
Submitted Comments Regarding 2020 IRP Assumptions

February 14, 2020

The Ecology Action Centre (EAC) welcomes the opportunity to participate as a stakeholder in the 2020 Integrated Resource Plan process. We submit the below comments in response to the Draft Assumptions Set and Draft Analysis Plan released for stakeholder comment, and discussed at the IRP stakeholder session on January 28, 2020. Specifically, this submission is in response to the below documents:

- i) [2020 IRP Draft Assumptions Set \(Jan 20, 2020\)](#)
- ii) [2020 IRP Draft Assumptions Addendum/Update \(Feb 3, 2020\)](#)
- iii) [2020 IRP Draft Analysis Plan](#)

It is also important to note in this submission that the capacity of EAC to engage in this process is greatly reduced due to the design and process of the 2020 IRP, and the lack of availability for stakeholder funding and support through the NSUARB, through the NSPI-led process, or through the Nova Scotia Department of Energy and Mines. This is true for other organizations who advocate on behalf of climate mitigation, environmental concerns and energy affordability concerns, who do not have staff regulatory or legal counsel capacity to engage in this important energy planning process.

Although NSPI has made every effort to make the 2020 IRP process accessible to stakeholders, we regret the lack of financial and structural support for organizations to participate. The EAC feels that this problem in ongoing NSPI and NSUARB processes will continue until the Department of Energy and Mines, or Nova Scotia Power create an updated mandate to support climate change and environmental concerns in a way similar to the [Consumer Advocate](#) or the [Small Business Advocate](#).

The EAC believes that setting clear, ambitious climate targets is critical to building the low-carbon economy and avoiding the worst of the threats that climate change poses to our coastal province. The phase out of coal-fired electricity is a critical policy that can help ensure affordable, clean electricity for Nova Scotians and help to avoid the worst climate impacts and ongoing human health impacts of burning coal.

With regional electricity planning, federal policy commitments and the established opportunities in affordable renewable energy and energy efficiency, the time has never been better to commit to a timeline and process for a full phase-out of coal-fired electricity in Nova Scotia, and a clear pathway to support coal workers and communities in the just transition to a prosperous, low-carbon economy.

The EAC welcomes the opportunity to submit written comments to this process, and acknowledges the time and effort of Nova Scotia Power staff in answering our questions during the pre-IRP and IRP periods thus far.

Thank you,



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1. Submission of EAC Report on Coal Phase-Out and Electricity System Transition

The EAC would like to take the opportunity to submit our November 2019 report into the discussion around the 2020 IRP Draft Assumptions Set.

The report was submitted to Nova Scotia Power staff in November 2019, and is entitled '[Accelerating the Coal Phase Out: Nova Scotia and the Climate Emergency A technical report and modelling analysis of a low-carbon transition for Nova Scotia's electricity and energy systems by 2030](#)'

The report offers a low-carbon scenario based on an end-use model of Nova Scotia's electricity system. Compared against a 2019 base year, this report is technical and modelling exercise for what an electricity grid with more than 90% renewable electricity, and a complete transition away from coal-fired electricity generation by 2030 would look like in Nova Scotia.

Key measures and results from the low-carbon pathway in the report include:

- Overall **electricity demand dropping** by about 7% in the province between 2019 and 2030.
- Substantial **increases in energy efficiency** programming by the year 2030 include: 80% of residential and commercial buildings receive deep-energy retrofits; major shifts to heat pumps for space heating and hot water; shifts away from oil and natural gas heating; and efficiency gains in lighting and other appliances.
- By 2030 25% of personal vehicles will be plug-in hybrid, and 15% fully battery-**electric vehicles**.
- The addition of 120 MW / 480 MWh of **energy storage**
- A generation mix of about 43% wind, 5% solar, 43% hydro and 9% natural gas by 2030.
- A doubling of **wind power** in Nova Scotia, with the addition of 600 to 800 MW
- Significantly increasing **solar power** in Nova Scotia, with the addition of about 480 MW
- Building a second **transmission link** to New Brunswick, and importing about 200MW of existing hydroelectricity capacity from Quebec.

