

Enhancing Industrial Competitiveness by Reducing Emissions

Columbus Roundtable – December 15-16, 2020

Key Takeaways

Overarching Themes

- Education is key for internal and external stakeholders, particularly on clean thermal heat, which is often blended with discussions on electricity, even though they are distinctly different in technology and applications. Educating facility employees and executives on the value created by energy efficiency projects is critical to get internal buy-in.
- Energy efficiency for the industrial sector is simpler and has clearer paybacks than clean thermal heat. Companies can and should take advantage of opportunities to save money and improve their competitiveness through energy efficiency while assessing electrification possibilities and other solutions for addressing their thermal footprint.
- The global nature of industrial markets requires a coordinated federal and state policy landscape that leans into innovation and creating economic incentives to facilitate decarbonization.
- EPA and DOE have high-quality programs available to provide efficiency program and project support to companies. EPA's ENERGY STAR Industrial Program Team out of the Region 5 office has been a good partner for companies. For small and mid-sized companies that don't always have the bandwidth to assess energy savings opportunities, DOE's [Industrial Assessment Centers](#) can be a resource. DOE's Advanced Manufacturing Office is another resource, and its green plants program is underutilized.
- National policy is key: a carbon price or financial incentive to reduce emissions would be helpful, particularly in tandem with competitive support for energy intensive, trade exposed industries. Incentives-based policies for industrial manufacturers are more likely to be effective at reducing emissions while preventing carbon leakage.
- Policymakers, including local regional planning organizations, are often willing partners for industry, and can be a resource. Education and trust-building are key first steps to successful public-private partnerships.

Session 1: INDUSTRIAL ENERGY EFFICIENCY

- Internal incentives – including competitions and prizes for energy teams, as well as executive/employee compensation – have been among the most effective internal measures at creating energy savings.
- Eliminating internal silos between company departments can help educate employees and reduce roadblocks to efficiency project implementation.
- Creating roadmaps for retrofits – even if they're not currently cost-effective – can be useful in an evolving policy landscape that might lead to future opportunities.

- A useful exercise is “treasure hunting” – seeking low or no cost improvements to energy efficiency. This also presents opportunities for collaboration up and down the supply chain, and can facilitate broad peer to peer information exchange.
- Trust is a key challenge: facility managers need to be able to trust utility commissions, agencies, and technology vendors about the reality of energy savings in order to implement projects.
- Peer to peer exchanges and support on best practices are a highly-effective and low-cost, way to boost efficiency projects. Policymakers at all levels should prioritize ways to foster those opportunities.
- Properly designed, utility rebate programs would help improve project implementation rates. Power market reforms could also provide a key opportunity to drive efficiency projects.
- Cities need more information on industrial energy consumption, including utility data, to better focus their efficiency programs such as aggregated energy procurement.
- Transparency measures, including benchmarking and financial and physical risk disclosure, can help leverage competition to drive emissions reduction.

Session 2: CLEAN THERMAL HEAT IN THE INDUSTRIAL SECTOR

- There is no one-size fits all solution as thermal needs vary greatly across different manufacturing processes and industries, creating challenges to educating policymakers.
- There is insufficient policy support for making clean thermal heat technologies available to companies at competitive costs, and more could be done at the state and federal levels to accelerate their deployment.
- Aggregating demand, including through industrial parks or 2030 districts, can be a key opportunity to procure clean thermal heat.
- CHP can help organizations achieve energy efficiency, reduce costs, build resiliency, and lower overall emissions, often very quickly.
- Organizations need to carefully consider how CHP fits into their long-term emissions portfolios, and whether these systems could create long-term obstacles to more significant emissions reductions. Renewable natural gas and blue or green hydrogen could both provide optionality, particularly long-term.
- Reliability concerns about electricity suggest the need for clean molecules that can deliver low-carbon heat, even though electrification may lead to lower operational costs.
- For the auto industry, opportunities will arise to update some facilities in the next decade and need to be prioritized given the long-lived nature of assets like automobile paint shops, which can last 20-30 years.