

Regional Greenhouse Gas Initiative (RGGI) 2025 Agreement

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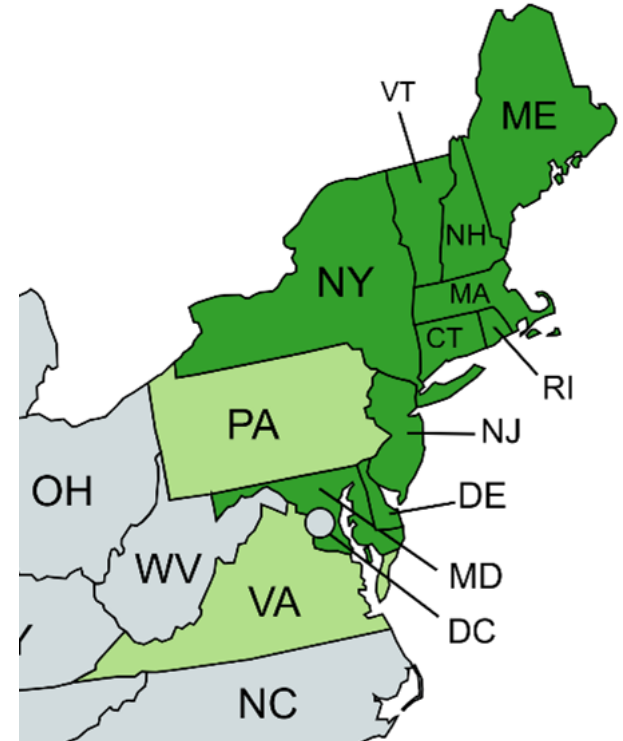


Regional Greenhouse Gas Initiative (RGGI) Background



What is RGGI?

- MD's most successful & enduring multistate partnership on climate change.
- Launched in 2009 after several years of coordination.
- First of its kind “Cap and Invest” program for power plants.



10 states participate in RGGI.
PA & VA are on hold pending litigation.



What is Cap & Invest?

1. Require CO2 sources to turn in **allowances** for their emissions.
2. Only issue a limited number of allowances.
3. Let sources trade allowances.
4. Auction the allowances and invest proceeds into energy programs & community projects.

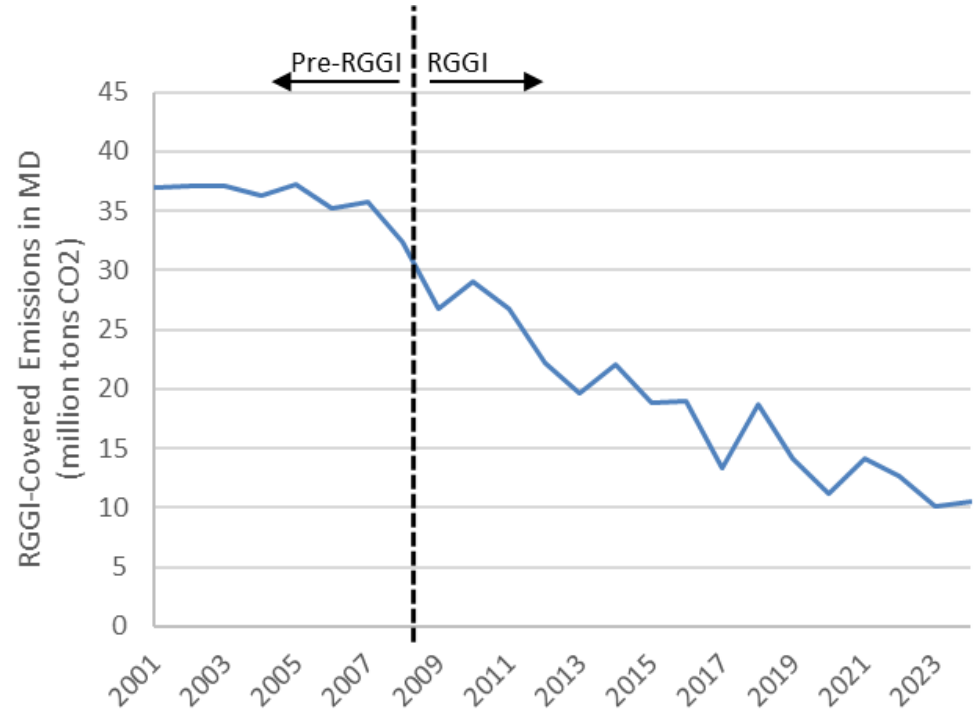
“Cap and Trade”

“Cap and Invest”



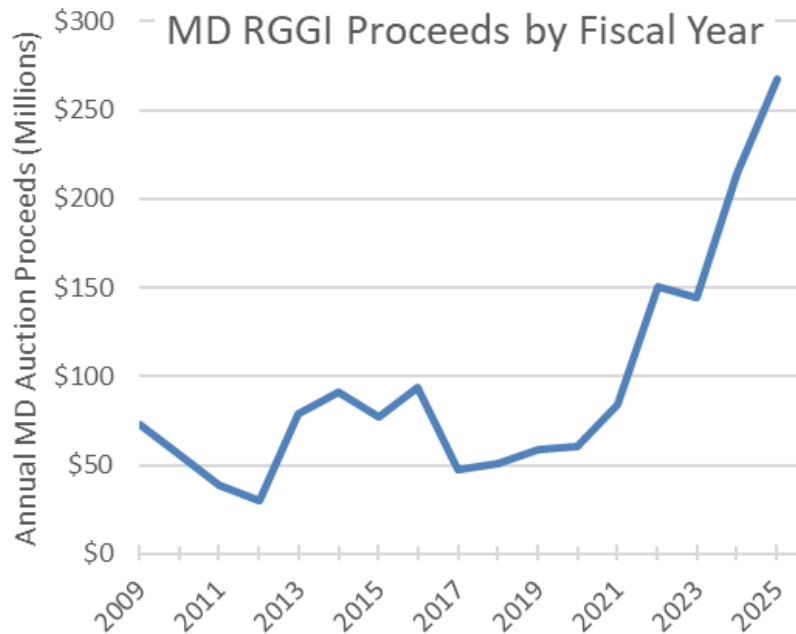
RGGI Emissions

- RGGI states have cut power plant CO2 **in half** since the program began in 2009
- Down **68%** in Maryland
- More rapid than the rest of the country

