Knowledge Brief
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Policies to Expand the Use and Production of Low-Carbon Materials in Washington

COLLEGE OF BUILT ENVIRONMENTS
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CLF Carbon Leadership Forum

This knowledge brief provides an overview of (RCW 39.116.050):

1. *Policies to expand the use and production of low carbon materials, preserve and expand low carbon materials manufacturing in Washington…*

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Introduction

This brief explains how low-carbon materials can be supported in Washington State. First, it explains how policies can expand the *use* of these materials. Then it explains how policies can support the *production* of these materials. This brief does not aim to provide a comprehensive list of policies, but instead aims to showcase real world policy examples as guidance for future policy in Washington.

Policies to Expand the Use of Low-Carbon Materials

This section provides an overview of policy ideas that could increase the demand for, and thereby the use of, low-carbon materials. This section also provides direct examples of existing policies that Washington can use as guidance in their own future policy development efforts. These policies are organized into the following categories:

1. Options to expand the scope of Buy Clean and Buy Fair (BCBF) WA
2. Require or incentivize higher-quality data on state projects
3. Incentivize GHG reductions on state projects
4. Collect project-wide embodied carbon data
5. Review opportunities to reduce embodied carbon in state building code
6. Advance Purchase Agreements

Each category of policy ideas, along with examples of similar existing policies, is described more in its respective subsections below.

1. Options to expand the scope of Buy Clean and Buy Fair (BCBF) WA

This subsection presents six ideas to expand the current scope of BCBF WA to help support the adoption of low-carbon materials.

A. Reduce the size (square footage) of buildings that need to comply so that more buildings are required to meet BCBF.

- BCBF WA currently requires that projects larger than 100,000 gross square feet must comply starting July 2025 to December 2026, and starting July 2027, projects larger than 50,000 square feet will need to comply. The project thresholds could be reduced or the timeline moved up to increase the number of projects.

- Other state Buy Clean project size thresholds vary and include:
    - The **Minnesota Buy Clean and Buy Fair Act** requires supply chain-specific EPDs for concrete in state-funded construction projects starting in 2026, and applies to buildings greater than 50,000 sf, both new construction and renovations. In 2028, EPDs will be required as well as GWP limits for all covered

materials, including concrete, rebar, structural steel, asphalt mixtures and concrete pavement.

- The **Colorado Buy Clean Act**, passed in 2021, applies to State public projects starting in 2024 - both buildings and infrastructure - for which the project cost exceeds $500,000. The law also required the Office of the State Architect (OSA) to establish a maximum acceptable global warming potential (GWP) limit for each category of eligible materials. The GWP limits were updated in 2026.
- **New York State's 2021 Low Embodied Carbon Concrete Leadership Act (LECCLA)** project threshold, for concrete only, applies to state agency contracts exceeding $1 million that involve the use of at least 50 cubic yards of concrete.
- The 2023 **New Jersey Low Embodied Carbon Concrete Leadership Act (LECCLA)** threshold, for concrete only, applies to projects starting in 2024 that supply at least 50 yards of concrete for state-funded construction projects.

B. Expand the 'covered project' definition and scope to include infrastructure projects as well as buildings.

BCBF WA currently applies to 'awarding authorities' which are defined as, "institutions of higher education, the Department of enterprise services, the Department of natural resources, the state parks and recreation commission, the Department of fish and wildlife, and the Department of transportation; and any other state government agency that receives funding from the omnibus capital appropriations act for a public works project contracted directly by the state agency."

BCBF WA defines a 'covered project' as, "a construction project larger than 50,000 gross square feet, or a building renovation project where the cost is greater than 50 percent of the assessed value, and the project is larger than 50,000 gross square feet of occupied or conditioned space."

Therefore, although awarding authorities that build infrastructure projects are included, such as the Department of Transportation (DOT), the definition of covered projects includes only building projects as defined by gross square footage, not roadways or other horizontal construction. The covered project definition could be expanded to include infrastructure projects, thereby increasing the demand for low carbon construction materials.

- State Buy Clean bills that include infrastructure projects include:
  - The **Buy Clean California Act** established the maximum acceptable GWP limits for four eligible materials, including structural steel, concrete reinforcing steel, flat glass, and insulation. All public works projects, including the CA Department of Transportation (DOT), High-Speed Rail Authority and other agencies that build infrastructure, must comply.

