



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Energy Intensive Industries Workgroup

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November 1, 2021

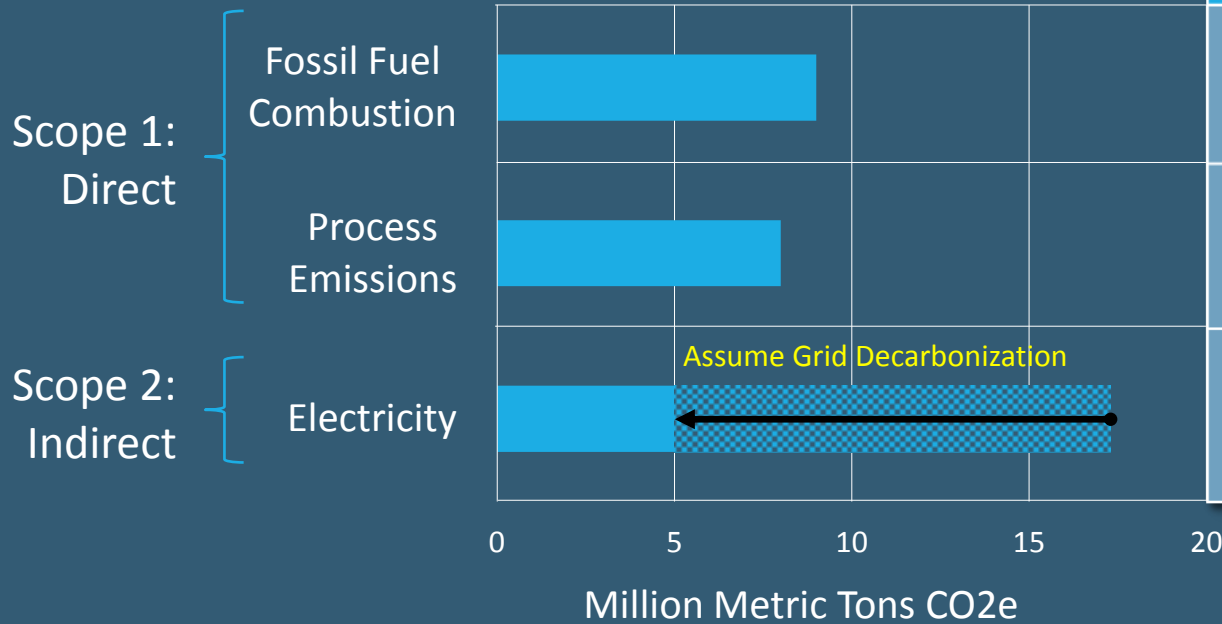


Stakeholder Process

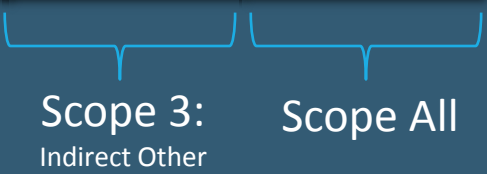
- Held 10 stakeholder meetings
- Three phase process:
 - Phase 1: Level-setting presentations from regional and national experts
 - Phase 2: Facilitated discussions to begin exploring potential recommendations
 - Phase 3: The workgroup reviewed and refined a list of recommendations based on the previous presentations and discussions.
- Throughout the process, input was solicited from workgroup members to be incorporated in the resulting recommendations.
 - Members were able to provide input during meeting discussions and/or through written feedback.

MI Energy Intensive Industry GHG Scope (34M metric tons CO2e)

Recommendations



	1	2	3	4	5		
	Carbon Neutral Fuels	Hubs, CCUS	Energy Efficiency	Low Carbon Procure.	Fed Carbon Pricing		
High GHG Reduction Potential		Low	Med				
		High				Medium *	High *
			Med				



Scope 1: EPA.gov (2019)
Scope 2: EIA.org (2018)



* Policy Drivers Increase Pace of Decarbonization

Recommendation #1: Deliver Carbon Fuels to Industry by 2050



Rationale: Michigan's industrial sector is primarily fueled by natural gas, which is currently the most economically viable energy source.

