



2027 Pennsylvania Status Report Updates
Presentation to Climate Change Advisory Committee



Adam Agalloco
Project Advisor

Katie O'Malley
Project Manager

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Agenda

1. Overview and Goals of the Status Report
2. Status Report Outline
3. CCAP GHG Reduction Strategies
4. Milestones and Metrics
5. Q&A and Discussion



→ CPRG Status Report

The Climate Pollution Reduction Grants (CPRG) program provides nearly \$5 billion in grants to states, local governments, tribes, and territories to develop and implement ambitious plans for reducing greenhouse gas emissions and other harmful air pollution.

Overview and Goals

\$5B for Climate Action:

- \$250 M non-competitive grants for plans to reduce GHG emissions
 - States (\$3M) and MSAs (\$1M)
 - Timeframe: now-2027
 - Priority Climate Action Plan (PCAP) (submitted March 2024)
 - Comprehensive Climate Action Plan (CCAP) (submitted December 2025)
 - **Status Report (Summer 2027)**



Goals: Implementation status of CCAP measures, updated analyses, next steps to continue implementation

Draft Status Report Outline

Executive Summary

1. Introduction

- 1.1 Pennsylvania's CPRG Efforts
- 1.2 Relationship to Act 70 Climate Action Plan
- 1.3 Report Organization and Methodology
- 1.4 Key Updates Since the CCAP

2. Engagement Approach and Outcomes

3. Greenhouse Gas Data Updates

- 3.1 Updated GHG Inventory (2005–2023)
- 3.2 Updated BAU Emissions Projections
- 3.3 CCAP Implementation Scenario

4. Implementation Progress

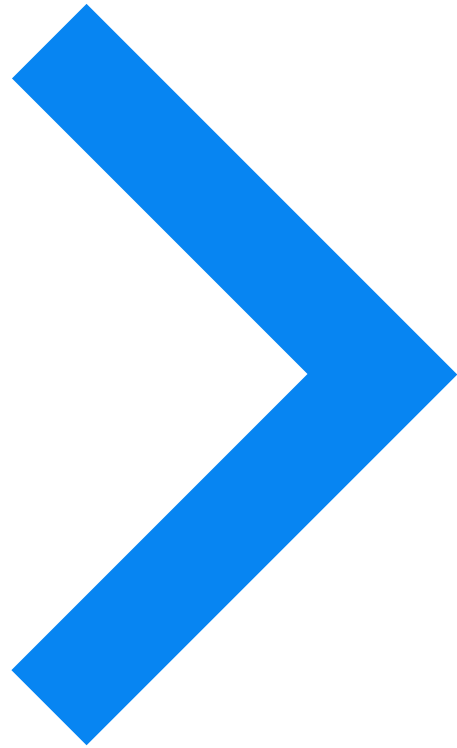
- 4.1 Implementation Status of GHG Reduction Measures
- 4.2 Implementation Narrative
- 4.3 [Sector] Implementation Summary (*repeated for each sector*)
 - 4.3.1 [Measure] Implementation Summary (*repeated for each measure*)
 - 4.3.2 Metrics Tracking
 - 4.3.3 Emission Reductions and Costs
 - 4.3.4 Review of Authority to Implement
 - 4.3.5 Intersection with Other Funding
 - 4.3.6 Co-benefits
 - 4.3.7 Potential Disbenefits