- The **New York State Buy Clean Concrete Guidelines**, effective as of 2022, apply to both building and transportation projects exceeding $1 million that involve the use of at least 50 cubic yards of concrete, or NYS Department of Transportation (DOT) contracts greater than $3 million, which include a concrete pay item with an estimated quantity of at least 200 cubic yards.
- **New Jersey's Low Embodied Carbon Concrete Leadership Act (LECCLA)** applies to any state agency when entering into a contract for the purchase of 50 cubic yards or more of concrete. In this bill, concrete is defined as structural and non-structural masonry, pre-cast and ready-mix concrete building products.
- **Buy Clean Colorado** applies to state projects starting in 2024. Public projects include 'any construction, alteration, repair, demolition, or improvement of any land, building, structure, facility, road, or bridge.' The Colorado Department of Transportation (CDOT) administers the program relevant to horizontal construction projects.
- **Buy Clean Oregon**, signed in 2022, applies to transportation infrastructure projects only. It requires the Oregon Department of Transportation (ODOT) to establish a program to reduce GHG emissions and conduct LCAs for select construction and maintenance activities, and devise strategies for reducing greenhouse gas emissions.
- **Minnesota Buy Clean Buy Fair** requires EPDs for state-funded construction projects starting in 2026, including the construction or reconstruction of two or more lane miles of trunk highway. It requires reporting of supply chain specific EPDs and to set global warming potential limits for concrete pavement, asphalt, carbon steel rebar, and structural steel by 2028.

C. Add additional materials to the list of covered products.

BCBF WA currently requires the collection of EPDs and other data for 'covered products' which include the following in the categories of concrete, wood, and steel products:

- Structural concrete products of the following types:
  - Ready mix (cast-in-place) concrete
  - Shotcrete
  - Precast concrete
  - Concrete masonry units (CMU)
- Reinforcing steel products of the following types:
  - Rebar
  - Post-tensioning tendons
- Structural steel products of the following types:
  - Hot-rolled structural steel

    - Hollow structural steel
    - Metal deck
    - Structural steel plate
- Wood products of the following types:
    - Glue laminated beams and timbers (Glulam)
    - Cross laminated timber (CLT)
    - Dowel laminated timber (DLT)
    - Nail laminated timber (NLT)
    - Laminated veneer lumber
    - Parallel strand lumber
    - Prefabricated wood joists
    - Wood structural panels
    - Solid sawn and structural lumber
    - Structural composite lumber

The BCBF WA covered product types could be expanded to add additional products and materials. An expanded list of materials would increase mandatory EPD reporting, which would give project teams the information needed to choose lower carbon products. Other materials covered by state Buy Clean bills include:

- Insulation: The **Buy Clean California Act** was updated in 2025 to include all types of insulation.
- Glass: Glass is included in the list of eligible or covered materials in **Buy Clean California** (flat glass), **Buy Clean Colorado** (flat glass), and **New York State Executive Order 22** (flat glass, processed glass and insulated glazing units).
- Asphalt: Asphalt is included in the list of eligible or covered materials in **Colorado Buy Clean**, **Minnesota Buy Clean Buy Fair**, **Buy Clean Oregon**, and **New York State Executive Order 22.**
- In January 2026, **Buy Clean Colorado** added new eligible material subcategories (with GWP limits) for Concrete Masonry Units (CMU), Steel Roof and Floor Deck, and Open-Web Steel Joist and Joist Girders.

D. Add a requirement for covered products to meet material-specific global warming potential (GWP) limits.

Reporting or disclosure of a product GWP is typically required in Buy Clean policies, whereas the inclusion of GWP limits and/or incentives varies by region and agency. Possible outcomes of using GWP limits include:

- Encourages domestic low-carbon manufacturing solutions and discourages emissions outsourcing
- Encourages innovation and development of new material decarbonization strategies

- Rewards companies that already invested in reducing their carbon footprint and encourage more
- Supports tracking of emissions reductions

State Buy Clean bills that include GWP limits are:

