

pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION



Draft Final Rulemaking Update

Chapter 145. Interstate Pollution Transport Reduction Subchapter E. CO₂ Budget Trading Program

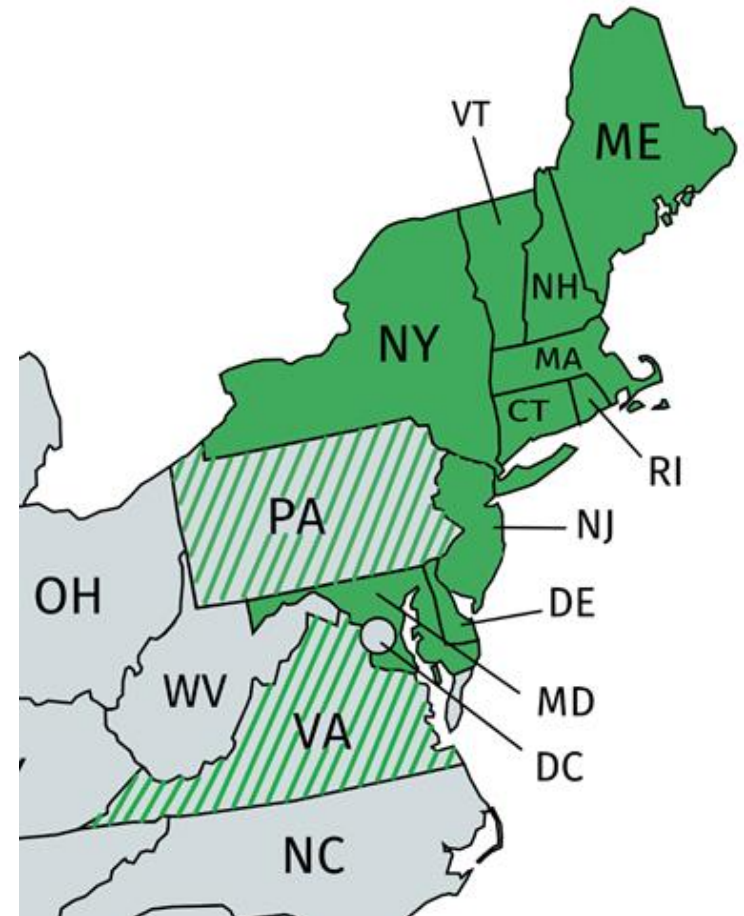
**Climate Change Advisory Committee
June 22, 2021**

