

The Impact of COVID-19 on Electricity / Renewables in Canada

Global Context

- Globally, we've seen that COVID-related lockdowns have had a two fold impact in demand:
 - First: power demand has fallen due to lower industrial and commercial activity. This was partially offset by higher residential demand as more people are working from home. According to IRENA, power demand was up to 20% lower in some countries.
 - Second: we've seen demand 'flatten', as daily peaks are less prominent.
- But even as lockdowns eased, demand has stayed low. According to the IEA, in June and July, weather-corrected electricity demand stayed 10% and 5% below 2019 levels. While there are signs of recovery, we're also seeing the emergence of 'additional waves' of infections.
- Going forward, we ought to be mindful of the potential impacts of future lock downs on the electricity sector. It may be too soon to predict when demand will return to 'normal'.

Canada – Demand (Utilities)

- For the most part, Canada's power systems are run by vertically integrated crown corporations. These utilities, as well as Canada's system operators, have effectively maintained the reliability of Canada's power systems. We've been fortunate that reliability has not been an issue.
- However, we have seen lower demand in a number of Canadian electricity markets. Several utilities reported that demand fell with lockdowns, reflecting global trends.
 - In Ontario, Canada's largest province, we saw demand fall by up to 12%. Other provinces have reported declines of up to 8%.
- As a result, Canada's utilities have reported lower revenues. While this has not presented significant issues to date, should lower revenues persist, we may see rising pressure on rates to cover fixed costs.
 - Of course, this would create new challenges for individuals that may already be coping with lower income because of COVID.
 - But it may also impede climate actions like electrification. Rising electricity rates would make electrification less appealing, and could mute the important role clean power can play in the economy-wide energy transition.

Canada – Supply (Projects)

- In addition to reduced demand, we're also experiencing challenges on the supply side of the electricity sector. Generally speaking, existing operations have not been impacted. However, projects under development face a number of challenges.

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- For example, several Canadian provinces are advancing large hydroelectric projects. These projects face a number of similar challenges from COVID. Primary amongst these are reduced workforces. Given the need to social distance, project developers have had to limit the number of workers living on site at any given time.
 - This is compounded by the remote nature of these projects, which may require workers from across Canada.
 - Additional care must be taken not to introduce the virus to remote communities, which are already facing constrained health care infrastructure.
- In fact, Canada has over 200 remote communities that currently depend on diesel-fired generation. Diesel is a costly, unreliable source of generation, and we are working with communities to replace these generators with renewable energy systems. However, many of these projects are on hold to prohibit the spread of the virus to isolated communities.
- Projects in more conventional settings are also facing challenges. For example, Canada's solar industry association conducted a survey to assess the impacts of COVID-19 on the Canadian solar industry. They **expect a 50 percent decline in solar installations relative to last year.**

Next Steps

- I've outlined some of the challenges that Canada – and I'm sure many of you – face today. But I would like to end by pointing to some key opportunities we see on the horizon.
- First: **technological innovation** to support electrification across the economy. By orienting our economies to use more clean power, we can create market demand that will drive investment to clean power projects and reduce emissions. Electrification may also reduce pressure on rates and help save people and businesses money.
- Second: support **business innovation**. Exploring alternatives to volumetric electricity rates could help utilities thrive in the 'new normal' of lower electricity demand. Further, shifting to new models such as 'energy as a service' could help drive electrification and grid modernization.
- Third: we should be mindful of the **project pipeline**. While demand is low today, we need to ensure projects continue to move towards completion and operation. If not, we may face challenges meeting demand as economic activity resumes following the pandemic.
- Thank you for your time. I look forward to working with each of you to advance these important issues.