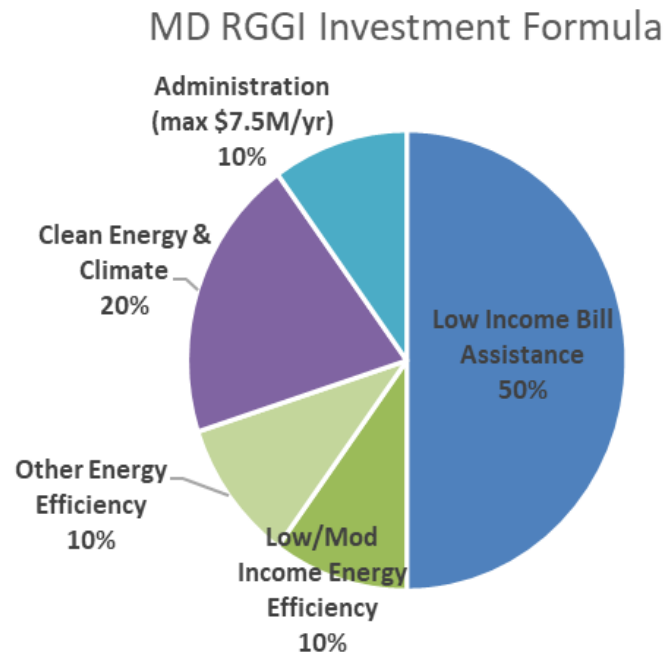




Maryland Proceeds and Investment



Annual auction proceeds have grown in recent years.









MEA invests RGGI proceeds according to a formula in statute.



Regional Benefits: State Estimates

The states report annually on their RGGI-funded investments and the benefit from those investments.

| Table 8: All-Time Benefits of RGGI Investments | | |
|---|------------------------------------|---|
| Category | | Lifetime Benefits of All RGGI Investments |
|  | Participating Households | 8,282,710 |
|  | Participating Businesses | 415,766 |
|  | Short Tons CO ₂ Avoided | 60,170,134 |
|  | Megawatt-Hours Saved | 101,691,503 |
|  | MMBtu Saved | 390,329,804 |
|  | Energy Bill Savings | \$20,255,827,633 |



RGGI Benefits: Outside Perspectives

Net economic benefits
on the order of

\$5.7 Billion

Bringing
more than

4K Jobs

Carbon emissions have
fallen by

50%

Independent analyses at: www.rggiprojectseries.org

“By almost any measure, RGGI is one of the most successful programs in the world to fight climate change.”

- Maryland Matters



New Agreement



Third Program Review

Program Review: States convene and evaluate the future program; conclude with new agreement:

