

ABSTRACT/SUMMARY

Assessing BTM Solar's Contribution to Canada's Net-Zero Pathway

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While estimates vary, it is widely recognized that a pathway to net-zero will approximately double electricity demand in 2050 relative to today. Many net-zero pathways studies do not consider the contribution of behind the-meter (BTM) solar generation. Of the ones that do, BTM solar consistently appears as part of the least-cost pathway to meeting net zero by 2050, with a need to contribute about 24 – 48 TWh (2 – 4% of the total electric demand in 2050 to Canada's total electricity).

While this contribution may seem small, this contribution critical to achieving net-zero emissions in a cost-effective manner, as well requires significant effort to scale up the market, considering that BTM solar merely serves 1.5 TWh, representing about 0.2% of electricity demand today.

Our analysis, conducted for the Canadian Renewable Energy Association (CanREA) represents the first comprehensive national market outlook for BTM solar potential in Canada, and offers insights for energy modellers, policymakers and industry into the market potential and trajectory out to 2050 under various market conditions. The study identifies that unlocking the full potential for BTM solar to contribute to achieving Canada's 2050 net-zero goals requires a holistic Market Transformation Scenario that combines expanded financial measures with policy levers that address non-financial barriers. Additionally, efforts urgent action is needed to enable, accommodate and leverage the growth of BTM solar capacity in Canada.

Oral Presentation

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