Achieving Michigan's climate goals will require innovative solutions that supply industry with carbon neutral and economically viable energy sources.



Recommendation: The Governor should direct the MPSC to initiate a stakeholder process to explore how Michigan's electric and natural gas utilities can deliver carbon neutral fuels to Michigan's industrial sector by 2050.

Solutions to be developed through collaboration between Michigan's natural gas and electric utilities and industry.

Recommendation #2: Support the Development of Clean Industrial Hubs



Rationale: To run processes that emit CO₂, we must capture it. The most effective means is through centrally located infrastructure.

Clean industrial hubs and clusters can help Michigan's industrial sector to achieve greenhouse gas emissions reductions as cost effectively as possible through shared CCUS infrastructure, efficient co-location of industrial facilities, and the efficient use of materials and energy streams.



Recommendation: The State of Michigan and the Michigan Economic Development Corporation (MEDC) should support the building and attraction of industrial hubs and clusters.

To avoid any future environmental injustices, the siting of industrial hubs must be done thoughtfully, with thorough and meaningful collaboration among communities at an early stage.

Recommendation #3: Advance Energy Efficiency and Process Improvements



Rationale: Energy efficiency can accelerate the rate of adopting technologies and practices that can reduce energy consumption in Michigan's industrial sector and reduce greenhouse gas emissions while keeping energy costs reasonable.

Both energy efficiency and process improvements should be considered collectively and holistically to ensure that Michigan's industries can achieve carbon neutral by 2050 as cost effectively as possible. |



Recommendation: The Governor should direct the Michigan Department of Environment, Great Lakes, and Energy and the Michigan Public Service Commission to convene a stakeholder workgroup before 2023 to recommend programs and partnerships to advance energy efficiency and process improvements to enable achieving carbon neutrality by 2050 in the industrial sector.

Recommendation #4: Implement a Policy for Public Procurement of Low Carbon Products



Rationale: Public and private procurement is a critical lever that the State of Michigan can use to create demand for low carbon and circular economy products. In many states, these policies are referred to as “buy clean.” Such a policy would encourage or require that any state government procurement meet established carbon intensity benchmarks for certain industrial products being purchased.



Recommendation: The Governor should direct EGLE to form a workgroup to craft, assess, model the potential impacts of, and implement a policy for public procurement of low carbon products, which would create a market demand for low carbon products and support industry to pursue technology innovation that can reduce emissions. The workgroup should include both state government and industry stakeholders and should recommend specific policy language and design.

Recommendation #5: Support a Federal Carbon Pricing Market



Rationale: A federal carbon pricing market would help to advance net zero GHG emissions technologies and approaches.



Recommendation: The Governor should support a federal carbon pricing market.

Equity in Industry Decarbonization

Siting: Industrial infrastructure has previously been the cause for environmental injustices in many communities. To avoid any future injustices, the siting of industrial infrastructure, including for the delivery of low/no emissions fuels, must be done thoughtfully, with thorough and meaningful involvement from communities at an early stage.

Rate Impacts: Building out the energy system to deliver carbon neutral fuels to industry may cause rate impacts on other customer classes. The MPSC should carefully evaluate infrastructure decisions to avoid creating an undue rate burden on vulnerable customers.

Health Impacts: Energy efficiency and process improvements may be able to reduce local air pollution in communities located near industrial facilities – this should be considered when making such improvements.



