

Electrification and Energy Transition Panel: Progress Update

David Collie, Chair

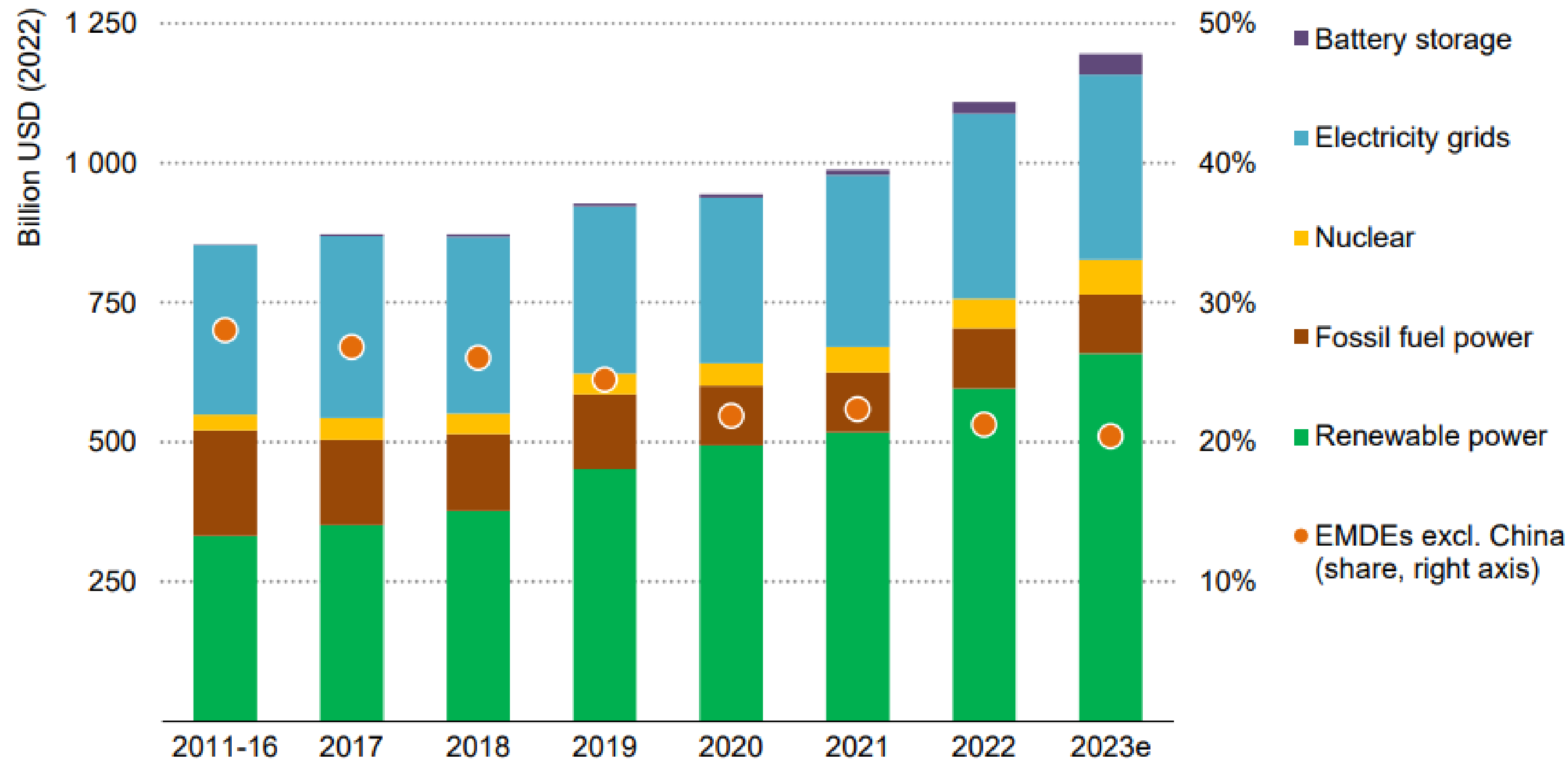
November, 2023

Topics

- Context
- Mandate
- What We Did
- What We Heard and Learned
- Cost-Effective Energy Pathways Study
- Timeline

