

March 15, 2024

Karishma Boroowa  
Director, Electricity and Combustion Division, Environment and Climate Change Canada

Submitted via email to: [ECD-DEC@ec.gc.ca](mailto:ECD-DEC@ec.gc.ca)

Dear Ms. Boroowa,

**Re: Submission and feedback on the public update on Canada's clean electricity regulations**

As development of the clean electricity regulations continues, the David Suzuki Foundation welcomes the opportunity to submit our comments, analysis and feedback on these crucially important regulations, which stand to bring significant benefits in terms of health, jobs, affordability and energy security — all while playing a foundational role in Canada's contributions to mitigating the worst of the climate crisis.

As consultation, analysis and consideration on these regulations continues, we also acknowledge the time and effort put into getting the balance right on this policy. We welcome the opportunity to continue these important discussions with Environment and Climate Change Canada and others involved over the coming weeks and months.

All comments and feedback submitted in this document are with respect to the policy and regulatory considerations published by Environment and Climate Change Canada as the [Clean Electricity Regulations Public Update: 'What We Heard' during the consultations and directions being considered for the final regulations](#) on February 16, 2024, which build on the policy and regulatory details published in [Canada Gazette, Part I, Volume 157, Number 33: Clean Electricity Regulations](#) on August 19, 2023.

The David Suzuki Foundation strongly supports Canada's move toward a zero-emissions electricity system by the year 2035. As with our [submission to the consultations period for the draft regulations, submitted on November 2, 2023](#), the details within this submission support two core recommendations for how the clean electricity regulations should be strengthened in the final regulations to be published in Canada Gazette, Part II:

- **The clean electricity regulations should be strengthened** to ensure further emissions reductions, and to achieve greater affordability and security.
- **The clean electricity regulations should be finalized by end of summer 2024**, to give stakeholders time to implement this important policy ahead of January 1, 2025, and to avoid potential implementation risks.

---

**VANCOUVER (HEAD OFFICE)**

219–2211 West 4th Avenue  
Vancouver, BC V6K 4S2  
604 732 4228

**TORONTO**

102–179 John Street  
Toronto, ON M5T 1X4  
416 348 9885

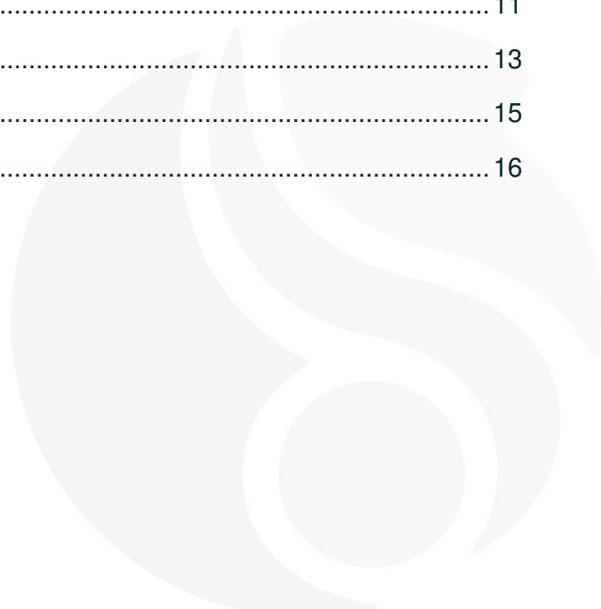
**MONTRÉAL**

540–50, rue Ste-Catherine Ouest  
Montréal QC H2X 3V4  
514 871 4932

Our comments, analysis and feedback in this submission cover a range of issues related to the published 'public update'. For ease of navigation, please find a high-level outline below:

## Contents

Overall approach:.....	3
Specific recommendations based on the CER public update.....	5
Residual emissions on the electricity system:.....	5
Timing of final regulations.....	6
Unit-specific annual emissions limit considerations.....	6
Emissions standard considerations.....	6
Pooling and fleet averaging considerations.....	7
Carbon offsets:.....	8
End-of-prescribed-life provision.....	8
Peaker flexibilities.....	8
Additional policy recommendations and considerations.....	9
Transmission, efficiency, storage and other zero-emissions reliability:.....	9
Carbon pricing.....	9
Appendix A: David Suzuki Foundation reports, analysis and resources.....	11
Shifting Power report.....	11
Keeping the Lights On report:.....	13
Decarbonizing Electricity and Decolonizing Power report:.....	15
Appendix B Resources on affordability.....	16



## Overall approach

The David Suzuki Foundation welcomes the federal government's commitment to a "net-zero emitting electricity system" by 2035. This 2035 target is a foundational goal for meeting Canada's climate obligations, and one shared by our international allies including the U.S., U.K., EU and G7. This target is also clearly outlined by the International Energy Agency as a necessary and foundational goal for an advanced economy such as Canada to be on track for economy-wide decarbonization by 2050.