Tom Wolf, Governor

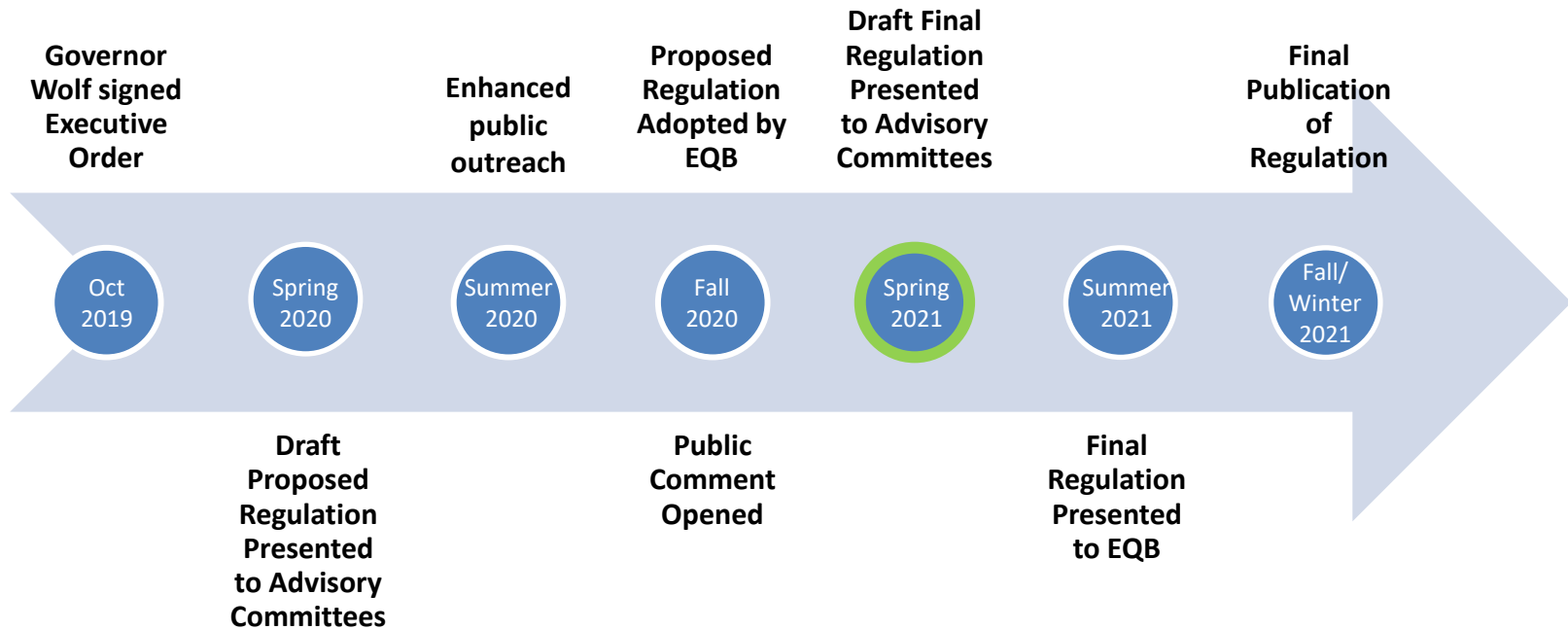
Patrick McDonnell, Secretary

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



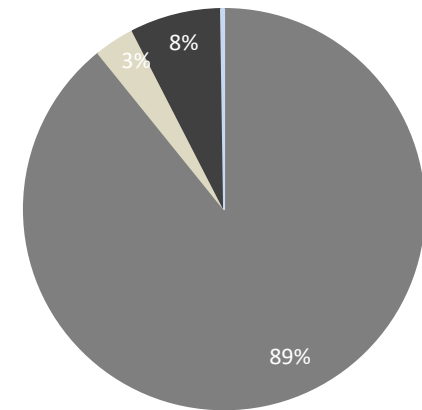
Public Comment Overview

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.

