

Advisory Panel on:

Energy-Intensive and Trade-Exposed Industries

December 9, 2020
Meeting 5

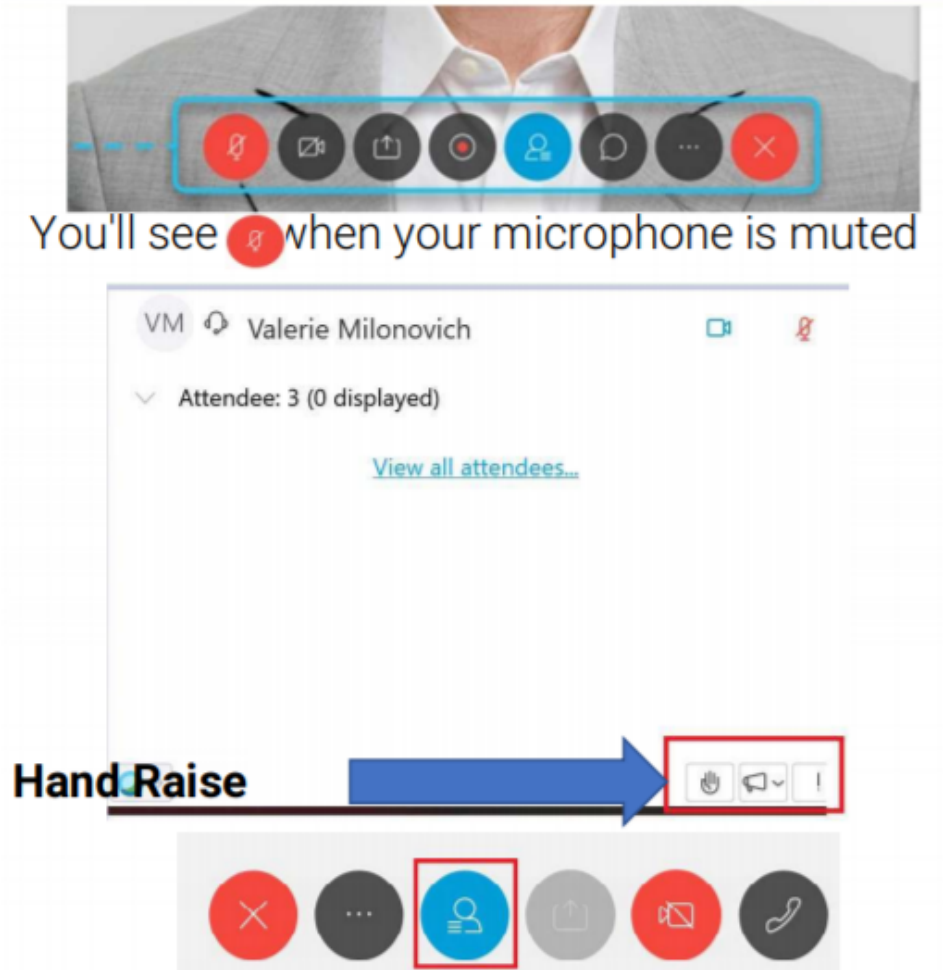


**Climate Action
Council**

Logistics and Meeting Procedures

Before beginning, a few notes to ensure a smooth discussion:

- > Panel Members should be on mute if not speaking
 - If using phone for audio, please tap the mute button
 - If using computer for audio, please click the mute button on the computer screen (1st visual)
- > Video is encouraged for Panel Members, in particular when speaking
- > In the event of a question or comment, please use the hand raise function (2nd visual). You can get to the hand raise button by clicking the participant panel button (3rd visual). The Chair will call on members individually, at which time please unmute.
- > If technical problems arise, please contact William.Mead@its.ny.gov or (518) 292-5192.



Meeting Objective

- Provide comments on preliminary **industrial decarbonization strategies**.
- *Next steps:*
 - *Strategies will then be presented to the Council for input on 12/15.*
 - *Strategies will also be presented to the CJWG for input on 12/16.*
 - *Public input session is tentatively scheduled for 1/13/21.*

Agenda

- Welcome and Updates
- Discuss Preliminary Industry Decarbonization Strategies
- Presentation on EITE Innovation/Deep Decarbonization:
 - Hydrogen and Carbon Capture - **John Lochner, NYSERDA**
- Next Steps

