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Green Jobs & The New Economy Track Background Paper

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Overview

Addressing climate change will drive new economic opportunities and create jobs as traditional industries are reshaped. Green jobs are the kind of family-supporting jobs that once anchored the American middle class, but in industries like energy efficiency, renewable energy, alternative transportation, advanced manufacturing, water use, and food and agriculture. This white paper begins with a goal we all can embrace and then highlights strategies from which a wide variety of strategic recommendations flow.

Context and Background

The federal climate legislation passed in August 2022 as part of the Inflation Reduction Act (IRA) is a game changer, resulting in investments of \$369 billion in energy security and climate change initiatives over the next ten years. The law provides a historic opportunity for Wisconsin to accelerate the transition to affordable clean energy, electric vehicles and fleets, energy-efficient buildings, advanced manufacturing, agricultural innovation, and environmental justice while significantly reducing carbon and other emissions, creating thousands of family-supporting jobs, cutting costs for consumers, strengthening energy supply chains, and improving the health of our communities. In addition, Governor Evers recently released the Governor's Clean Energy Plan.

Why this work is important

Wisconsin needs an economy that works for everyone, rewards innovation, and celebrates those that lead on creating a more just and sustainable world. By investing in clean energy, clean transportation, clean manufacturing, and natural carbon solutions while we green our infrastructure and electrify our building and transportation stock, we can address climate change and add thousands of green jobs. These green jobs can create new economic opportunities in overlooked communities by both improving infrastructure and employing those marginalized by the current economy. Common ground is often found in uncommon places. In this facilitated conference track, our goal is to produce recommendations that would reduce carbon emissions by tens of millions of tons while creating the 40,000 family-supporting jobs envisioned by the Governor.

What other work has already been done

The Track Leaders have cast a wide net to solicit input for this session. We started with the 170 recommendations that came out of the Governor's Task Force on Climate Change and the recently released Governor's Clean Energy Plan. With help from Renew Wisconsin, we highlighted some of the high-level recommendations from the Governor's Clean Energy Plan.



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Leading sustainability professionals from American Family Insurance, the Wisconsin Sustainable Business Council and the Dane County Office of Energy & Climate Change also contributed their expertise to expand, better focus and refine the list. Finally, we reviewed the climate and energy provisions of the Inflation Reduction Act of 2022 (IRA) signed into law on Aug. 16, 2022.

Resources:

- The Inflation Reduction Act: Summary of Budget Reconciliation Legislation – Holland & Knight: <https://www.hklaw.com/-/media/files/insights/publications/2022/08/080822inflationreductionactsummary.pdf?a=en>
- The Inflation Reduction Act: Department of Energy Office of Policy Summary: https://www.energy.gov/sites/default/files/2022-08/8.18%20InflationReductionAct_Factsheet_Final.pdf
- The High-Road Workplace: Route to a Sustainable Economy - American Sustainable Business Network (ASBN): https://www.asbcouncil.org/sites/main/files/file-attachments/asbc_building_the_high_road_report_2017.pdf
- Governor’s Taskforce on Climate Change: <https://climatechange.wi.gov/Pages/Home.aspx>
- Governor’s Clean Energy Plan: <https://osce.wi.gov/pages/cleanenergyplan.aspx>
- Wisconsin Electric Vehicle Charging Infrastructure Plan: https://wisconsin.gov/Documents/projects/WI-EV_DRAFT_22-0714.pdf
- Wisconsin’s Clean Energy Industry Supply Chain: <https://elpc.org/resources/wisconsin-clean-energy-supply-chain-report-2020/>
- The POWER of Sustainable Purchasing - American Sustainable Business Network (ASBN): https://www.asbcouncil.org/sites/main/files/file-attachments/procurement_2018.pdf
- Wisconsin Clean Energy Toolkit: https://www.wicleanenergytoolkit.com/_files/ugd/fe3757_46d94580584f414abc43a8e531047cbb.pdf
- E2 Clean Jobs America Report: <https://e2.org/reports/clean-jobs-america-2022/>
- U.S. Energy Information Administration: www.eia.gov
- Preliminary Report: The Climate and Energy Impacts of the Inflation Reduction Act of 2022: https://repeatproject.org/docs/REPEAT_IRA_Preliminary_Report_2022-08-12.pdf
- Social Cost of Carbon More than Triple the Current Federal Estimate, New Study Finds: <https://www.rff.org/news/press-releases/social-cost-of-carbon-more-than-triple-the-current-federal-estimate-new-study-finds/>



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Green Jobs & The New Economy Goal and Strategies

Goal

Accelerate the transition to a green economy, where growth in employment and income are driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, improved economic justice and prevention of the loss of biodiversity and ecosystem services.