Summary of Public Comments

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

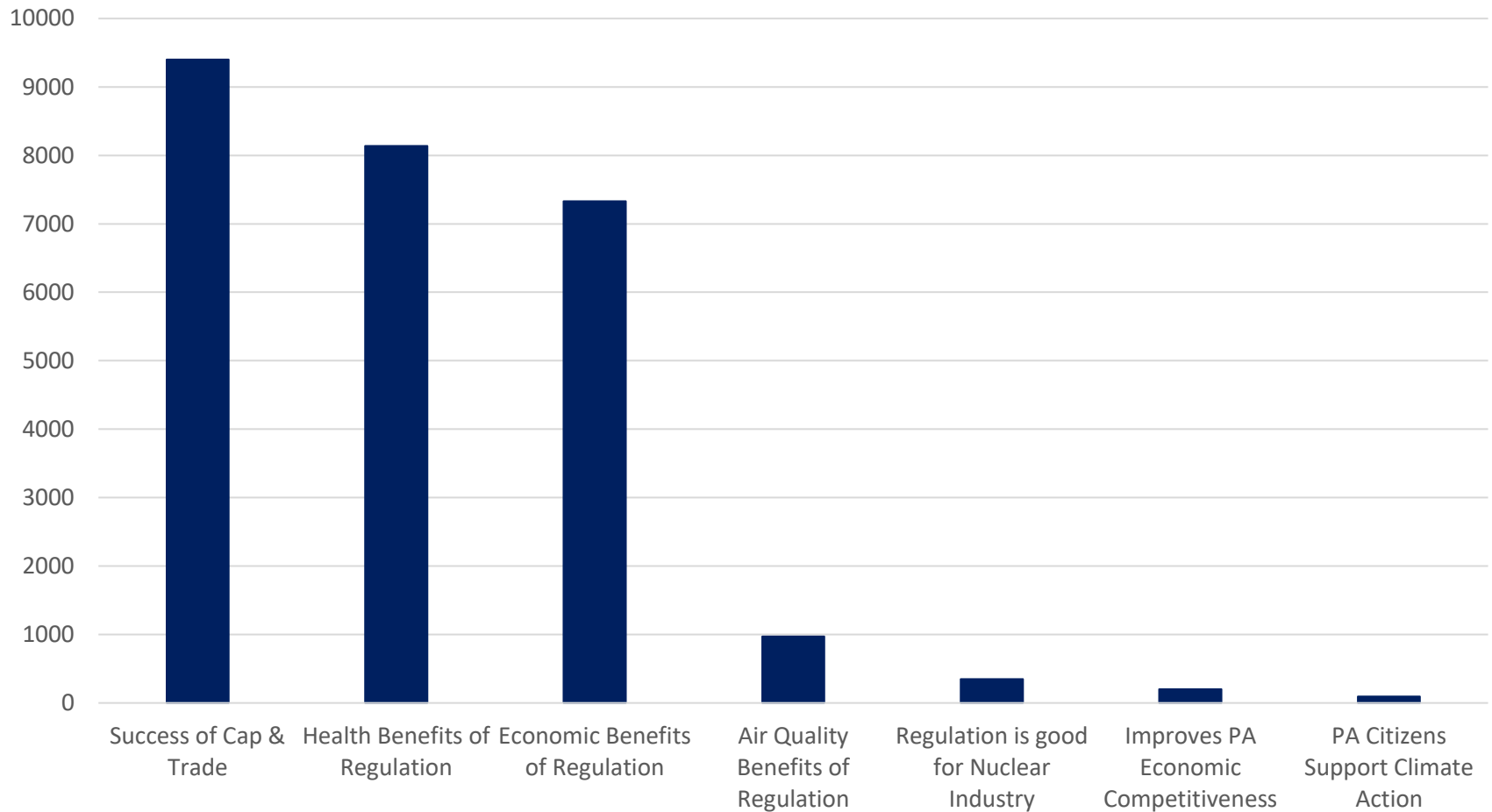


■ Email ■ Testimony ■ Online ■ Hard Copy