Although this report is not primarily an economic report, it does perform high-level economic analysis on the key measures proposed as part of this low-carbon pathway with a result of net annual cost of about \$200 million. This does not suggest all incremental costs are put on the rate base. To put this in context, \$200 million is about half of one percent of Nova Scotia's economic output, or about 10% of the revenue the government collects every year in sales tax.

The EAC looks forward to submitted a number of these key measures and results for consideration as elements of the 2020 IRP scenario options.

The measures of the report result in significant overall greenhouse gas emissions reductions in Nova Scotia. Including the emission reductions in the scope of this report lead to a provincial total of more than 69% below 2005 levels by 2030 – as seen in the sample figure below.

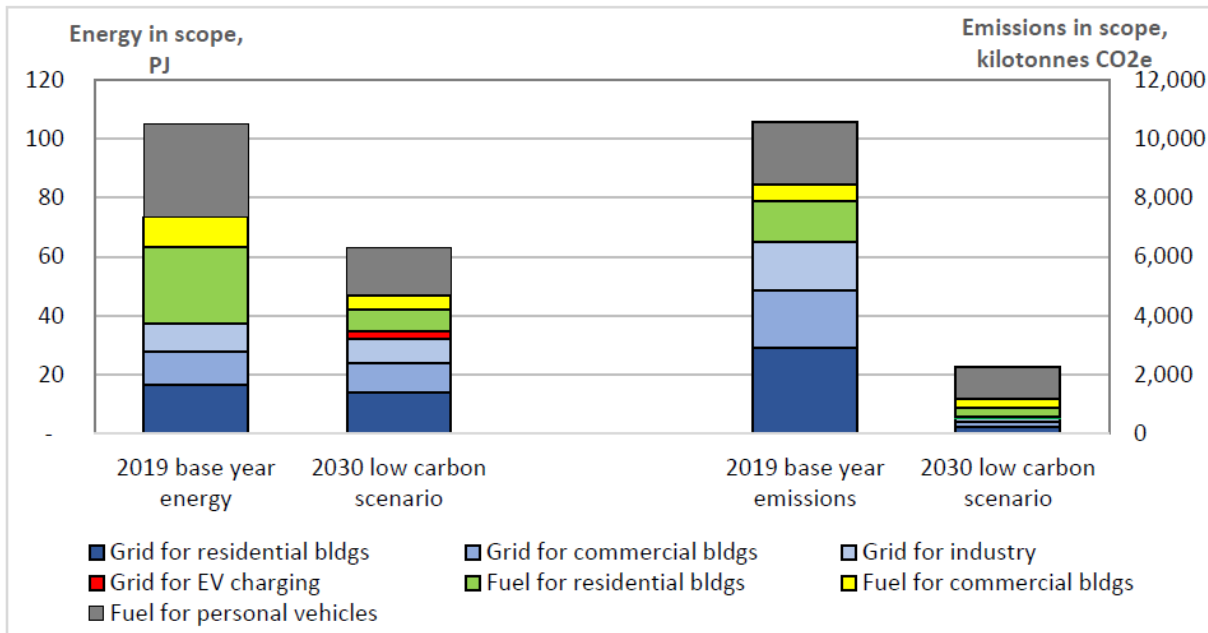


Figure ES- 2. Energy (bars on the left) and emissions (bars on the right) included in scenario, 2019 baseline vs. 2030 low carbon scenario.

The report can be found at the link below:

<https://ecologyaction.ca/sites/default/files/images-documents/EAC%20Coal%20Phaseout%20Report%20-%20Final%20-%2020191120.pdf>

2. Greenhouse Gas Reductions Assumptions

Overall, the EAC believes that more ambition in greenhouse gas emissions reductions should be considered.

As mentioned on Page 14 of the 2020 IRP Assumptions Set, the EAC agrees that the Sustainable Development Goals Act and subsequent regulations will have the potential to significantly increase the level of ambition from the currently regulated hard caps out to 2030 in Nova Scotia. With an overall provincial emissions reduction target of 53% below 2005 levels by 2030, it can reasonably be expected that a portion of these new reductions from the Sustainable Development Goals Act will come from the electricity sector, beyond the existing hard caps.