- **Buy Clean California**'s GWP limits for all eligible materials first took effect on January 1, 2022. Updated GWP limits for concrete reinforcing steel and mineral wool board insulation took effect on January 1, 2025. The limits are set by the Department of General Services (DGS) Procurement Division in consultation with the California Air Resources Board (CARB), and are set at the industry average of facility-specific GWP for that material.
- The **Colorado Buy Clean Act** took effect in 2024 and requires the Office of the State Architect (OSA) to establish a maximum acceptable GWP limit for each category of eligible materials. The GWP limits are reviewed annually and were updated in January 2026 to reflect available industry data and add additional eligible material categories.
- **NYS Buy Clean Concrete**, starting in January 2025, requires EPDs for all concrete mixes, and that mixes not exceed 150% of the National Ready Mixed Concrete Association's (NRMCA) regional baselines, equivalent to 150% of the average emissions for concrete mixes in the Eastern Region. In 2027, the limits will be revised and lowered using New York-specific data collected through the Executive Order 22 reporting effort.
- **Minnesota's Buy Clean Buy Fair Act** began from July to December 2025 with the collection of EPDs for eligible materials. In January 2026, GWP thresholds were established for ready-mix concrete used in buildings and carbon steel rebar used in buildings, to take effect for projects after July 15, 2026. GWP limits for other eligible materials/products will be set by 2028 as required by legislation.
- **Buy Clean Maryland**, passed in 2023, requires the Department of General Services to assess and establish a maximum acceptable GWP limit for eligible materials. DGS is required by the Buy Clean Maryland Act to base the maximum acceptable GWP on the industry average of GWP emissions for that material.

2. Require or incentivize higher-quality data on state projects

Although there are currently no examples of this type of incentive, a policy could theoretically incentivize higher-quality data on state projects by offering tax incentives or rebates for state projects that use higher-quality EPDs. Alternatively, a policy could *require* submission of higher-quality or supply chain specific EPDs. For more information about what "higher-quality EPDs" means, see the forthcoming BCBF Report #1, "Improving EPD Data Quality."

Another policy to incentivize higher-quality data could be to create a state assistance program to support sawmills in collecting and sharing wood sourcing data such as percent contribution of annual mill throughput by county and landownership type.

3. Incentivize GHG reductions on state projects

Policies could encourage the adoption of low-carbon materials by incentivizing GHG reductions in construction projects. This could be done by (1) providing incentives for meeting product or material GWP limits, or (2) providing incentives or low-interest loans for purchasing lower-carbon materials. Each of these mechanisms is described in more detail below, including examples.

A. Incentives for meeting product/material GWP limits.

Incentives could be structured as tax incentives or rebates as a "reward" for meeting GWP limits. Examples of each of these are presented below.

- **Tax Incentives:** As of July 2024, construction materials that are eligible for Buy Clean Colorado are now exempt from the Colorado Sales and Use tax. This exemption has also been proposed in 2025 NY Senate Bill S07648, alongside a state-maintained registry of eligible materials. New Jersey passed a Low Embodied Carbon Concrete Leadership Act (LECCLA) that includes a tax credit of up to 8% of contract cost for companies that supply ready mix concrete below an established GWP threshold.
- **Rebates:** New Mexico House Bill 153- Low-Carbon Construction Material Rebate Act, was proposed in February 2026 to provide financial incentives to material buyers who purchase low-carbon construction materials. Rebates would include: (1) a maximum of $500,000 per project; and (2) a maximum rebate of $10,000,000 statewide per fiscal year. The Department of Environment would establish emissions baselines based on regional industry-average emissions data, and benchmarks for low-carbon materials may be set up to 15% lower than the baselines.

B. Incentives/low-interest loans for purchasing lower-carbon materials for projects.

Incentives could also be structured as loans for purchasing lower-carbon materials for projects. An example of this is shown below.

- **Colorado** is the first state to add embodied carbon improvements to the list of energy improvements that are eligible for **Commercial Property Assessed Clean Energy (C-PACE)** loan programs. Colorado SB25-182 passed in 2025, allowing financing to be used for eligible materials that result in a reduction of embodied carbon emissions. Since 2008, C-PACE programs have been enacted in over 40 states, providing financing for energy efficiency, electrification, and resilience upgrades for property owners, and current proposals in several states, if enacted, would allow for embodied carbon reductions to use that financing. RMI launched a C-PACE Embodied Carbon Model

Policy Primer in February 2026 to support administrators and legislators in implementing embodied carbon provisions into their programs.