We also welcome the suite of complementary funding and policy measures outlined in the "[Powering Canada Forward](#)" paper released by Natural Resources Canada in August 2023. Budget 2023 saw the most significant investment in clean electricity to date, with tens of billions of dollars being made available in the form of investment tax credits, direct funding programs and a strengthened mandate for the Canada Infrastructure Bank.

We believe strongly that meeting net-zero emissions by 2035 is a crucial test of this regulation. Any significant residual emissions permitted on the grid in 2035 stand to open a gap between the policy intent of this regulation and its results. This gap puts burden on other policies and the need for increased federal spending support and introduces further stranded asset and implementation risks.

**It is clear that the draft regulations, as released in August 2023, do not achieve net-zero emissions on the electricity sector by 2035.** During an August 2023 public webinar with ECCC officials it was shared that there would remain up to 10 million tonnes of residual emissions on the electricity system in the year 2035.

Further, **we believe that the majority of considerations in the 'public update' published on February 16 would serve to weaken the stringency of the regulation**, allow more new unabated fossil fuels on the grid and allow fossil fuel electricity generators to pollute freely for longer. These considered changes would add to stranded asset and implementation risks, likely add costs to the electricity system and lower emissions reductions, and work to threaten Canada's transition toward affordable, reliable, clean electricity.

The clean electricity regulations are [the primary policy tool](#) to achieve net-zero emissions from Canada's electricity sector by 2035 — and we believe strongly that these regulations should work to actually achieve this goal.

Achieving clean electricity by 2035 is also overwhelmingly popular, with [polling from Abacus Data in July 2023](#) showing more than 71 per cent of people living in Canada in support. This includes 64 per cent of people living in Alberta and 68 per cent of people living in Saskatchewan and Manitoba.

Our concerns with the 'public update' considerations primarily have to do with the suite of flexibilities, loopholes and extensions that are being considered to accommodate expanded and prolonged use of natural gas on the electricity system. Taken together, these considerations erode the strength of the regulations to the point where Canada risks not achieving a net-zero electricity system by 2035 — with significant unabated emissions in 2045 or beyond.

The draft regulations, the 'public update' document, the Regulatory Impact Analysis statement and public webinars hosted by ECCC make clear that a great deal of policy work, time and energy has been spent considering how best to accommodate natural gas generators.

However, the David Suzuki Foundation believes that more affordable, more reliable [pathways](#) exist that prioritize low-cost wind and solar, and complementary zero-emissions technologies like energy storage, energy efficiency, interprovincial and inter-regional transmission upgrades and other balancing services and system upgrades.

Canada is ahead of many countries on electricity decarbonization. However, significant work remains to clean up some high-emissions provincial electricity systems, and collaborative work is needed everywhere in Canada as electricity needs are set to [double or even triple in the coming decades](#). As global electricity generation is set to be more than [50 per cent renewable by 2030](#), and as investments in clean electricity are already far outpacing investments in fossil fuel-based electricity, Canada risks being left behind if too many concessions are awarded to fossil fuel electricity in the 2030 and 2040 decades.

Access to affordable, reliable electricity is fundamental for everyone living in Canada. Renewable sources such as wind and solar are now the [lowest-cost sources of electricity in history](#), well [below the price of natural gas](#). Multiple Canadian studies have shown that as we move to zero-emissions electricity, [household energy spending goes down for everyone, enhancing energy equity](#).

A strong, effective CER must achieve zero-emissions electricity across Canada by 2035 while preserving system reliability and the affordability of electricity for all. To get there, we must avoid all new fossil fuel electricity and provide certainty that Canada's electricity system is on track for its 2035 goals.



## Specific recommendations based on the CER public update

### Residual emissions on the electricity system

It is important that the CER achieve a reduction of emissions on the electricity system to as close to zero as possible by the target year of 2035. ECCC staff estimate<sup>1</sup> that the draft clean electricity regulations, as proposed, will create an emissions profile on the electricity system where “up to 10 million tonnes of CO<sub>2</sub> equivalent” remain as residual emissions in 2035. This is fundamentally at odds with the policy intent of the CER and Canada’s stated goals of achieving a net-zero electricity system by 2035, and must be corrected.

The RIAS states that the draft clean electricity regulations have the potential to avoid more than 342 Mt of greenhouse gas emissions (CO<sub>2</sub>e) between 2025 and 2050, making it a significant and foundational climate policy for Canada’s work toward our climate goals and a net-zero economy by 2050.