Energy-Intensive and Trade-Exposed Industries Advisory Panel

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Empire State
Development

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Co-Chair**

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Updates

- Energy-Intensive and Trade-Exposed Industries Definition (Business Impacts Subgroup)

Reminder: EITE Industries - Concept

- > Energy-intensive: industries that consume a high amount of energy (electricity, fuel, etc.) relative to the value of their economic output. (*Example: chemical manufacturing*)
 - Historically, due to a lack of clean power, "energy-intensive" has also meant "emissions-intensive."
- > Emissions-intensive: industries that emit a high level of greenhouse gas emissions relative to the value of their economic output. (*Example: cement manufacturing*)
 - May consider emissions of multiple types – electricity use, fuel combustion and industrial processes.
- > Trade-exposed: industries in highly competitive markets with price-sensitive customers.
 - Often measured by the extent to which products are bought and sold across borders as opposed to industries whose customers cannot easily switch to competitors outside of the jurisdiction. (*Example: cut and sew apparel manufacturing vs. local retail stores*)
 - Less able to charge higher prices for their products because customers have access to numerous competitive substitutes and will simply shift their purchases away from any higher-cost producer.

Reminder: EITE Industries - Implications

- > Industries that are both “EI” (in one or both forms) and “TE” may be most sensitive to leakage in jurisdictions with stricter emission controls and clean energy policies.
- > This risk stems from the fact that:
 - Due to their “EI” status, without mitigation, the sector will face the highest costs of compliance relative to their size with respect to energy or emission policies; and
 - Due to their “TE” status, the sector has the least ability to pass those costs along to their consumers, meaning that they may have limited ability to invest in high compliance cost jurisdictions.
- > As a result of these factors, jurisdictions seeking to enact significant energy or emission policies have sought to identify and protect EITE subsectors from leakage.

EITE Industries - Steps to Define

- > Several governments have previously passed measures that have sought to define EITE subsectors, including the United States, the European Union, Australia, Canada and the State of California.
- > Steps to define EITEs generally include:
 1. Define a set of industry activities to measure;
 2. Select metrics to quantify each industry's energy intensity, emissions intensity and exposure to trade;
 3. Set thresholds for qualifying under each definition; and
 4. Determine which industry activities should be treated as "EITE" based on their energy intensity, emissions intensity and/or trade exposure.

Step 1. Working Industry Classification: NAICS

- > U.S., Canada and California identified EITE industries based on "NAICS" code.
- > NAICS codes refer to the North American Industry Classification System (NAICS), a list of industry definitions maintained by the U.S. Census Bureau.
- > EITE subsectors have historically been concentrated in Manufacturing and Mining, but they may include certain others such as Data Centers.
- > Where operating under an "EITE subsector" is expected to convey a benefit, the NAICS code claimed by a business for an operating location should include government assignment or validation.



Step 2. Measures for Defining "EITE" Sectors (Preliminary)

A. Energy intensity: the ratio of an industry's *energy consumption* relative to its *size*, or economic activity.

$$\frac{\$ \text{ Cost of Electricity} + \$ \text{ Cost of Fuel}}{\$ \text{ Value of Shipments, Sales or Revenue}} = \% \text{ Energy Intensity}$$

