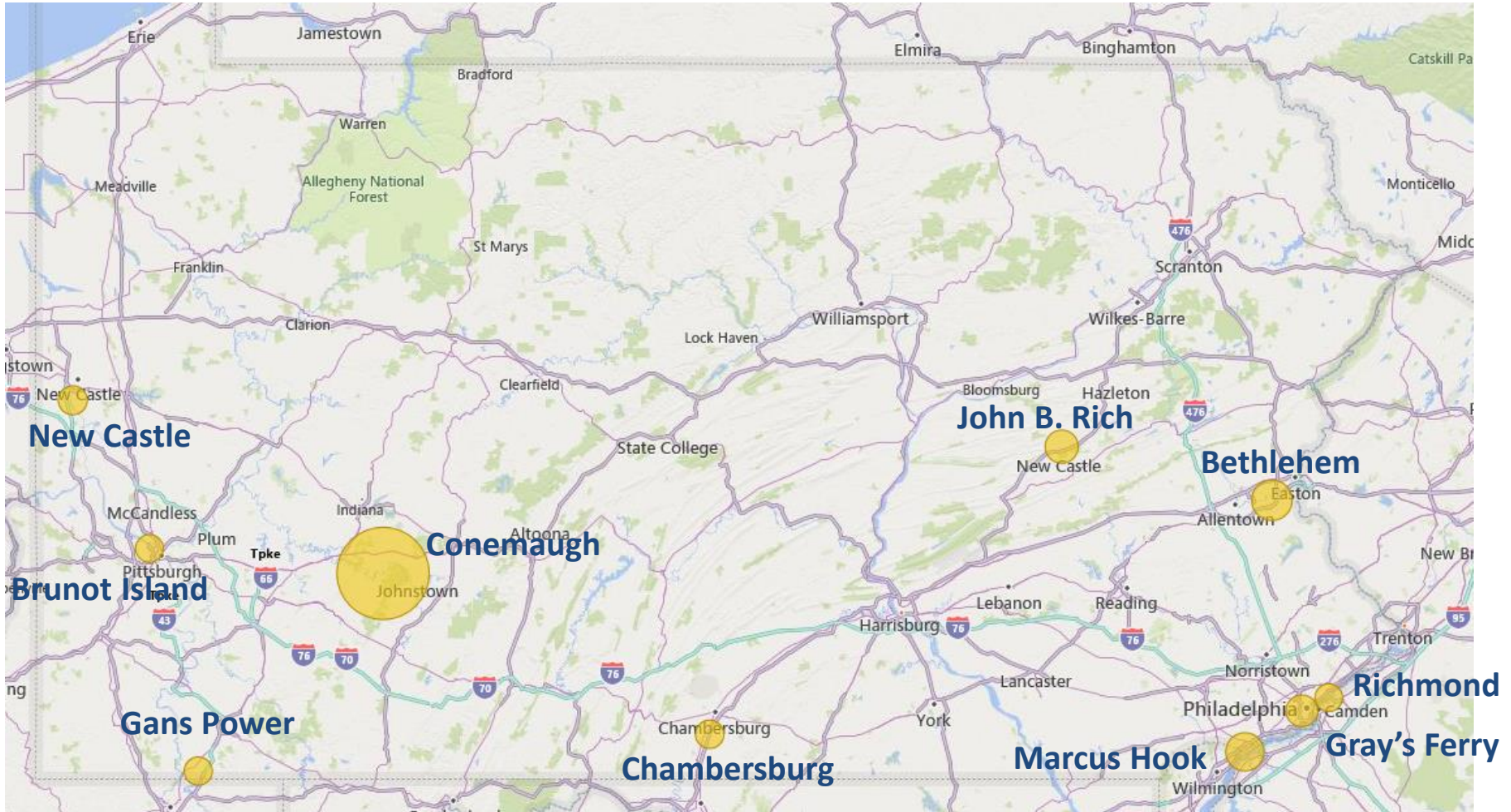
- Added Quarterly CO₂ Allowance Budgets for 2022 (§ 145.341)
- Made a slight modification to the Limited Exemption (§ 145.305)
- Expanded Cogeneration (now Combined Heat and Power) Set-Aside with Qualifiers (§ 145.342)
- Adjusted the amount of Waste Coal Set-Aside Allowances (§ 145.342)
- Refined and Clarified Strategic Use Set-Aside (§ 145.342)
- Added DEP Commitment to Annual Air Quality Impact Assessment (§ 145.306)
- Incorporated Equity Principles (preamble)