However, in the ‘public update’ no modelling, data or detail whatsoever has been shared publicly about the impacts to affordability or emissions reductions of each of the considered changes to the draft clean electricity regulations. This lack of adequate information frustrates the process to provide meaningful and nuanced feedback on each of the considered policy changes and is a missed opportunity.

The David Suzuki Foundation’s May 2022 modelling report “Shifting Power” demonstrates pathways that reduce emissions from the electricity sector by a cumulative 380 Mt CO<sub>2</sub>e between 2025 and 2050. This report also quantifies some of the emissions reductions benefits of a clean electricity system by way of clean electrification for buildings, transport and industry. The total emissions benefits of clean electrification between 2025 and 2050 are shown to be 3,200 Mt CO<sub>2</sub>e.

Electricity system emissions are estimated to be 52 million tonnes of CO<sub>2</sub> equivalent per year as of 2021, according to the [2023 NIR table ES-2](#).

The Canadian Climate Institute [estimated in September 2023](#) that Canada’s 2022 electricity sector emissions stayed about the same, also at 52 million tonnes of CO<sub>2</sub> equivalent per year, even showing a slight increase of 0.3 per cent in 2021.

If by 2035 the CER leads to residual emissions of 10 million tonnes of CO<sub>2</sub> equivalent per year or greater, that represents a significant amount of remaining emissions with no clear pathway or policies to achieve net-zero emissions for Canada’s electricity system.

The CER must be strengthened to achieve an outcome of residual emissions on the electricity system in 2035 to below two million tonnes of CO<sub>2</sub> equivalent per year. **No policy change should be considered that weaken the stringency of the clean electricity regulations and add cumulative emissions to the electricity system.** Our recommendations to this effect are outlined in the sections below, corresponding to the considered policy changes in the ‘public update’.

For further information on our views and analysis on strengthening the clean electricity regulations, you can also see our [submission to the consultations period for the draft regulations, submitted on November 2, 2023](#).

---

<sup>1</sup> During the public ECCC webinar on the Clean Electricity Regulations, officials answered a question from a stakeholder asking the magnitude of residual emissions on the electricity sector under the draft Clean Electricity Regulations as modelled for CGI. The officials answered by saying there are “less than 10 Mt on annual emissions on the grid in 2035” and “Less than 2Mt on annual emissions on the grid in 2050.”

## Timing of final regulations

The David Suzuki Foundation feels strongly that the **final clean electricity regulations should be introduced in Canada Gazette Part II by summer 2024** in order to avoid implementation risks.

The clean electricity regulations are scheduled to be in force by January 1, 2025, and significant regulatory and investment planning is necessary among Canadian electricity generators, utilities, system operators and regulatory commissions to plan for and implement the clean electricity regulations. There is no time to waste to implement this important policy, and delayed final regulations will only needlessly complicate implementation and add to uncertainties.

- **Recommendation:** The final clean electricity regulations should be published in the Canada Gazette Part II no later than summer 2024.

## Unit-specific annual emissions limit considerations

The draft regulations present a performance standard of 30 t/GWh, equivalent to 95 per cent capture rate for natural gas generating units. The ‘public update’ considers a change to instead introduce a unit-specific annual emissions limit, which is consistent across all fossil fuel generator types. This annual emissions limit would be calculated per the below formula:

$$\begin{array}{ccccccc} \textit{Unit} & = & \textit{Performance} & & & & \\ \textit{Emission limit} & & \textit{standard} & \times & \textit{MW} & \times & \textit{8760 hours} \\ \textit{(t/year)} & & \textit{(t/GWh)} & & \textit{(capacity of unit)} & & \textit{(total hours in} \\ & & & & & & \textit{a year)} & \times & \left( \frac{1 \textit{ GW}}{1000 \textit{ MW}} \right) \\ & & & & & & & & \textit{(unit} \\ & & & & & & & & \textit{conversion)} \end{array}$$

- **Recommendation:** The considered change to a unit-specific annual emissions limit is acceptable, and can add to the flexibility and transparency of the clean electricity regulations. However, this approach should only be considered if it does not also incorporate policy changes that would weaken the stringency of the clean electricity regulations, such as by weakening the performance standard, excess pooling or allowing carbon offsets.

