Written Submission for the Pre-Budget Consultations in Advance of the 2022 Budget

By Energy Storage Canada

Recommendation

To help reduce GHG emissions, lower electricity costs, and make our electricity grids more efficient, the federal government should:

- Increase funding to and provide an extension of NRCan's Smart Renewables and Electrification Program (SREP) and,
- Implement the Government's promised Investment Tax Credit (ITC) for clean technology, wherein we further recommend the inclusion of a broad range of energy storage applications (batteries, pumped storage, thermal, compressed air etc.), with support levels and options consistent with the proposed ITC for energy storage in the United States.

About Energy Storage Canada

Energy Storage Canada (ESC) is the only national trade organization whose representation and advocacy are entirely dedicated to energy storage in Canada. ESC represents a diverse membership of more than 80 companies engaged in the country's storage industry, ranging in size from large multinationals to smaller, innovative technology companies. Our goal is to build a sustainable market and demonstrate the value that energy storage contributes to our energy systems, our environment, and our economy. Canada has the opportunity to become a global leader in the energy storage industry by reinforcing innovation, creating expertise and jobs, and ensuring the establishment of a strong supply chain.

Submission

Energy Storage Canada's wishes to express support for two 2022 Federal Budget proposal items, which if implemented, would help Canada's transition to a clean electricity system, while also creating jobs, providing export opportunities, and reducing ratepayer costs. Therefore, we urge you to support the two initiatives outlined below:

1. An increase in funding to and an extension of NRCan's Smart Renewables and Electrification Program (SREP) and,
2. The Government's promised Investment Tax Credit (ITC) for clean technology, wherein we further recommend the inclusion of a broad range of energy storage applications (batteries, pumped storage, thermal, compressed air etc.), with support levels and options consistent with the proposed ITC for energy storage in the United States.

Energy storage is an essential ingredient in Canada's transition to a low-carbon economy. Storage has the unique ability to extract more value from existing zero-carbon assets, such as nuclear, solar, wind and hydro. It is also unmatched in its efficacy providing multi-service benefits, including flexible capacity, peak capacity, ancillary services, deferral of additional investments in generation, transmission and distribution, and the augmentation of the reliability of the grid. These features are especially important if electrical grids are going to take on the anticipated increase in load as our energy needs shift from fossil fuels to clean electricity sources.

The storage industry is well positioned for this shift. "Energy storage projects are growing in scale, increasing in dispatch duration, and are increasingly paired with renewables," according to Bloomberg New Energy Finance. "This is the energy storage decade. We've been anticipating significant scale-up for many years and the industry is now more than ready to deliver."[1]

No other grid resource offers energy storage's value proposition, with significant economic co-benefits. According to the National Research Council, adding 2,636 MW of installed energy storage would reduce Ontario's GHG emissions by 11% by 2030, while increasing Ontario's GDP by $768 million, and adding 5,781 jobs.[2]

Investments in Canada's electricity system in the coming years will determine whether Canada can meet its GHG reduction potential for this sector. According to the December 2021 annual base-case-scenario forecast from the Canada Energy Regulator,[3] "At an average annual growth rate of about 1.7 GW/year, storage sees a rapid growth throughout the analysis period. From 2019 capacity of about 0.01 GW, storage capacity reaches 52 GW by 2050."

The 2021 Federal Budget promised, "the government will undertake an analysis to ensure that Canada keeps pace with the U.S. and other jurisdictions in providing the appropriate tax structures and incentives to encourage clean economy businesses to invest, grow, and deploy solutions here in Canada." While the federal government has introduced several positive measures to reduce GHGs from the electricity sector,

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[1] **https://about.bnef.com/blog/global-energy-storage-market-set-to-hit-one-terawatt-hour-by-2030/**
[2] National Research Council *Canadian Energy Storage Report: 2019 Case Study for the Ontario Market*: **https://nrc-publications.canada.ca/eng/view/ft/?id=5c38ed85-541c-4b7b-8b41-a97f544ce637**
[3] CER, "Towards Net Zero: Electricity Scenarios," Dec. 2021, **https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2021/towards-net-zero.html**

federal energy and climate programs generally have a blind spot when it comes to investing in storage, and they are far outpaced by U.S. incentives. Several U.S. jurisdictions have stipulated targets or developed incentive programs for energy storage.[4] These include federal measures such FERC Order 841, which instructs state utility commissions to ensure storage resources are eligible in all capacity, energy and ancillary services markets, and FERC Order 2222, which enables Distributed Energy Resource aggregations to fully participate in wholesale electricity markets.

Moreover, the U.S. is seeing tangible results from these programs. Jobs in the energy storage sector increased 235% from 2015 to 2019. By 2025, the U.S. Energy Storage Association estimates 200,000 jobs will be created in the sector, with annual deployment expected to reach 7.5GW.

Storage is also featured prominently in President Joe Biden's Infrastructure Plan. Congress has already approved an investment of over US$1 billion in energy storage, and Biden has included an additional 26% tax credit for storage as one of his top legislative priorities, which includes a "direct pay" provision.

Furthermore, Canadian government programs have at times introduced targeted measures that address storage opportunities. The most important of these is NRCan's Smart Renewable Energy and Electrification Program (SREP). According to departmental officials, this program has demonstrated concrete results, and we strongly support allocating additional support for it.

In addition, given the barriers that exist in the market, the sector needs a more lasting and comprehensive measure that provides consistency and bankability for investment across the various storage technologies and applications. In this regard, consistent with the Liberals' 2021 Platform commitment, the federal government should establish a 30% tax credit for the installation of energy storage systems of all technology types, in front and behind the meter, short and long duration, which would apply to stand-alone storage systems as well as hybrid storage-renewables systems. As in the United States, the tax credit should be complementary to any funding from other programs, including Canada's Infrastructure Bank, and any other eligible tax benefits.

A similar ITC launched for renewables in 2006 has been characterized by the U.S. solar industry as "one of the most important federal policy mechanisms to support the growth of solar energy in the United States. Since the ITC was enacted in 2006, the U.S. solar industry has grown by more than 10,000% -- creating hundreds of thousands of jobs and investing billions of dollars in the U.S. economy in the process."

We hope the opportunities associated with energy storage will be addressed as the Government fulfills its commitments on the clean energy transition and clean technology.

Sincerely,

Justin Rangooni

Justin Rangooni
Executive Director
Energy Storage Canada

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[4] See, for example, *State of Charge: Massachusetts Energy Storage Initiative Study*, 2016, **https://www.mass.gov/doc/state-of-charge-report/download**. The study found system savings associated with storage of $2.2 billion, at a cost of between $907 million and $1.3 billion. f