NEW Annual Air Quality Impact Assessment

The Department of Environmental Protection is making an annual commitment to assess changes in emissions and air quality in Pennsylvania as it relates to implementation of this regulation. § 145.306

- The Department will use the emissions measurements recorded and reported under Article III 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 to include at a minimum:
 - Baseline air emissions data from each CO₂ budget unit for the calendar year prior to the year Pennsylvania becomes a participating state.
 - Annual emissions measurements recorded and reported to the Department from each CO₂ budget unit.

RGGI Covered Facilities – EJ Census Block



New RGGI Equity Principles

Environmental justice ensures fair treatment and meaningful involvement of all people in development of environmental laws, regulations and policies and embodies the principle that populations should not be disproportionately exposed to environmental impacts.

DEP collaborated with EJ partners to develop and has prioritized for implementation, a set of RGGI Equity Principles whereby the Department in development of this rulemaking and associated investment framework commits to:

- Inclusively gathering and considering input from the public related to decisions made under RGGI.
- Protecting public health and welfare, mitigating any adverse impacts on human health, especially in EJ communities.
- Working equitably and with intentional consideration to distribute environmental and economic benefits of the proceeds of allowance auctions.

Regulatory Review

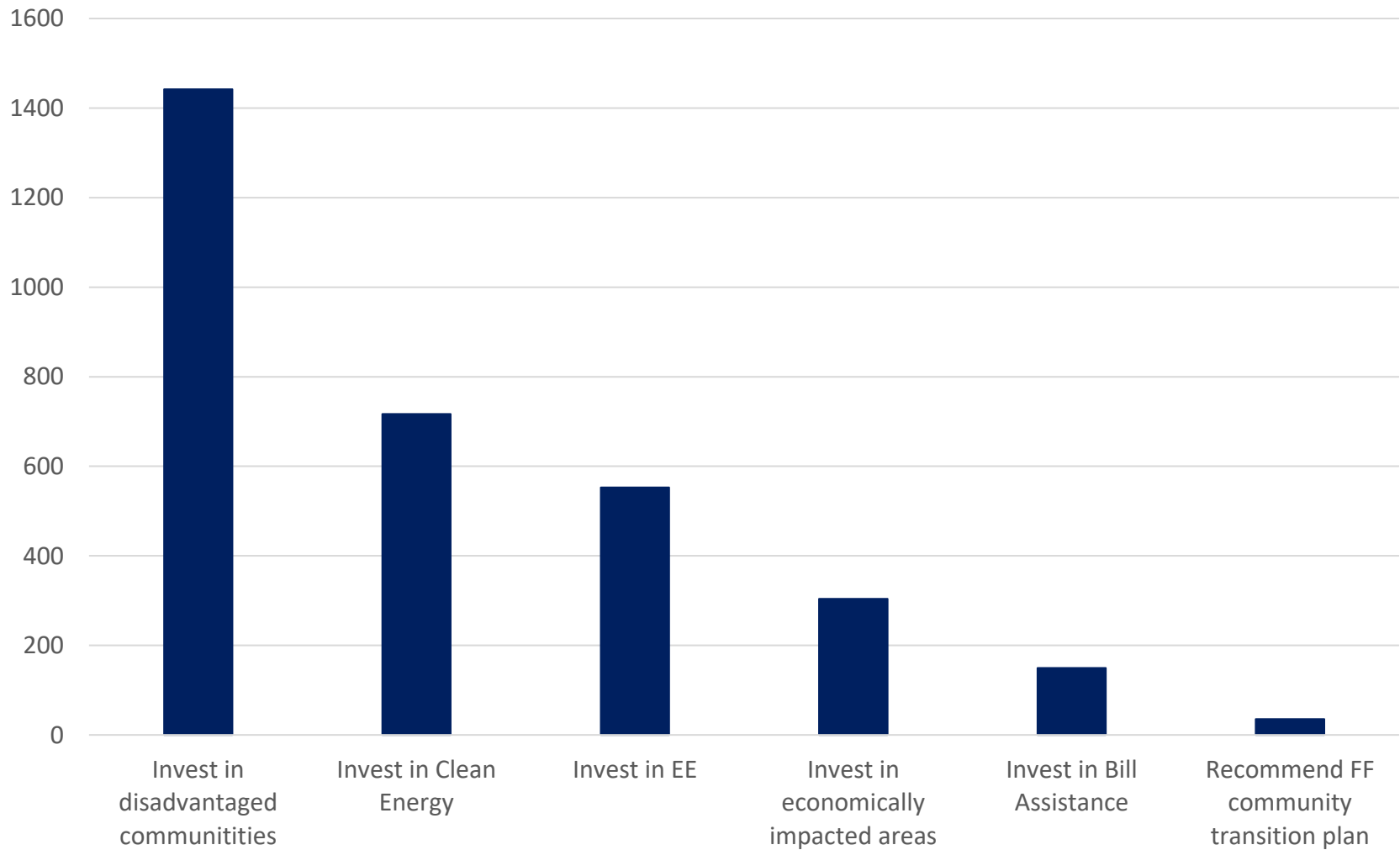
If the Department determines that changes to the regulation are needed after implementation, the rulemaking would be amended through the regulatory process.