## Emissions standard considerations

A weakening of the performance standard — which now forms the basis of stringency for the unit-specific annual emissions limit — is also being considered in the ‘public update’. Given our understanding of this considered change and application of the unit-specific annual emissions limit, a few examples are below:

- 1) at 30 t/GWh, a 100 MW natural gas unit would have an emissions limit of **26.3 kt/y**
- 2) at 40 t/GWh, a 100 MW natural gas unit would have an emissions limit of **35.0 kt/y**
- 3) at 50 t/GWh, a 100 MW natural gas unit would have an emissions limit of **43.8 kt/y**

The David Suzuki Foundation agrees with the original emissions standard level of 30 tCO<sub>2e</sub>/GWh, proposed in the draft clean electricity regulations. This standard should discourage all new emitting generation and should minimize the need for offsets and compliance requirements. We believe that a strong emissions standard is core to the stringency of the clean electricity regulations.

- **Recommendation:** To uphold the stringency of the clean electricity regulations, the performance standard should be held at 30 tCO<sub>2e</sub>/GWh.

## Pooling and fleet averaging considerations

Further, a change is considered that would allow “*responsible parties owning multiple existing units in the same jurisdiction to combine the emissions limits of individual existing unit into a pooled emissions limit.*”

Given our understanding of this considered change, a few examples are shown below:

- 1) A fleet of 5,000 MW of natural gas units at 30t/GWh would have a pooled limit of **1.35 Mt/y**
- 2) A fleet of 5,000 MW of natural gas units at 40t/GWh would have a pooled limit of **1.75 Mt/y**
- 3) A fleet of 5,000 MW of natural gas units at 50t/GWh would have a pooled limit of **2.19 Mt/y**

Across Canada, the Canada Energy Regulator estimates that there are 25,938 MW of natural gas electricity generation capacity in 2023, potentially growing to 45,992 MW in 2034 under the “Global net-zero” scenario of the Canada’s Energy Future 2023 report<sup>2</sup>.

Given our understanding of this considered change, a few examples are shown below exploring Canada’s existing fleet of approximately 25,938 MW of natural gas generating capacity:

- 1) At 30t/GWh, Canada’s existing natural gas units would have a total pooled limit of about **6.8 Mt/y**
- 2) At 40t/GWh, Canada’s existing natural gas units would have a total pooled limit of about **9.1 Mt/y**
- 3) At 50t/GWh, Canada’s existing natural gas units would have a total pooled limit of about **11.4 Mt/y**

If the clean electricity regulations are not successful at sending a policy and market signal strong enough to limit new natural gas units from being commissioned, the issue of pooling annual emissions limits becomes even more problematic. Given our understanding of this considered change, a few examples are shown below exploring Canada’s total fleet of 45,992 MW of natural gas generating capacity in 2034, as per “Global net-zero” scenario of the “Canada’s Energy Future 2023” report:

- 1) At 30t/GWh, Canada’s 2034 natural gas units could have a total pooled limit as high as **12.1 Mt/y**
- 2) At 40t/GWh, Canada’s 2034 natural gas units could have a total pooled limit as high as **16.1 Mt/y**
- 3) At 50t/GWh, Canada’s 2034 natural gas units could have a total pooled limit as high as **20.1 Mt/y**

Although the above examples are illustrative, each show the significant residual emissions that could remain on Canada’s electricity system under the proposed pooling consideration, even before accounting for end-of-prescribed-life exemptions, carbon offset or other exemptions being considered.

We believe that pooling by responsible parties among a small number of generators to provide flexibility can be appropriate in some cases, but that significant restrictions should be considered for the overall magnitude of emissions pooling.

- **Recommendation:** If pooling is implemented, a restriction should be applied, in Mt CO<sub>2</sub>e per year, to the total amount of pooling that responsible parties can apply. This limit should be transparently applied per province and per responsible party in such a way that allows total residual emissions of no more than 2.0 Mt per year in 2035.

---

<sup>2</sup> Figures taken from Canada’s Energy Future 2023 dataset, accessed March 2024: <https://apps.cer-rec.gc.ca/ftppndc/dfft.aspx?GoCTemplateCulture=en-CA>

## Carbon offsets

The creation and implementation of a new carbon offset scheme is considered as policy option in the 'public update'. The David Suzuki Foundation believe that this could threaten the stringency of the clean electricity regulations and add significant administrative burden to responsible parties, regulators and governments. With ample zero-emissions, low-cost electricity generation options available throughout Canada, we believe a new carbon offset system for the electricity sector is not necessary. Any limited consideration of carbon offsets should be reserved for harder-to-decarbonize sectors.

- **Recommendation:** Do not allow carbon offsets as a compliance mechanism under the clean electricity regulations.