Further, the federal government is set to review and likely increase the level of ambition as part of the federal carbon pricing system during the 2020 midterm review. This may result in further emissions reductions being required from Cap and Trade jurisdictions in the post-2022 period. Additionally, the Federal Government's commitment to exceed the federal emissions reduction target of 30% below 2005 by 2030 is likely to drive continued reductions regionally across Canada.

The ambition of potential scenarios from HaliFACT 2050 – Halifax's municipal climate action plan process – may be another early driver of further need for decarbonisation of the electricity system beyond the existing hard caps presented in the 2020 IRP Assumptions Set.

3. Renewable Electricity Target Assumptions

The EAC believes that renewable electricity targets or renewable energy standards (RES) may be part of the future regulatory landscape in Nova Scotia. The EAC therefore disagrees with the assertion on Page 26 of the 2020 IRP Assumptions Set that no future RES regulations are anticipated. Although the Sustainable Development Goals Act states a goal of net-zero by 2050, step-goals in the milestone years of 2025, 2030, 2035, 2040, 2045 and so on may be likely as a regulatory framework toward the net-zero goal.

Further, if this is not already considered, the stated commitments and agreements regarding the Federal government's goal of reaching [100% renewable electricity for all Federal government buildings by 2025](#) should be considered in its interaction with the NS electricity system.

4. Coal Phase-Out Equivalency Agreement Assumptions

Since November 2016, the Federal Government has had an established policy goal to phase out all coal-fired electricity generation across Canada by 2030, as a key emissions reduction pillar of the Pan-Canadian Framework on Clean Growth and Climate Change.

The Federal Government finalized its amended regulations for emissions from coal-fired electricity generation on November 30, 2018. The final regulations articulated emissions reductions from the electricity sector and showed that phasing out coal electricity in Nova Scotia by 2030 would avoid 89 premature deaths, 8,000 asthma episodes and 58,000 days of breathing difficulty for Nova Scotians, among other benefits.

a. The Renewed 2020-2025 Equivalency Agreement

The renewed equivalency agreement, released for comment on March 30th, 2019 and finalized in November 2019 is a renewal of the existing 'Canada-Nova Scotia Equivalency Agreement Regarding Greenhouse Gas Emissions from Electricity Producers', which came into force on July 1,

2015. The existing equivalency agreement expired after a five-year period on Dec 29, 2019. This renewed agreement is accompanied by a 'Quantitative analysis of equivalency determination consultation: carbon dioxide emissions from coal-fired generation' which gives supplementary information and highlights analysis of future emissions pathways out to 2040.

Although the quantitative analysis shows emissions targets between 2015 and 2040 to gain a high-level and long-term perspective of emissions pathways, the proposed renewed equivalency agreement itself would only be valid for a five-year period between January 1, 2020 and December 31, 2024.

Emissions targets for the 2025-2029 period are also shown in the proposed renewed equivalency agreement and are regulated in Nova Scotia under the Environment Act's Greenhouse Gas Emissions Regulations. However the targets in this period are outside the five-year term of the proposed equivalency agreement and would have to be agreed upon by the Federal and Provincial governments in 2024 to enter a renewed agreement at that time.

The quantitative analysis also includes a forward-looking picture of Nova Scotia's plans for what the Province would submit to be equivalent emissions reductions for the 2030-2040 period. Importantly, this lays out a path and sets expectations for the 2030-2040 period, but is not binding for emissions pathways past 2024, or past the 5-year period of the Equivalency Agreement itself. Our understanding from the provincial government is that a new, separate equivalency agreement will be needed for the 2030-2040 period.

The lack of ambition in the proposed long-term emissions pathway proposed in the 2030-2040 pathway is the EAC's main point for criticism of this equivalency agreement renewal process.