Strategies

1. Build Out a Clean Energy Economy
2. Improve Energy Efficiency & the Existing Housing Stock
3. Grow Green Jobs, Work Force Participation & Education
4. Jump Start Clean Energy Manufacturing
5. Ramp Up Clean Transportation and Supporting Infrastructure
6. Embrace and Adopt Climate-Smart Agriculture

Current Status

Wisconsin coal power plants consumed almost 14 million tons of coal in 2020 resulting in over 33 million tons of carbon dioxide (CO₂) emissions, not to mention other criteria pollutants including 21 million tons of Nitrogen Oxide (NO_x), 14 million tons of Sulfur Dioxide (SO₂), plus particulate emissions and other pollutants. Source www.eia.gov

While coal consumption in Wisconsin is declining and electric utilities have announced plans to retire about half of the state's coal-fired capacity in the next few years, recent reports suggest the possible postponement of the phasing out of coal power plants. The impact of coal power plants continuing to operate for another 3, 5 or 7 years is significant, and significantly undermines the state's ability to get to a 50% reduction of CO₂ emission equivalent by 2030 (based on 2005 levels).

Moreover, there are few if any new jobs associated with maintaining a commitment to coal and the Governor's Clean Energy plan sets a goal of 40,000 new clean energy jobs by 2030.

New research on the social cost of carbon, measured in dollars per ton of CO₂, including losses from flooding and crop damage, increased health care expenses and rising premiums, has increased to \$185 per ton of CO₂, more than triple the federal government's current estimate. This means a coal plant that produces 10 million tons of CO₂ would cause \$1.85 billion in climate damages across the economy. It also means shutting down that coal plant would generate \$1.85 billion of societal benefits.

End Status

By increasing the supply of clean energy and by changing the conversation around a green economy, Wisconsin can return to a position of leadership in the climate and carbon arena and bring about the cost-effective early closure of coal facilities in the state. What follows are strategic recommendations on actions that can be taken now and actions that will tap into funding from the IRA. These actions will change how we get our energy and how we use that energy while creating green jobs and accelerating



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the economic changes that lead to lower greenhouse gas emissions and a fairer and more resilient economy that works for all.

Impact on climate change mitigation, adaptation, or resilience

The strategic recommendations advanced by the members of the working group will reduce the state's reliance on fossil fuels (and their accompanying carbon emissions), increase the economic impact of the clean technology sector, reduce the economic costs of inefficient infrastructure (buildings, grids, networks, etc.) and make the state more resilient to upcoming climate impacts.

Focal Constituencies

Wisconsin manufacturers (and their supply chains), large retailers, small businesses, agricultural cooperatives, municipal and county governments, K-12 school districts, hospitals, churches, nonprofit organizations, the Public Service Commission, utilities (investor owned, municipal and cooperatives), the Focus on Energy Program, the University of Wisconsin System, Wisconsin Technical Colleges, the Department of Public Instruction, state and local workforce agencies, the Wisconsin Economic Development Corporation, WI Manufacturing Extension Partnership, the Wisconsin Sustainable Business Council, the Department of Agriculture, Trade and Consumer Protection, the Department of Administration, the Office of Sustainability and Clean Energy and other state agencies.

Why this is a good approach for Wisconsin

Wisconsin has the goods to be a leader in green jobs and the new economy. The state has the research and development capabilities of the University of Wisconsin System, a strong work ethic, particularly good infrastructure, outstanding natural resources (including agriculture and forest products), plus a manufacturing heritage and environmental leadership tradition that can be harnessed to accelerate actions to achieve our goal.



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Strategy 1: Build Out a Clean Energy Economy

Primary key action: Accelerate and expand utility-scale solar, wind, advanced battery storage, microgrids and low-cost community solar projects, includes:

- 8,000 megawatts of solar (MW), 1,500 MW of wind, and nearly 3,000 MW of advanced battery storage slated for or already under development in Wisconsin.
- Expand the use of community solar, electricity storage, and microgrids for critical infrastructure.
- Ensure opportunities are widely marketed to access IRA direct pay provisions to implement low-cost, small-scale solar projects at businesses, educational institutions, hospitals, churches, and other nonprofit organizations.

Other potential key actions:

- Authorize and fully utilize third-party solar financing arrangements, to include both solar leases and power purchase agreements (PPAs).
- Accelerate smart grid technology and interconnection upgrades to the transmission network.
- PSC to work with utilities to retire coal-fired power plants before 2030.
- Remove barriers to undergrounding high voltage, direct current transmission in right-of-ways (highway and rail corridors) to reduce land use conflicts and environmental impacts of traditional powerlines.*

*[NextGen Highways](#) Coalition effort to combine electric vehicle charging, broadband and buried high-voltage DC transmission along highway rights-of-way to advance a 21st century clean energy economy.



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Strategy 2: Improve Energy Efficiency & the Existing Housing Stock

Primary key action: Work with utilities and the Public Service Commission to create "on-bill financing" options. (Also called Pay as You Save). This no-interest payment plan covers energy improvement projects for residential customers (and possibly small businesses), particularly those with low to moderate incomes.