## End-of-prescribed-life provision

The “end-of-prescribed-life” provision in the draft clean electricity regulations appears to be the most significant contribution to residual emissions on the electricity system in 2035, 2040 and beyond. This provision needs to be removed in order to strengthen the clean electricity regulations. At the very least, the end-of-prescribed-life time horizon needs to be significantly shortened compared to what is proposed in the draft regulations.

Under the draft regulations, fossil fuel electricity generating units built before January 1, 2025, will have the application of the full emissions standard delayed by a period of 20 years. The 'public update' considers extending this period to 25 years or more. This would mean fossil fuel generators commissioned in 2024 will be allowed to pollute freely on the grid until 2049 or later.

Further, the 'public update' considers an extension to the definition of “existing units” to include “*Units with substantial investment and work underway before January 1, 2025 and that start selling electricity to the grid by [TBD] would also receive an EOPL. However, the EOPL would be shortened so that the unit would become subject to an annual emissions limit no later than a unit commissioned by January 1, 2025.*”

This risks adding to unabated emissions for decades to come. This also risks creating a rush of approvals for new natural gas generating facilities — as we have seen in Ontario and Prairie provinces in [2023-24](#). These new fossil fuel facilities will significantly increase costly stranded asset risks for electricity consumers, create compliance risks and compromise the overall ability to meet Canada’s stated goal of net-zero emissions electricity by 2035.

- **Recommendation:** The clean electricity regulations should apply in full to all fossil fuel generating units no later than January 1, 2035. No end-of-prescribed-life provision should be granted for fossil fuel generators beyond January 1, 2035, regardless of when they are commissioned.

## Peaker flexibilities

The 'public update' considers removing all peaker provisions, while applying the unit-specific annual emissions limit. Given the considerations, recommendations and cautions above, the David Suzuki Foundation would support this change.

- **Recommendation:** No peaker provisions should be considered under the clean electricity regulations.

## Additional policy recommendations and considerations

### Transmission, efficiency, storage and other zero-emissions reliability:

The clean electricity regulations are necessarily technology-agnostic, and the work of upgrading Canada's electricity infrastructure lies with provinces. However, it is crucial to acknowledge and incorporate the benefits, opportunities and necessity that new and upgraded interprovincial, intraprovincial and inter-regional electricity transmission projects will bring to Canada's electricity transformation and to the success of the clean electricity regulations.

It has been consistently shown in Canadian modelling efforts that scenarios and pathways that utilize new transmission system upgrades add affordability and reliability benefits to Canada's electricity system.

The David Suzuki Foundation's May 2022 "[Shifting Power](#)" report showed that pathways that embrace interprovincial transmission are more reliable, affordable and secure in their ability to integrate low-cost renewables.

Similar national modelling studies from [Canada's Energy Modelling Hub](#) (2023), the [Canadian Climate Institute](#) (2022), the [International Energy Agency](#) (2023) and the [University of Regina](#) (2018) also show the crucial importance of supporting upgraded grid infrastructure and transmission projects.

The David Suzuki Foundation also views transmission upgrades as a clear area where federal spending can support provinces in their electricity transformations, and directly reduce the requirement for capacity from fossil fuel generation while keeping electricity system costs affordable.

Similarly, energy efficiency, energy conservation, demand-side management, storage and strategic implementation of distributed energy resources such as residential energy storage, time-of-use billing and vehicle-to-grid infrastructure each have potential to offer system reliability benefits, and all are not considered in full in the RIAS. By considering these additional zero-emissions electricity system upgrades in the final CER, additional cost and reliability benefits can be realized without relying on natural gas generation or other fossil fuel generation sources.

- **Recommendation:** Consider the benefits of additional interprovincial, intraprovincial and inter-regional transmissions system upgrades in the final clean electricity regulations.
- **Recommendation:** Consider the benefits of additional energy efficiency, demand-side management, energy conservation, energy storage and distributed energy resources in the final clean electricity regulations.

### Carbon pricing

The David Suzuki Foundation asserts that Canada's electricity sector should be exposed to the full carbon price and removed from the output-based pricing system as soon as possible. A clear statement and policy intention from the federal government on carbon pricing in the electricity sector should come at the same time as the final clean electricity regulations in order to provide policy clarity to affected electricity generators and utilities.

- **Recommendation:** The electricity sector should be exposed to the full carbon price as soon as possible to help the electricity sector stay on track for full decarbonization by 2035.

Please feel free to contact the David Suzuki Foundation if you have any further questions about the recommendations in this submission. We look forward to continuing this important discussion about how Canada can best achieve affordable, reliable, zero-emissions electricity by 2035.

