

# THE REGIONAL GREENHOUSE GAS INITIATIVE (RGGI)

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DNREC – Division of Air Quality

Public Workshop - Amendments to Regulation 1147

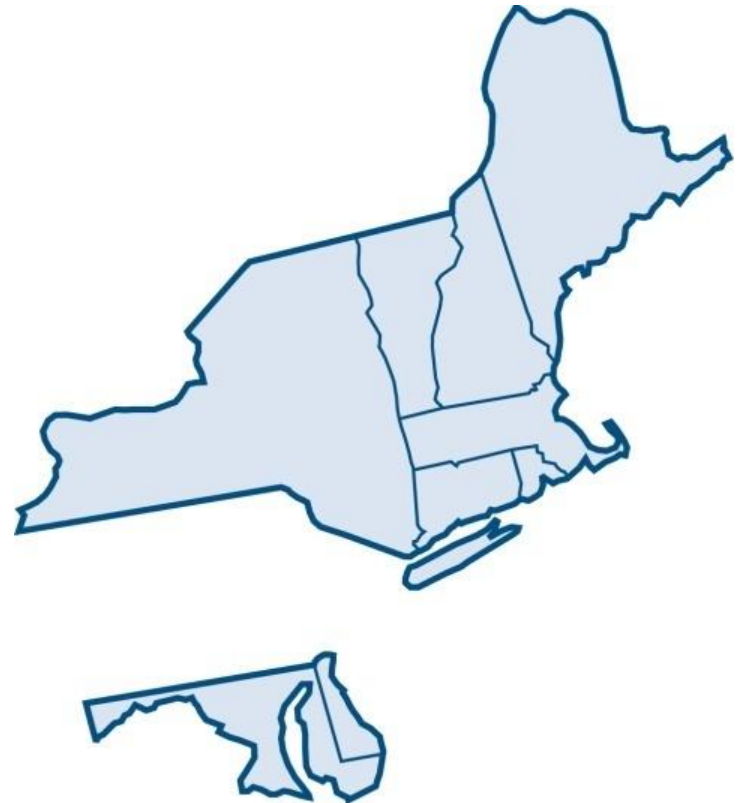
May 22, 2018

# Agenda

- Welcome/Introductions
- Overview of the RGGI Program
- 2016 Program Review & Updates to the Model Rule
- Proposed Regulatory Timeline
- Proposed Amendments to Regulation 1147

# What is RGGI?

- Regional Greenhouse Gas Initiative
- A cooperative 9-state effort designed to cap and reduce carbon dioxide emissions from the electricity generating sector.



# RGGI Program Goals

- Stabilize, then reduce, greenhouse gas emissions.
- Invest in energy efficiency, renewables and climate policies and programs.
- Create a market for carbon.
- Demonstrate that a state-led regional program can work.
- Implement a professional auction model.