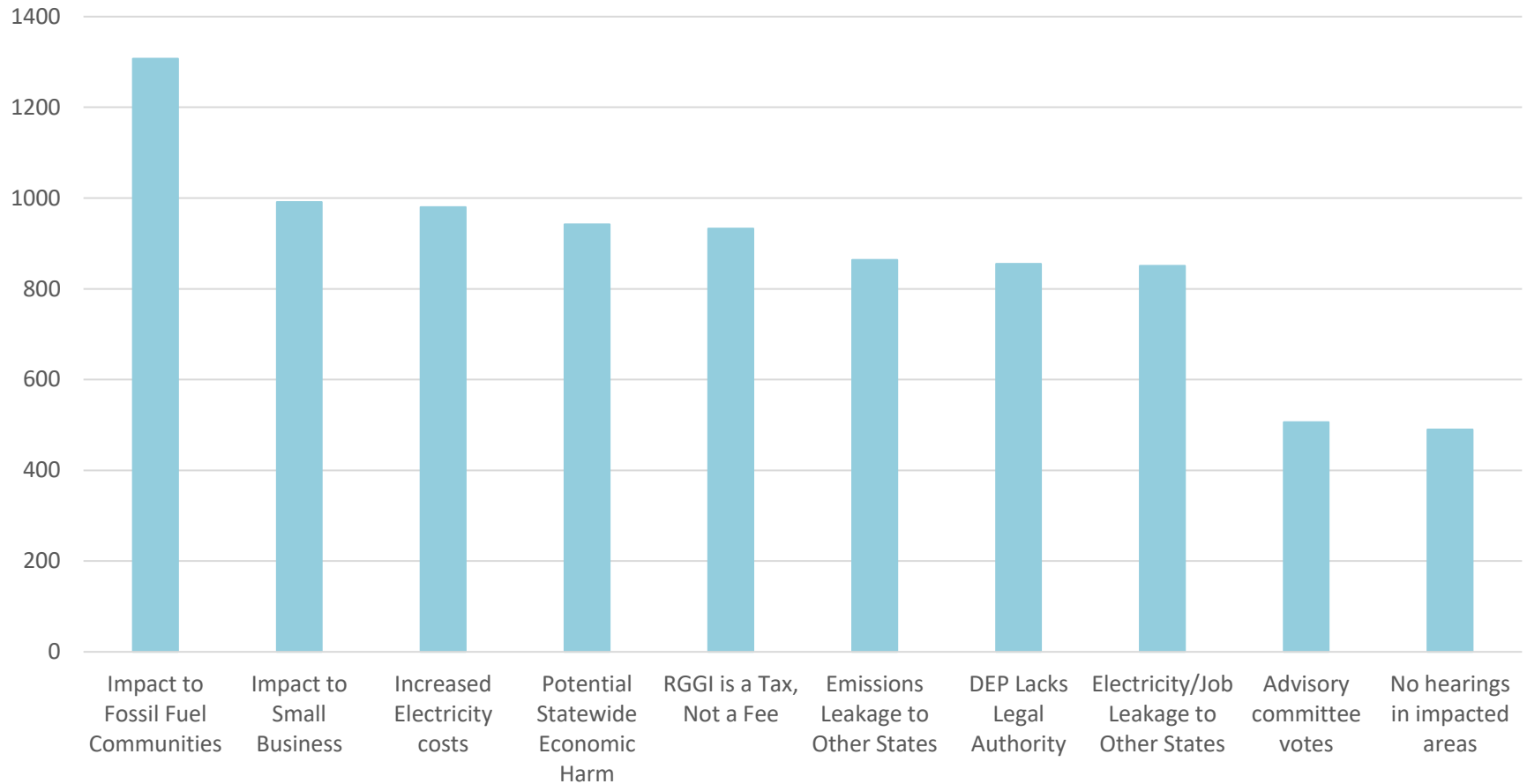
Received comments from across Pennsylvania, representing many groups and communities, including:

- 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.