Regional Greenhouse Gas Initiative Program Review

- The RGGI participating states conduct periodic program reviews to consider program successes, impacts and design elements- two have been completed since 2009.
- Program review evaluates the RGGI Model Rule, the multistate auction process and emissions reduction targets, and other key policy considerations.
- The next program review is scheduled to commence later this year and will evaluate energy trends, emerging energy issues, and other program elements.
- The review includes extensive regional stakeholder engagement involving the regulated community, environmental groups, consumer and industry advocates, etc.
- Based on stakeholder input and feedback, RGGI states will develop program review objectives and embark upon policy deliberations and technical analyses in 2022.

Investment of Proceeds

Comments on Investment of Proceeds



RGGI Investment Framework

DEP is conducting robust stakeholder engagement to consider a wide range of investments that maximize program proceeds and reduce air pollution.

- Engaging with many different groups including workers, environmental justice groups, industrial groups, and many others.
- Committed to developing a draft investment plan that is posted for public comment to hear from as many Pennsylvanians as possible.
- Stakeholder engagement and plan development process will unfold throughout 2021 to allow ample time for input.

Traditional Energy Communities

The Department is seeking to create investment mechanisms through RGGI revenue to support communities who are impacted by the ongoing energy sector transformation from coal.

- Hired the Delta Institute to facilitate conversations with traditional energy communities about how to economically diversify.
- The Delta Institute has extensive relevant experience working with communities on economic diversification.
- Delta Institute will create a final report and communication strategy, to help DEP guide investment opportunities.



PLANNING FOR PENNSYLVANIA'S FUTURE
*ECONOMIC DIVERSIFICATION THROUGH
COMMUNITY ENGAGEMENT AND INVESTMENT*

Anticipated Rulemaking Schedule

Consultation with Department Advisory Committees

- Air Quality Technical Advisory Committee – May 17, 2021
- Citizens Advisory Council – May 19, 2021
- Small Business Compliance Advisory Committee – May 19, 2021
- Environmental Justice Advisory Board – May 20, 2021

Environmental Quality Board Considers Final Rulemaking

- Anticipated Third Quarter 2021 (July- September)

Final-Form Rulemaking Promulgated

- Anticipated Fourth Quarter 2021 (October – December)
publication in the *Pennsylvania Bulletin*.

Questions & Answers





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Visit the RGGI website @ www.dep.pa.gov/RGGI
Materiales también disponibles en español.

Email staff with additional questions @
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