

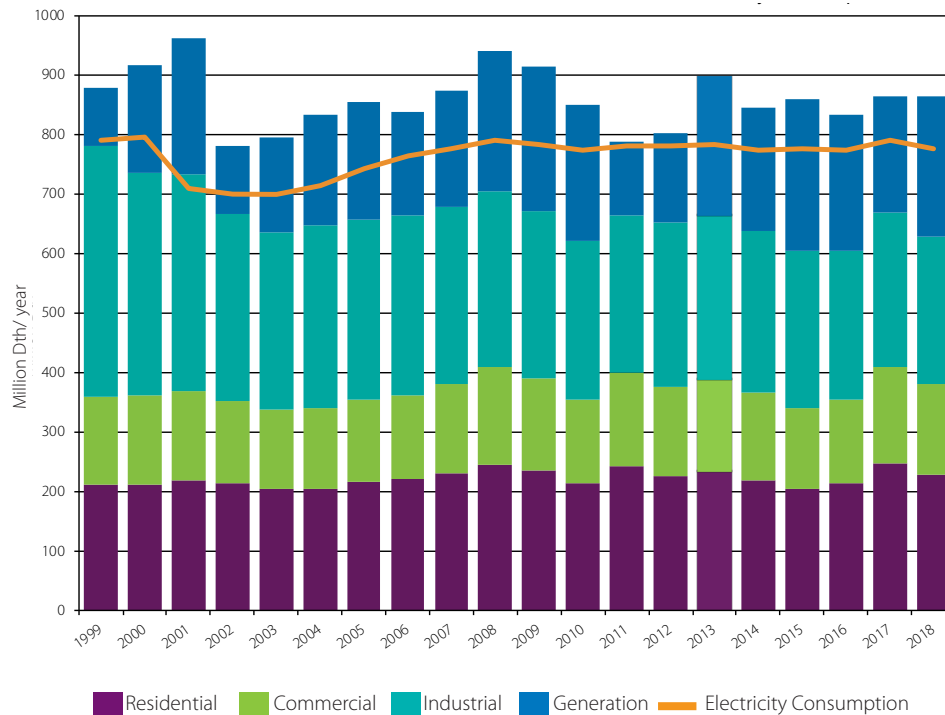
2020 GAS OUTLOOK • REGIONAL DEMAND

KEY FINDINGS

Overall demand for natural gas in the Pacific Northwest is forecast to grow at nearly the same rate as reported last year: a modest 1.0 percent per year (see forecast demand growth by sector in Table D1). Natural gas as a fuel to generate electricity paces overall expected growth in regional gas use (see Figure D2), in part due to retirement of coal generation units in the 2021-2022 time frame. Meanwhile, residential and commercial customers continue the decades-long trend of using gas more efficiently (see Figure D3), dampening growth in those sectors.

Figure D1 (below) shows how regional demand has fluctuated over the past two decades. Figure D4 shows forecast peak and average day demand.⁶

FIGURE D1. Historic Regional Demand by Sector



NOTES: While regional residential and commercial consumption has remained relatively flat over the past decade, industrial usage has declined considerably, in part due the “Great Recession” that cost the region more than 20 percent of its industrial gas load between 2007 and 2012. The industrial sector is still the largest regional user, however (see Figure D2).

As noted above, the region is using increasingly more natural gas to generate electricity. However, year-to-year variations occur because gas is typically used only when other resources (hydro, nuclear, wind, solar) are unavailable in sufficient quantities, and the first resource turned off.

⁶The source of all charts and tables in this section is NWGA.