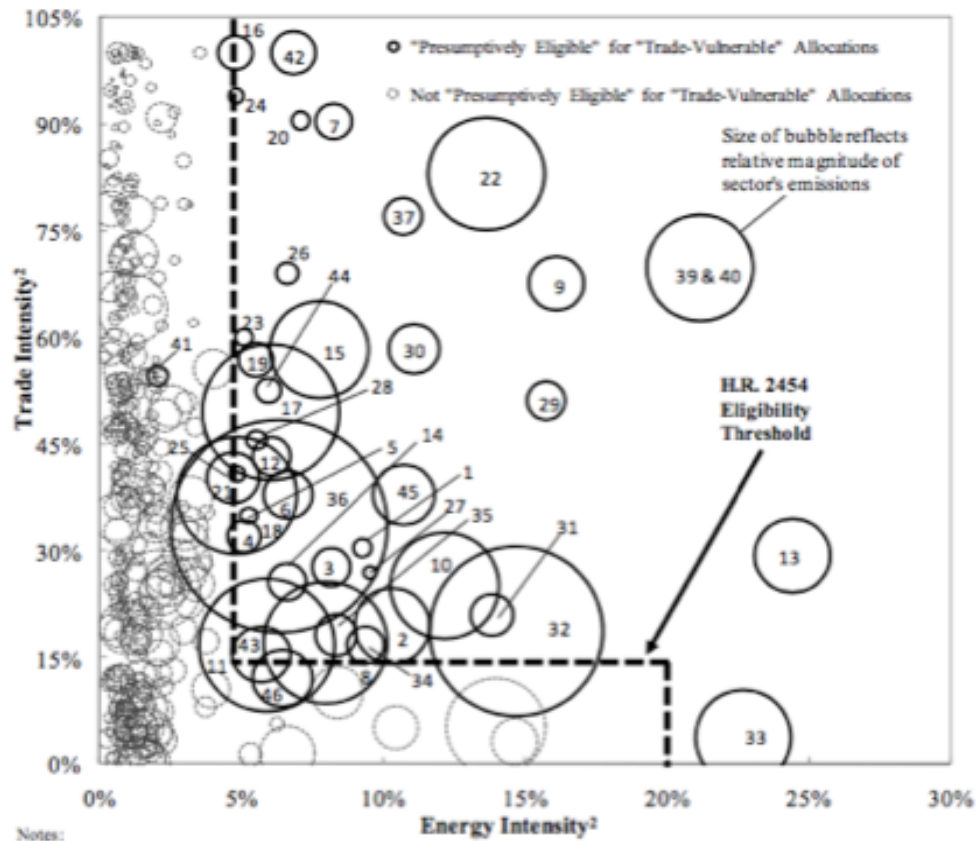
B. Emissions intensity: the ratio of an industry's *emissions produced* relative to its *size*, or economic activity.

$$\frac{\text{Emissions (tCO}_2\text{e)}}{\$ \text{ Value of Shipments, Sales or Revenues}} = \text{tCO}_2\text{e Emissions Intensity per \$ Million of Shipments}$$

C. Trade exposure: the ratio of an industry's cross-border *trade activity* relative to its total market *size*.

$$\frac{\$ \text{ Imports} + \$ \text{ Exports}}{\$ \text{ Value of Shipments, Sales or Revenues} + \$ \text{ Imports}} = \% \text{ Trade Exposure}$$

Preview: Steps 3-4: Set Thresholds and Assess Which Industries Qualify as EITE



U.S. ACES Example:

Industries generally qualified as EITE if they met at least one of two tests:

- >5% Energy or Emissions Intensity; AND >15% Trade-Exposed; OR
- >20% Energy or Emissions Intensity

Select EITE Sectors Under Definition

- Aluminum Production
- Cement Manufacturing
- Chemical Manufacturing
- Glass Manufacturing
- Iron, Copper and Nickel Ore Mining
- Iron and Steel Mills
- Paper, Pulp & Newsprint Mills
- Semiconductor Manufacturing

Source: Energy Intensity, Trade Intensity, and Emissions of U.S. Manufacturing Sectors at the Six-Digit NAICS Code Level, Federal Interagency Report on International Competitiveness and Emission Leakage in Energy-Intensive Trade-Exposed Industries, Figure 2, p. 11 (December 2, 2009).

DRAFT AND PRELIMINARY

Next Steps: Review Industry Data to Establish Working Thresholds and Identify EITE Subsectors

- > Staff will assess industry data to determine which subsectors would qualify as energy intensive, emissions intensive, and/or trade exposed based on different thresholds.
- > Thresholds for qualifying will be proposed (and/or tiered) based on results.
- > Industries will be preliminarily identified as “EITE” if they exceed proposed thresholds.
- > Certain industries may require additional assessment or alternative procedures (e.g., appeal process, alternative qualification criteria) where data is not available or where traditional metrics may be lacking (e.g., assessing interstate trade exposure).

Discussion -

***Preliminary Industrial
Emission Reduction
Strategies***

Reminder: Considerations for Industrial emission mitigation strategies

- Industrial sectors within EITE panel scope (Manufacturing, Mining, Construction) total perhaps ~7% of State emissions .
- "Heterogeneous" nature may result in higher cost per emissions reduced.
- "EITE" industries are likely to represent a high share of Industry sector emissions; non-incentive-oriented approaches may cause leakage.
- Emissions will decline with decarbonization of Power Generation sector; near-term opportunities likely focused on energy efficiency, while most deep decarbonization (carbon capture, low-carbon fuels, etc.) is est. to occur further into the future as new technologies scale, mature and become more viable.