Therefore, the EAC believes that the forecast CO2 emissions hard caps presented on Page 17 of the 2020 IRP Draft Assumptions Set are the least ambitious emissions reductions pathway scenario that should be modelled, and all other scenarios should increase in emissions reductions ambition from this set of hard caps.

b. Targets for 2030 and Beyond:

It is the understanding of the EAC that the articulated greenhouse gas emissions pathway for the 2030-2040 period within the quantitative analysis of the proposed equivalency agreement is simply the business-as-usual case articulated by Nova Scotia Power Inc. to continue burning coal for electricity generation until well into the 2040 decade, until at least 2042ⁱ.

If this emissions pathway were to be accepted, there would be no incremental emissions reductions beyond the business-as-usual case for Nova Scotia resulting from the amended federal regulations on coal-fired electricity, or this proposed equivalency agreement. In the view of the EAC, this is not acceptable, and certainly does not meet the intent of the federal policy.

The figure below shows the proposed pathway of the Nova Scotia Government showing Nova Scotia over-achieving emission reductions compared with the federal regulations through the 2015-2029 period, and proposing it be allowed to be deficient with federal regulations and emit more greenhouse gases in the 2030-2040 periodⁱⁱ. Although this carefully selected timeframe results in approximately the same emissions reductions over the total 2015-2040 period when compared with

the modelled baseline, this proposal of banking emissions credits over a 25-year period is fundamentally problematic and does not lead to increased overall ambition.

Success in achieving past policy goals should be celebrated, but should not be used as a tool to ensure weakened future ambition. Over achievement during the duration of the term of one equivalency agreement should not be used to balance deficiencies in the outcomes of a future equivalency agreement.