- Oregon DEQ's Clean Water **State Revolving Fund** provides principal loan forgiveness on loans up to 50 percent but not exceeding $500,000, of the project costs associated with using low carbon concrete or other "green" materials in wastewater and storm water projects.

4. Collect project-wide embodied carbon data

Another way that a policy could advance the adoption of low-carbon materials is to require the collection of project-level embodied carbon data. This can be done by (1) creating requirements or incentives to do whole building LCA, (2) adding whole building LCA guidance and standards into state design guidelines and specifications, (3) funding pilot projects that demonstrate the use and reuse of low-carbon materials, or 4) requiring scope 3 emissions reporting. Each of these methods, along with real-world policy examples, are described more below.

A. Collect project-level embodied carbon data by creating a requirement to do a whole building LCA for state projects

Many of these policy types occur at the city level, but some state-level examples that require LCA include:

- **Executive orders:**
  - **New York State Executive Order 22**: establishes an interagency council (GreenNY Council) and a range of sustainability and decarbonization initiatives to be led by New York State Agencies. Related to embodied carbon, GreenNY Council is directed to issue Operational Directives and guidance for reducing embodied carbon in common construction materials. Additionally, starting January 1, 2023, public agencies must reduce the embodied carbon on new construction and adaptive reuse costing greater than 50% of the cost of new construction by (1) calculating the total embodied carbon that will result from the project during design and then (2) requiring EPDs during bidding.
  - **Massachusetts Executive Order 594**: 'Decarbonizing and Minimizing Environmental Impacts of State Government' - requires all new construction and substantial renovations funded by the Massachusetts Commonwealth to meet a number of energy and transportation targets. As a part of this executive order, projects must evaluate and implement strategies to reduce embodied carbon contained in building materials.

B. Add whole building LCA guidance and standards into state design guidelines and specifications, such as:

- **The City of Vancouver's 2023 Embodied Carbon Guidelines**, which were later adapted to be **Canada's National Whole-Building Life Cycle Assessment Practitioner's Guide** in 2024, provide instruction for how to assess and demonstrate reductions in the estimated embodied carbon of designs for the new construction or renovation of buildings in Canada.
- **Minnesota's B3 Program** ("B3" stands for "Buildings, Benchmarks, and Beyond") contains a set of guidelines and tools including EPD collection and WBLCA criteria, with the goal of reducing embodied carbon. The B3 programs were developed for and are required on State-funded projects in Minnesota.
- The **Port Authority of New York-New Jersey (PANYNJ) Clean Construction Program** incorporates several initiatives to reduce embodied emissions in PANYNJ projects, both buildings and infrastructure, including design guidelines that incorporate:
    - LEED and Envision-aligned sustainability standards
    - Sustainable construction requirements (specifications), including low-carbon concrete mixes, low-emission construction vehicles, and construction waste reduction.
    - Environmental Product Declaration (EPD) requirements, supporting systematic collection of environmental data to further improve practices and track progress agency-wide.
- The **Massachusetts Port Authority** **2025 Sustainability Design Guidelines** include the following provisions to address embodied carbon:
    - Evaluate whether an existing building might be able to serve the project needs through renovation rather than new build using The Carbon Avoided: Retrofit Estimator (CARE) tool.
    - All building projects with new structural scope shall analyze multiple structural systems and provide a comparative analysis of GWP.
    - All new construction and existing building renovations shall demonstrate a 20% reduction in the embodied carbon (GWP) of primary materials (foundation, structure, enclosure) compared to an equivalent baseline.
    - Consider using low-carbon concrete provided it meets all other applicable requirements. Refer to the most current GWP baselines and target a 20% reduction.
    - Select materials with lower than industry baseline embodied carbon emissions in product categories for which data is readily available (including carpet, ceiling tiles, insulation, and gypsum wallboard at a minimum).
    - Specify the tracking of construction stage emissions, including transportation of materials to the job site and onsite construction and installation emissions.

