



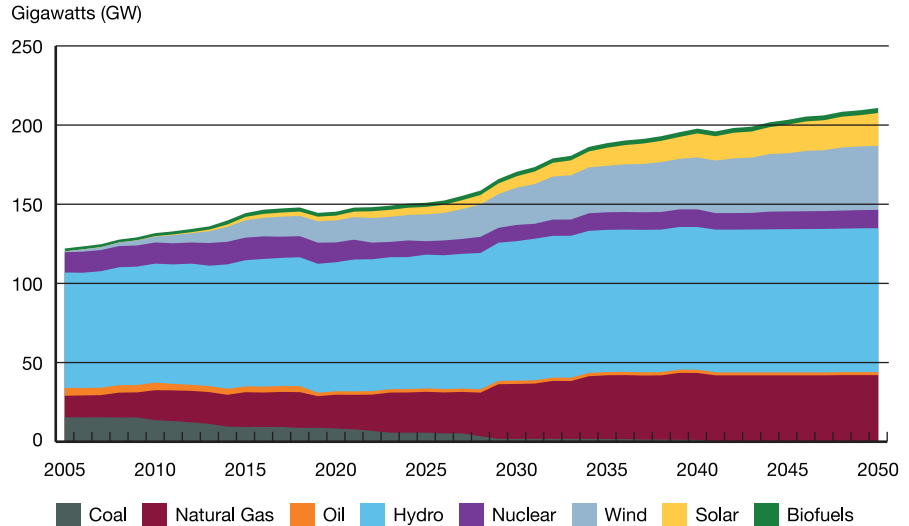
Electricity

CANADA'S ENERGY FUTURE 2020

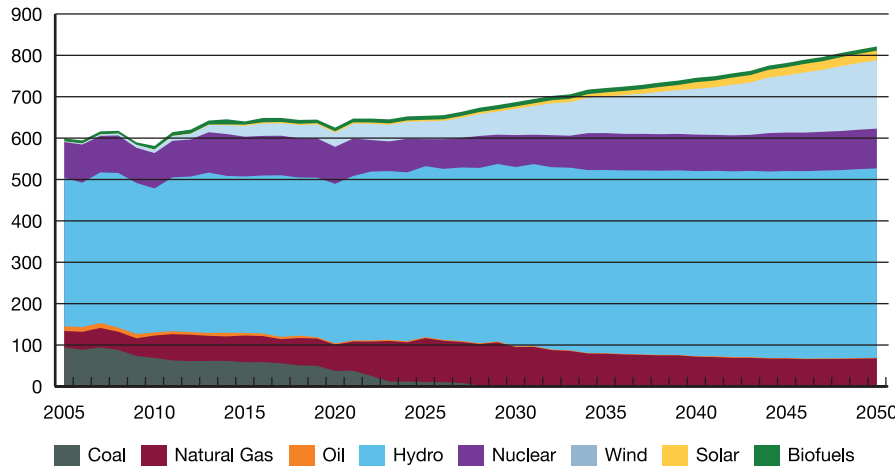
Total installed capacity by energy source – Evolving Scenario

Electricity's share of end-use demand increases from approximately 16% currently to over 27% in 2050. In 2010, total capacity was 132 GW. In 2050, total capacity is projected to be 210 GW. Hydro generation will continue to be the largest source.

 **600%** Increase in solar use
 **27 GW** Wind additions




Terawatt Hours (TW.h)



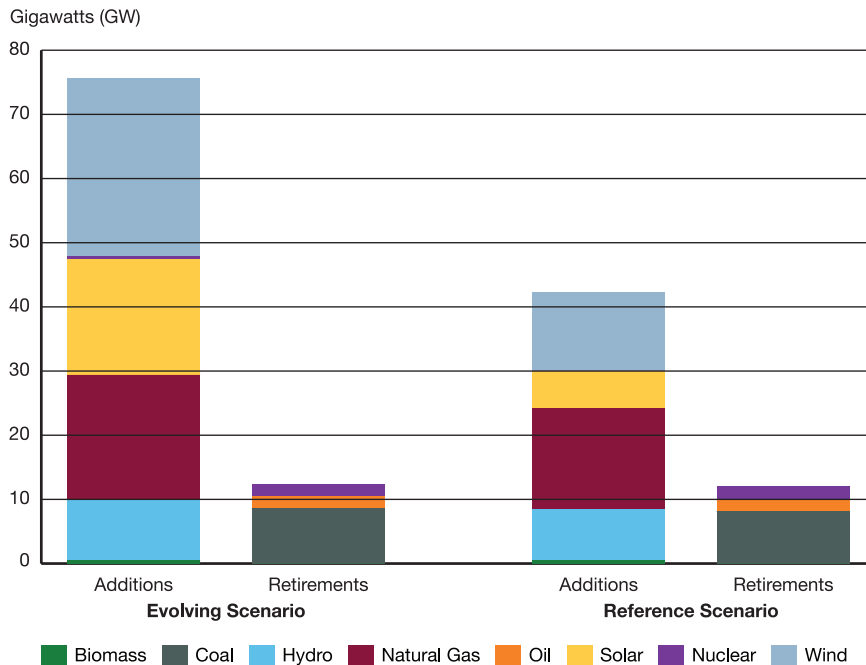
Total Generation by Energy Source – Evolving Scenario

In 2018, total generation was 644 TW.h. In 2050, total generation is projected to be 821 TW.h.