Reminder: Approaches to industrial emission mitigation

Emission Mitigation:

- Financial assistance
- Technical assistance
- Low-carbon procurement & supply chain policies
- Research, development & demonstration/innovation
- Workforce development
- Emission reporting

Economic Incentives

EITE Strategies, 1 of 6

Scope topic: Provide financial incentives and technical assistance for the decarbonization of EITE sectors

Strategy under consideration	<ul style="list-style-type: none"> • Provide technical assistance to help identify economically viable decarbonization pathways and to provide comprehensive energy management planning • Provide financial incentives for decarbonization projects • Refer economic assistance recipients to resources that will result in lower-emitting projects • Leverage low-cost hydropower to provide support for industry
Rationale	Decarbonizing EITE sectors will require overcoming significant barriers related to lack of financial, technical, and personnel resources. Technical assistance provides increased evidence of the financial and operational viability, as well as emissions savings persistence, of decarbonization measures and energy management. Financial incentives help speed the transition of stock turnover and adoption of decarbonization projects.
Equity considerations	<ul style="list-style-type: none"> • Technical assistance to consider equity considerations where applicable • Goal of directing public resources towards disadvantaged communities (at least 40% of benefits) • Targeted outreach to facilities located in disadvantaged communities to make aware and assist of emission reduction programs
Potential Implementation challenges	<ul style="list-style-type: none"> • Heterogeneity of solutions vary across energy-intensive industries (not one-size fits all solutions) • Disclosure of intellectual property to other industrial competitors may cause apprehension to participate in state run programs
Issues to explore	<ul style="list-style-type: none"> • Funding source and duration • Coordination with investor-owned utility programs to deliver comprehensive strategies to market.

EITE Strategies, 2 of 6

Scope topic: Create incentives for business to capitalize on low-carbon economy opportunities

Strategy under consideration	
	<ul style="list-style-type: none">• Create preferential standards for the public procurement of low-carbon building materials
Rationale	<ul style="list-style-type: none">• Advantages in selection for public procurement provide a revenue stream for low-carbon replacement products• Early development of low-carbon products will position NY state manufacturers on the leading edge as more markets require such products
Equity considerations	N/A
Potential implementation challenges	<ul style="list-style-type: none">• Success will require robust carbon accounting standards and life-cycle analyses specific to each product class
Issues to explore	<ul style="list-style-type: none">• Cross-collaboration with Energy Efficiency and Housing as well as Land Use and Local Governments advisory panels• Incremental cost impact to the state• Estimated impact on private procurement of similar materials

EITE Strategies, 3 of 6

Scope topic: Identify and support technological innovation to enable deep industrial decarbonization	
Strategy under consideration	<ul style="list-style-type: none"> • Develop a comprehensive Innovation Roadmap to address knowledge gaps and to guide key priorities for deep decarbonization investment in the areas of carbon-tech, low-carbon fuels, and carbon removal • R&D funding for early stage decarbonization technologies • Demonstration pilot funding for high impact solutions in coordination with private market • Identify potential for innovation clusters to leverage supply chains and infrastructure for novel solutions
Rationale	<ul style="list-style-type: none"> • Road-mapping initiative is needed to determine key areas of investment across multiple interconnected sectors (e.g. manufacturing, transportation, power generation) • Significant technological advances are required to meet long-term emissions targets
Equity considerations	<ul style="list-style-type: none"> • All activities would include equity and environmental justice as a key parameter in determining recommendations and/or funding decisions
Potential implementation challenges	To be determined; challenges to implementation will be identified as part of the road-mapping exercise.
Issues to explore	<ul style="list-style-type: none"> • Low-carbon fuel generation and midstream infrastructure • Geologic storage capacity for CO2 • Cost/benefit analysis of research investment • Opportunities for pilot and demonstration funding

EITE Strategies, 4 of 6

Scope topic: Workforce development training to support Energy-Intensive and Trade Exposed (EITE) industries

Strategy under consideration	Provide workforce development on existing and new innovative emission reduction technologies that effect EITE industries
Rationale	Expands pool of workforce with skills needed to address emission reduction strategies increasing confidence and reducing risk to EITE industries.
Equity considerations	Advance disadvantaged individuals including MWBE firms with job opportunities
Potential implementation challenges	Matching supply and demand of trained workforce with companies Funding sources
Issues to explore	Cross cutting strategy in many other advisory panels from Transportation, Power Gen, Just Transition

EITE Strategies, 5 of 6

Scope topic: Increase the available data on industrial GHG emissions to help prioritize efforts and monitor progress