Global Context: Energy Transition

Global average annual investment in the power sector by category, 2011-2023e



Main Uses: Electrification of Transportation and Building Heat/Water

- **Electrification and energy transition are intensifying**, both at home and abroad, driven by policy commitments, technological change, and corporate environmental and sustainability decisions.
- **Global investment in clean energy technologies is now significantly outpacing spending on fossil fuels**, according to the [International Energy Agency](#) with low-emissions electricity technologies expected to account for almost 90% of investment in power generation in 2023. Electrified end-uses – such as heat pumps and electric vehicles – are also seeing significant growth.
- **This global energy transition presents a tremendous opportunity for Ontario.** With a clean electricity grid, a long history in energy infrastructure development, and strong planning mechanisms for electricity and natural gas distribution, the province is well-positioned to harness the economic opportunities that come with rethinking and transforming our economy and the entire energy system.

Source: International Energy Agency, [World Energy Investment 2023](#)

Vision for Success



EETP Mandate

Newsroom

NEWS RELEASE

Ontario Finalizes Electrification and Energy Transition Panel

Panel Will Help Province Plan for Reliable, Affordable and Clean Energy Supply

November 17, 2022

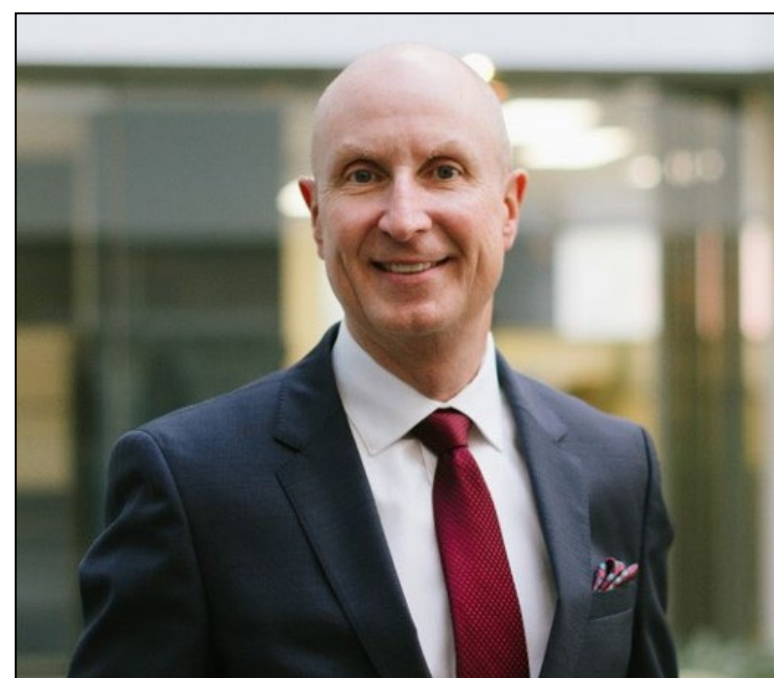
[Energy](#)



Professor Monica Gattinger,
Panel Member



Chief Emerita Emily Whetung,
Former Panel Member



David Collie, Panel Chair

- The Panel was established to deliver on the following mandate:
 - **Provide advice on short- medium- and long-term opportunities for the energy sector to help Ontario's economy prepare for electrification, and to**
 - **Identify opportunities to strengthen Ontario's long-term energy planning process by better coordinating the fuels and the electricity sector.**