Sincerely,

**Stephen Thomas**  
Clean Energy Manager  
David Suzuki Foundation



## Appendix A:

### David Suzuki Foundation reports, analysis and resources

The David Suzuki Foundation would like to submit for your consideration a number of reports that our organization has authored or commissioned that have specific relevance to the clean electricity regulations and to Canada's work of achieving affordable, reliable, zero-emissions electricity by 2035. Three reports are outlined below.

#### Shifting Power report

In May 2022 the David Suzuki Foundation released "[Shifting Power: Zero-Emissions Electricity Across Canada by 2035](https://davidsuzuki.org/science-learning-centre-article/Shifting-Power-Zero-Emissions-Electricity-Across-Canada-by-2035/)." The report is the result of a four-year partnership with the University of Victoria's SESIT Lab, led by Madeleine McPherson (now co-lead of Canada's Energy Modelling Hub). The report was the first Canadian modelling study to explore pathways to zero-emissions electricity by 2035. The analysis uses purpose-built electricity modelling to explore reliable, affordable pathways that prioritize wind, solar, energy storage, energy efficiency and interprovincial transmission, while also accounting for a growing economy and aggressive electrification up to 2050. The report demonstrates pathways without relying on expensive and sometimes unproven and dangerous technologies like small modular nuclear or fossil gas with carbon capture and storage.

Full report link: <https://davidsuzuki.org/science-learning-centre-article/Shifting-Power-Zero-Emissions-Electricity-Across-Canada-by-2035/>

Policy recommendations from "**Shifting Power**":

1. **Prioritize proven, affordable, scalable and zero-emissions technologies like wind and solar generation, energy storage, energy efficiency and improved transmission.**
  - a. Renewable electricity sources are technically mature and the cheapest form of new electricity available. They, along with enabling technologies and policies, should be prioritized as the primary source of new electricity generation.
  - b. Governments, utilities, businesses and households need to prioritize energy efficiency and conservation since in many cases the cheapest source of energy is the energy saved through efficiency.
  - c. To deliver early emissions reductions and to avoid new fossil generation assets being locked in or stranded, the federal government should put in place a stringent clean electricity standard and ensure that the electricity sector is fully exposed to carbon pricing.
  - d. Terminate federal and provincial public financing of fossil fuel generation with carbon capture, utilization and storage and new small modular nuclear reactors and redirect public funds toward renewable electricity and the technologies that enable it.
2. **Maximize the value that can be delivered by the electricity system by taking a whole-system approach**, recognizing how the flexible operation of Canada's existing hydroelectric fleet; new energy storage capacity; new interprovincial and interregional transmission capacity; complementary energy efficiency and diversity of wind and solar resources can all contribute to achieving grid flexibility and reliability.
3. **There is no time for delay.** The build-out of renewable generation must start immediately if we are to achieve 100 per cent zero-emissions electricity by 2035 throughout Canada. Concurrently, electrification across the economy must be accelerated to wean society off of fossil fuels and to reach climate targets.

4. **Collaboration is key and reforms are needed in utility regulation.**
  - a. Mandates are needed for electric utilities and system operators that give clear direction for electricity sector decarbonization by 2035, to promote interprovincial collaboration and connections and to harness the electricity sector's role in economy-wide decarbonization by 2050.
  - b. Electricity system governance (from utility commissions to electricity markets) must evolve quickly to support the deployment of renewable and enabling technologies.
  - c. Higher levels of interprovincial transmission are beneficial, and collaboration between system operators and provincial governments will be necessary to update policies and mandates that allow for mutually beneficial, cross-jurisdiction electricity planning and operation.
  - d. The new Pan-Canadian Grid Council should support interprovincial electricity trade, regulatory reform and knowledge-sharing toward high levels of renewable electricity.
5. **Prepare the workforce.** Canada must develop and properly fund training and retraining programs for the significant labour requirement needed in renewable electricity generation, energy efficiency and clean electrification.
6. **A national energy poverty strategy** and federal support for regulatory solutions to energy poverty are required. As end uses increasingly switch to the electricity sector, more energy poverty considerations will fall under the electricity sector's umbrella. Focused programming for low- and moderate-income and equity-seeking households must be a priority.
7. **Mobilize money and unlock opportunities.** Building out renewables, expanding interprovincial transmission, modernizing the grid, incorporating new storage technologies and electrifying the economy will require redirecting investment flows from carbon-intensive sectors **to markedly increase the level of investment** in the electricity sector and in economy-wide electrification. Governments can play a role in de-risking investments, correcting market failures and enabling Indigenous ownership and community-owned renewables.