5. Updated Workforce Planning Analysis

- 5.1 Workforce Planning Update
- 5.2 Workforce Development Initiatives

6. Next Steps and Future Needs

- 6.1 Implementation Next Steps
- 6.2 Planning Next Steps



Strategies

CCAP GHG Reduction Strategies

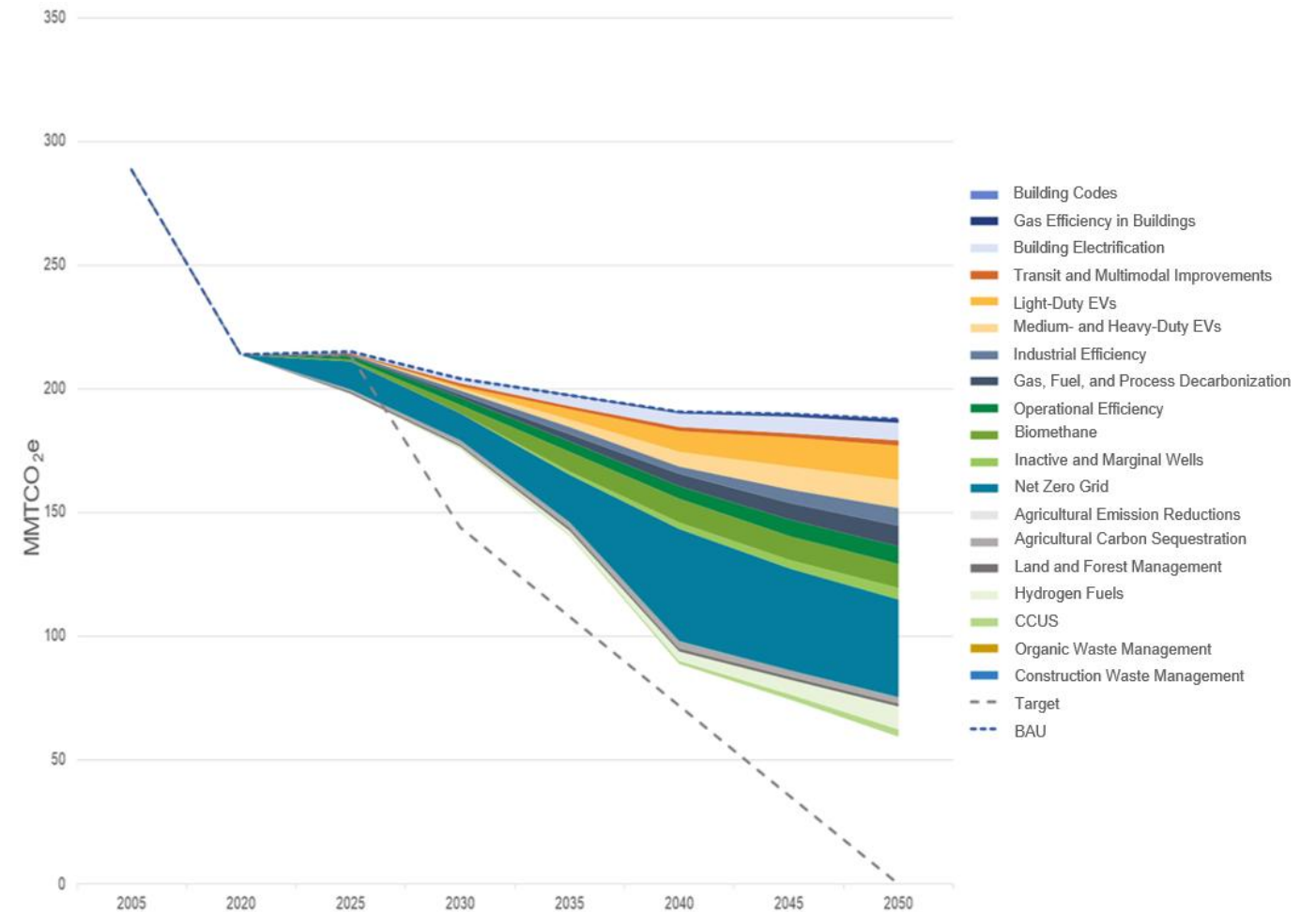
GHG Reduction Strategy	Reductions MMTCO ₂ e	
	2030	2050
B1. Building codes ^a	0.02	0.43
B2. Electricity efficiency in buildings ^b	N/A	N/A
B3. Gas energy efficiency in buildings ^a	0.11	1.07
B4. Building electrification ^a	1.96	7.43
B5. Onsite solar ^b	N/A	N/A
Buildings Total	2.09	8.94
T1. Transit & Multimodal Improvements	1.27	1.88
T2. Light Duty Vehicle Electrification ^a	0.92	13.86
T3. Zero Carbon Medium- & Heavy-Duty Vehicles ^a	0.76	11.49
Transportation Total	2.94	27.24
I1. Industrial Efficiency ^a	1.67	7.1
I2. Gas, Fuel, and Process Decarbonization ^a	1.43	8.39
Industrial Total	3.09	15.49
F1. Operational Efficiency	2.67	7.25
F2. Biomethane	3.46	9.49
F3. Plug Inactive & Marginal Wells	0	4.48
Fuel & Gas Systems Total	6.13	21.22
P1. Net Zero Grid	10.91	39.42
P2. Distribution & Transmission	N/A	N/A
Power Generation Total	10.91	39.42
L1. Agricultural Best Practices – Emissions Reduction	0.02	0.02
L2. Agricultural Best Practices – Carbon Sequestration	1.52	2.78
L3. Land & Forest Management	1.14	1.16
Agriculture/ Land Use Total	2.68	3.96