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**

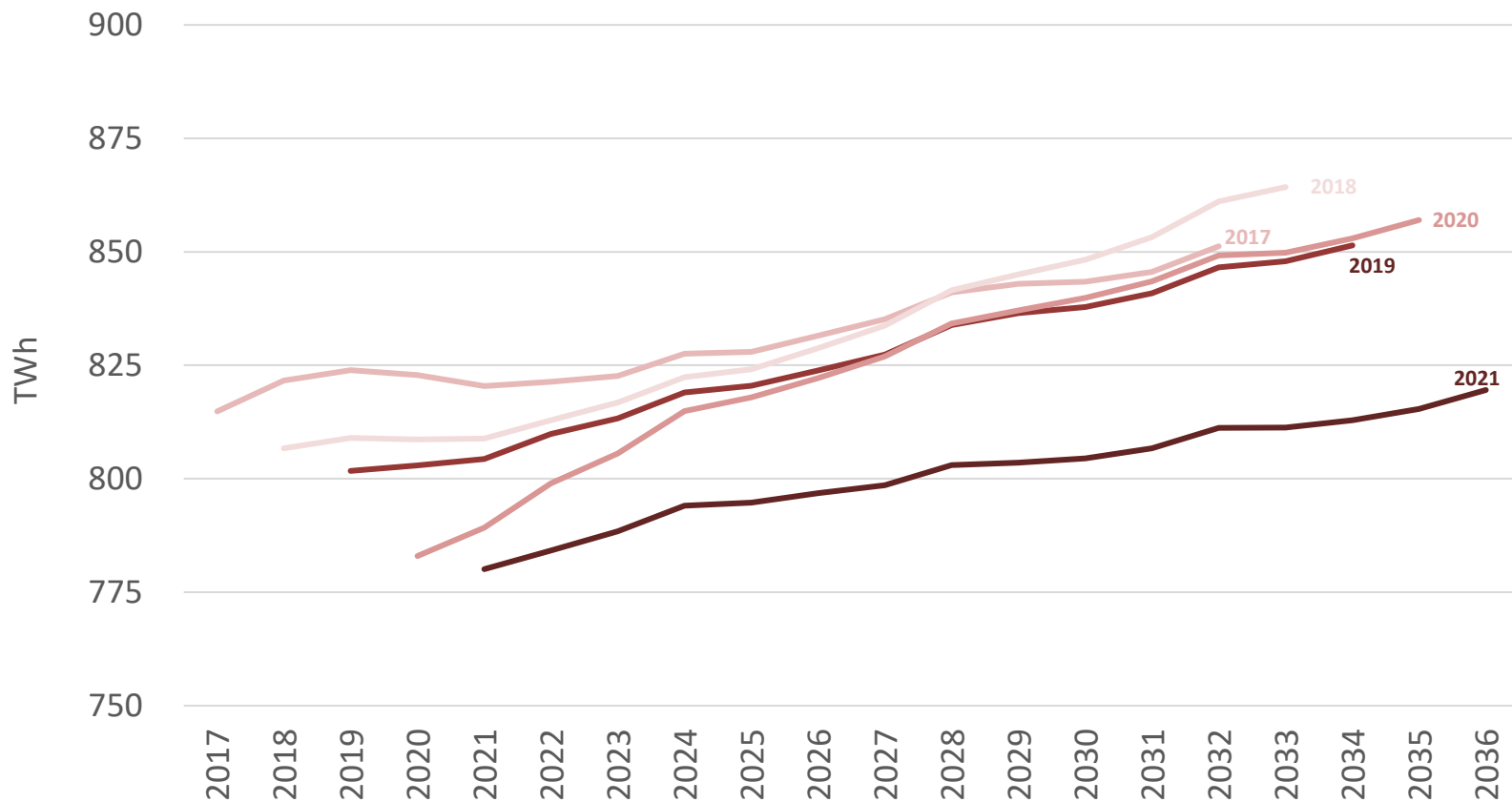
- Used same, advanced modeling software, Integrated Planning Model (IPM[®]), as original effort.
- Included updated data, assumptions, and inputs that reflect recent changes in power sector.
- Power sector modeling only, did not include economic modeling.
- Results include a reference case (without regulation) 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