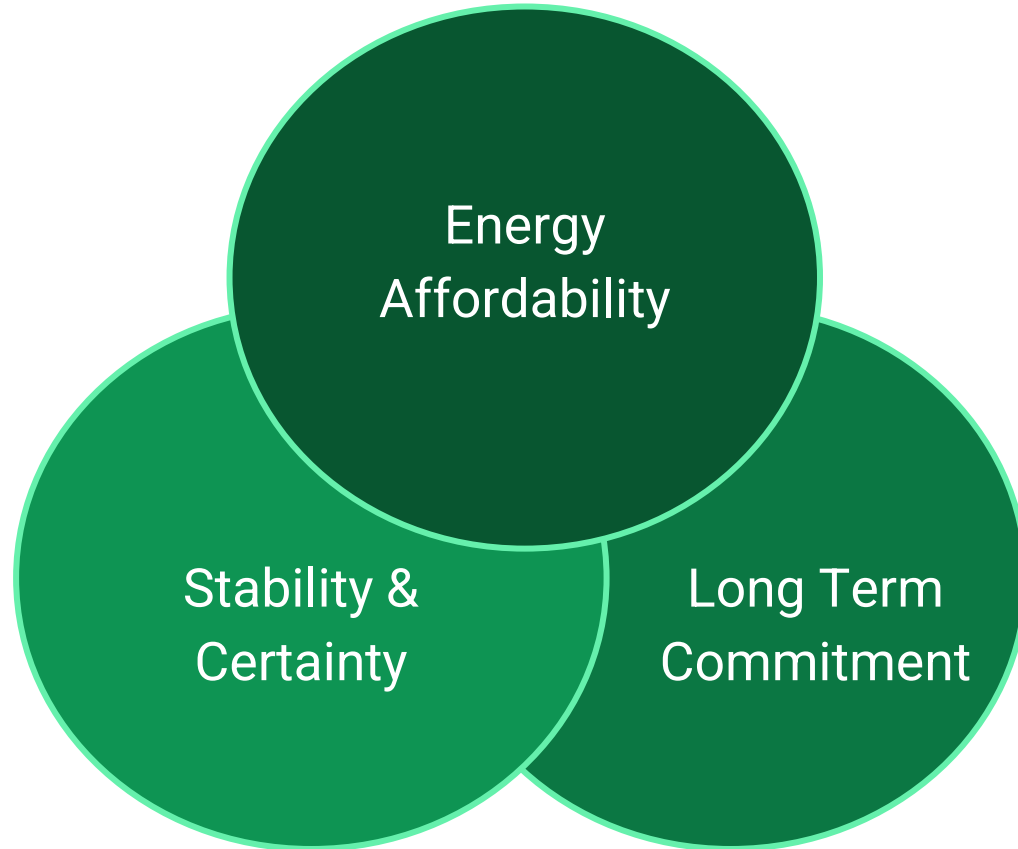
First Program Review: February 2013

Second Program Review: August 2017

Third Program Review: July 2025

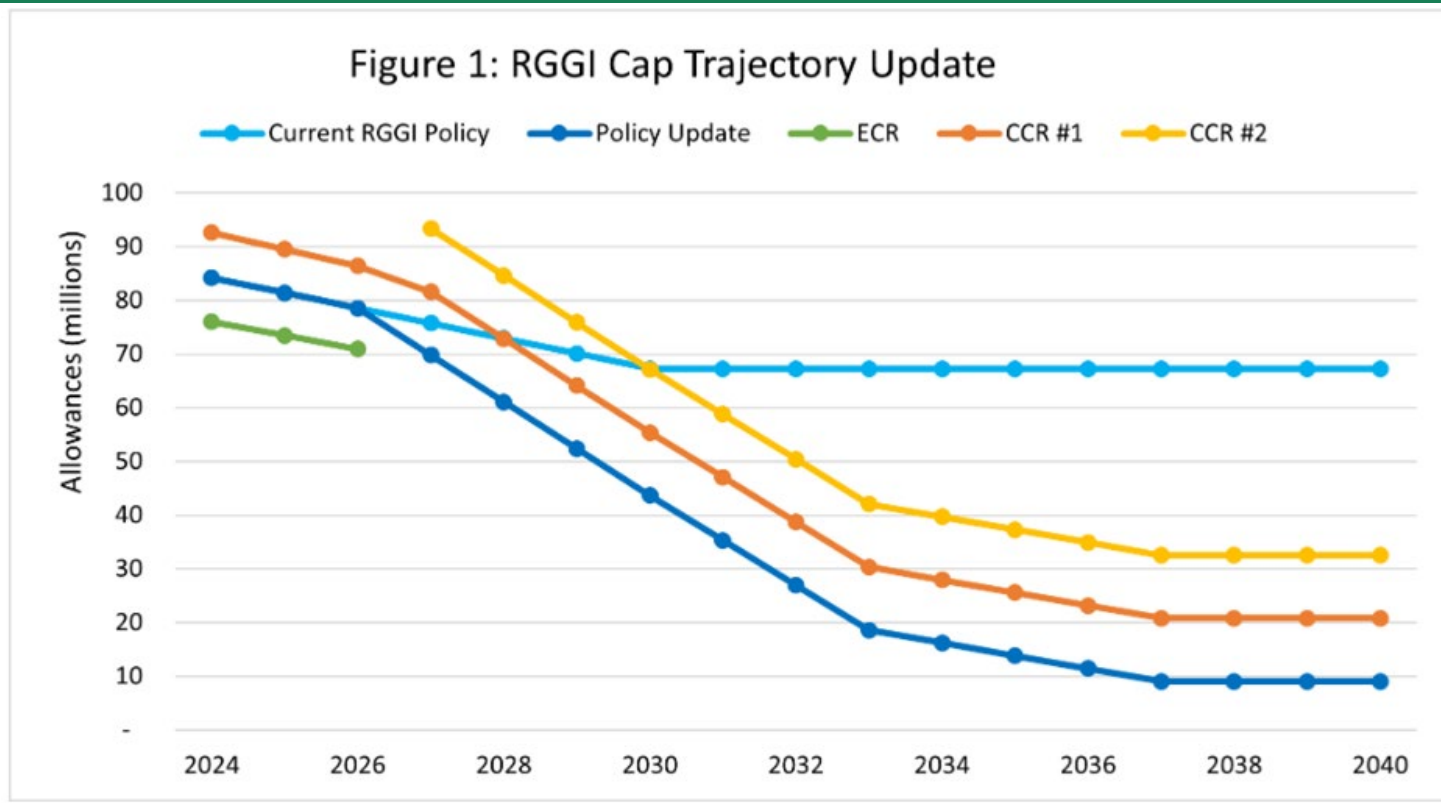


2025 Agreement Priorities





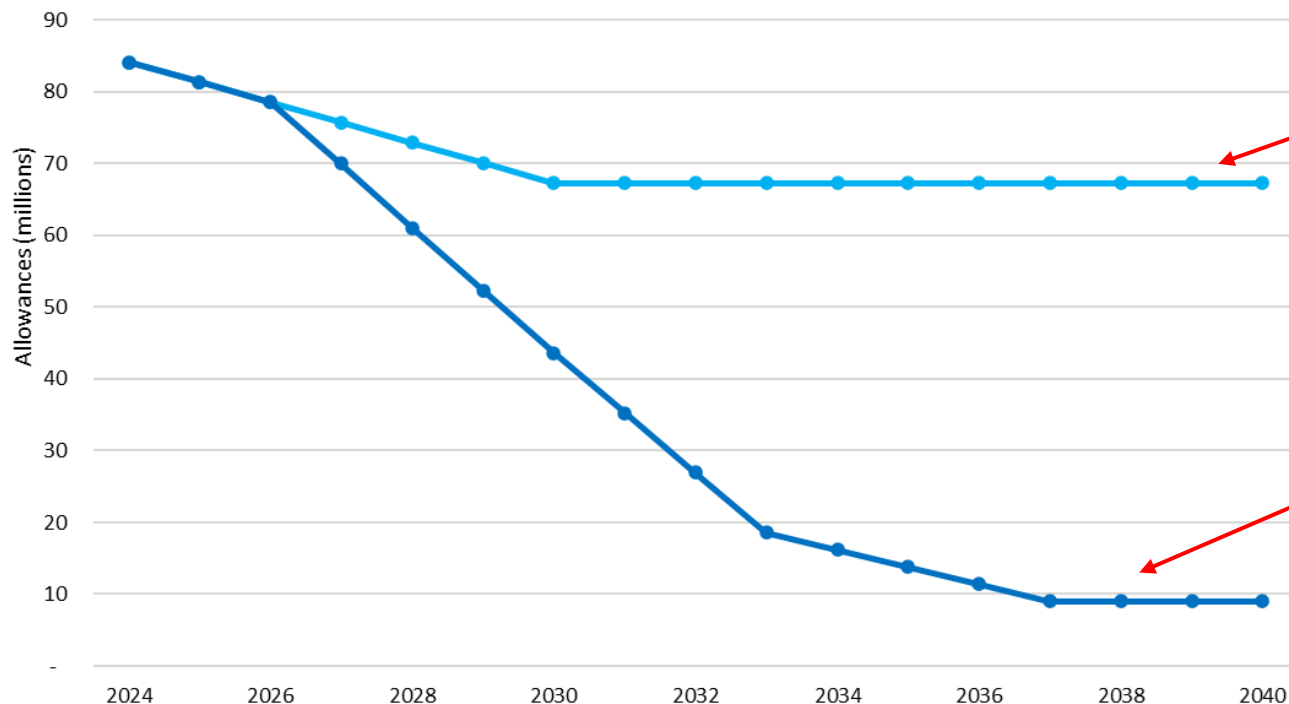
New RGGI Caps





New RGGI Caps

Figure 1: RGGI Cap Trajectory Update

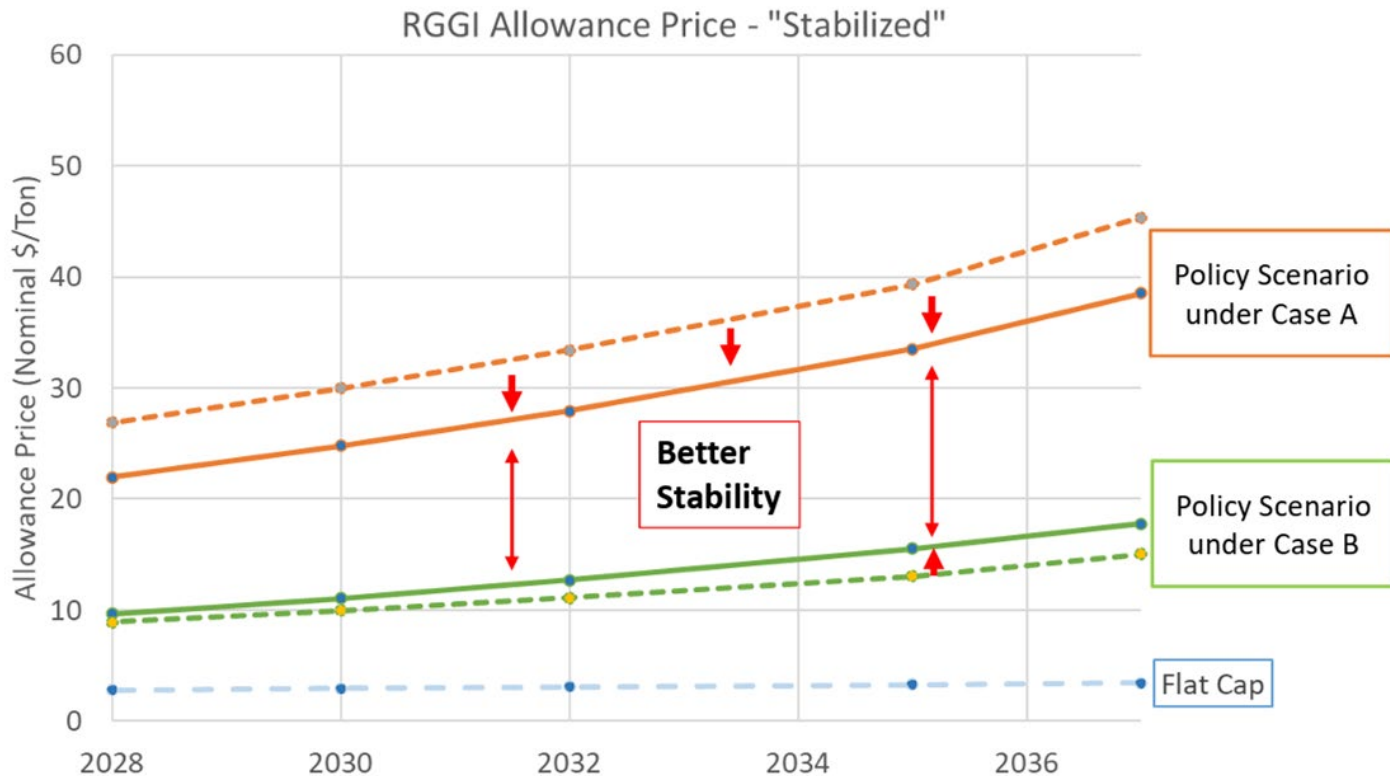


Current cap
reduces CO₂