Strategy under consideration	
Rationale	Collecting emissions data from a larger universe of industrial facilities will enable a more complete picture of greenhouse gas emissions, allowing the State to better track its emission reduction progress, identify the potential for additional EITE sectors and prioritize emission reduction efforts.
Equity considerations	N/A
Potential implementation challenges	Limited challenge in regulatory development. Potential challenge with outreach to ensure all effected facilities report timely and accurately.
Issues to explore	Establishing a GHG emissions threshold at which reporting will be required; Concern about placing additional regulatory requirements on facilities already highly regulated by DEC; Evaluate whether to align with reporting already done to meet EPA GHG Reporting Program.

Expand the universe of industrial facilities that are required to report on their GHG emissions.

Collecting emissions data from a larger universe of industrial facilities will enable a more complete picture of greenhouse gas emissions, allowing the State to better track its emission reduction progress, identify the potential for additional EITE sectors and prioritize emission reduction efforts.

N/A

Limited challenge in regulatory development. Potential challenge with outreach to ensure all effected facilities report timely and accurately.

Establishing a GHG emissions threshold at which reporting will be required; Concern about placing additional regulatory requirements on facilities already highly regulated by DEC; Evaluate whether to align with reporting already done to meet EPA GHG Reporting Program.

EITE Strategies, 6 of 6

Scope topic: Provide economic incentives to grow the green economy

Strategy under consideration	Leverage the State's climate policies to develop an in-state supply chain of green economy companies by engaging in business development discussions and offering incentives through NYSTAR, NY Ventures and Excelsior Tax Credits
Rationale	Green economy industries are poised for significant growth, and anchoring an in-state supply chain of growing green businesses will both make it easier for the State to achieve its climate goals while also attracting new investments and jobs. ESD invests in green/cleantech start-ups through NY Ventures, funds R&D centers to help commercialize new technologies through NYSTAR, and offers Green Economy Tax Credits for job, investment and R&D commitments through Excelsior.
Equity considerations	Project location decisions are typically business-driven, not State-driven (e.g., whether they may be inside of a Disadvantaged Community).
Potential implementation challenges	N/A - Ongoing
Issues to explore	Initiatives to connect non-green EITE businesses to green economy opportunities.

Summary of preliminary EITE strategies

1. Provide financial incentives and technical assistance for the decarbonization of EITE sectors
2. Create procurement incentives for business to capitalize on low-carbon economy opportunities
3. Identify and support technological innovation to enable deep industrial decarbonization
4. Workforce development training to support Energy-Intensive and Trade Exposed (EITE) industries
5. Increase the available data on industrial GHG emissions to help prioritize efforts and monitor progress
6. Provide economic incentives to grow the green economy

