



Building Washington's Clean Materials Manufacturing Economy

Distillation of Facilitated Discussions: June 28, 2022

The Building Washington's Clean Materials Manufacturing Summit took place virtually on June 23 and in-person on June 28, 2022, where approximately 50 clean materials manufacturing stakeholders—policymakers; Department of Commerce and Ecology staff; labor unions; environmental groups; and materials manufacturers—gathered to discuss how to make Washington state a clean materials manufacturing center.

During the afternoon of the in-person Summit, participants gathered in three groups of 10–15 people for facilitated discussions. The discussions were designed to address the question:

“What are Washington’s top opportunities and needs related to clean materials manufacturing?”

The following distillation summarizes the proceedings of those discussions. The discussion notes represent a compilation of the ideas that participants suggested for how to address the opportunities and needs related to building Washington's clean materials manufacturing economy. The notes are grouped by topic and listed in the order of prioritization based on dot-voting by each of the three groups of participants. The dot-voting indicated the relative importance of the topic areas but not a consensus of the group as the facilitation was not designed to result in consensus.

Policy and Funding

Participants observed that there is currently no clear articulation of Washington's commitment to grow manufacturing while reducing emissions and suggested that the state needs to develop a clean industrial/manufacturing policy that is climate-aware and encourages manufacturing that supports the clean energy transition.

The following needs/opportunities were suggested to move the state toward developing such a policy:

- Create a formal process and tools for how to evaluate and prioritize clean manufacturing projects
- Develop a long-term game plan for industry
- Break down silos in government agencies that all play parts in industrial decarbonization
- Provide legislative/regulatory clarity, transparency, and predictability with attainable goals

- Resolve rules for energy-intensive and trade exposed (EITE) industries to provide certainty and reward emissions reductions
- Ensure compliance flexibility as industrial policy is not one size fits all
- Increase clarity and accuracy with data measurement to inform an industrial policy
- Develop trade policy(ies) to provide fair market comparable sales and to make materials manufacturing more valuable

Participants discussed Buy Clean/Buy Fair (HB 1103) legislation in Washington.

Related to this policy, participants noted the following would be desirable:

- Creating a stakeholder roundtable to tease out and resolve issues
- Providing more information and education to explain how the policy would work
- Looking to other states that have passed similar legislation to understand how BCBF might impact Washington
- Ensuring uniform environmental product declarations (EPDs) and early reporting
- Reducing the percentage of clinker in concrete

Workforce

Participants suggested that there is a significant opportunity to grow the economy while meeting required environmental standards. They identified the need to strategically expand Washington’s manufacturing workforce in Washington while also protecting existing jobs.

To accomplish this, participants identified the following priorities:

- Attract new talent and retain existing talent
- Develop the new skills that the clean manufacturing economy requires while retaining “old” skills that are still needed
- Proactively develop a job retention strategy as retaining workers is a huge challenge
- Shift the state’s culture to embrace industrial policy and onshore jobs: Can we bring manufacturing back to the U.S.?
- Include labor standards in the state’s industrial policy
- Develop co-located clusters of related manufacturers to promote synergy
- Create carbon border adjustments to keep jobs and EITEs here
- Develop a rural workforce to bring economic benefits to rural communities

Participants discussed the need for investment in education and training pathways.

Participants indicated that this requires:

- Manufacturers playing a role in training new workers
- Investing in re-training: skills transfer, in-house training, etc.

- Trade Adjustment Assistance Program provides re-training for industries that are forced to close operations
- Developing continued education and apprenticeship programs to develop workforce
- Engaging the next generation of workforce
- Using an equity lens when developing training and partnerships for clean manufacturing jobs: Consider unions, tribes, community groups, colleges, etc.

Clean manufacturing and related industries are an opportunity to stabilize troubling workforce trends. If we are intentional, growing our manufacturing base can be an equitable solution for wealth disparities.

Participants said intentionality would mean addressing:

- The high cost of living is currently an obstacle. Consider childcare, housing, community benefit agreements, etc.
- Ensuring that new jobs are good paying union jobs
- Investment in facilities happens with clear return on investment (ROI), which then leads to more competitive job opportunities

Clean Electricity

Clean electricity can play a role in decarbonizing certain aspects of producing energy-intensive materials. But switching fossil fuel-dependent processing to electrification presents challenges. Participants noted the need to significantly increase clean electricity in Washington to meet demand growth and suggested multiple opportunities exist to address this critical clean materials manufacturing need.

These opportunities include:

- Grow clean and renewable power:
 - Explore research and development (R & D) for future technologies (consider nuclear, geothermal, offshore wind to power green hydrogen)
 - Build more solar and wind energy infrastructure
 - Streamline transmission project permit requirements
- Quantify the clean electricity load that is needed
- Align and coordinate efforts to address reliability and resource adequacy problems
 - Examine the role of Bonneville Power Administration (BPA)
 - Allow the BPA to resume direct service contracts
- Develop distributed energy resources (production and consumption)
- Balance generation and load
 - Opportunity to use industrial energy as grid balancing (e.g., thermal)
 - Create incentives for manufacturing to be more flexible during peak hours

- Consider the role of the state regarding analysis (e.g., least conflict solar)
- Examine outdated rules (e.g., Kent solar)
- Consider the roles of software and data operability
- Develop time and geography-based accounting for renewable energy attributes (e.g., T-RECS)
- Ensure that utilities harden distribution (last mile)

Hydrogen

Participants suggested the need for a clearer long-term vision for the role that hydrogen might play in decarbonizing energy-intensive materials manufacturing in Washington.