through 2030

New cap
reduces CO₂
through 2037



Stability Mechanisms Reduce Price Variation



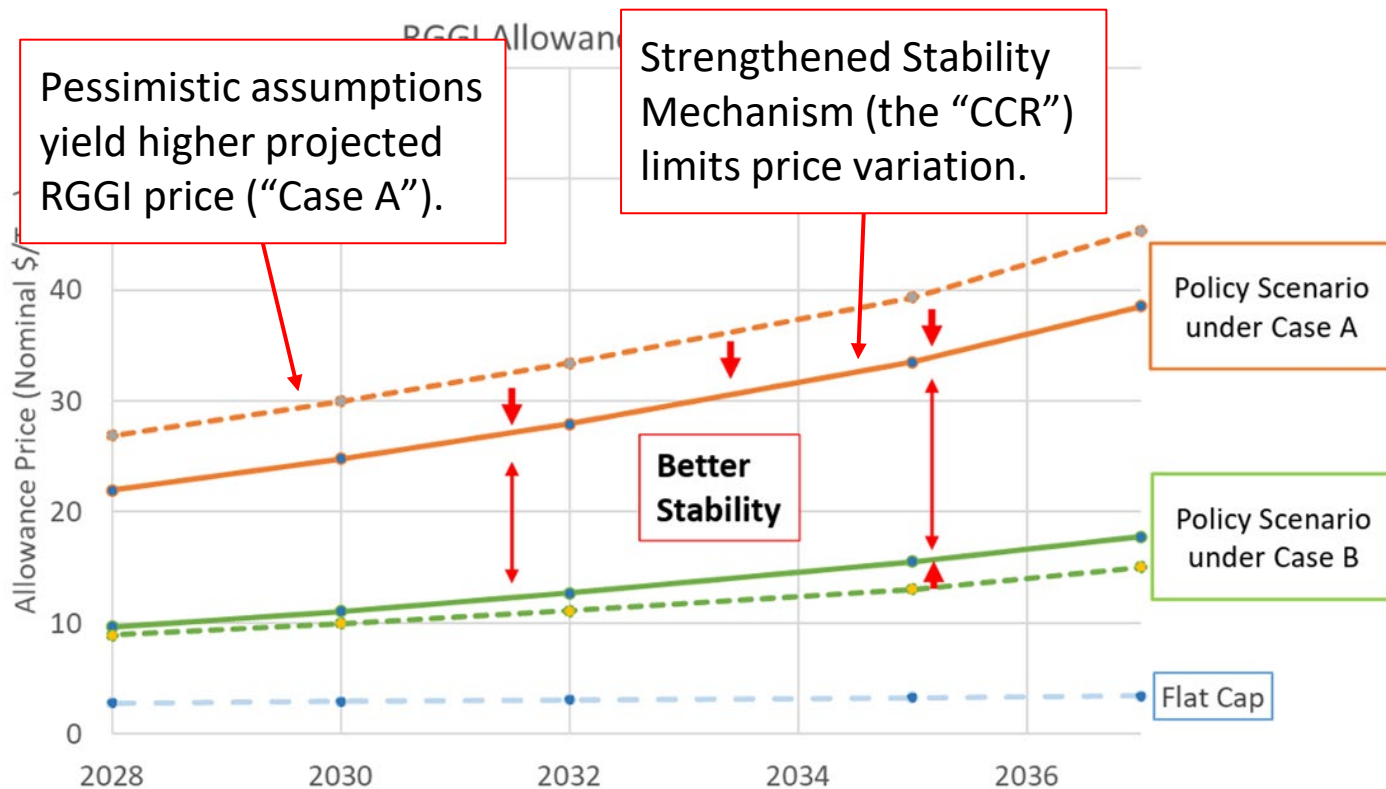
RGGI's price is affected by external trends.

Stability mechanisms protect affordability and reduce volatility.

Modeled allowance prices with stability mechanisms in place (solid lines) reduce price variation compared to modeled prices with no stability mechanisms (dashed lines).