Engagements: Broad Representation



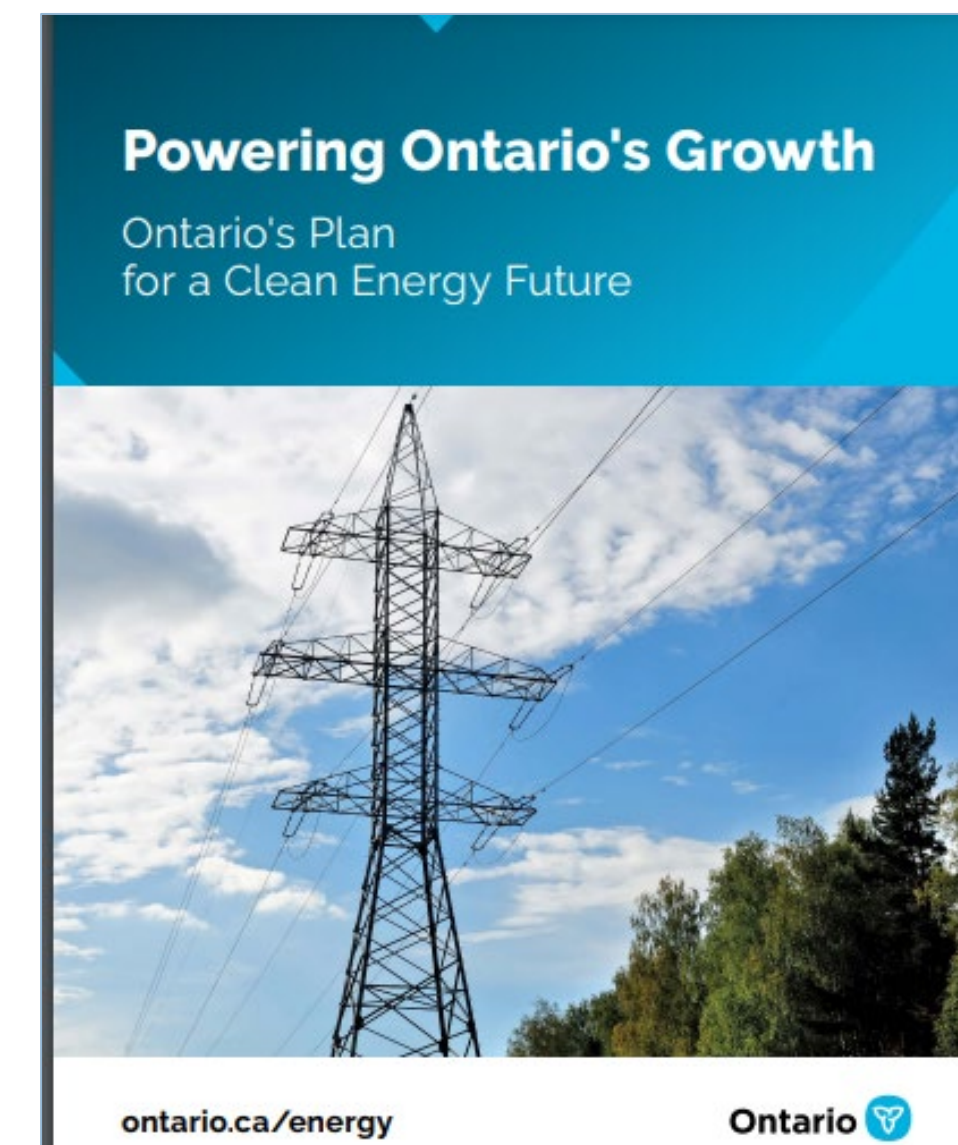
Thematic and Roundtable Engagement

Individual Engagement with Indigenous Partners

Individual Engagement with Stakeholders

Open Call for Written Submissions

The Panel has also leveraged opportunities to hear from sector tables and coordinated with agencies, where possible.



Our Engagement with Municipalities:

- Association of Municipalities of Ontario:
Regional, Local, Size, Geography
- Energy Hub Communities
- Key Economic Sectors Impacted by the Energy Transition
- Delegations on Energy Transition
- Aligned or Supportive Organizations

What We Heard and Learned

Indigenous Perspectives

- Increased participation & governance
- Capacity building
- Flexible funding models

Energy Planning

- Policy direction
- Policy principles
- Sectoral strategies
- Fully integrated

Governance & Accountability

- Use full mandate
- Support innovation
- Align with policy

Established & Emerging Technologies

- Enabling DERs, NWAs
 - CDM/DSM
- Electric Vehicles and Infrastructure

Community & Customer Perspectives

- Support for energy efficient technologies
- Reliability and affordability
 - Pacing of transition