Participants indicated this would mean:

- Additionality: New renewable energy for hydrogen electrolysis
- Addressing questions related to hydrogen:
 - o Does developing hydrogen infrastructure perpetuate the use of fossil gas?
 - o Can hydrogen play a role in fuel cells in light-duty vehicles (LDVs)?
- Leveling the playing field among fuels
- Pursuing a Hydrogen Hub as an opportunity for Washington
 - o Need policy, financial support, and prioritization to take advantage of this federal funding opportunity
 - o Must think about the HEAL Act and environmental justice considerations
 - o Must ensure safety and community engagement
- Hydrogen can also play a role in balancing generation and load

Market Development & Competitiveness

Participants expressed the need to create a market for clean manufacturing of materials and promote competitiveness.

This could include:

- Market development
 - o Pacific Northwest can be a hub for clean materials manufacturing and innovation
 - o Customers must be willing to pay more money for lower-carbon materials (EPD markets)
 - o Need to understand economics of industrial decarbonization: what is the right balance of regulation and public investment?
 - o Need to create a market for products currently made elsewhere
 - o Leverage Washington’s energy and climate policies, including the Climate Commitment Act (CCA)

- Use purchasing power to encourage clean product manufacturing
- Competitiveness
 - Culture shift = “We make things here” (re/onshoring U.S. manufacturing)
 - Washington already has low carbon competitive advantage and the opportunity to onshore clean manufacturing
 - Take advantage of tech sector growth to drive lower carbon-built environment processes
 - Consider challenges:
 - Leakage (when addressing global problems at the state scale)
 - Existing high-cost environment
 - Competition with other states
 - Identify current regulations to avoid duplication and strive for complementary policies
 - We need multiple pathways for manufacturers to meet goals
 - We need a commitment and glide path on return for investment for companies
 - Need insulation of higher carbon manufacturing products from intruding in green market

Participants wanted to promote a culture of innovation and access to funding to advance our industrial decarbonization goals.

Participants indicated that this could achieve multiple aims:

- De-risk alternative fuel projects for manufacturers by providing R & D money for low-carbon materials, etc.
- Create more win-win scenarios that reward those doing better (we need carrots and not just stick to incentivize investing in innovation)
- Position Washington as a major recipient of federal investment (e.g., 2021 DOE grants for carbon capture pilot project) and increase awareness of funding available through the federal Infrastructure Investment and Jobs Act
- Help deliver state and federal support targeting rural development

Data / Measurement

Participants noted that data management is foundational to how we to have a level playing field in the clean materials manufacturing economy and that data management is currently inconsistent and not connected to policy. Participants noted there is no “one size fits all,” so compliance flexibility and consistency/uniformity are needed in how to report.

This could entail:

- Fair and reliable material disclosure to know who is doing better
 - Standardization of environmental product declarations (EPDs)
 - Predictable processes for how low-carbon data is evaluated

- Education on best practice on low-carbon reporting and product lifecycle assessment (LCA) use
- Recognition that transparent embodied carbon metrics are good for companies, consumers, and communities
- Continued opportunities for stakeholders to convene and problem-solve
- Collaborative access to data
- Integration of data management processes in industrial policy
- Understanding that data can be a useful tool for communication

Participants indicated there are data needs related to clean materials manufacturing.

These could include:

- Quantitative analysis of the need for industrial fuels/energy use
- Ways to assess embodied carbon/consumption-based information
- Assessment of workforce needs
- Improved timeliness, granularity, and process of the Washington state greenhouse gas inventory

Siting

Participants discussed the issues relating to siting and the need to improve the siting process for clean manufacturing facilities.

Participants suggested the following issues to address:

- Current siting feels like “flog it until it’s dead”
- Engage all stakeholders, including environmental advocacy and environmental justice groups
- Let the new Energy Facility Site Evaluation Council (EFSEC) process play out. ([E2SHB 1812](#), which passed during the 2022 legislative session, is supposed to modernize siting and permitting for clean energy product manufacturing)
- Explore policy and budget for 2023 legislative session for addressing siting challenges
- Reform permitting processes to address both new and existing facilities
- Create long-term certainty, a clear time frame, and aligned permit requirements

Stakeholder Engagement and Collaboration

Participants noted the need for continued opportunities for stakeholder engagement and collaboration.

This could achieve multiple outcomes:

- Continue discussions and build alliances between different stakeholders, including environmental groups, labor unions, policymakers, manufacturers, and other interest groups
- Connect manufacturers with project designers
- Build public/stakeholder buy-in by making opportunities more tangible
- Build buy-in and trust
 - o Current obstacles = public opinion and industry recalcitrance
- Intersectional coordination
 - o Educate decision/ policymakers, coordinate a communication strategy
- Collaboration at all levels, including local

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