Stability Mechanisms Reduce Price Variation



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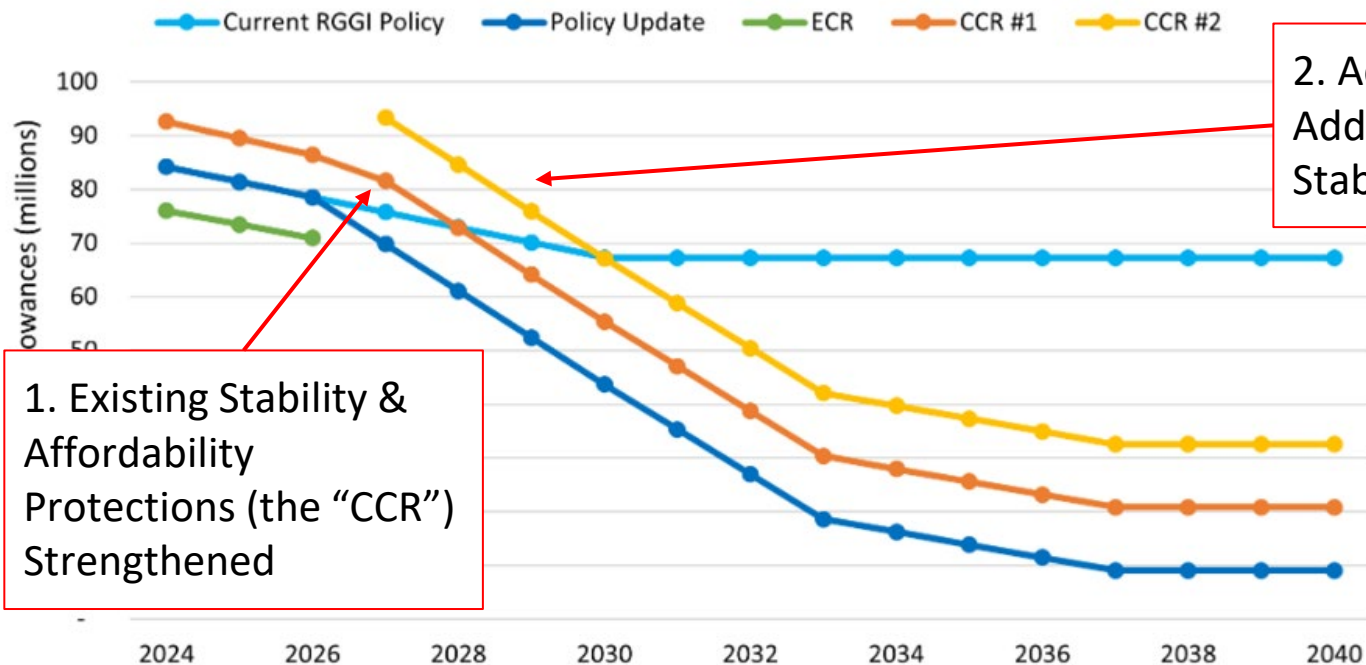
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Modeled allowance prices with stability mechanisms in place (solid lines) reduce price variation compared to modeled prices with no stability mechanisms (dashed lines).