    - For infrastructure projects, achieve the Envision credit for Reduce Net Embodied Carbon.

- The **Oregon Department of Environmental Quality (DEQ) Low-Embodied Carbon Housing Program** provides rebates to support the development of new lower-embodied carbon housing units. DEQ received $25.6 million to create the program and offers incentives of $20,000 per unit for space efficient new construction and $45,000 per unit for commercial to residential conversions. The program published a Low Embodied Carbon Compliance Guidebook and embodied carbon reporting form, both developed with the Carbon Leadership Forum.
- Another pathway is to require that state projects achieve LEED certification, as the newest **LEED version 5 (v5)** now includes a prerequisite and a credit for embodied carbon assessment and reductions:
    - *MR Prerequisite 2: Quantify and Assess Embodied Carbon* requires a cradle-to-gate (A1–A3) assessment of, at a minimum, asphalt, concrete, masonry, structural steel, insulation, aluminum extrusions, structural wood and composites, cladding, and glass.
    - *MR Credit 2: Reduce Embodied Carbon* requires the quantification and reduction of embodied carbon of all major structure, enclosure, and hardscape materials, either through a WBLCA or EPD analysis.

C. Fund pilot projects that demonstrate the use and reuse of low-carbon materials and develop circular economy case studies at the project scale

As a precursor to a policy that promotes materials reuse and the circular economy, state-funded pilot project case studies can demonstrate successful implementation.

- As part of the **Seattle** Deconstruction Incentive Pilot Program, Sound Transit deconstructed 15 buildings in 2009 to make way for a light rail station. In this case study, two public agencies collaborated on an innovative new way to approach projects, and it resulted in over 29 tons of salvaged materials valued at $90,000.
- The **Massachusetts** Interior Planning and Design Management (IPDM) unit of the Division of Capital Asset Management and Maintenance (DCAMM) recently completed an extensive interiors reuse project, in which they identified thousands of workstations and private office components across state-owned and leased buildings that could be harvested, refabricated, and reused. The success of the pilot has led to the program's continuation.
- The **Pennsylvania** Recycling Markets Center Corporation is an independent non-profit whose mission is to reduce or eliminate barriers that lead to new and expanded use of Pennsylvania's recycled materials. They initially received launch funding from the Pennsylvania Department of Environmental Protection, and address many materials, including construction materials.

5. Review opportunities to reduce embodied carbon in state building code

Integrating low-carbon materials into the state building code is another way to encourage the adoption of low-carbon materials. This can be done by reviewing the current state building code for opportunities to introduce embodied carbon requirements or appendices. The following policies exemplify how building codes can reduce embodied carbon, thus encouraging the adoption of low-carbon materials:

- **CalGreen (Title 24, Part 11)** was the nation's first mandatory green building code to include embodied carbon requirements. As of July 1, 2024, large commercial and school buildings must reduce embodied carbon through (1) building reuse, (2) achieving WBLCA-based reduction targets, or (3) meeting product GWP limits.
- The **Oregon 2023 Climate Omnibus Bill** includes 3 opportunities to address embodied carbon by -
    - (1) directing State agencies to identify opportunities within Oregon Building Code and other means to reduce GHG emissions from construction materials,
    - (2) directing agencies to oversee all capital projects to meet certain requirements, and also sets requirements for developing sustainable design standards for state buildings, and
    - (3) directing the Dept of Environmental Quality to update the state's consumption-based emission inventory and identify opportunities to reduce consumption-based emissions (which includes embodied carbon of construction materials).
- The **2026 Massachusetts Embodied Carbon Reduction Plan**, developed through legislation, outlines nine recommendations for the state to undertake to reduce embodied carbon, including:
    - Recommendation 9: Building Code, which directs the Board of Building Regulations and Standards (BBRS) to incorporate energy efficiency credits for low carbon concrete and insulation into the base state building code, and determine the appropriate timeline to adopt base building code provisions aimed at reducing EC, with multiple paths to achieving compliance.
- There are many ongoing proposals to update state and model codes, such as a voluntary appendix to Washington's building code and multiple proposals to the IBC and IECC. In early 2026, the ICC Board determined that Embodied Carbon provisions will be limited to IgCC and IECC in model codes, so future efforts will be limited to these model codes.

