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Karishma Boroowa
Director, Electricity and Combustion Division
Energy and Transportation Directorate
Environment and Climate Change Canada
Email: ECD-DEC@ec.gc.ca

Submitted via email to: ECD-DEC@ec.gc.ca

Also submitted as text via the new Online Regulatory Consultation System at:
https://www.gazette.gc.ca/rp-pr/p1/2023/2023-08-19/html/reg1-eng.html

Dear Ms. Boroowa,

**Re: Submission and feedback on the draft clean electricity regulations**

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. We also acknowledge the time, thought and consideration put into the design of these regulations and this consultation period, and we welcome the opportunity to continue these important discussions with Environment and Climate Change Canada and others involved.

All comments and feedback submitted in this document are with respect to 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. 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 as soon as possible in 2024**, to give stakeholders time to implement this important policy ahead of January 1, 2025, and to avoid potential implementation risks.

Our comments, analysis and feedback in this submission cover a range of issues related to the draft clean electricity regulations. For ease of navigation, please find a high-level outline below:

## Contents

## Overall approach:

The David Suzuki Foundation welcomes the federal government's commitment to "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 like Canada to be on-track for economy-wide decarbonization by 2050.

This is why 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, and also introduce further stranded asset and implementation risks.

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.

This said, 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 Albertans and 68 per cent of people living in Saskatchewan and Manitoba.

Our concerns with the draft CER primary have to do with the suite of flexibilities, loopholes and extensions that have been put in place to accommodate expanded and prolonged use of natural gas on the electricity system. Taken together, these deviations 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 2040 and beyond, and costly stranded asset risks.

The draft regulations, 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 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 for the CER

### 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[1] that the clean electricity regulations, as proposed, will create an emissions profile on the electricity system where "up to 10 million tonnes of CO2e" remain as residual emissions. 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 (CO2e) 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, little detail has been shared publicly about emissions reductions pathways in the RIAS, or emissions reductions by province, region or policy measure.

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 CO2e 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 CO2e.

Electricity system emissions are estimated to be 52 million tonnes of CO2e/year as of 2021, according to the 2023 NIR table ES-2.

The Canadian Climate Institute has estimated in September 2023 that Canada's 2022 electricity sector emissions stayed about the same, also at 52 million tonnes of CO2e/year, even showing a slight increase of 0.3 per cent in 2021.

If by 2035 the CER lead to residual emissions of up to 10 million tonnes per year, that represents a significant amount of remaining emissions with no clear pathway to achieve net-zero emissions.

**The CER must be strengthened to achieve an outcome of residual emissions on the electricity system in 2035 to below two Mt. Our recommendations to this effect are outlined below.**

### Regulation timing:

The David Suzuki Foundation feels strongly that the final clean electricity regulations should be introduced in Canada Gazette Part II as soon as possible 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 a 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 six months after the close of the current consultations.

[1] 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"

## Introduce interim measures this decade

The draft regulations do not introduce any new emissions requirements for existing fossil fuel generators until 2035. The David Suzuki Foundation believes that a strong enough market signal is not yet being sent to prevent commissioning of new unabated fossil fuel–generating units before January 1, 2025, nor to prevent compliance risk of new unabated fossil fuel generators built after January 1, 2025.

- **Recommendation:** The full performance standard of 30 $tCO_2e$/GWh should apply to all new generating units commissioned after January 1, 2025, to ensure overall electricity system emissions ramp down steadily on a compliance pathway toward the 2035 target date.
- **Recommendation:** The electricity sector should be exposed to the full carbon price as soon as possible, and no longer be partially exempt through the Output-Based Pricing System.

## 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 and 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.

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. This means fossil fuel generators commissioned in 2024 will be allowed to pollute freely on the grid until 2044.

This, along with other flexibilities for fossil fuel generators, 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 full performance standard of 30 $tCO_2e$/GWh should apply 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

Special considerations for natural gas peaker plants and other unabated fossil fuel generation contradict this regulation’s technology neutrality and should only be considered when other zero-emissions pathways have been explored. The grid services and load-carrying capacity that a natural gas generating station or other fossil fuel plant provides has numerous zero-emissions alternatives from a balanced mix of variable renewable electricity from wind and solar, grid-scale energy storage, existing hydroelectric capacity, interprovincial and inter-regional transmission connections, distributed energy resources and a suite of energy conservation and energy efficiency measures.

- **Recommendation:** No special consideration for “peaking” fossil fuel generating units or aggregate allowances should be considered unless a system operator, utility or competent authority can demonstrate that the same electricity system value cannot be delivered economically by a zero-emissions alternative.
    - Should a special allowance for peaking generation for unabated fossil fuel generation be deemed necessary, the limit on flexibility shown in the draft clean electricity regulations should apply: not more than 450 hours per year and not more than 150 kilotonnes of CO2e emissions per year.

## Maintain a strong emissions standard

The David Suzuki Foundation agrees with the emissions standard of 30 $tCO_2e/GWh$, proposed in the draft CER. This standard will discourage all emitting generation and should minimize the need for offsets and compliance requirements. We believe that a strong emissions standard is core to enforcing clean electricity regulations that achieve the policy intent of a net-zero emissions electricity system by 2035.

- **Recommendation:** The performance standard should be held at 30 $tCO_2e/GWh$.

## 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.

Pease 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 or outlined below.

## Shifting Power report

In May 2022 the David Suzuki Foundation released "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 achieved 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," 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 |
|---|---|---|---|
| **Energy Poverty Strategy** | ➢ A National Energy Poverty Strategy for Canada | • Energy justice as a guiding approach<br>• Energy poverty advisory group<br>• Household energy data<br>• Energy poverty definition, indicators and targets | Federal government<br>Provincial government<br>Civil society |
| **Universal Clean Energy Service** | ➢ Consumer protection and access to energy services | • All-season energy disconnection ban | Provincial government<br>Municipal government<br>Utilities<br>Social service agencies |
| | ➢ A right to cool (and heat) | • Access to cooling services | |
| **Affordable Energy** | ➢ Bill-assistance programs | • Lifeline rate<br>• On-bill credits/discounts<br>• Seasonal programs<br>• Emergency assistance | Provincial government<br>Utilities<br>Social service agencies |
| **Decarbonizing and Efficiency for the Residential Sector** | ➢ Energy efficiency resources standard | • Utility targets | Provincial government<br>Utilities<br>Social service agencies |
| | ➢ Energy efficiency | • Building-sector targets<br>• Low-income energy efficiency funding<br>• Multi-residential and landlord-owned buildings programs | Federal government<br>Provincial government<br>Municipal government |

| | | | |
|---|---|---|---|
| | ➢ Renewable energy programs | • Free heat pump programs<br>• Free electric water heater programs | Federal funding<br>Provincial government<br>Municipal government<br>Utilities<br>Social service agencies |
| | ➢ Education and collaboration | • Community outreach and education delivery<br>• Diverse and inclusive stakeholder engagement | Provincial government<br>Municipal government<br>Utilities<br>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://davidsuzuki.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://davidsuzuki.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://davidsuzuki.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.