New RGGI Caps

Figure 1: RGGI Cap Trajectory Update



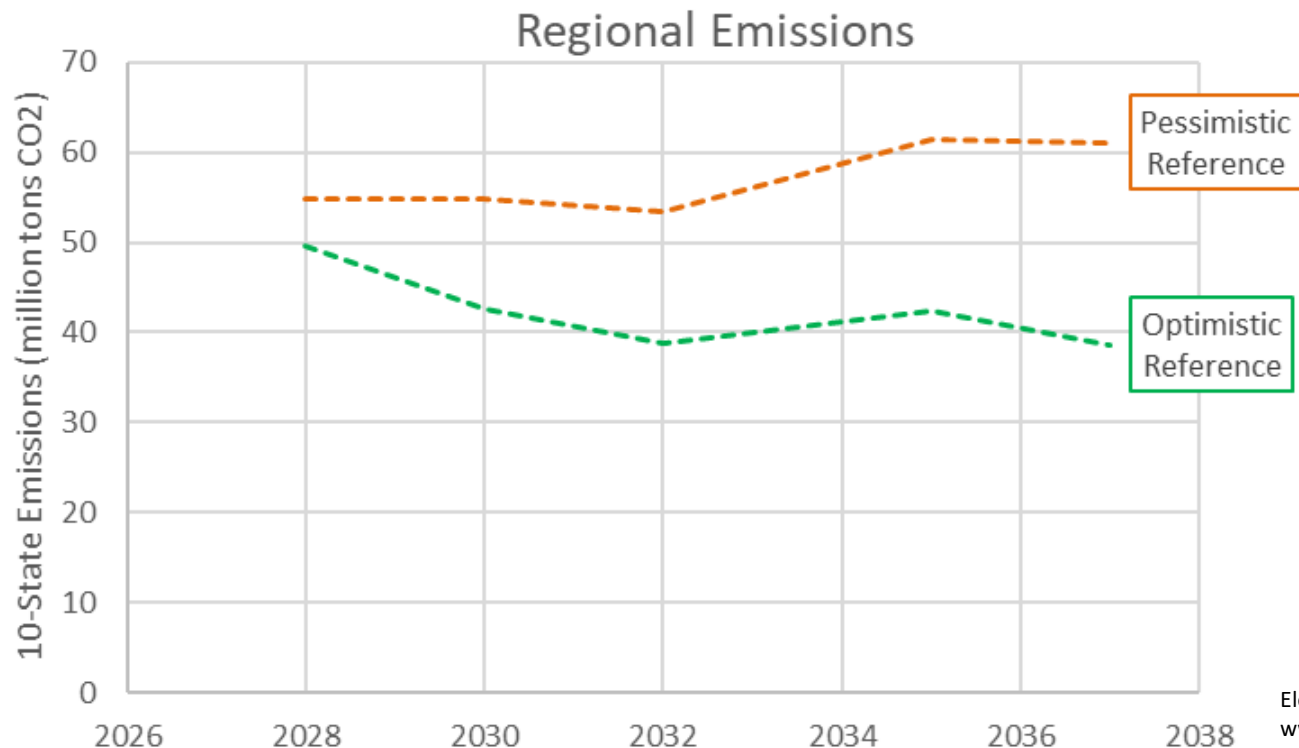
1. Existing Stability & Affordability Protections (the “CCR”) Strengthened