6. Advance Purchase Agreements

A type of policy that could support the use of low-carbon materials in construction is an Advance Purchase Agreement. An Advance Purchase Agreement is an agreement made between a buyer and a seller for a product that is still in development, thereby providing funding for the manufacturer to

scale production. **Brief #1: Embodied Carbon Policy Trends and Alignment Opportunities** includes a detailed section on Advanced Purchasing Commitments with policy examples.

One example that could serve as a model for low-carbon materials is the Cascadia Sustainable Aviation Accelerator, a sustainable aviation fuel (SAF) accelerator program in Washington. Currently, there are no commercial-scale SAF production facilities in Washington state, but several are in development. The accelerator program has designated $20 million to accelerate production, deployment, and adoption of sustainable aviation fuel across the Pacific Northwest (PNW). A similar program could be established to accelerate the production, deployment and adoption of low carbon construction materials.

Scope 3 Emissions Accounting

Purchase agreements in the private sector are partially in response to the growing pressure for companies to be accountable for their Scope 3 emissions, which include the emissions from purchased construction materials. For example:

- California's Climate Corporate Data Accountability Act (CCDAA) requires large companies to disclose their Scope 3 supply chain emissions beginning in 2027, meaning companies need to collect this data in 2026.
- Science Based Targets Initiative (SBTI) now requires companies to set and meet scope 3 targets if Scope represents over 40% of their total emissions.

Policies to Expand Production of Low-Carbon Materials

Demand side incentives are more common and often easier to implement, but can only be successful if complemented by an available supply of low carbon materials. Although low-carbon materials manufacturing is already active in Washington State, this sector has room to expand in scope and sophistication. Barriers to increased production of low carbon concrete and other materials and products exist in Washington state and could be addressed through supply-side policy. Legislative Report 1 identifies some of the key barriers and recommended actions by industry to advance low-carbon construction in Washington. The section below goes into more detail on a selection of the policies highlighted in Legislative Report #1 with a focus on providing real world examples of these policies.

1. Incentives for manufacturers to reduce emissions and produce high-quality data

Providing financial incentives can be an effective policy approach for governments to encourage industrial sector decarbonization and the production of lower-carbon materials. Supply-side policies that provide incentives can reduce risk, help to level the competitive industrial sector playing field, and bridge the cost gap between established and emerging technologies.

Supply-side incentives fall into several categories, including:

- **Direct grants** for research and development, pilot projects, facility improvements and supply chain data transparency (EPD production)
- State-level **tax credits**, exemptions, or adders

Each of these categories of supply-side incentives is detailed more in the subsections below.

A. Direct Grants

Direct grants can expand the production of low-carbon materials in the following ways:

- **Incentivize local Environmental Product Declaration (EPD) development for small manufacturers through financial, technical, or educational support.** Examples include:
    - **Massachusetts Concrete EPD Grant Program:** The Massachusetts Clean Energy Center (MassCEC) has funded the Massachusetts Concrete and Aggregate Producers Association (MaCAPA) to partially offset the costs of onboarding EPD generation software and generating third-party site-specific EPDs.
    - **Oregon Concrete EPD Program:** This program was a partnership between Oregon DEQ and Oregon Concrete and Aggregates Producer Association

(OCAPA) to help concrete businesses measure and disclose the environmental impacts of their concrete mixes using EPDs.

  - **Minnesota EPD Grant Program:** Administered through its Department of Transportation (MnDOT) to help producers create EPDs for asphalt and concrete. Minnesota secured $565,000 in total EPD funding from the Department of Administration. The University of Minnesota's Center for Sustainable Building Research administered the program. Grants closed on February 7, 2025.
    - Asphalt EPD program
    - Concrete EPD program
  - The **Buy Clean Maryland Act** includes an EPD Assistance Fund, administered by the Department of Commerce, that awards grants to producers of eligible materials. The fund supports the development, standardization, and transparency of EPDs and consists of money appropriated in the state budget.

