# <section-header>

CANADIAN HYDROPOWER COULD LOWER U.S. CARBON EMISSIONS

**Canada generates a majority of its electricity from hydropower** and is a global leader in hydroelectricity production. As a result, Canada is positioned to provide a secure and renewable source of electricity in response to increasing domestic demand for clean energy in the United States.

Hydropower converts energy from moving water into electricity. It is a clean energy source: it does not waste water, does not produce pollutants, and is the most efficient source of electrical energy. On top of that, the storage capacity of hydropower provides the flexibility needed for electricity producers to diversify with wind and solar sources. Hydroelectric power imported from Canada currently accounts for 1% of total electricity consumption in the United States. As the 3rd largest producer of hydropower electricity in the world, Canada has the capacity to double its production in order to fuel increasing U.S. demand for clean energy. If Canada utilized half of this undeveloped capacity for electric cars, it could power every light automobile in Canada and 25% of the U.S. light automobile fleet. The presence of affordable and reliable energy drives investment in the United States, as was the case with BMW's decision to build a new manufacturing plant in Moses Lake, Washington. (Source: Canadian Hydropower Association)



**SGL Automotive Carbon Fibers** (SGL ACF)—a joint venture of SGL Group and the BMW Group—has officially opened its new state-of-the-art carbon fiber manufacturing plant in Moses Lake, Washington.... In line with BMW and SGL's leading roles in sustainable business operations, the decision to build the carbon fiber plant in Moses Lake was based primarily on the availability of clean, renewable hydropower and competitive energy costs in the state of Washington...

# **HYDROELECTRIC PLANTS IN U.S. AND CANADA**



### **Hydroelectric Power Plants**

- Conventional Hydro
- Pumped Storage

### Size by Capacity (megawatts)

- O 500+
- O 101 to 500
- o 51 to 100
- 21 to 50
- 1 to 20

Source: U.S. Energy Information Administration, derived from Energy Velocity

# **Canada has 529** hydroelectric stations and **75,000** megawatts of installed hydroelectric capacity.

# **Canada generated 61%** of its electricity from hydropower in 2013.

# Hydropower accounts for 80% of Canadian

electricity exports to the United States.



# **Hydropower by Province**





## Technical Potential Hydroelectric Capacity (gigawatts)

Source: Natural Resources Canada, Statement of the Province of Manitoba, the Québec Government Office in Washington, Manitoba Hydro, and the Canadian Hydro Association, submitted to the U.S. Senate Committee on Energy and Natural Resources



canada@wilsoncenter.org T (202) 691-4301 • F (202) 691-4001 www.wilsoncenter.org/canada



@CanadaInstitute