N/A = Not Applicable.

^a A portion of GHG reduction from this strategy is captured in the electricity generation sector.

^b The GHG reductions from this strategy are captured in the electricity generation sector.

GHG Reduction Strategy	Reductions MMTCO ₂ e	
	2030	2050
W1. Sustainable Organic Waste Management	0.0031	0.032
W2. Sustainable Construction Waste Management	0.000071	0.00072
Waste Total	0.0032	0.033
C1. Hydrogen	0.46	9.41
C2. CCUS	0.02	2.8
Cross Cutting Total	.49	12.21



Strategies Proposed for Early Modeling Review

Strategies expected to require minimal updates are proposed for early modeling

- Minimal updates expected for these sectors
 - Low uncertainty
 - Established data sources
 - Limited stakeholder input required
- Start with targeted/minor assumption updates (April–May)
- Use these measures to initiate early modeling runs
- Decision points before full modeling:
 - ✓ Metrics tracking
 - ✓ Data availability
 - ✓ Key assumptions to update

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Strategies Requiring Additional Input Before Modeling

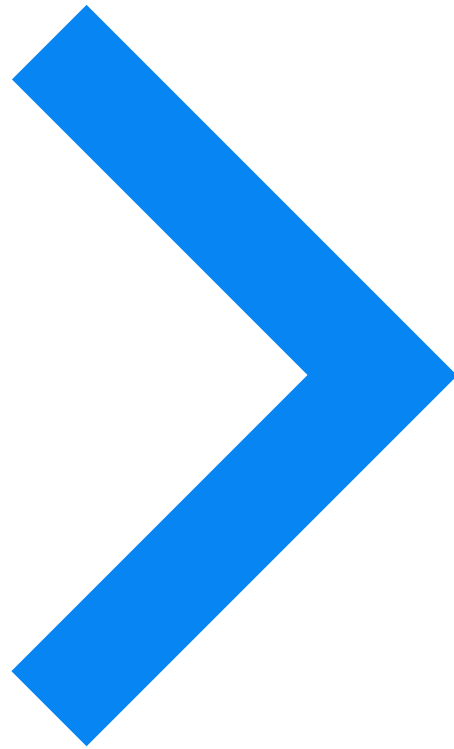
Strategies expected to require more significant updates are proposed for later modeling

- These sectors may need further input on assumptions from CCAC/stakeholders or updated data before modeling
- More significant updates are anticipated for these strategies compared to waste, agriculture/land, buildings, transportation
- New potential measure: Coal mine methane mitigation
- Key assumption changes:
 - Load growth scenarios
 - Updated energy market conditions
 - Federal policy changes
 - Data center expansion

CCAC input will help refine assumptions for these strategies.