2. Additional “CCR” Added for Greater Stability Protection

3. Sufficient Long-term Allowance Supply if Needed



Impacts: Emissions

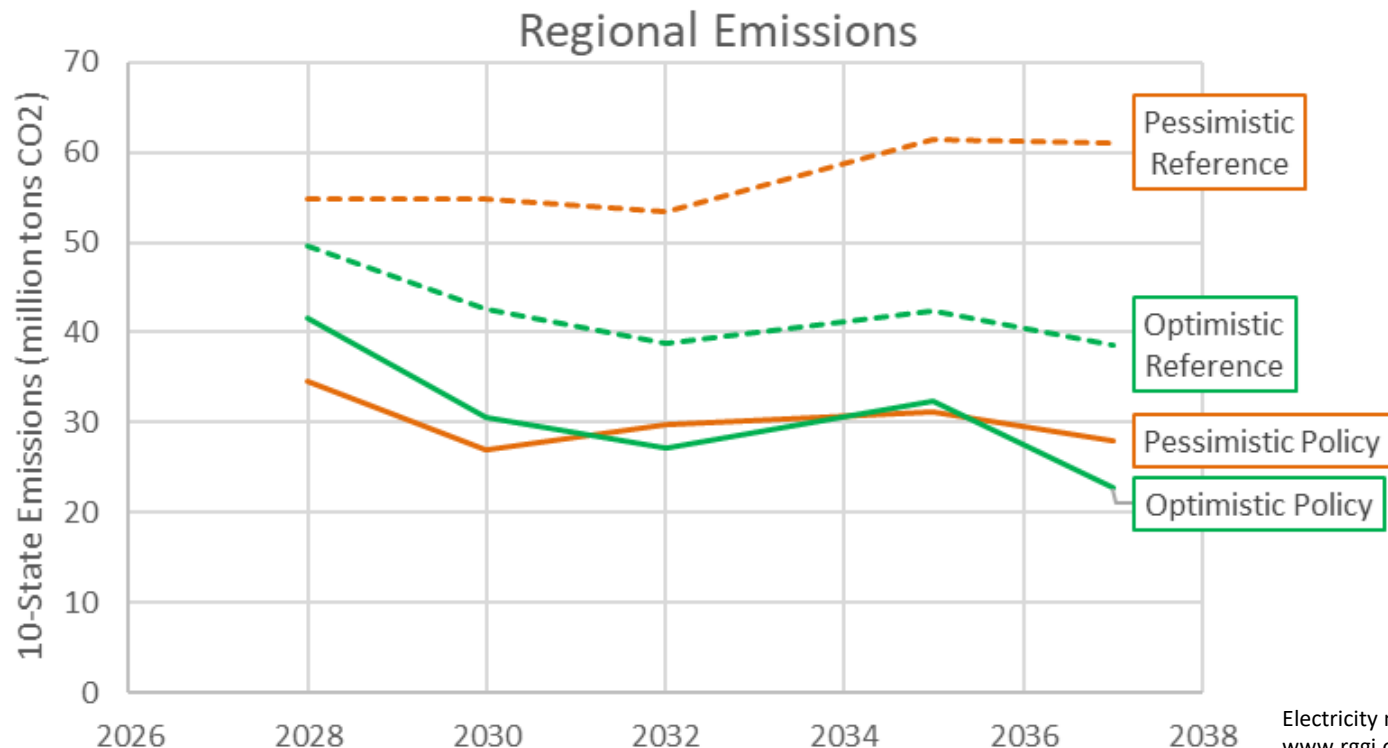


“Reference”
reflects current
“flat” cap

Emissions
decline uncertain



Impacts: Emissions



New Caps
ensure
emissions
decline



Impacts: Bills

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RGGI Average Bill Impacts

Pessimistic vs Optimistic

Case A*

| Monthly Bill - No Reinvestment of RGGI Proceeds | | | | |
|---|-----------------------------|--------------------------------|-----------------------------------|-----------------------|
| Customer Class | Case A (Policy Scenario) | Case A (Current RGGI Price) | Monthly Difference (\$2022) | Percent Difference |
| Residential | \$96.26 | \$95.86 | \$0.40 | 0.41% |
| Commercial | \$618.40 | \$614.82 | \$3.58 | 0.57% |
| Industrial | \$9,055.15 | \$8,994.51 | \$60.64 | 0.66% |

Case B*

| Monthly Bill - No Reinvestment of RGGI Proceeds | | | | |
|---|-----------------------------|--------------------------------|-----------------------------------|-----------------------|
| Customer Class | Case B (Policy Scenario) | Case B (Current RGGI Price) | Monthly Difference (\$2022) | Percent Difference |
| Residential | \$97.90 | \$98.49 | -\$0.59 | -0.61% |
| Commercial | \$611.65 | \$616.96 | -\$5.32 | -0.88% |
| Industrial | \$9,533.59 | \$9,611.21 | -\$77.62 | -0.84% |

Monthly Bill - Projected State-Level Bill Assistance

| Customer Class | Case A (Policy Scenario) | Case A (Current RGGI Price) | Monthly Difference (\$2022) | Percent Difference |
|----------------|-----------------------------|--------------------------------|-----------------------------------|-----------------------|
| Residential | \$96.07 | \$95.77 | \$0.30 | 0.31% |
| Commercial | \$616.61 | \$613.93 | \$2.68 | 0.42% |
| Industrial | \$9,047.86 | \$8,990.89 | \$56.97 | 0.62% |

Monthly Bill - Projected State-Level Bill Assistance

| Customer Class | Case B (Policy Scenario) | Case B (Current RGGI Price) | Monthly Difference (\$2022) | Percent Difference |
|----------------|-----------------------------|--------------------------------|-----------------------------------|-----------------------|
| Residential | \$97.84 | \$98.42 | -\$0.58 | -0.61% |
| Commercial | \$611.08 | \$616.30 | -\$5.22 | -0.86% |
| Industrial | \$9,531.25 | \$9,608.46 | -\$77.21 | -0.84% |

Monthly Bill - Projected State-Level Bill Assistance, Energy Efficiency Spending, and Beneficial Electrification Spending

| Customer Class | Case A (Policy Scenario) | Case A (Current RGGI Price) | Monthly Difference (\$2022) | Percent Difference |
|----------------|-----------------------------|--------------------------------|-----------------------------------|-----------------------|
| Residential | \$95.15 | \$95.31 | -\$0.16 | -0.20% |
| Commercial | \$608.31 | \$613.93 | -\$5.61 | -0.99% |
| Industrial | \$8,897.79 | \$8,990.89 | -\$93.10 | -1.14% |

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| Residential | \$97.53 | \$98.06 | -\$0.52 | -0.55% |
| Commercial | \$608.34 | \$613.03 | -\$4.69 | -0.79% |
| Industrial | \$9,479.44 | \$9,546.32 | -\$66.88 | -0.75% |

Notes: All results are load-weighted.

* Case A and Case B represent different sets of assumptions regarding clean energy deployment. More information can be found here:
https://www.rggi.org/sites/default/files/Uploads/ProgramReview/2024/Third_Program_Review_Update_9-23-2024.pdf

No material
impacts on
electricity
bills



Impacts: Bills

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RGGI Average Bill Impacts

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Accounting for Investment

| Monthly Bill - Projected State-Level Bill Assistance | | | | |
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Impacts: Economy

| Cumulative RGGI Results (3% Discount Rate*) | | |
|--|-------------|---------|
| Economic Indicator | 2025 - 2040 | |
| | Case A | Case B |
| Employment (Thousands of Job-Years) | 176.5 | 24.9 |
| % Change from Reference Case | 0.0309% | 0.0044% |
| Reference Case Level | 571,567 | |
| Gross State Product (Billion Fixed 2022\$) | \$20.4 | \$21.1 |
| % Change from Reference Case | 0.0288% | 0.0195% |
| Reference Case Level | \$70,645 | |
| Disposable Personal Income (Billion Fixed 2022\$) | \$13.2 | \$8.9 |
| % Change from Reference Case | 0.0258% | 0.0173% |
| Reference Case Level | \$51,119 | |