## Keeping the Lights On report:

In October 2022, the David Suzuki Foundation released “[Keeping the Lights On: Ensuring energy affordability, equity and access in the transition to clean electricity in Canada](https://davidsuzuki.org/science-learning-centre-article/keeping-the-lights-on-ensuring-energy-affordability-equity-and-access-in-the-transition-to-clean-electricity-in-canada/),” authored by Runa R. Das and Mari Martiskainen.

This report focuses on energy poverty in the context of a people-centred transition in Canada. Calls have been made for energy transitions to be equitable so they do not cause unnecessary burden and risk distribution. Some people and households are particularly vulnerable in the current energy system. Almost one in 10 Canadian households spends more than 10 per cent of their income on energy bills. Many experience energy poverty, struggling to have a sufficient level of energy services. This can have damaging effects on health, resiliency, social relationships and, in extreme cases, survival.

To mitigate energy poverty in the context of a clean energy transition, this report makes policy recommendations in four areas: national energy poverty strategy; universal clean energy service; affordable energy; and decarbonizing and efficiency for the residential sector.

Full report link: <https://davidsuzuki.org/science-learning-centre-article/keeping-the-lights-on-ensuring-energy-affordability-equity-and-access-in-the-transition-to-clean-electricity-in-canada/>

Policy recommendation matrix from “**Keeping the Lights On**”:

Key policy topic	Subsections	Recommendations	Key actors
<b>Energy Poverty Strategy</b>	➤ A National Energy Poverty Strategy for Canada	<ul style="list-style-type: none"> <li>• Energy justice as a guiding approach</li> <li>• Energy poverty advisory group</li> <li>• Household energy data</li> <li>• Energy poverty definition, indicators and targets</li> </ul>	Federal government Provincial government Civil society
<b>Universal Clean Energy Service</b>	➤ Consumer protection and access to energy services	• All-season energy disconnection ban	Provincial government Municipal government Utilities Social service agencies
	➤ A right to cool (and heat)	• Access to cooling services	
<b>Affordable Energy</b>	➤ Bill-assistance programs	<ul style="list-style-type: none"> <li>• Lifeline rate</li> <li>• On-bill credits/discounts</li> <li>• Seasonal programs</li> <li>• Emergency assistance</li> </ul>	Provincial government Utilities Social service agencies
<b>Decarbonizing and Efficiency for the Residential Sector</b>	➤ Energy efficiency resources standard	• Utility targets	Provincial government Utilities Social service agencies
	➤ Energy efficiency	<ul style="list-style-type: none"> <li>• Building-sector targets</li> <li>• Low-income energy efficiency funding</li> <li>• Multi-residential and landlord-owned buildings programs</li> </ul>	Federal government Provincial government Municipal government

	➤ Renewable energy programs	<ul style="list-style-type: none"> <li>• Free heat pump programs</li> <li>• Free electric water heater programs</li> </ul>	Federal funding Provincial government Municipal government Utilities Social service agencies
	➤ Education and collaboration	<ul style="list-style-type: none"> <li>• Community outreach and education delivery</li> <li>• Diverse and inclusive stakeholder engagement</li> </ul>	Provincial government Municipal government Utilities Community organizations



## Decarbonizing Electricity and Decolonizing Power report:

In May 2022 the David Suzuki Foundation released “Decarbonizing Electricity and Decolonizing Power: Voices, Insights, Perspectives and Priorities from Indigenous Clean Energy Leaders,” authored by Neegan Burnside and Dean Jacobs of Walpole Island First Nation.

All existing and future energy projects in Canada are located on either unceded Indigenous territories or treaty lands. A transition to zero-emissions electricity by 2035 must ensure benefits flow to communities and will only succeed with full Indigenous consent and participation that upholds Indigenous rights and title. The report authors interviewed more than a dozen Indigenous clean energy leaders across Canada. The report offers key insights and case studies, and sets out six principles for upholding Indigenous rights and ensuring community benefits in the transition to clean renewable electricity.

Full report link: <https://david Suzuki.org/science-learning-centre-article/decarbonizing-electricity-and-decolonizing-power-voices-insights-and-priorities-from-indigenous-clean-energy-leaders/>

Policy recommendations from “**Decarbonizing Electricity and Decolonizing Power**”:

Despite current successes and future opportunities for Indigenous-led clean energy development, several significant and institutional barriers to entry and expansion exist. Challenges include but are not limited to regulatory, policy and program barriers; political barriers; lack of capacity and lack of access to equitable financing opportunities.