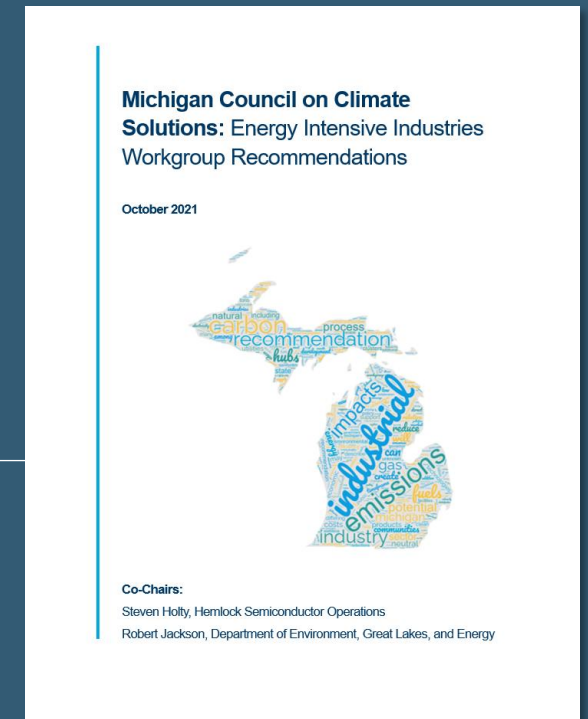
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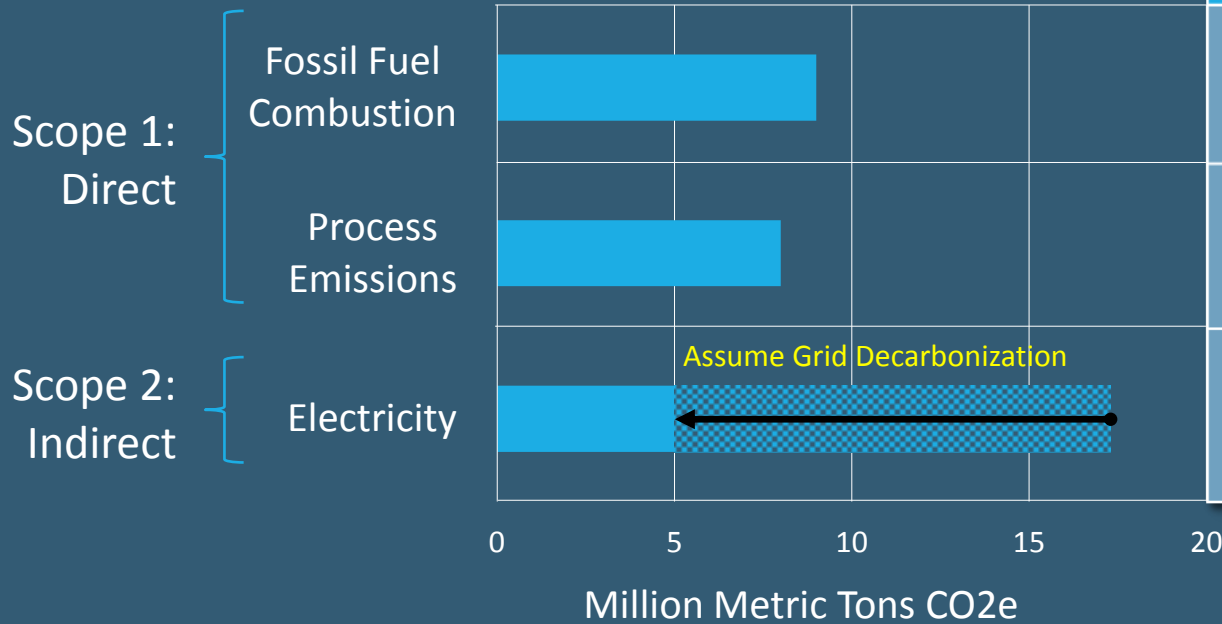
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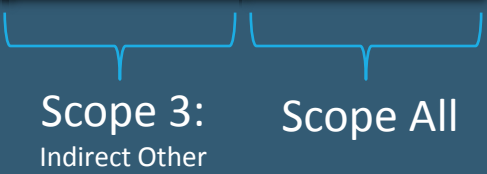
Additional Slides

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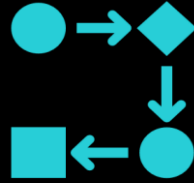


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Additional Recommendations



6. Michigan should support voluntary measures among manufacturers to decarbonize their supply chain.



7. The state should strengthen its relationships with federal agencies to position itself as a leader in the research, development, and deployment (RD&D) space.



8. Michigan should address non-carbon GHG emissions from industry, including gases such as sulfur Hexafluoride (SF₆).