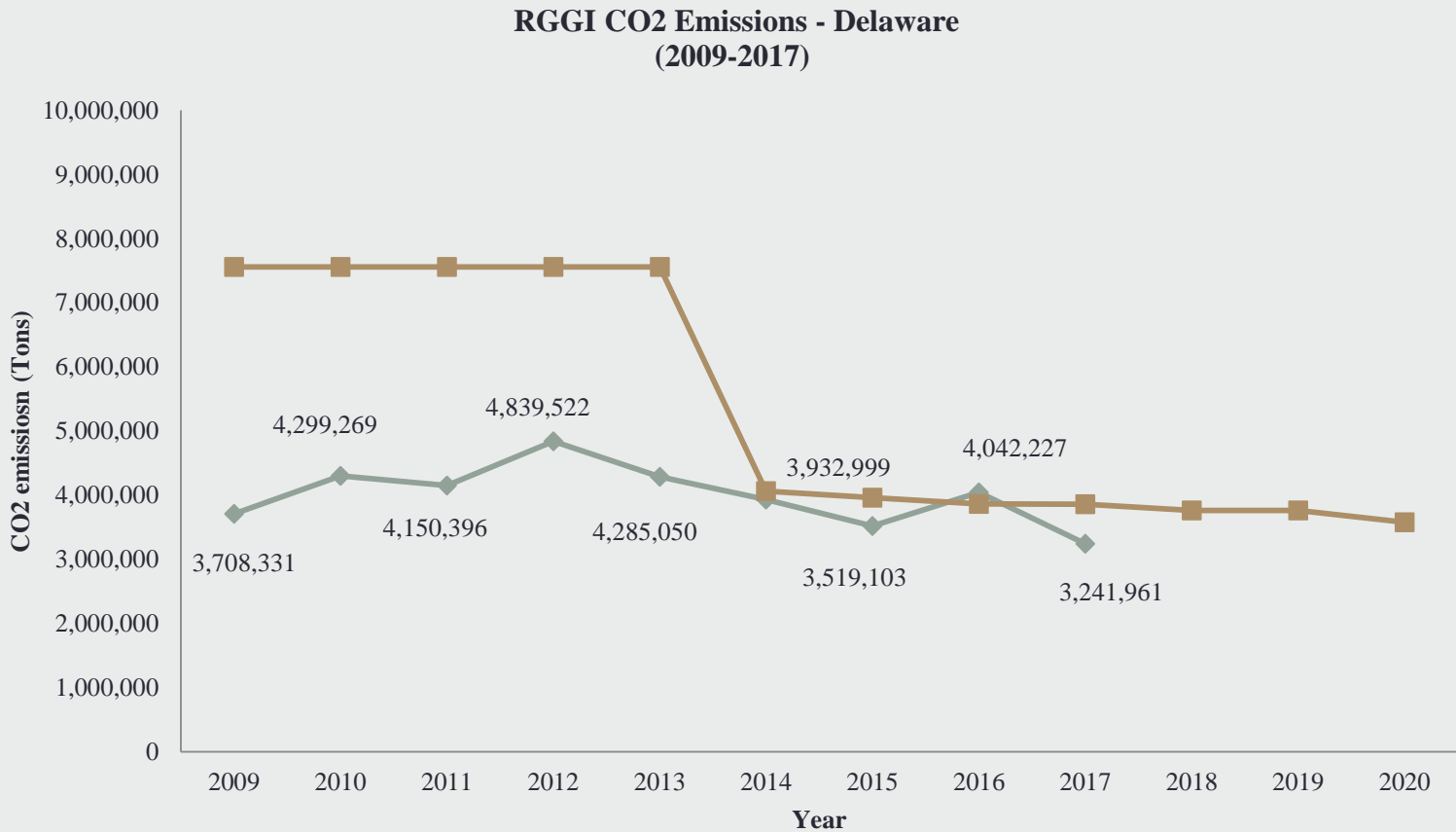
# RGGI works

- RGGI states experienced a 45% reduction in carbon dioxide pollution since 2005, even as the regional economy grew by 8%
- RGGI has raised over \$2.58 billion for reinvestment regionally.
- RGGI investments are projected to return \$4.67 billion in lifetime energy bill savings to customers
- **RGGI cost to customers has been and is projected to continue to be negligible. Supply cost for electricity in Delaware has not increased.**

# 2017 RGGI Emissions

<u>Year</u>	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>	<u>Annual Subtotal</u>	<u>Cap Levels</u>
2009-2011 Avg:	27,912,090	24,354,802	32,504,645	23,051,435	107,822,971	165,184,246
2012-2014 Avg:	22,857,102	19,785,348	26,632,260	19,352,565	88,627,274	(2012-2013) 165,184,246 (2014) 91,000,000
2014:	27,481,780	19,146,768	22,923,899	16,976,931	86,529,378	91,000,000
2015:	24,115,204	18,484,260	25,075,694	15,553,385	83,228,543	88,725,000
2016:	17,118,675	18,136,537	28,445,078	15,527,866	79,228,156	86,506,875
2017:	14,511,005	14,579,253	20,520,516	15,305,518	64,908,718	84,344,203
% Change in 2017 from 2016:	- 15%	- 20%	- 28%	- 1.4%	- 18.1%	

# Delaware Historical Emissions



# Delaware's "Compliance Entities"

(produce more than 25 megawatts of power)

Compliance Facility	Number of Units	Nameplate Capacity (MW)
Calpine Christiana Substation	2	29, 29
Calpine Edge Moor	3	75, 177, 446
Calpine Garrison Energy Center	1	309
Calpine Hay Road	8	115, 115, 115, 115, 122, 122, 195, 200
City of Dover- McKee Run	1	114
City of Dover- Van Sant	1	45
DEMEC- Warren F. Sam Beasley	2	45,51
Delaware City Refinery	6	28, 28, 63, 63, 90, 90
NRG- Dover Energy Center	2	50, 50
NRG- Indian River	1	442



# Program Reviews

- As called for in the RGGI Memorandum of Understanding and subsequent documents, the Participating States **conduct routine program reviews** of the CO<sub>2</sub> Budget Trading Programs.
- The RGGI program reviews are rigorous and comprehensive evaluations, supported by an **extensive regional stakeholder process** that engaged the regulated community, environmental nonprofits, consumer and industry advocates, and other interested stakeholders.
- **Amendments to the Model Rule** are developed by the RGGI state staff as part of the Program Review. This effort is supported by an **extensive regional stakeholder process** that engaged the regulated community, environmental nonprofits, and other organizations with technical expertise.

