



Ontario Waterpower Association

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Waterpower: Ontario's Primary Source of Renewable Energy

Today, Ontario's waterpower resources comprise about a quarter of the province's energy supply – with an installed capacity of 8,150 Megawatts. Nuclear power accounts for 40%, fossil fuels (coal, gas, oil) for 30%, and other renewables (wind, solar etc.) for 1%.

An Energy-efficient Source of Electricity

- The average facility converts kinetic energy to electric energy at a rate of between 75% and 95%.
- A typical waterpower generating facility has a long life cycle of between 75 and 100 years.
- The average energy payback ratio (energy required vs. energy produced) is by far the highest among all sources.
- Relative to other sources, the production of waterpower could be considered a form of energy conservation.

A Province Rich in Water Resources

- Ontario has more than 250,000 lakes and tens of thousands of kilometres of rivers and streams.
- About 50 systems support all of Ontario's waterpower production. Fewer than a dozen account for more than 80%.
- Niagara Falls comprises almost a quarter of the installed capacity.
- Waterpower facilities are located within 10 km of every major town and all cities in northwestern Ontario.

Realizing the Potential for Clean, Renewable Waterpower

- An inventory of waterpower potential in Ontario identified 2,000 sites with basic hydraulic conditions (regularly flowing water and change in elevation) to produce waterpower energy.
- Just 200 sites are in production.
- Distance to the transmission grid, other natural resource values, and the demand for renewable energy are important factors in realizing waterpower potential.

Sustainable Energy: An Asset for the Future

- Like other natural resources, Ontario's waterpower resources must be managed and developed to meet present needs and the requirements of future generations.
- The waterpower potential that remains in Ontario should be treated as an asset that can continue to contribute energy, now and in the future.
- Acknowledging and protecting this potential will increase our energy options for the future.

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Need more information?

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