CENTER FOR CLIMATE AND ENERGY SOLUTIONS

Water, Carbon and Power

How Canadian hydropower can help achieve US climate goals

Hydropower is the second largest source of zero-carbon electricity in the U.S., enough to power more than 27 million homes.

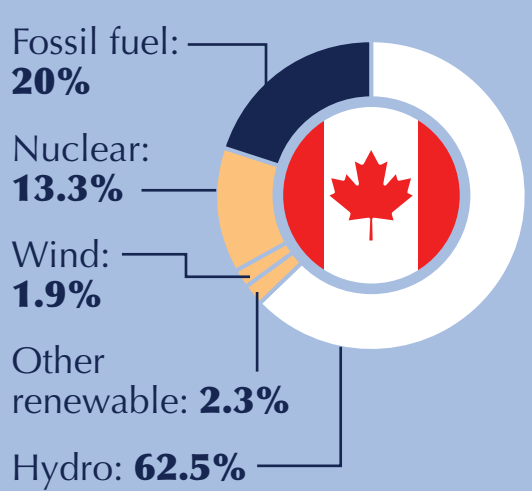
15%

Over 15 percent of this electricity is imported from Canada, which plans to develop additional hydropower capacity.

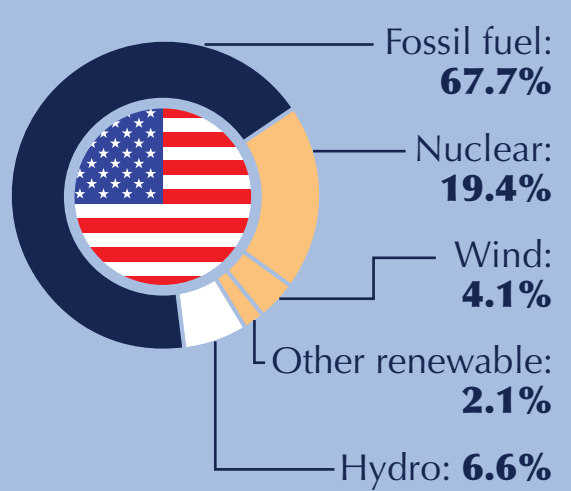
CO_2

U.S. states may be able to use new Canadian hydropower to reduce carbon emissions under the proposed federal Clean Power Plan.

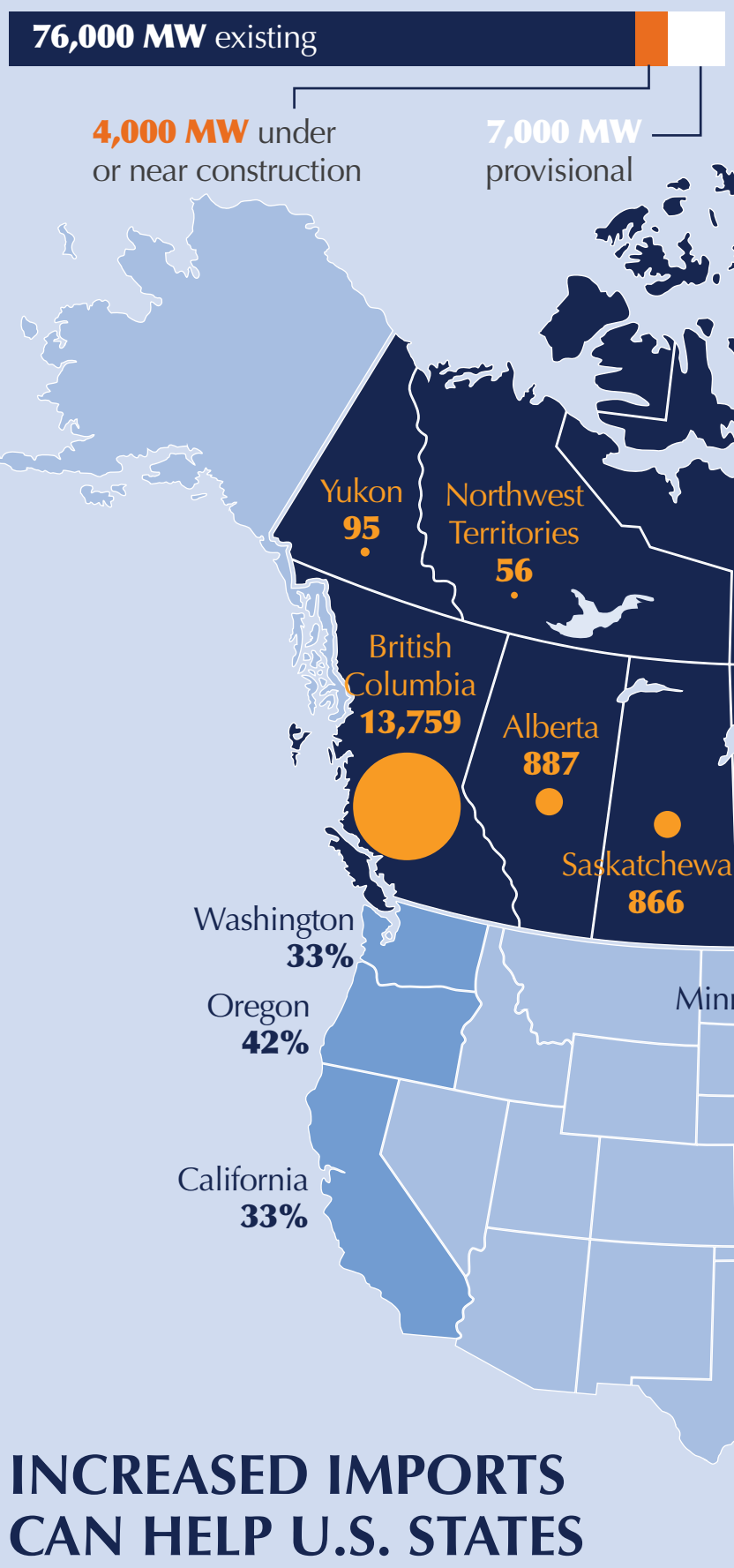
Hydropower can be quickly and easily delivered, making it ideal to balance intermittent zero-emission resources like wind and solar power.



Hydropower makes up 20% of U.S. and 80% of Canadian zero-emission power



CANADIAN HYDROPOWER CAN GROW SIGNIFICANTLY



INCREASED IMPORTS CAN HELP U.S. STATES MEET CLIMATE GOALS

The shaded states already import a significant amount of Canadian electricity.* The numbers show the progress each state could make toward its 2030 CO_2 target under the proposed Clean Power Plan by importing 250 MW of new Canadian hydropower, about enough to power 110,000 homes. If 10 states import a total of 2500 MW of new hydropower, U.S. CO_2 emissions would fall by over 12 million tons a year, equivalent to taking 2.3 million cars off the road.**

*These states each imported more than 100,000 megawatt hours (MWh) in 2013. Fourteen additional states imported a smaller amount of Canadian electricity.

**This is based on each state importing from a new 250 MW project, operating at a 55% utilization factor. Note that the size of new hydropower projects can vary widely. Hydro is expected to displace coal-fired generation where it exists; otherwise it displaces gas-fired generation. This is an illustrative example only and is not highlighting any specific proposed project.

Sources: Center for Climate and Energy Solutions, Energy Information Administration, Statistics Canada

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For more information, read: "Canadian Hydropower and the Clean Power Plan"
www.c2es.org/publications/canadian-hydropower-clean-power-plan