Presentation –

EITE Innovation Discussion

- Hydrogen
- Carbon Capture, Utilization and Storage

Presented by John Lochner, NYSERDA Vice President for Innovation

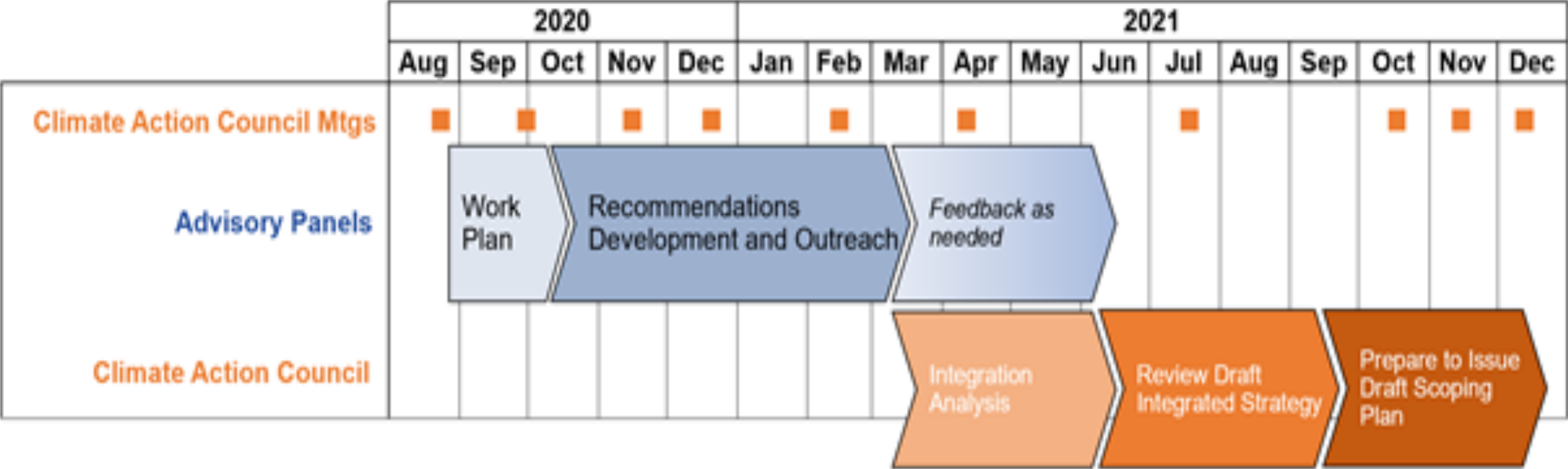
Next Steps

Next Steps

- > Preliminary strategies will be presented to the Climate Action Council on 12/15 and to the Climate Justice Working Group on 12/16.
- > Public input session to be held; tentative date of 1/13.
- > Panel and public should submit comments and potential strategies for consideration to climate@esd.ny.gov.

Appendix

Reminder: Timeline Overview



Reminder: EITE Advisory Panel Work Plan – Draft Timeline of Meetings, Expertise Provided

Date	Group	Anticipated Panel-Related Topics	Expertise Provided to Panel for Meeting
Oct 8.	CAC	➤ <i>EITE Chair to present Work Plan and solicit input from CAC</i>	
Late Oct.	EITE	<ul style="list-style-type: none"> • Discuss any CAC input on Work Plan • Review potential technologies and policies 	<ul style="list-style-type: none"> • Deep dives on: i) industry emission sources; ii) technologies & policies to reduce emissions.
Nov.	CAC	➤ <i>EITE Chair to present progress and solicit input from CAC</i>	
Nov.	EITE	<ul style="list-style-type: none"> • Identify potential recommendation options 	<ul style="list-style-type: none"> • Input from JTWG, CJWG and EJAG • List of potential recommendations compiled by Panel, staff, Industry, public, engagement
Dec.	CAC	➤ <i>EITE Chair to present potential recommendation options and solicit input from CAC</i>	
Dec.	EITE	<ul style="list-style-type: none"> • Select preliminary recommendations and any input on goals 	<ul style="list-style-type: none"> • Initial evaluation of identified recommendations
Jan.	EITE	<ul style="list-style-type: none"> • Public, panel/working group, and/or expert input session(s) 	
Feb.	EITE	<ul style="list-style-type: none"> • Identify potential refinements to recommendations and goals 	<ul style="list-style-type: none"> • Summary of input from public, JTWG, CJWG, EJAG • Ongoing evaluation of recommendations
Feb.	CAC	<i>EITE Chair to present progress and solicit input from CAC</i>	
Mar.	EITE	<ul style="list-style-type: none"> • Finalize panel recommendations and any input on goals 	<ul style="list-style-type: none"> • Evaluation of potential refinements
Apr.-June	CAC/EITE	<ul style="list-style-type: none"> • Respond to CAC inquiries as necessary. 	

Note: EITE Staff Working Group also expects to hold internal meetings on an approximately weekly basis.

Reminder: Scope of Work

1. Review Industrial emissions and technologies/policies to reduce emissions
2. Develop detailed recommended strategies to reduce industrial emissions
3. Provide input on State Industrial emission reduction goals
4. Develop recommendations to protect competitiveness and mitigate leakage
5. Develop recommendations to support environmental and climate justice

Reminder: Key Scoping Assumptions

1. What types of emissions should the Panel's recommendations address?

- Assumption: On-site fuel combustion, On-site non-combustion process emissions and indirect emissions from electricity use. (Excludes *product use emissions*)

2. What industrial activities fall within Panel's "Industry" designation?

- Assumption: Manufacturing, Construction and Mining. (Excludes *Agriculture*, which is expected to be addressed by Agriculture and Forestry Advisory Panel, and *Waste*)

3. How does the EITE Advisory Panel's responsibility differ from the Just Transition WG?

- Assumption: Panel will recommend Industry emission reduction strategies and goals while considering EITE sectors and leakage; JTWG will lead the definition of EITE sectors and the development of policies to mitigate anti-competitiveness (with EITE Panel providing input).

