



### Total Installed Capacity by Energy Source - Evolving Policies Scenario

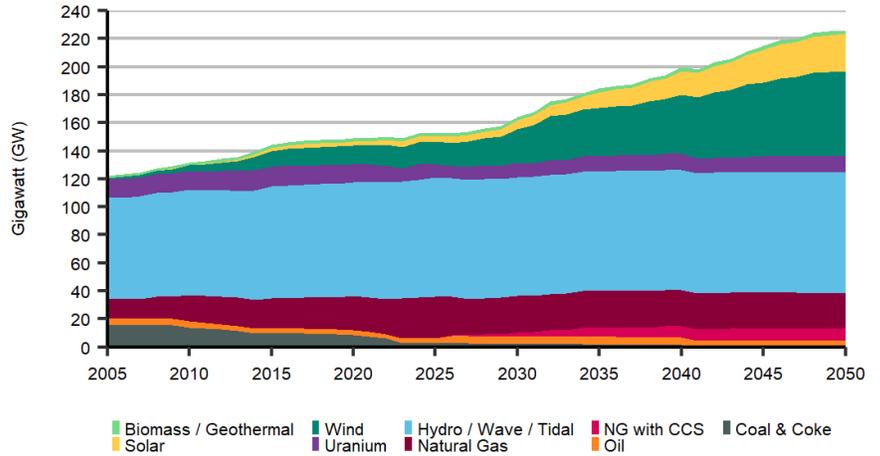
Electricity's share of end-use demand increases from about 17% currently to over 29% in 2050. In 2010, total capacity was 132 GW. Driven by increasing electricity demand, total capacity reaches 215 GW in the Evolving Policies Scenario.



Solar increases 878%



47 GW of wind additions



### Total Generation by Energy Source - Evolving Policies Scenario

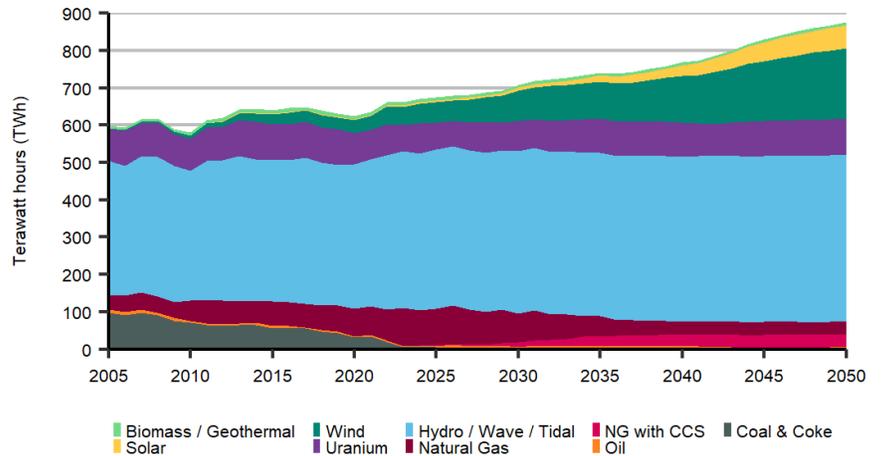
In 2019, total generation was 632 TWh. In 2050, total generation is projected to be 819 TWh.

55%

is hydro in 2050

19%

is wind in 2050



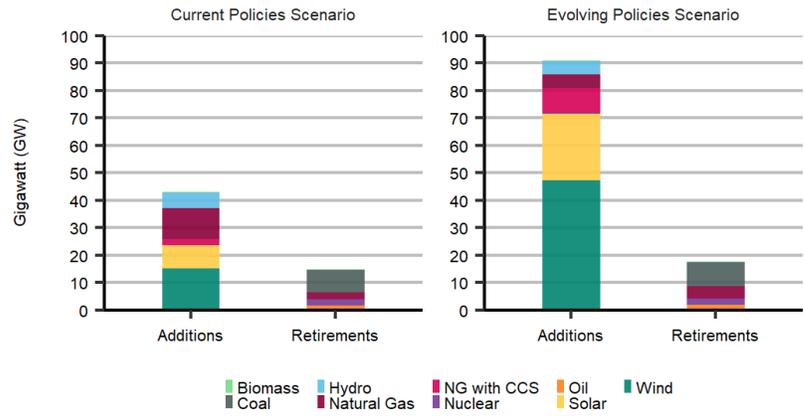
**Capacity** is the maximum electric output a facility can produce. **Generation** is the amount of power actually produced. Generation facilities cannot operate at full capacity 100% of the time because of maintenance, unplanned outages, and other factors.

	Year	Coal	Natural Gas	NG + CCS	Oil	Hydro	Nuclear	Wind	Solar	Biomass
Capacity in GW	2019	8.9	22.6	0.0	3.6	81.4	13.3	13.2	2.7	2.3
	2050 Evolving Policies Scenario	0.1	25.0	8.9	4.3	86.1	11.6	60.7	27.0	2.6
	2050 Current Policies Scenario	0.8	31.2	2.2	2.0	86.9	11.5	27.7	11.5	2.8
Generation in TWh	2019	44.0	69.6	0.0	3.7	376.0	95.5	32.3	2.2	8.9
	2050 Evolving Policies Scenario	0.1	35.8	33.4	5.7	446.5	96.1	159.2	34.7	7.7
	2050 Current Policies Scenario	1.7	112.3	7.5	3.8	423.4	89.4	113.8	16.7	9.3

## Electric Capacity Additions and Retirements

Over the projection period, the Evolving Policies Scenario adds more electric capacity than the Current Policies Scenario, mainly in wind and solar additions.

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



## Installed Capacity by Technology 2030 vs. 2050 - Towards Net Zero Electricity Scenarios

All scenarios see wind and solar dominate new capacity additions. Electricity storage also sees rapid growth. New demand is primarily met by wind and solar while high GHG emission generation technologies see rapid decline. The importance of hydropower remains high. However, there are not major hydropower capacity additions.

NZE - Net-Zero Electricity Scenario  
BECCS - Bio energy with carbon capture and storage.