- **Provide grants for facility improvements and administrative compliance to address the administrative and financial burden of compliance.** Examples of states that have enacted similar policies are described below:
  - **Colorado** passed the Air Quality Improvement Investments Bill in 2022, resulting in the creation of the Clean Air Program. It provides reimbursement-based grants for industrial and manufacturing facilities that voluntarily reduce their GHG emissions and air pollutants. The Colorado Energy Office offers technical assistance to help eligible facilities identify decarbonization opportunities. The program can award up to $25 million by 2028.
  - Also in 2022, **California** established the Industrial Decarbonization and Improvement of Grid Operations (INDIGO) program through Assembly Bill 209. This grant program provides incentive funding to decarbonize industrial facilities, reduce air pollutants, and support grid reliability. The INDIGO Program is part of a statewide initiative that invests 'Cap-and-Invest' dollars into work that reduces greenhouse gas emissions, strengthens the economy, and improves public health. The program has approximately $46.2 million in available funding for projects.
  - **New York** launched the Commercial and Industrial (C&I) Carbon Challenge in 2018, which provides industrial facilities and other large energy consumers with grants to reduce their carbon emissions. NYSERDA administers the

program, which has awarded six rounds of funding as of 2025, with awards ranging from $500,000 to $3.75 million per project.

- **Pennsylvania** was awarded $400 million through the EPA Climate Pollution Reduction Grants in 2024 to launch Reducing Industrial Sector Emissions in Pennsylvania (RISE PA), a plan to create a statewide industrial decarbonization incentive program. The program offers grants for small-, medium-, and large-scale decarbonization projects at industrial facilities, which is the highest-emitting sector statewide and accounts for over 30% of Pennsylvania's total GHG emissions.
- **New Mexico** House Bill 153- Low-Carbon Construction Material Rebate Act, proposed in February 2026, would provide financial rebates to material buyers who purchase low-carbon materials, and also direct grants for manufacturers to decarbonize their facilities.

B. Tax Credits

Tax credits can support the production of low-carbon materials by acting as a "reward" for manufacturers who invest in developing low-carbon products. The following states have implemented tax credits that encourage the production of low-carbon materials:

- **New Jersey** was the first state to develop a tax credit incentive aimed at encouraging concrete producers to accelerate the development of low-carbon products. The state first passed legislation in 2021, and expanded it in 2023 through LECCLA Bill S287, making concrete producers who supply at least 50 cubic yards of concrete for state-funded construction projects eligible for a performance-based tax credit if they deliver concrete with quantifiable reductions in embodied carbon. These low-carbon concrete mixes must have EPDs that demonstrate a reduction from the established baseline, and are then eligible for a tax credit of up to 8 percent of the total cost of the contract.
- **Colorado** has passed several pieces of legislation creating tax credits to encourage the production of low-carbon materials. In 2022, SB 22-051 created an exemption from state sales and use tax for low-carbon construction materials for buildings. In 2023, the Colorado Industrial Tax Credit Offering (CITCO) passed, offering up to $8 million per project in refundable tax credits for industrial facilities that make facility improvements to reduce greenhouse gas emissions.

2. Clean Product Standards could help scale low carbon production

This section highlights one policy concept that has proven successful in generating new lower carbon products in a local or regional market. This demand-side policy has the potential to spur more supply side scale-up of lower carbon products manufactured in Washington. Although this policy hasn't yet been applied to building products, the concept is presented here for consideration in Washington State.

A. Clean Product Standards (Low Carbon Product Standards)

A clean product standard (CPS) is a regulatory policy that can be applied to the manufacturers of building products within a state, region, or country. The policy sets an emissions intensity benchmark that decreases over time — effectively regulating the efficient production and use of building materials. A CPS policy regulates production efficiency but does not put a total cap on emissions within a geography.

The clean fuel standards in CA, OR, WA, and Canada are good examples of how a clean product standard could operate. A key aspect of a clean product standard is its application to any covered product sold in the state, which allows regulation of imports.

Clean fuel standards have been around for over 15 years and provide an example of how these policies can scale the production of new lower carbon options. In this case, renewable diesel has seen unprecedented growth and new domestic production based on the demand through clean fuels programs[1]. A similar policy placed on products could create a supply-side financial incentive to scale lower carbon building product production in Washington State.