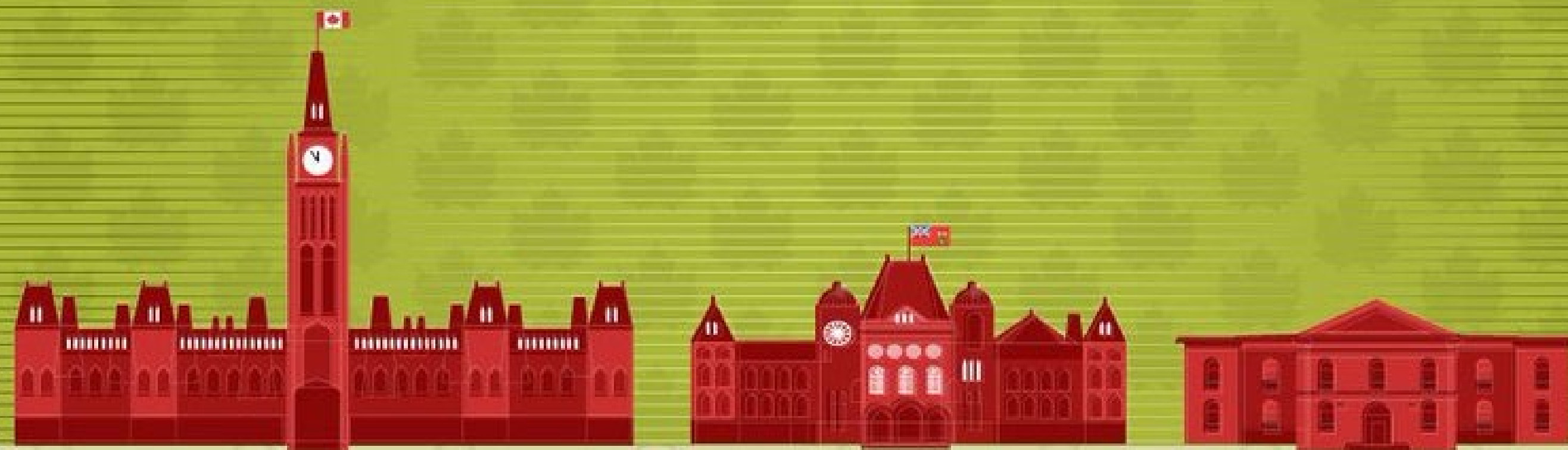
Facilitating Economic Growth

- Provincial/Federal incentive alignment
- Supporting existing and emerging clusters
- Cross-ministerial focus

Community Energy Planning: Overcoming Barriers and Obtaining Benefits

■ Conclusion Municipalities in Ontario are a **significant participant** in meaningful climate action planning that is enabling the province to transition to a low-carbon economy. **Community energy planning** is a key part of this transition process that helps municipal governments define energy priorities to improve efficiency, reduce emissions and spur economic development. From our interviews with members, there are still **barriers to overcome** such as building awareness, unlocking resources with limited capacity, and accessing the right data to create good

community energy plans. But the **benefits and opportunities** from implementing an effective community energy plan can solve many local challenges, from local economic development to potential energy cost savings. AMO/LAS commits to continuing our ongoing engagement with the Province and energy stakeholders to **overcome existing legislative, regulatory and resource barriers** that impede effective implementation of community energy plans. AMO 2018



Towards Greater Alignment on a Clean Energy Economy

Cost-Effective Energy Pathways Study

Key Observations

- Independent Study
- Supports EET, Energy and Government
- All Economy, All Fuels.
- Pathways are Similar for Other Jurisdictions
- Need for Regular Modelling: Importance