# 2012 Program Review

## [Announced results February 7, 2013](#)

- *“RGGI States Propose Lowering Regional CO2 Emissions Cap 45%, Implementing a More Flexible Cost-Control Mechanism”*
- Improvements include:
  - A reduction of the 2014 regional CO2 budget, “RGGI cap”, from **165 million to 91 million tons** – a reduction of 45 percent. The cap would decline 2.5 percent each year from 2015 to 2020.
  - Additional adjustments to the RGGI cap from 2014-2020. This will account for the private bank of allowances held by market participants before the new cap is implemented in 2014. From 2014-2020 compliance with the applicable cap will be achieved by use of “new” auctioned allowances and “old” allowances from the private bank.

# 2012 Program Review

- **Cost containment reserve (CCR)** of allowances that creates a fixed additional supply of allowances that are only available for sale if CO2 allowance prices exceed certain price levels (\$4 in 2014, \$6 in 2015, \$8 in 2016, and \$10 in 2017, rising by 2.5 percent, to account for inflation, each year thereafter.)
- Updates to the RGGI offsets program, including a **new forestry protocol**.
- Not reoffering unsold 2012 and 2013 CO2 allowances.
- Requiring regulated entities **to acquire and hold allowances equal to at least 50 percent of their emissions** in each of the first 2 years of the 3 year compliance period, in addition to demonstrating full compliance at the end of each 3 year compliance period.
- Commitment to identifying and evaluating potential tracking tools for emissions associated **with electricity imported into the RGGI region**, leading to a workable, practicable, and legal mechanism to address such emissions.

# 2016 Program Review

[Announced results](#) and updated [model rule](#) – Dec 19, 2017

**Revised Regional Cap:** The Participating States will specify a regional cap through 2030 which continues the downward trajectory of the existing cap. The lower regional CO2 emissions cap will align the cap more closely with current emissions trends.

- A regional cap of 75,147,784 tons of CO2 in 2021, which will decline by 2.275 million tons of CO2 per year thereafter, resulting in a total **30% reduction in the regional cap from 2020 to 2030.**
- The Participating States will **address the bank of allowances** held by market participants with a third adjustment for banked allowances. The third adjustment will be made over a 5-year period (2021-2025) based upon the size of the bank at the end of 2020.

# 2016 Program Review

**CCR:** The Participating States will modify the size and the price triggers for the CCR. The CCR is a reserved quantity of allowances, in addition to the cap, that would only be available if defined allowance price triggers are exceeded.

- Beginning in 2021, allowances provided within the **CCR will be equal to 10% of the regional cap.**
- The CCR **trigger price will be \$13.00 in 2021, and rise at 7% per year**, ensuring that the CCR will only trigger if emission reduction costs are higher than projected.

# 2016 Program Review

**ECR:** The Participating States will establish an emissions containment reserve (ECR), which is a quantity of allowances that will be withheld from circulation to secure additional emission reductions if prices fall below established trigger prices.

- The states implementing the **ECR will withhold up to 10% of the allowances in their base budgets per year**. At this time, Maine and New Hampshire do not intend to implement an ECR. Allowances withheld in this way will not be reoffered for sale.
- The **ECR trigger price will be \$6.00 in 2021, and rise at 7% per year**, ensuring that the ECR will only trigger if emission reduction costs are lower than projected.

# 2016 Program Review

**Offsets:** The Participating States will **eliminate two offset categories**, reduction in emissions of sulfur hexafluoride (SF6) in the electric power sector and end-use energy efficiency in the building sector, and update and retain three categories that some States may continue to implement. Any awarded offset allowances will remain fully fungible across the states.

**Minimum Reserve Price:** The Model Rule retains language to increase the minimum reserve price by 2.5 percent each year.

# 2016 Program Review

## Base Budget

2018	3,763,577
2019	3,613,361
2020	3,523,027
2021	3,383,313
2022	3,280,789
2023	3,178,264
2024	3,075,739
2025	2,973,215
2026	2,870,690
2027	2,768,165
2028	2,665,641
2029	2,563,116
2030+	2,460,591

## CCR/ECR Budget

457,658	
457,658	
457,658	
338,331	338,331
328,078	328,079
317,826	317,826
307,573	307,574
297,321	297,322
287,069	287,069
276,816	276,817
266,564	266,564
256,311	256,312
246,059	246,059



# DNREC's Regulatory Timeline

- Start Action Notice approved Feb. 15, 2018
- Workgroup meetings –
  - March 21<sup>st</sup> (canceled due to snow) and April 17<sup>th</sup>
- Public Workshop –May 22, 2018
- Finalize proposed amendments for publication July 10<sup>th</sup>
- Publish proposed amendments in DE Register August 1<sup>st</sup>
- Public Hearing – tentatively scheduled August 29, 2018