 **56%** hydro in 2050
 **20%** wind in 2050

Capacity is the maximum electric output a facility can produce. **Generation** is the amount of power actually produced. Generation facilities cannot operate at full capacity 100% of the time because of maintenance, unplanned outages, and other factors.

	Year	Coal	Natural Gas	Oil	Hydro	Nuclear	Wind	Solar	Biomass
Capacity in GW	2018	8.8	22.6	3.8	81.4	13.3	12.8	2.7	2.6
	2050 Evolving Scenario	0.1	42.0	1.9	90.9	11.6	40.5	20.7	3.1
	2050 Reference Scenario	0.6	38.2	2.1	89.4	11.1	24.9	8.6	3.1
Generation in TW.h	2018	50.8	66.1	5.7	382.1	95.0	31.9	3.0	9.4
	2050 Evolving Scenario	0.1	67.9	1.6	457.9	96.1	165.1	23.3	10.0
	2050 Reference Scenario	0.5	149.9	3.1	447.0	82.8	101.0	8.8	11.2

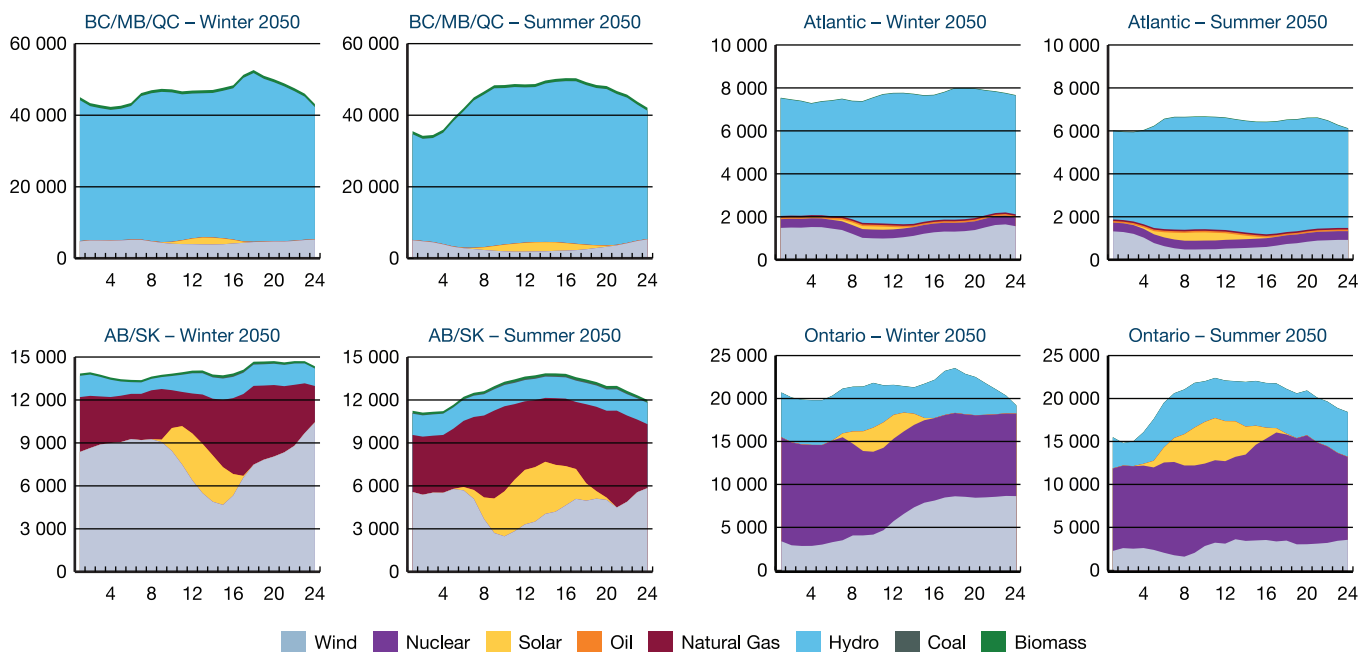


Electrical Capacity Additions and Requirements

Over the projection period, the Evolving Scenario adds more electric capacity than the Reference Scenario, with the primary difference in wind and solar additions.

In both scenarios, retirements are led by the phasing out of traditional coal-fired power plants by 2030.

Simulated Hourly Electricity Generation in 2050 - Evolving Scenario



Find these figures and additional data in the downloadable Excel file at <https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2020electricity/index.html>