Other potential key actions:

- Capitalize on Wisconsin's nationally recognized Focus on Energy (FOE) program to fully access and distribute funding available through the IRA's Energy Efficiency and Electrification provisions that include \$10 billion in rebates, grants, and other incentives to make housing, including multifamily housing, healthier and more energy efficient.
- Update state and local building codes to require that all buildings be designed to have all energy needs met with electricity, incentivize the use of air/ground-source heat pumps, and require a cost/benefit analysis of high-efficiency upgrades.
- Universities and other educational institutions, hospitals, churches, and nonprofit organizations should access energy efficiency funding through the direct pay provisions of the federal IRA law.



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Strategy 3: Grow Green Jobs, Work Force Participation & Education

Primary key action: The Department of Public Instruction and the Wisconsin Technical College System will work with state and local workforce agencies* and businesses to develop career pathways to prepare young people for work within the clean energy sector, including solar and wind, electric vehicles, energy efficiency retrofits, advanced manufacturing, and agricultural innovation.

Other potential key actions:

- Strengthen and grow apprenticeship programs, particularly in disadvantaged communities, to access bonus tax credits available under the IRA for projects meeting low-income/brownfield communities, prevailing wage, and apprenticeship requirements.
- The Department of Public Instruction, with support from major businesses, will expand the STEM curriculum in Wisconsin to address climate adaptation and resilience and prepare students for jobs in new and developing industries.

*[Boys & Girls Club McKenzie Regional Workforce Center](#) will train and connect a new generation of young people in skilled trades and green jobs.



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Strategy 4: Jump Start Clean Energy Manufacturing

Primary key action: Leverage new IRA federal tax credits with Wisconsin Economic Development Corporation (WEDC) targeted grants, loans, and business development to expand clean energy technology manufacturing and the accompanying supply chains, including renewable energy, batteries, smart-grids, electric vehicles, and related components*, building on [Wisconsin’s clean energy industry supply chain of 354 companies](#).

Other potential key actions:

- Align Wisconsin Economic Development Corporation (WEDC) research with research being done at Wisconsin colleges, universities and technical schools to create a market advantage for Wisconsin in clean energy technologies, energy efficiency, battery technology and electric vehicle manufacturing to stimulate additional capital expenditures and job creation in Wisconsin, including exploring potential clean vehicle manufacturing development opportunities for Southeast Wisconsin, including the Foxconn development.
- Manufacturers should access incentives, including \$300 billion to retool and revitalize manufacturing available in the Bipartisan Infrastructure Law, to reduce overall energy usage and emissions and reduce the cost of energy to all customers.
- Expand industrial efficiency and sustainability programs, including programs offered by the Wisconsin Sustainable Business Council, Wisconsin Manufacturing Extension partnership, and UW Industrial Assessment Center, and others.
- Department of Administration to coordinate with the WEDC and the Office of Sustainability and Clean Energy to create a “Clean Wisconsin Made” state and local green procurement initiative that generates higher in-state spending.

*E2 Clean Jobs America report shows clean energy and clean transportation jobs grew by more than 5 percent in 2021, with electric vehicle manufacturing jobs leading the way and renewable energy regaining most of the jobs lost in the COVID-19 economic downturn. More than 71,000 Wisconsinites were employed in renewable energy, energy efficiency, storage and grid modernization, clean fuels, and clean vehicles at the end of 2021.



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Strategy 5: Ramp Up Clean Transportation and Supporting Infrastructure

Primary key action: Lead by example - state, local governments and businesses should each commit 50% of replacement vehicle budgets to EVs and require a minimum of 2 charging stations for parking facilities (where people park more than six hours) for every 50 parking spaces.

Other potential key actions

- Fast-Track the [federally approved WIEV plan](#) that includes \$79 million to establish an electric vehicle corridor of fast-charging stations to give Wisconsin a competitive, first-mover advantage.
- Require local governments and school districts to prioritize the expansion of electrically powered fleets, school, and transit buses.
- Expand EV charging infrastructure: businesses with revenue over \$10 million to add at least 2 EV charging stations. Up to \$40,000 commercial fleet tax credit available under IRA law.



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Strategy 6: Embrace and Adopt Climate-Smart Agriculture

Primary key action: Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) to align programs and initiatives to ensure rural communities and cooperatives, farmers and small businesses have access to expertise and capabilities to tap into the \$30 billion in IRA direct investments in agricultural conservation programs, renewable energy, improved efficiency and carbon capture to benefit the farmer's bottom line.

Wisconsin can lead the world in climate-smart agriculture practices to increase farmer's profits, rebuild soils, clean our waterways, and expand renewable energy. Whether its organic farming or other responsibly grown methods, Wisconsin farmers, cooperatives and food processors can harness IRA funds and innovation to reduce carbon emissions and improve crop yields while reducing nutrient runoff into sources of drinking water.

Other potential key actions:

- DATCP to coordinate with the UW Great Lakes Bioenergy Research Center (GLBRC) to enable investments in infrastructure for home-grown clean biofuels and sustainable aviation fuels (SAF).
- Provide planning grants to establish a network of on-farm and regional biodigesters in the state to produce renewable natural gas and demonstrate the co-benefits and financial value associated with agriculture clean energy projects.

*[Organic Valley Co-op Carbon Positive Climate-Smart Farming](#)