Reminder: Key Scoping Assumptions (Cont.)

4. What types of technologies should the Panel consider for reducing emissions?

- Assumption: energy efficiency, low-carbon thermal solutions, cleaner fuels, electrification, carbon capture utilization and storage.

5. What types of policies should the Panel consider for reducing emissions?

- Assumptions: emission reduction incentives, emission regulations, rate design; market preference for goods produced with minimal greenhouse gas emissions, enabling strategies.

6. What types of policies should the Panel consider to mitigate leakage?

- Assumptions: rate design; low-cost power programs, market preference for goods produced with minimal emissions, opportunities to support clean technology supply chains.

Reminder: Emission Reduction Goals

- Pathways Analysis currently reflects Industry sector goals of:
 - From 2016 levels: 6% reduction by 2030, 81%-82% reduction by 2050
 - Both goals are for on-site fuel combustion only
- Pathways Analysis contains no reduction goals yet for:
 - Non-combustion industrial process emissions
 - Product use emissions (not part of panel scope)
 - Indirect emissions associated with electricity (in Power Generation panel scope)
- EITE Advisory Panel to advise CAC on goals and should consider goals when making Industry sector recommendations.

Reminder: Public Participation

- Panel meetings will be available for public viewing.
- Meeting notices and materials will be posted on the Advisory Panels web page at <http://climate.ny.gov>.
- Written input will be collected from industry and the public at new email: climate@esd.ny.gov.
- At least one virtual forum to collect public input will be held, anticipated to occur in January.

Reminder - Key Takeaways: Industrial Emission Sources

- > Industrial emissions in NYS come from several sources:
 - Emission types: Fuel combustion (direct), Industrial processes (direct), Electricity use (indirect)
 - Industry sectors: Manufacturing, Construction, Mining
 - Top subsectors: DEC data suggest that most direct Industrial emissions come from Cement, Paper, and Primary Metals
- > Fuel combustion produces ~66% of Industrial emissions:
 - Overall, fuel combustion emissions had declined by 62% from 1990 levels as of 2018; represented 5% of all 2016 NYS emissions
 - Natural gas produces most combustion emissions, followed by coal and distillate
 - Approximately ~2/3 of combustion emissions are from Manufacturing, ~1/3 from Construction
- > Limited Industry-specific data exists on electricity use emissions; estimated to produce ~25% of Industrial emissions
 - Overall electricity use is likely to increase where applying electrification; decrease due to energy efficiency measures
 - Electricity emissions should decline as Power Generation sector is decarbonized in favor of clean power
- > Industrial non-combustion processes produce ~9% of Industrial emissions:
 - Overall, process emissions have declined by 50% from 1990 levels; represent <1% of all 2016 New York State emissions

Reminder - Key Takeaways: Technology and Process Solutions

- > Short-term emission reduction opportunities are likely in energy efficiency and electrification of low-temperature process heat
- > Long-term emission reduction technologies, including carbon capture, utilization, and storage and low-carbon fuel alternatives, require significant study and investment
- > Manufacturing subsectors are heterogenous and require unique solutions for reducing emissions
- > Increased organizational focus and personnel capacity can lead to sustained energy efficiency and conservation opportunities that reduce emissions

Reminder - Key Takeaways: Overview of NYS Programs Applicable to Industry

- > The State offers many existing programs in *financial assistance, technical assistance, low-cost power and workforce development* to:
 - **lower the emissions produced** by industrial activities in New York State;
 - **support the transition** of energy-intensive and trade-exposed industries throughout the decarbonization of the state's economy; and
 - **mitigate leakage** from energy-intensive and trade-exposed industries by supporting their attraction, retention and expansion.

Empire State Development (ESD) Programs

Program	Purpose
Excelsior Jobs Program, including Green Economy Tax Credits	Provides performance-based refundable tax credits to private businesses in exchange for achieving annual milestones in employment, investment and R&D spending, with enhanced benefits for green economy projects. \$5 million is reserved for the workforce training Employee Tax Incentive Program credit.
Centers and Programs – Division of Science, Technology and Innovation (NYSTAR)	<p>NYSTAR annually provides \$55 million to a total of approximately 70 NYSTAR centers, including a number that impact or support the green economy by providing a forum for experts to work with big and small industry partners to conceive, validate and scale disruptive technologies.</p> <p><i>Sample Programs: Centers of Excellence (COE), Centers for Advanced Technology (CAT) and Manufacturing Extension Partnership (MEP) programs.</i></p>
Other Economic Assistance – Loans, Grants, Tax Credits and Technical Assistance	ESD administers dozens of general programs devoted to providing loans, grants, tax credits, technical assistance and venture investment; some of these programs may be available to support EITE industries or serve as models for new programs.