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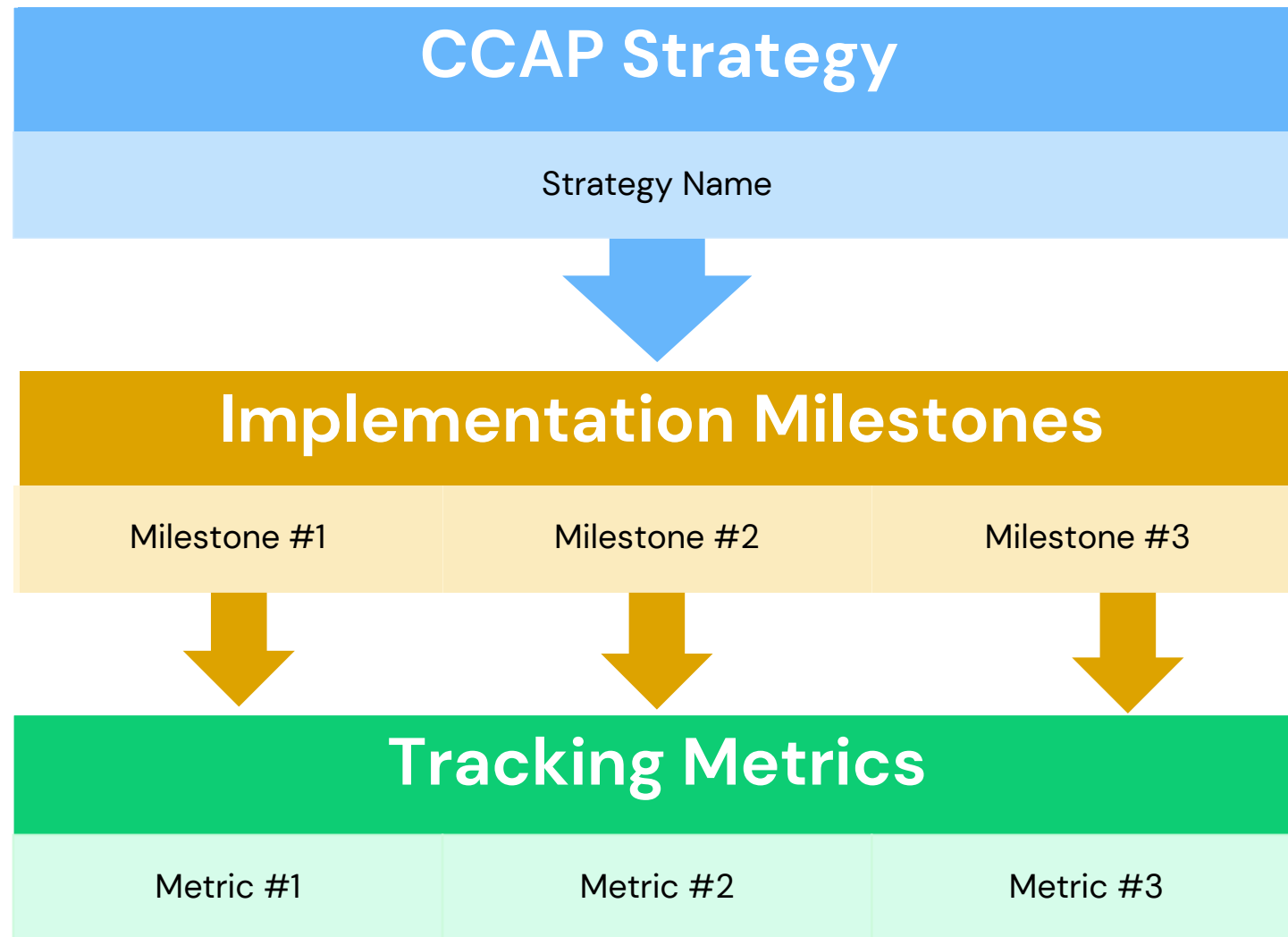
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Milestones and Metrics

Milestones and Metrics Framework

Example: Strategy # – Strategy Name



Milestones describe what implementation looks like; Metrics show how progress is tracked

