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Are BC electricity imports a realistic solution to Alberta's emissions reduction plan?

Recent proposals to use British Columbia hydropower as a substitute for coal power in Alberta should be viewed in the context of [new research](#) showing that in the long-term, BC has little energy to spare, and that any substitute power would in fact be originating from the United States.

The research was released today by the [2060 Project](#), a joint initiative of the University of Victoria's Institute for Integrated Energy Systems (IESVic) and the UVic-led Pacific Institute for Climate Solutions (PICS).

The 2060 Project team modelled the combined BC-Alberta electricity system and future scenarios under Alberta's proposed carbon-reduction policies. The model includes current and planned electrical generating units, as well as a suite of potential options, such as natural gas-fired generation, wind and solar power, and imports from the US. One of these options is the expansion of the electrical transmission connection (called an intertie) between the provinces.

"Our findings indicate that, even with the addition of the province's planned Site C dam, BC will not have an abundance of surplus energy to sell to Alberta, due to growing internal demand," says Jeff English, a PhD candidate with the 2060 Project and lead author of the report.

Although BC was a large energy exporter in 2015, it's been a net importer of energy for five of the past 10 years and had a net energy balance close to zero between 2005 and 2015.

"BC simply doesn't have additional energy to sell," says English. "If current market trends continue, the majority of the energy provided to Alberta through an expanded intertie would first be imported to BC from the US, stored in BC's hydroelectric reservoirs, and then exported to Alberta during times of high demand and low wind production. And there's no guarantee that the US energy would be low-carbon."

However, the 2060 Project team says an expanded intertie could potentially "green the grid" by supporting wind and solar investment in Alberta. For example, when the wind is blowing and the sun is shining in Alberta, surplus renewable energy can be sold to BC while BC throttles down its large hydroelectric facilities, thereby saving water. This stored water can then be used as energy in Alberta at times when wind and solar generators are not producing.

[IESVic](#) is an international leader in sustainable energy solutions, investigating areas as diverse as fuel cell science, cryofuels, energy policy development, as well as alternate energy sources such as wind, solar, run-of-river hydro, tidal and wave power.

[PICS](#) is led and hosted by UVic, brings together leading researchers from BC and around the world to study the impacts of climate change and develop positive approaches to mitigation and adaptation.

The [2060 Project](#) is a joint IESVic/PICS initiative that explores the nexus of technology, policy, economic and societal issues related to decarbonization of Canada's electrical sector. Through partnerships with electrical utilities, provincial governments and academia, the findings from the 2060 Project provide both the knowledge required to help drive the Canadian electrical system toward carbon neutrality.

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Media contacts:

Jeff English (2060 Project) at 250-858-5372 (cell) or jre@uvic.ca

Robyn Meyer (Pacific Institute for Climate Solutions) at 250-588-4053 or rmeyer@uvic.ca

Suzanne Ahearne (University Communications + Marketing) at 250-721-6139 or

sahearne@uvic.ca

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