New York Power Authority (NYPA) Programs

Program	Purpose
High Load Factor Power (HLF)	Allocates power from pumped storage facilities to businesses that utilize power at a high rate (~75% load factor or higher) and have an electric demand of 5 MW or higher.
Industrial Economic Development Power Program	Allocations of power including hydro and market are granted to the electric systems with new, expanding, or relocating businesses within their service territory, in exchange for a commitment of new jobs at the facility.
Northern NY Power Proceeds	Allocates funding for economic development In St. Lawrence County. 15% of the program is dedicated to supporting energy related projects, programs and services.
Preservation Power	Allocates hydropower to eligible businesses expanding or businesses looking to locate operations in St. Lawrence, Franklin or Jefferson counties.
ReCharge New York (RNY)	Provides low-cost power to businesses and not-for-profit organizations statewide in return for commitments to retain/create jobs and invest capital in their facilities.
WNY Hydropower	Allocated hydropower to expanding businesses or businesses seeking to locate within 30 miles of the Niagara Power Plant.
Western NY Power Proceeds	Low-cost hydropower is allocated to businesses and others to reduce electricity costs and spur economic development. 15% of the program is dedicated to supporting energy related projects, programs and services.
Distributed Energy Resource Program	Advance NYS Clean Energy goals by partnering with our customers to implement distributed solar and storage with NYPA operating as the owner's representative. This work is done at no cost to the customer and is paid by the solar or storage developer if their overall project economics meet the customer's financial requirements.
eMobility Program	Installation of electric vehicle charging equipment for multiple purposes: fast charging for highway corridors and urban centers, commuter lot EV charging, transit bus depot charging and charging for workplaces within the ReCharge NY program. Advisory services for fleet electrification.
Energy Efficiency Program	Partnering with NYPA customers to implement comprehensive Energy Efficiency projects. This program provides our customers with the expertise to identify and evaluate facility improvements that not only provide solutions to aging equipment, but also produce significant energy and environmental benefits.
Smart Street Lighting NY	Advance NYS Clean Energy goals by offering a full turnkey service to assist customers with the acquisition and conversion of street lights to energy efficient LEDs.
Street Lighting Maintenance Service	The Maintenance Service begins once municipalities gain ownership and convert their street lights to LED through Smart Street Lighting NY.

New York State Energy Research and Development Authority (NYSERDA) Programs

Program	Purpose
Buildings of Excellence Competition	Recognizes and rewards the design, construction, and operation of very low or zero carbon emitting multifamily buildings.
Clean Energy Workforce Development Programs	Provides clean energy workforce development and training funds.
Clean Heating and Cooling Programs	Heat pumps are a more efficient heating and cooling option that eliminate fossil fuels, can provide up to 100 percent of your heating and cooling needs, and help you save on your energy bills.
Commercial and Industrial (C&I) Carbon Challenge	Helps large commercial and industrial companies and organizations implement their best energy-saving/carbon-reduction projects.
Commercial New Construction Program	Provides technical assistance and support to design teams and building owners involved in building energy-efficient structures.
Energy Storage Program	Offers funding and technical support to building owners, municipalities, energy storage developers, contractors, and integrators for installing energy storage technologies.
Energy to Lead	Challenged student-supported coalitions across the State to develop and implement plans to advance clean energy on their campuses and in their local communities in new ways.
Flexible Technical Assistance (FlexTech) Program	Shares the cost to produce an objective, site-specific, and targeted study on how best to implement clean energy and/or energy efficiency technologies.
Ground Source Heat Pump Program	Offers support for the installation of ground source heat pump systems at residential, commercial, institutional, and industrial buildings.
NY-SUN	Provides incentives and financing to make solar-generated electricity accessible and affordable for all New York homeowners, renters, and businesses. include training for installers and public officials, standardized permitting processes, and consumer education.
Real Time Energy Management Program (RTEM)	RTEM technologies analyze data and recommend actionable insights, resulting in lower operating and utility costs, and a smarter building with greater comfort, appeal and marketability.
Strategic Energy Management Program	Offers training to industrial facilities that are interested in optimizing energy use through a continuous improvement approach