Attendees

1. Eric Gertler, Chair  Empire State Development
2. Keith Hayes, Co-Chair  New York Power Authority
4. Tristan Brown  SUNY College of Environmental Science and Forestry
5. Jason Curtis  Nucor Steel Auburn, Inc.
6. Carlos Garcia  New York City Environmental Justice Alliance
7. Leah George VanScot  Greater Rochester Enterprise
8. Doug Grose  NY CREATES
9. Michael LeMonds  LafargeHolcim
10. Melanie Littlejohn  National Grid
11. Elisa Miller-Out  Chloe Capital
12. Stephen Tucker  Workforce Training Center at Northland
13. David Wasiura  United Steelworkers District 4
14. Lourdes Zapata  South Bronx Overall Economic Development Corp. (SoBRO)

Not in Attendance

None

Agenda Item I – Welcome, Objectives and Agenda

- Chair Gertler welcomed the Panel, reviewed meeting logistics and took the role.
- Chair Gertler stated that, as reflected in the agenda, today’s meeting objectives are:
  - to provide the Panel with deep dives into three topics:
    - Industrial Emission Sources,
    - Technology and Process Solutions to Reduce Industrial Emissions, and
    - Policy Options, and
  - to seek the views and other input from the Panel members regarding the Policy Options presented as well as other policy options that should be explored in future meetings.
- Before proceeding to the presentations, Chair Gertler gave the Panel members brief updates on:
  - the Climate Action Council’s acceptance of the EITE Advisory Panel’s draft Work Plan,
  - the formation of the Climate Adaption and Resiliency Group, and
  - the Business Impact subgroup of the Just Transition Working Group.

Agenda Item II – Presentation on Industrial Emissions Sources by Staff

- Chair Gertler then introduced Christopher LaLone, Assistant Director of Air Resources at the NYS Department of Environmental Conservation, who presented on Industrial Emissions Sources, which include:
  - Emissions from on-site fuel combustion,
  - Emissions from on-site non-combustion industrial processes, and
  - Offsite, or indirect, emissions caused by the use of electricity.
• Mr. LaLone noted that:
  o industrial emissions accounted for approximately 5% of the NYS's total 2018 emissions, with approximately 90% of those emissions from fuel combustion and 10% from industrial processes,
  o roughly 2/3 of industrial combustion emissions are from the Manufacturing sector and almost 1/3 are from the Construction sector, and
  o combustion emissions have declined by almost 2/3 since 1990, with 62% of the remaining emissions being generated by on-site natural gas.

• Mr. LaLone then responded to a number of questions in areas including:
  o types of emissions from paper manufacturing,
  o geographical trends across the State,
  o the status of the new accounting methodology being developed for greenhouse gas emissions, and
  o the process of reporting emissions. Panel member Garcia then requested information on the proportions of the methods of self-reporting emissions, such as continuous emissions monitoring, stack test results and emission factors based on source type. He also emphasized the importance of monitoring in order to verify and capture the actual level of emissions.

**Agenda Item III – Presentation on Technology and Process Solutions by Staff**

• Chair Gertler introduced Sean Mulderrig, Project Manager in the office of Industrial and Agriculture Market Development Programs at NYSERDA, who presented on Technologies and Processes to Reduce Industrial Emissions, including:
  o Energy Efficiency Solutions, and
  o Electrification and Process Emissions

• With regard to Energy Efficiency, Mr. Mulderrig noted, among other things, that:
  o Efficiency measures can potentially cut 15% of industrial emissions through inexpensive modifications, and
  o The industrial sector is heterogeneous and different subsectors and facilities require custom approaches and precisely scoped engineering solutions.

• Among the efficiency topics reviewed were:
  o Non-Process Building systems
  o Machine Drives
  o Compressed Air
  o Process Efficiency
  o Energy Monitoring and Management, and
  o Workforce Capacity and Training.

• With respect to Electrification, Mr. Mulderrig noted that:
  o Existing plants have highly integrated processes that must work in coordination with each other, and swapping in just one or a few electric components could disrupt that working dynamic.
  o Manufacturing plants have useful lives of several decades and therefore comprehensive plant overhauls that could transition to large-scale electrification are infrequent.

• Mr. Mulderrig then responded to a number of questions in areas including:
  • Opportunities to reduce process emissions in cement production
  • The potential for the use of green hydrogen in light of its cost and availability.
• Panel member Curtis observed that many large emitters already have undertaken basic energy efficiency measures.

**Agenda Item IV – Policy Options, Discussion and Next Steps by All**

• Chair Gertler presented a Preview on Policy Options and begin with a brief review of State policies and programs already in place that address climate change and the green economy.

• Chair Gertler then presented a map showing that EITE sectors are likely to span the State with
  o 2,400 business locations, and
  o Just under 100,000 jobs (70,000 upstate and 30,000 downstate)

• Chair Gertler then presented a variety of policy examples that have been enacted by other jurisdictions. These examples included:
  o Emission Reduction Financial Assistance
  o Emission Reduction Technical Assistance
  o Research, Development & Demonstration
  o Low-Carbon Procurement Policies
  o Rate Design: Low-Cost Power Programs, and
  o Economic Incentives.

• Panel members then discussed Policy Options and made a number of observations and comments, including the following:
  o When reducing emissions, scale is extremely important because it reduces cost. The Advisory Panel should not limit itself only to what the industrial sector can do on its own but should interact with other Advisory Panels on broader solutions. We should look at the Canadian program, which is rolling out a carbon fuel standard across its entire economy.
  o There has been little attention to nuclear energy under the CLCPA.
  o The process of fuel switching in NYS is difficult and a barrier to using low-carbon fuels.
  o Low-carbon procurement programs rely on honest and accurate reporting from other countries.
  o Workforce development efforts should be leveraged for Environmental Justice purposes.
  o Innovation programs should be married to Environmental Justice communities.
  o There should be an emphasis on innovation and pilot programs
  o NYS has good R&D Programs. They all need government support.
  o Before pursuing innovation, we should determine what could be accomplished by implementing already existing solutions.

• Chair Gertler then addressed Next Steps:
  o The next Panel meeting will be held on November 18th for a more detailed discussion of potential policy recommendations.
  o The Panel and public should submit and potential recommendations options for consideration to climate@esd.ny.gov.

• Chair Gertler then asked for any final questions or comments from the Panel before concluding the meeting.