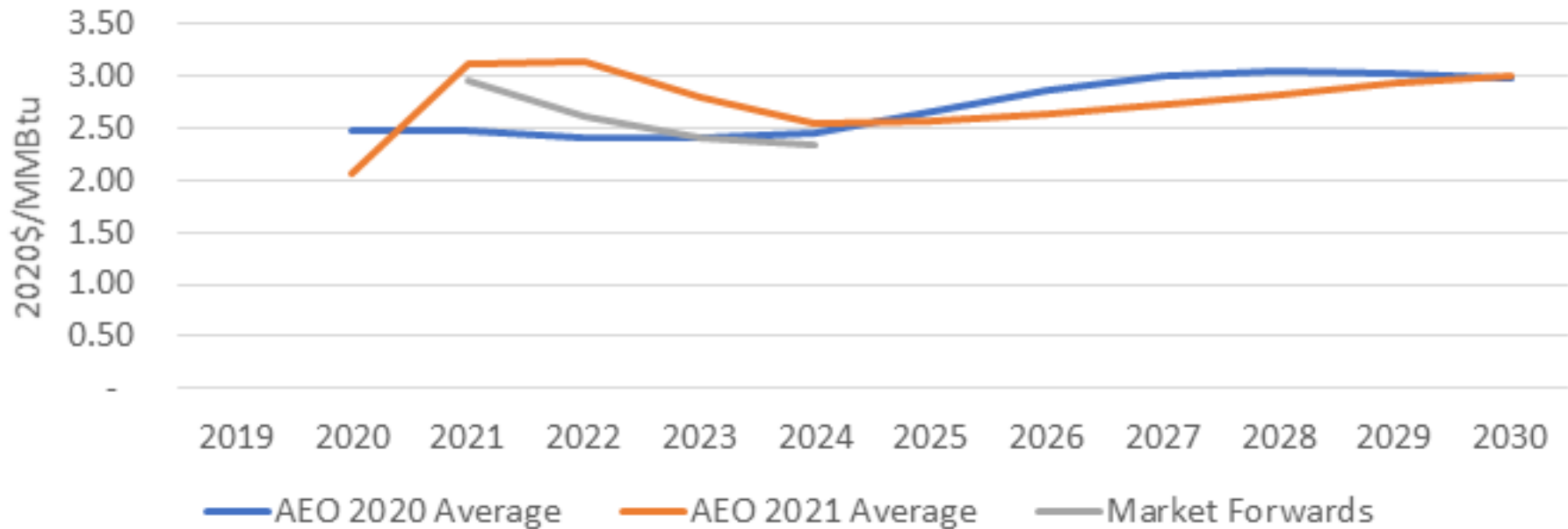
Assumptions: Demand Forecast

Variability in PJM Demand Forecasts



Assumptions: Natural Gas Prices

EIA AEO and Futures Henry Hub Gas Prices



Assumptions: Firm Capacity Additions

Project Name	Capacity (MW)	Fuel Type
Shell Chemical	250	Natural Gas
Towanda	163	Natural Gas
Renovo Energy Center	1,240	Natural Gas
Hill Top Energy Center	620	Natural Gas
Robinson Power (Beech Hollow)	1,000	Natural Gas
Firm Natural Gas Capacity Additions --- 3,273 MW (+142 MW)		
Firm Solar Capacity Additions --- 719 MW (+468 MW)		
Firm Wind Capacity Additions --- 200 MW (+200MW)		
Firm Hydropower Capacity Additions --- 25 MW (+25MW)		
Total Firm Capacity Additions 2021 --- 4,217 MW		
Total Firm Capacity Additions 2020 --- 3,382 MW		

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 Proposed Regulatory Changes

Summary of Regulatory Changes

- Added Quarterly CO₂ Allowance Budgets for 2022 (§ 145.341)
- 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)