# Regulation 1147 – CO2 Budget Trading Program

- Section 1 – General Provisions
- Section 2 – CO2 Authorized Account Representatives
- Section 3 – Permits
- Section 4 – Compliance Certification
- Section 5 – CO2 Allowance Allocations
- Section 6 – CO2 Allowance Tracking System
- Section 7 – CO2 Allowance Transfers
- Section 8 – Monitoring & Reporting
- Section 9 – Auction of CO2 CCR and ECR Allowances
- Section 10 – Offsets
- Section 11 – CO2 Emission Auction

# Proposed Amendments to...

- Section 1 – General Provisions
- Section 2 – CO2 Authorized Account Representatives
- Section 5 – CO2 Allowance Allocations
- Section 6 – CO2 Allowance Tracking System
- Section 8 – Monitoring & Reporting
- Section 9 – Auction of CO2 CCR and ECR Allowances
- Section 10 – Offsets
- Section 11 - Auction

# Section 1 – General Provisions

- Section 1.3 Definitions
  - Administrative edits –
    - Delete references to CAIR and replace with CSAPR
    - Delete definitions associated with Offset Categories – SF6 and Building Energy Efficiency
  - New Definitions
    - CO2 Cost containment reserve trigger price
    - CO2 emissions containment reserve allowance
    - CO2 emissions containment reserve trigger price
    - CSAPR definitions
    - Net electric output
    - Third adjustment for banked allowances
  - Amended Definitions
    - Receive or receipt of

# Section 2 – CO2 Authorized Account Representative

- Section 2.1 Authorization and responsibilities of the CO2 authorized account representative
  - Changed sequence of “Alternate CO2 authorized account representative” to “CO2 authorized alternate account representative”
  - Added language to 2.1.2
    - The CO<sub>2</sub> authorized account representative of the CO<sub>2</sub> budget source shall be selected by an agreement binding on the owners and operators of the source and all CO<sub>2</sub> budget units at the source- and must act in accordance with the certificate of representation under 2.4 of this regulation.
- Section 2.6.6 – 2.6.9
  - Added language for delegation

# Section 5 – CO2 Allowance Allocations

- Section 5.1 – Delaware Base Budget
  - Deleted 2014-2017
  - Amended 2018 -2020
  - Added 2021- 2031
- Section 5.3
  - Amended CCR language through 2020
  - Added CCR allowance allocation 2021-2030
  - Added ECR withholding language
  - Amended language
    - First Control period adjustment
    - Second Control period adjustment
  - Added language
    - Third Control period adjustment

# Section 6 – CO2 Allowance Tracking System

- Changed sequence of “Alternate CO2 authorized account representative” to “CO2 authorized alternate account representative”
- Minor edits and corrections
  - Section 6.4
  - Section 6.8 – Closing general accounts

# Section 8 – Monitoring & Reporting

- Changed references to CSAPR trading programs
- Minor edit in 8.8.1 – Additional requirements to provide output data



# Section 9 – Auction of CO<sub>2</sub> CCR and ECR allowances

- Section 9.2 – General Requirements
  - Added language to be included in the auction notice
  - Added language for the withholding of ECR allowances from an auction

9.2.4 The Department or its agent shall follow these rules for the withholding of CO<sub>2</sub> ECR allowances from an auction:

9.2.4.1 CO<sub>2</sub> ECR allowances shall 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.

9.2.4.2 If the condition in 9.2.4.1 of this regulation is met at an auction, then the maximum number of CO<sub>2</sub> ECR allowances that may be withheld from that auction will be equal to the quantity shown in 5.3.5.1 of this regulation minus the total quantity of CO<sub>2</sub> ECR allowances that have been withheld from any prior auction in that calendar year. Any CO<sub>2</sub> ECR allowances withheld from an auction will be transferred into the State of Delaware ECR Account.

# Section 10 – Offsets

- Minor editorial edits and corrections
- Section 10.5 CO2 emission offset project standards
  - Deleted Section 10.5.2 - Reduction in emissions of sulfur hexafluoride (SF6) and
  - Deleted Section 10.5.4 – Reduction in emissions....due to end use energy efficiency

# Section 11 – CO<sub>2</sub> Allowance Auctions

- Minor suggested edit 11.13 Publication of Results

Within 10 days of the Transfer of CO<sub>2</sub> Allowances provided for under 11.10 of this regulation, the Department or its agent shall publish on its website the auction clearing price and the total amount of Allowances sold in such Auction.

# DISCUSSION & QUESTIONS?

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Submit Comments to:

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