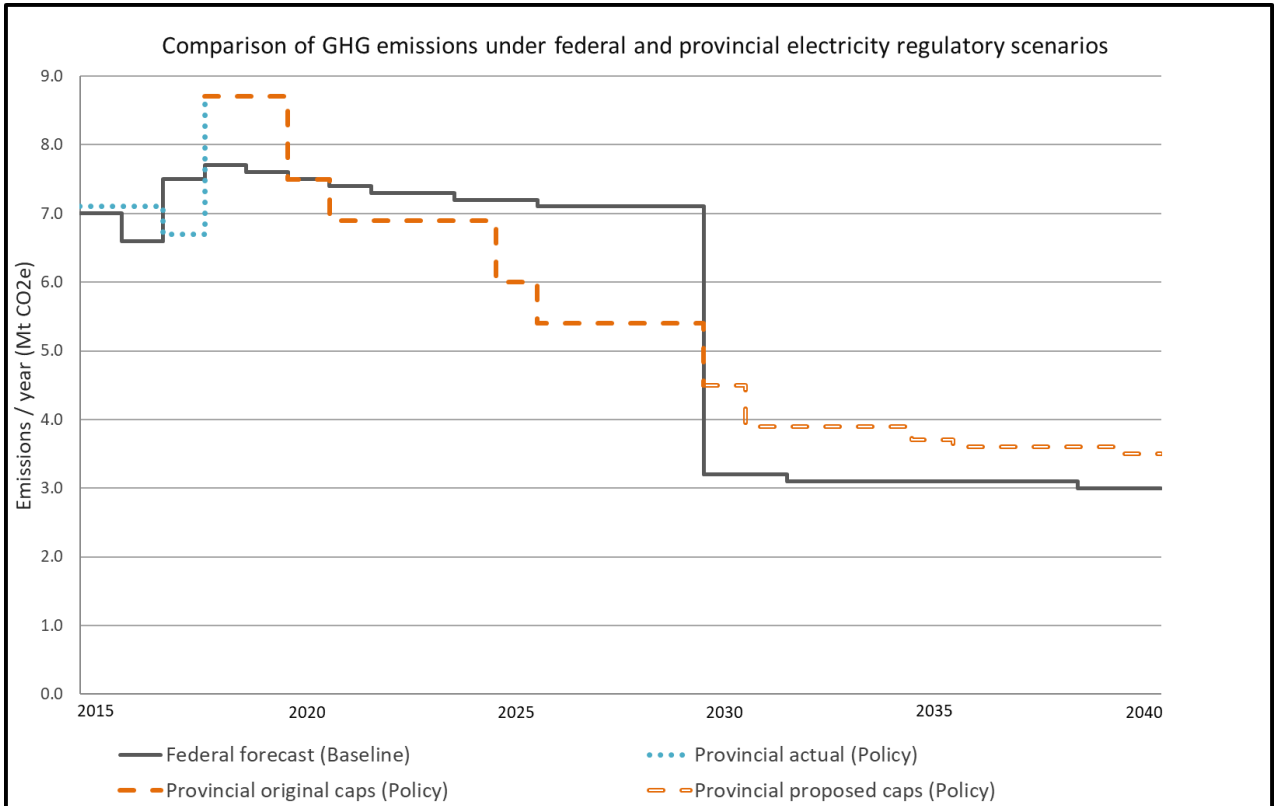


Figure 1 from 'Quantitative analysis of equivalency determination consultation: carbon dioxide emissions from coal-fired generation'.

It is the view of the EAC that the federal government should not accept the proposed emissions pathway for the 2030-2040 period. An emissions pathway that is compliant with the federal regulations of approximately 3.0 Mt of CO₂e for the 2030-2040 period should be proposed by Nova Scotia, or the 2030-2040 period should be removed from this analysis entirely until such a time that clarity on future equivalency for the post-2030 period can be reached.

c. Complete Coal Phase-Out Scenario

Given the uncertainty with future Equivalency Agreements, the EAC agrees with the 'Scenario Note' on page 15 of the 2020 IRP Draft Assumptions Set that at least one modelling scenario should examine a portfolio where all coal units are retired by Dec 31, 2029 in accordance with the 2018-19 Federal regulations.

5. Moving Forward

The EAC believes that Nova Scotia still has an opportunity to set long-term ambition, and commit to phasing out coal-fired electricity in Nova Scotia.

We need to ensure that low and middle-income Nova Scotians, coal workers and communities all benefit from this change in our electricity system, and the EAC believes that this transition is possible in an affordable, just and timely way.

The EAC looks forward to continued participation in the 2020 IRP stakeholder process, and ongoing conversations regarding Nova Scotia's electricity future.

Ecology Action Centre is committed to continuing to ensure Nova Scotia sets a pathway to phasing out coal-fired electricity generation, and looks forward to working with all partners toward the just transition to a prosperous, green economy.

Thank you for your consideration,



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See Also:

Ecology Action Centre's Electricity Report and Ongoing Work on Coal Phase-Out:

<https://ecologyaction.ca/electricityreport>

Setting Expectation for Robust Equivalency Agreements in Canada (April 2019)

Climate Action Network Canada | Canadian Association of Physicians for the Environment | Centre québécois du droit de l'environnement | Ecology Action Centre | Environmental Defence | Pembina Institute

<https://ecologyaction.ca/sites/ecologyaction.ca/files/images-documents/CAN-Rac-Equivalency-Paper-2019-web.pdf>

The Just Transition Task Force on Coal Workers and Communities Final Report:

<https://www.canada.ca/en/environment-climate-change/news/2019/03/government-of-canada-welcomes-report-from-just-transition-task-force-for-canadian-coal-power-workers-and-communities.html>

Ecology Action Centre's Electricity Report and Ongoing Work on Coal Phase-Out:

<https://ecologyaction.ca/electricityreport>

ⁱ Synapse Energy Economics, Inc. for Nova Scotia Utility and Review Board: *Nova Scotia Power Inc. Thermal Generation and Utilization and Optimization - M08059* | May 1, 2018 | <https://uarb.novascotia.ca/fmi/webd/UARB15>

ⁱⁱ ECCC: *Quantitative analysis of equivalency determination consultation: carbon dioxide emissions from coal-fired generation* | March 30, 2019 | <https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/canada-nova-scotia-consultation-carbon-dioxide-electricity/quantitative-analysis-equivalency-determination.html>

ⁱⁱⁱ ECCC: *Quantitative analysis of equivalency determination consultation: carbon dioxide emissions from coal-fired generation* | March 30, 2019 | <https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/canada-nova-scotia-consultation-carbon-dioxide-electricity/quantitative-analysis-equivalency-determination.html>