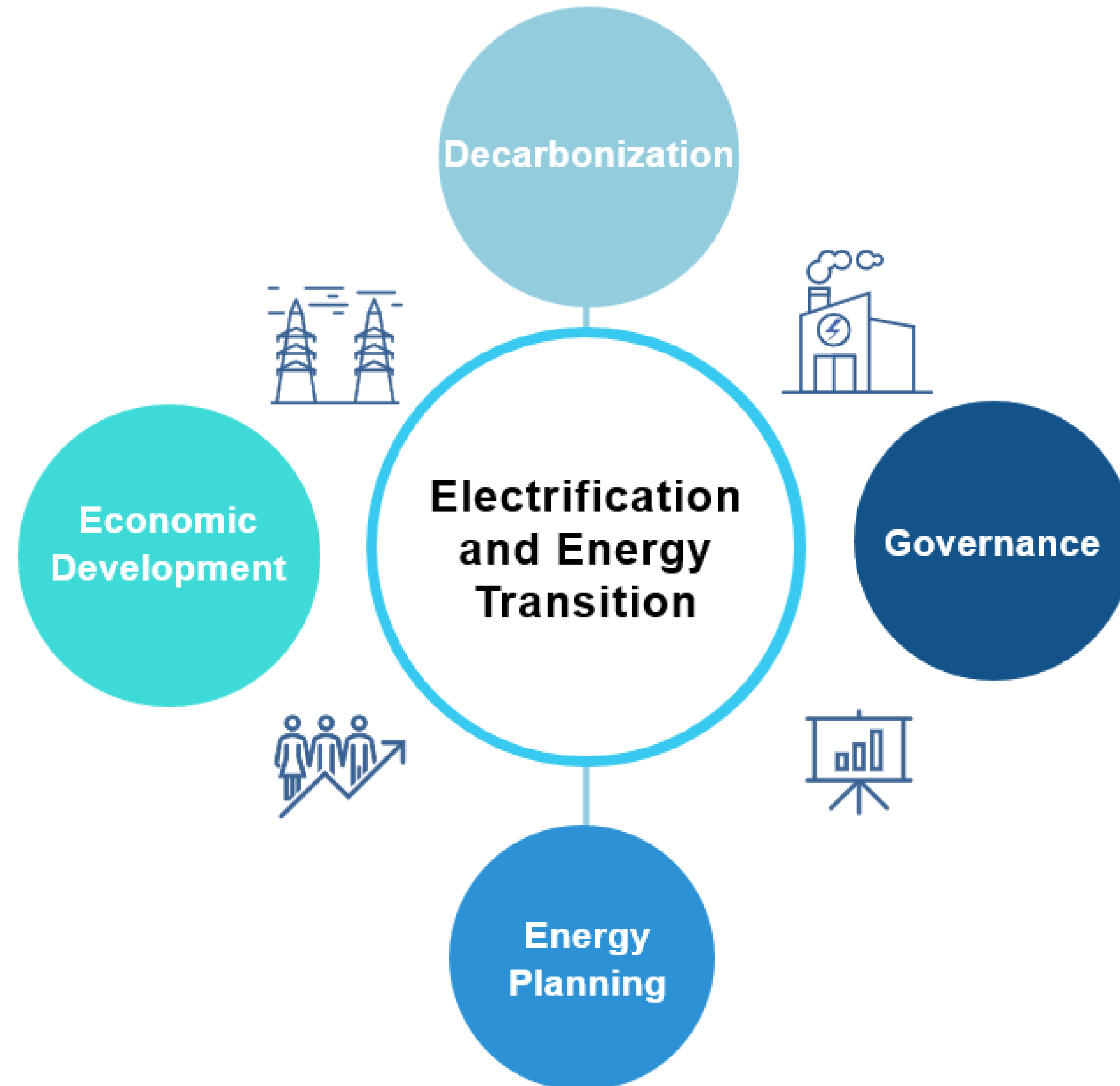
REDUCE total energy demand relative to current forecasts, through accelerating the pace of energy efficiency efforts

SWITCH >80% of fossil fuel use, including the vast majority of heating, mobility and industrial needs, to renewable & emissions-free options