Example Implementation Milestones

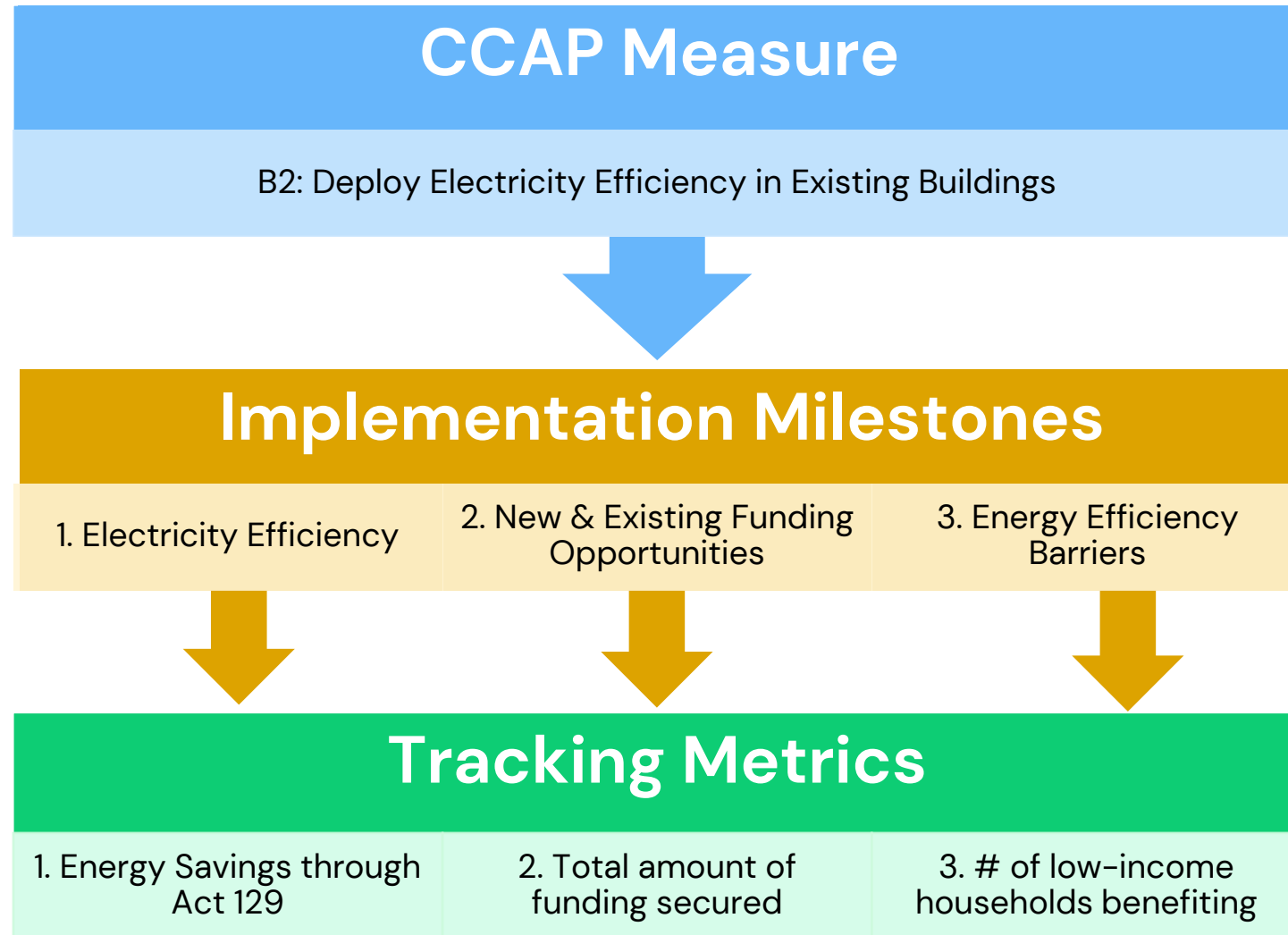
- Program or policy design finalized
- Funding and resources deployed
- Barriers to participation addressed