Macroeconomic impacts are small but positive

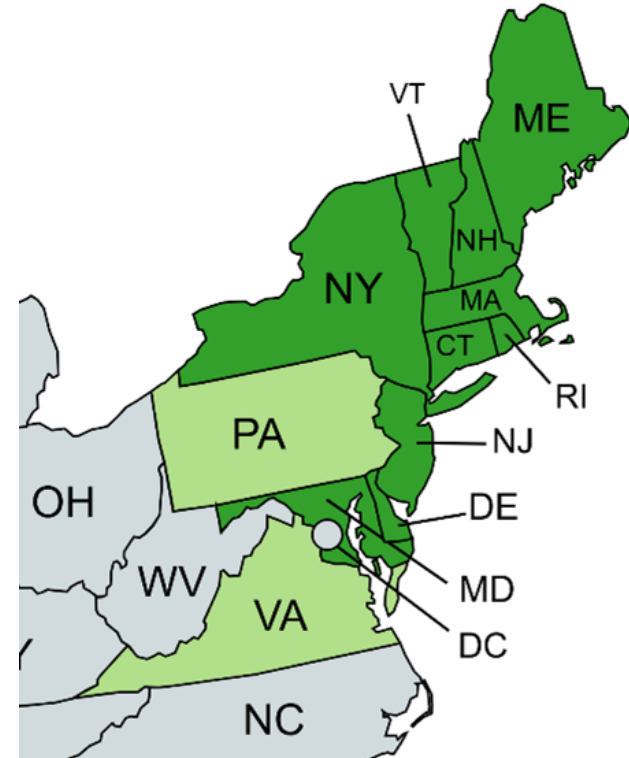
*Employment Numbers are Undiscounted

Macroeconomic (REMI) analysis by ICF:
www.rggi.org/program-overview-and-design/program-review



Next Steps

- With agreement in place, the states now amend their own programs by 2027.
- Next Program Review convenes 2028.





Proposed Amendments



Comar 26.09

Maryland CO2 Budget Trading Program

MDE proposes to amend regulations addressing the following:

1. Implementing the policy changes to the cap and stability mechanisms from the Program Review.
 - Pages 7-9, 14-15.
2. Removing offsets.
 - Page 13.
3. Eliminating obsolete accounting mechanisms for industrial sources and long-term contracts.
 - Page 9.
4. Clerical changes.



Size and Structure of Regional Cap and Allowance Apportionment

- COMAR 26.09.02.03A (page 7).
- Regional emissions cap is reduced in 2027 to 69,806,919 tons of CO₂.
 - 75,717,784 tons under previous Model Rule.
- 2027-2033: Allowances decline by an average of 8,538,789 tons per year.
 - ~10.5% of the 2025 budget.
- 2034-2037: Allowances decline by 2,386,204 tons of CO₂ annually.
 - ~3% of the 2025 budget.
- Subsequent years are set to match the 2037 emissions cap and no adjustments are made to banked allowances.



Cost Containment Reserve (CCR)

- COMAR 26.09.02.03C (page 7).
- CCR ensures availability of RGGI allowances to meet grid reliability needs and to protect against cost volatility.
- CCR is a reserve of allowances made available at auction if the clearing price exceeds a trigger price.
- Amendments increase the size of the CCR.
 - CCR tier 1 and tier 2 both = 2,130,856 allowances annually.
- Second tier of CCR allowances available at auction at a higher trigger price.



Pre-AQCAC Change

Language was inserted into the CCR tier 1 and 2 allowance definitions to clarify the relationships with their respective CCR tier 1 and 2 trigger prices (pages 1-2):

- (34) "CO₂ cost containment reserve *tier 1* allowance or CO₂ CCR *tier 1* allowance" means a CO₂ allowance that is offered for sale at an auction by the Department for the purpose of containing the cost of CO₂ allowances, *subject to the requirements of §B(34-2) of this regulation*, and is separate from, and additional to, a CO₂ allowance allocated from the Maryland CO₂ Budget Trading Program [base and adjusted] budgets.
- (34-1) "CO₂ cost containment reserve *tier 2* allowance or CO₂ CCR *tier 2* allowance" means a CO₂ allowance that is offered for sale at an auction by the Department for the purpose of containing the cost of CO₂ allowances, *subject to the requirements of §B(34-3) of this regulation*, and is separate from, and additional to, a CO₂ allowance allocated from the Maryland CO₂ Budget Trading Program budgets.



Emissions Containment Reserve (ECR)

- Pages 7-8.
- Amendments increase the minimum reserve price (page 4).
 - The lowest price at which RGGI allowances may be sold at auction.
- ECR was a reserve of allowances that can be withheld from auction if the clearing price falls below a trigger price.
- Beginning in 2027, ECR is removed and replaced with an increased minimum reserve price.
 - Matches existing ECR trigger price trajectory.
- New minimum reserve price is \$9.00 in 2027.
 - Increases 7% annually thereafter.
- Rather than a fixed number of allowances being withheld under the ECR, all allowances will simply be withheld below new price.



Offset Projects

- Chapter 3 is repealed (page 13).
- The updated RGGI Model Rule eliminates language regarding offset allowances.
- Beginning in 2027, offset allowances will no longer be awarded for any project categories.
- Any already awarded offset allowances could still be used for compliance ($\leq 3.3\%$).
 - Compliance language remains unchanged in Chapter 2.



Limited Industrial Exemption

- COMAR 26.09.02.06 (page 9).
- Replaces the Limited Industrial Exemption Set-aside Account.
- Amendments:
 - Still provides opportunity for CO2 budget sources to apply for exemption from compliance requirements.
 - Still requires CO2 budget source's annual electrical output to the electric grid in the PJM region to be not more than 10% of annual gross generation.
 - Still require CO2 budget source to submit a climate action plan to MDE.
 - Requires reduction of CO2e emissions through reduction practices.
 - MDE will no longer allocate or retire CO2 allowances on behalf of exempt CO2 budget sources.



Long-Term Contract Set-Aside Account

- COMAR 26.09.02.07 (page 9).
- Expiration date of January 1, 2027 added.
- Developed for specific sources at the onset of the CO2 Budget Trading Program.
- Sources that utilized the set-aside account have ceased operation.
 - Severstal, Luke Paper Mill.



Clerical Changes

- The definitions for several terms have been edited for clarity and updated or removed to match corresponding updates throughout the Model Rule (pages 1-4).
- Offset-related IBR documents removed (page 5).
- Monitoring, reporting, and recordkeeping language have been streamlined (pages 9-12).
- Certain references have been updated or corrected throughout for clarity and consistency.