Through thoughtful and insightful interviews with Indigenous clean energy leaders, we have identified six broad themes that need to guide planning and development to achieve 100 per cent clean electricity in Canada by 2035:

1. Indigenous world views and knowledge need to be incorporated and respected within broader societal and economic value systems;
2. Meaningful, rights-based and consent-based consultation needs to be mainstreamed for all clean energy projects;
3. Existing Indigenous leadership needs to be honoured and advanced through support for capacity, ownership opportunities and jobs;
4. Indigenous leaders require a seat at decision-making tables, as decarbonizing electricity must also mean decolonizing power structures;
5. Solving systemic infrastructure gaps for Indigenous communities through focused just transition measures must be prioritized as part of the clean energy transition; and
6. Economic reconciliation must be central to the clean energy transition by removing barriers to accessing financial capital, ownership and other project benefits.

These six foundational themes must be applied to decolonize existing power structures held by Crown corporations and utilities, and to empower Indigenous communities to advance their interests through meaningful and sustained involvement in the clean energy transition. This includes not only advancing Indigenous-led, -owned and controlled clean energy projects, but also engaging in and directing regulatory, planning and policy processes at the municipal, provincial and federal levels.

## Appendix B

### Resources on affordability

As Canada moves to clean electricity, it harnesses the opportunity for more affordable energy. Significant energy efficiency savings are inherent in electrification, as energy end uses move away from fossil fuels and transition to affordable, reliable clean electricity. Studies and reports outlined below demonstrate clean electricity's economic and affordability advantage. However, no matter the energy source, we know that specific and focused supports are needed to address energy poverty in Canada and we are pleased to offer some resources and solutions for this crucial problem as well.

**Keeping the Lights On** | David Suzuki Foundation | October 2022

<https://david Suzuki.org/science-learning-centre-article/keeping-the-lights-on-ensuring-energy-affordability-equity-and-access-in-the-transition-to-clean-electricity-in-canada/>

- See Appendix A for main findings and recommendations on solutions and approaches for energy poverty in Canada.

**Clean Electricity, Affordable, Energy** | Canadian Climate Institute | June 2023

<https://climateinstitute.ca/wp-content/uploads/2023/06/Clean-Electricity-Affordable-Energy.pdf>

- Main finding on affordability: “Our analysis finds that Canadians will spend **12 per cent less on energy** than they do today when they switch off fossil fuels to power their homes, vehicles and businesses with clean electricity.”

**A Clean Bill** | Clean Energy Canada | September 2023

<https://cleanenergycanada.org/report/a-clean-bill/>

- Main finding on affordability: “A family that adopts a few common clean energy solutions — including EVs and heat pumps — could knock \$800 off their monthly energy bills compared to one that is largely reliant on fossil fuels.”

**Shifting Power** | David Suzuki Foundation | May 2022

<https://david Suzuki.org/science-learning-centre-article/Shifting-Power-Zero-Emissions-Electricity-Across-Canada-by-2035/>

- Main finding on affordability: “Clean electricity pathways that achieve zero-emissions electricity in Canada by 2035 through prioritizing wind, solar, energy storage, existing hydroelectric capacity, significant new interprovincial transmission, high-electrification and high energy efficiency are cost-comparative to the BAU in 2025-2030 and can achieve a lower levelized cost of energy when compared to BAU pathways between 2035-2050.”

**Towards a Clean Atlantic Grid** | Pembina Institute | Jan 2022

<https://www.pembina.org/pub/towards-clean-atlantic-grid>

- Main finding on affordability: non-emitting clean electricity “portfolios” that provide the same grid services and reliability can reduce consumer costs when compared to natural gas-fired electricity.

**Unveiling the CER and EMH’s Policy Impact Assessment Tools – Presentation** | Energy Modelling Hub | October 2023

<https://cme-emh.ca/en/unveiling-the-clean-electricity-regulation-emhs-impact-assessment-tools/>

- Main finding on affordability under illustrative scenarios: “The CER is only marginally more expensive than BAU scenarios, and cheaper by 2050” and comes with “substantial emissions savings.”

**Electricity Affordability and Equity in Canada’s Energy Transition** | Canadian Climate Institute, Brett Dolter, Jennifer Winter | June 2023

<https://climateinstitute.ca/wp-content/uploads/2022/09/Electricity-and-equity-canadas-energy-transition.pdf>

- Main finding on affordability: as electricity spending and consumption rise with household electrification, household energy spending goes down among all income quintiles.

**2023 Levelized Cost of Energy +** | Lazard | April 2023

<https://www.lazard.com/research-insights/2023-levelized-cost-of-energyplus/>

- Main finding on affordability: The levelized cost of energy for various applications of wind and solar electricity are well below the levelized cost of energy for new gas peaking plants, new nuclear plants, new coal plants and new combined cycle natural gas plants — and in many cases new wind and solar electricity is cheaper than existing nuclear, coal and gas capacity.