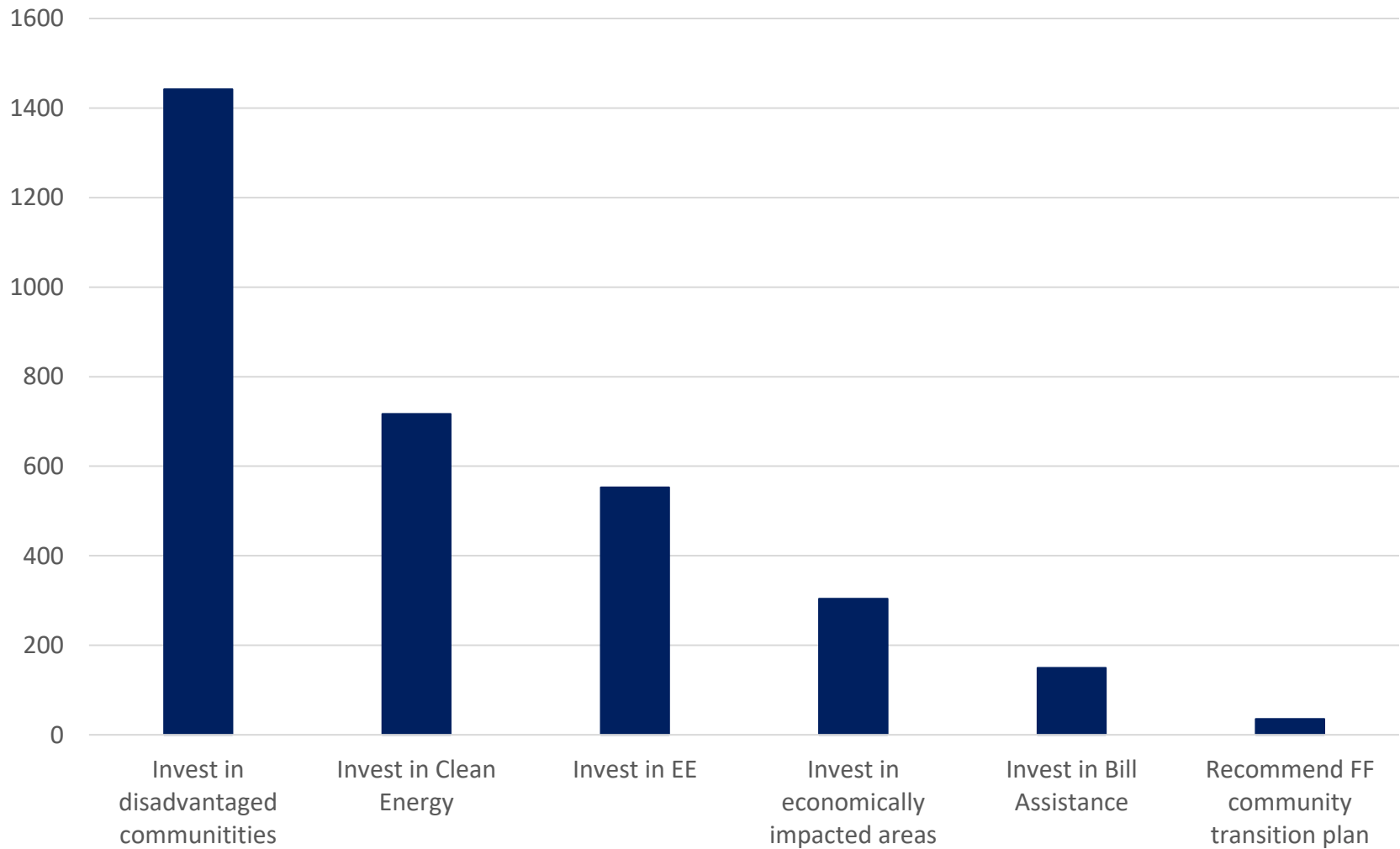
Regulatory Review

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.

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*

Focus on Environmental Justice

- Develop and Implement Equity Principles
- Commitment to Investing in EJ Communities
- Active Participation and Engagement in Decision-making
- Conduct Annual Air Quality Assessment
- Engagement with Environmental Justice Communities

Anticipated Rulemaking Schedule

Consultation with Department Advisory Committees

- Air Quality Technical Advisory Committee – April 8, 2021 & May 17, 2021
- Citizens Advisory Council – April 20, 2021 & May 19, 2021
- Small Business Compliance Advisory Committee – May 19, 2021
- Environmental Justice Advisory Board – May 20, 2021
- Climate Change Advisory Committee – June 22, 2021

Environmental Quality Board Considers Final Rulemaking

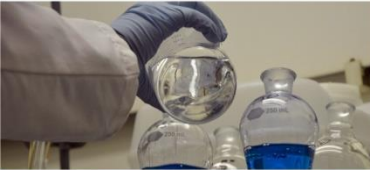
- Anticipated Third Quarter 2021 (July- September)

Final-Form Rulemaking Promulgated

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

Questions & Answers





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DEPARTMENT OF ENVIRONMENTAL PROTECTION



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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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