[1] https://afdc.energy.gov/fuels/renewable-diesel

Appendix A: Snapshot of ideas and resources for new low carbon product development in Washington State

This appendix provides a snapshot of ideas and resources to expand future low-carbon manufacturing in Washington State. This is **not** a comprehensive list of products or resources and simply serves as a starting poing for discussion for the BCBF technical advisory committee.

New Product ideas for Washington based manufacturing:

- Pozzolans (cement substitutes) - natural pozzolans and glass pozzolan
  - Example: natural pozzolan production facility supported by state grants in Oregon
- Biofuels for use in industrial manufacturing
- Agricultural residues used in paneling and insulation products
- Wood fiber insulation
  - Example: Wood fiber insulation facility constructed in Maine
- Biochar-based construction additives (e.g., biochar in concrete, asphalt, or polymer composites) paired with in-state biomass utilization pathways.
- Biomass-derived pellets (already emerging per recent requests) and other densified biomass products, especially where tied to forest health treatments and verifiable carbon/air-quality safeguards.

New production facilities in construction (potential to produce lower carbon products):

- Riverside Forest Products USA announced in 2025 that it would develop a sawmilling facility in the City of Forks. WA Commerce supported their work, including two Evergreen Manufacturing Growth Grants and a Strategic Reserve Fund grant totaling about $400,000. One component of the Manufacturing Growth Grant is creating a new product line, an advanced cross-laminated timber (CLT) panel structure using thermally modified hemlock for use as a four-unit housing complex or a single-family dwelling.
- In 2024, Rockwool electrified its Flumroc, Switzerland mineral wool facility, replacing coal-fired melting with a fully electric furnace powered by certified renewable electricity, primarily hydropower. Rockwool is advancing similar electrification efforts in the United States. The company's new Walla Walla County, Washington facility—currently under construction—will be its largest electric-melter plant and will operate on hydropower, maximizing emissions reductions while producing a cost-comparable product identical to conventional mineral wool. WA Commerce invested in the development of the industrial park to support this new facility.

Resources to support the development of new products in Washington

- The Washington Mass Timber Accelerator (MassTAc) is a nonprofit organization in Washington State with the goal to position the state as a leader in mass timber research, design,

manufacturing, and construction. The Office of Economic Development and Competitiveness (OEDC) at WA Commerce is a key partner of MassTAc. They maintain a map of Washington's mass timber suppliers as well as project case studies.

- The Pacific Northwest Mass Timber Tech Hub is a nonprofit led by Oregon State University with the goal to scale the mass timber design, manufacturing, and construction industries across the four-state initiative (OR, WA, ID, MT).
- Forterra is a nonprofit land trust leading a coalition to accelerate the market for CLT and other mass timber products in Washington State. They see an opportunity for mass timber production to address several of the state's needs, including workforce development, housing, and employment in rural areas.

Novel materials research and development

There are several innovative material manufacturers and development projects currently based in Washington State, including:

- Bio Fiber Industries: a Seattle-based clean technology and agro-industrial company specializing in sustainable materials derived from industrial hemp and other plant-based resources. It produces materials such as hempcrete, bio-based insulation, fiber composites, bioplastics, and textiles. They participated in UW's CoMotion climate tech incubator (see program details below).
- CarbonSilvanus: develops advanced material and process solutions for the next generation of infrastructure. It is a woman-owned small business based in Washington State. They engineer and integrate graphene oxide, carbon nanotubes/nanofibers, engineered biochar, and other carbon materials into high-performance construction materials — including portland cement composites, geopolymer composites, asphalt composites, and water-treatment systems.
- Microsoft Research (as the funder) and the University of Washington have developed a seaweed-infused cement with 21% lower GWP (article).

Novel materials incubators

Incubators are specialized programs designed to accelerate the development and success of early-stage startups and entrepreneurs. Two incubators focused on novel materials in Washington State are described below:

- CoMotion Labs Climate Tech Incubator is a University of Washington-affiliated climate tech incubator that has supported startups such as Bio Fiber Industries and others focused on sustainability solutions for building supply chains and low-carbon materials.
- The Buildings, Utilities, and Infrastructure Living Together – or the BUILT Cluster CleanTech Alliance in Washington State is a cross-sector cluster encouraging decarbonization across the built environment value chain, connecting material innovators with partners, investors, and demonstration projects.