Example Metrics

- Energy or emissions impacts
- Funding secured or deployed
- Participation and equity outcomes

Milestones and Metrics Framework – Example Strategy

Example: Measure B2 – Deploy Electricity Efficiency in Existing Buildings



Milestone 1: Electricity Efficiency

- A modified framework of Act 129 is offered to residents, commercial building owners, and utilities to help fund electricity efficiency improvements and increase energy-saving targets

Metric 1: Amount of energy saved from electricity efficiency improvements through Act 129

Milestone 2: New and Existing Funding Opportunities

- Funds available through the IIJA and IRA and from existing sources are taken advantage of to support existing programs such as LIHEAP, HEELP, LIURP, and WAP

Metric 2: Total amount of funding secured

Milestone 3: Energy Efficiency Barriers

- Barriers to energy efficiency experienced by low-income households are addressed through the funding and benefits from Act 129 programs, WAP, HEELP, and LIURP

Metric 3: Number of low-income households benefiting from energy efficiency assistance programs

Strategies & Metrics with Potentially Significant Updates

Power Generation

- **What's driving uncertainty:**

- Load growth projections
- Future power generation mix
- Federal policy changes since previous CAP
- Data center expansion and on-site capacity

- **Impacts on Power Generation Metrics:**

- Net Zero Electricity Generation --> Amount of energy generated from the electric power sector in PA from no/low-carbon sources
- Infrastructure Investments --> Number of quality jobs created
- Infrastructure Investments --> Distance of new lines, new substations, and other grid modernizations installed
- Software Systems --> Distributed resources utilized as virtual power plants
- Reliable Electricity Supply --> Number of transmission or distribution system interruptions

CCAC Input

1. What considerations are important for modeling power generation load growth changes in PA?
2. What does near- and mid-term data center expansion look like?
3. How should we think about the future grid configuration?



Strategies & Metrics with Potentially Significant Updates

Cross cutting technologies

- **What's driving uncertainty:**

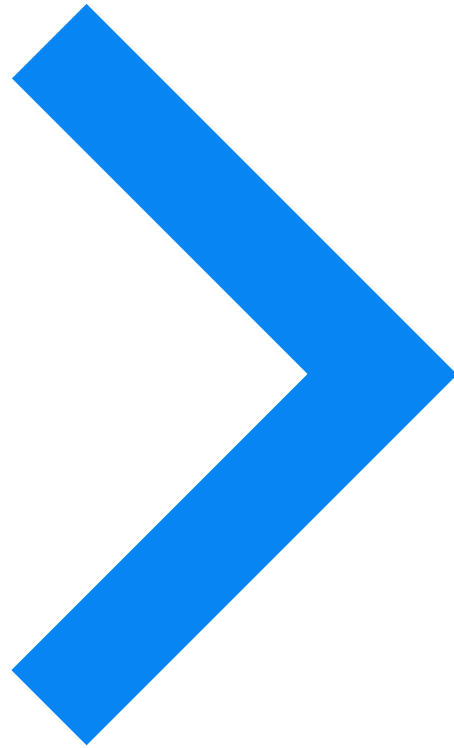
- Changes in federal policy for tax credits and various definitions within CCUS and hydrogen technologies
- Changes in technology approaches and efficiencies

- **Impacts on Cross cutting Metrics**

- Produce Hydrogen with Natural Gas --> Total volume of hydrogen produced and used
- Regional Hydrogen Hubs --> Regional hydrogen hubs with either carbon-free electrolysis approaches or ancillary carbon capture and management technologies necessary to ensure a net positive emissions outcome are developed.
- Carbon Capture and Management Technologies --> Number of new CCUS implementations in the Commonwealth

CCAC Input

- 1. How much should the Status Report emphasize these technologies?**



Status Report Q&A and Discussion