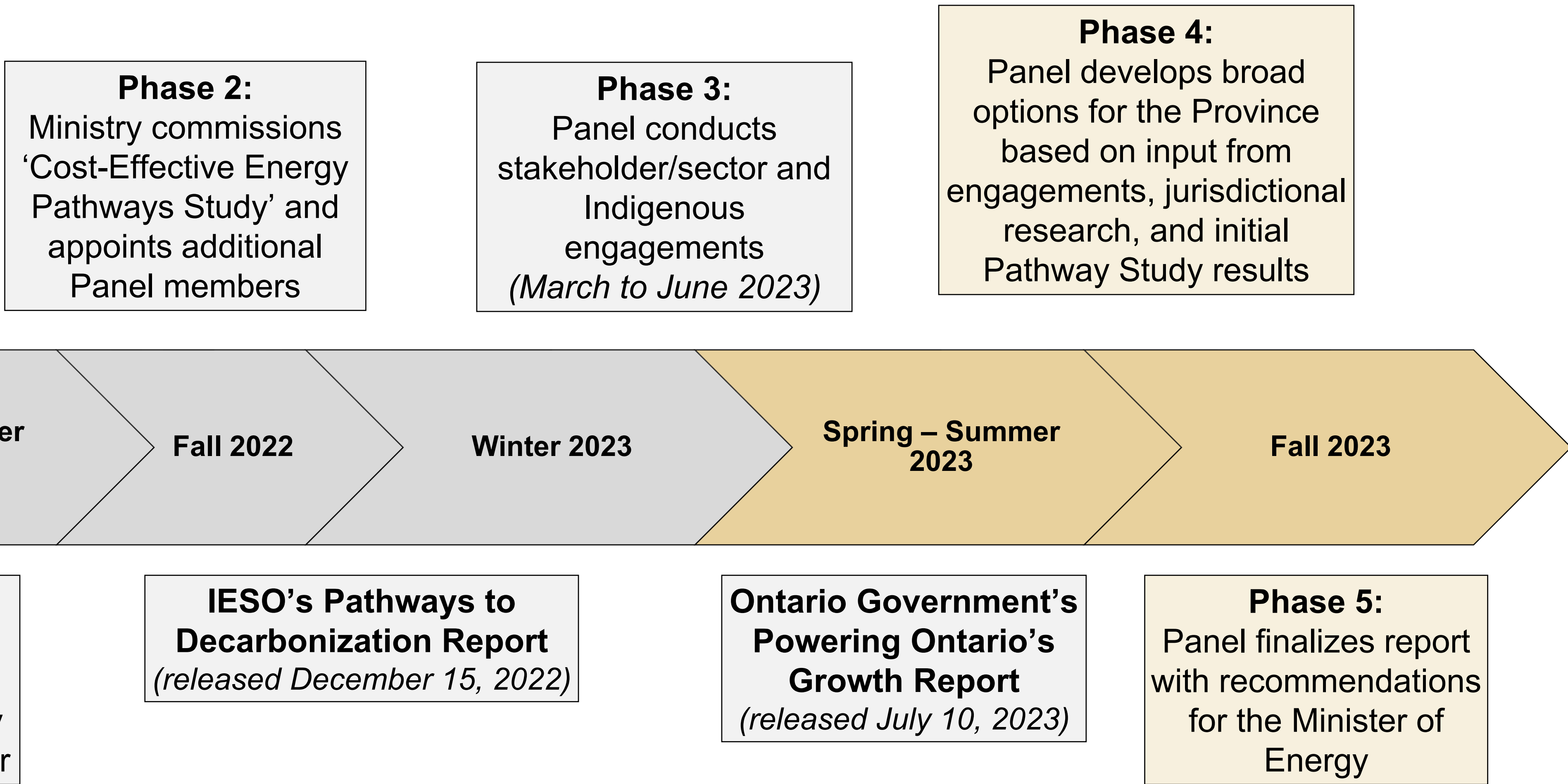
GROW the grid to over 2x

SEQUESTER remaining emissions using CCS and negative emissions technologies, including biochar and DAC

Summary of Key Themes



Timelines





EETP

ELECTRIFICATION AND
ENERGY TRANSITION PANEL

Thank you

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