TABLE D1. Forecast Annual and Cumulative* Demand Changes by Case

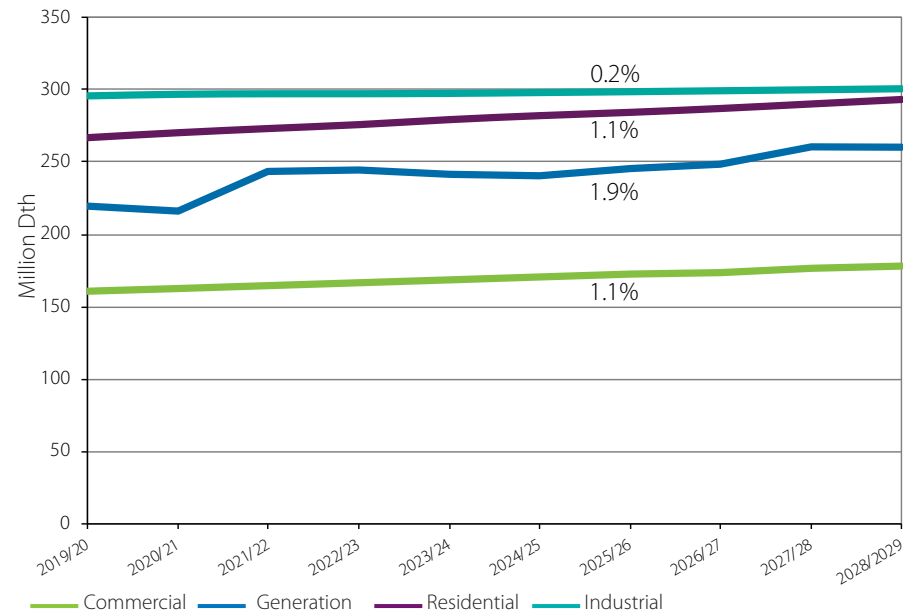
	Low		Expected		High	
	Annual Rate	Cumulative Rate	Annual Rate	Cumulative Rate	Annual Rate	Cumulative Rate
TOTAL	-0.1%	-1.2%	1.0%	8.7%	1.3%	11.0%
Residential	0.3%	2.5%	1.1%	9.0%	1.8%	14.7%
Commercial	0.5%	4.1%	1.1%	9.7%	2.3%	18.4%
Industrial	-1.0%	-9.2%	0.2%	1.6%	0.8%	7.3%
Generation	0.0%	0.0%	1.9%	15.7%	0.7%	6.3%

* through 2028/2029

NOTES: This demand forecast is a compilation of the planning conducted by NWGA member-companies, including the integrated resource plans each natural gas utility is required to file with their respective state/provincial regulator.

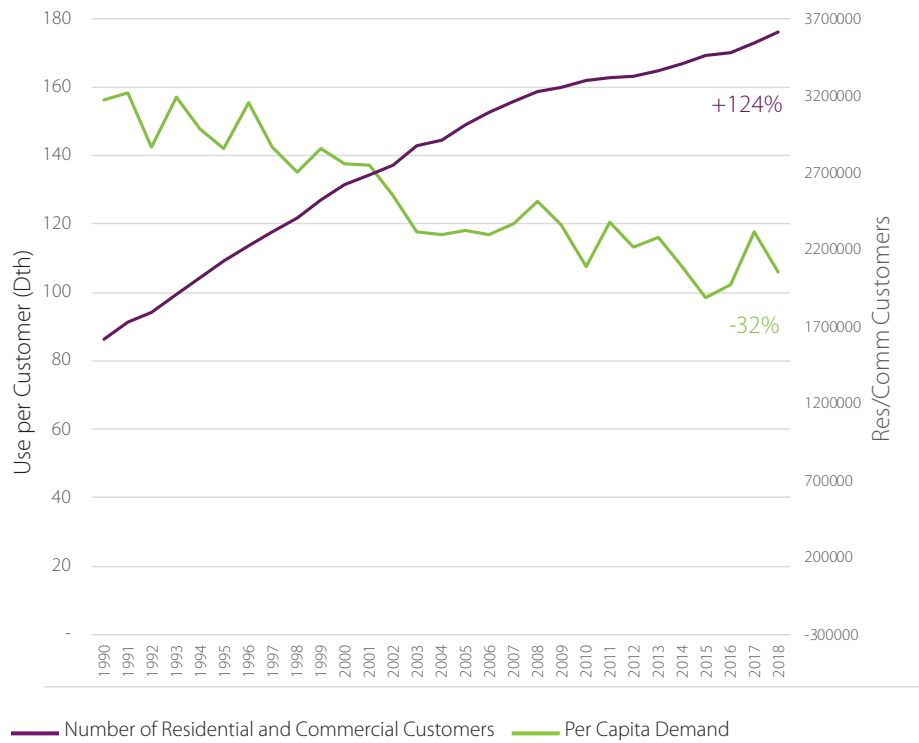
Low and high demand cases are driven by a variety of economic and policy factors, including growth, commodity cost, cost of carbon, etc. See Appendix B for forecast assumptions utilized by a number of regional utilities.

Figure D2. Expected Case Forecast by Economic Sector



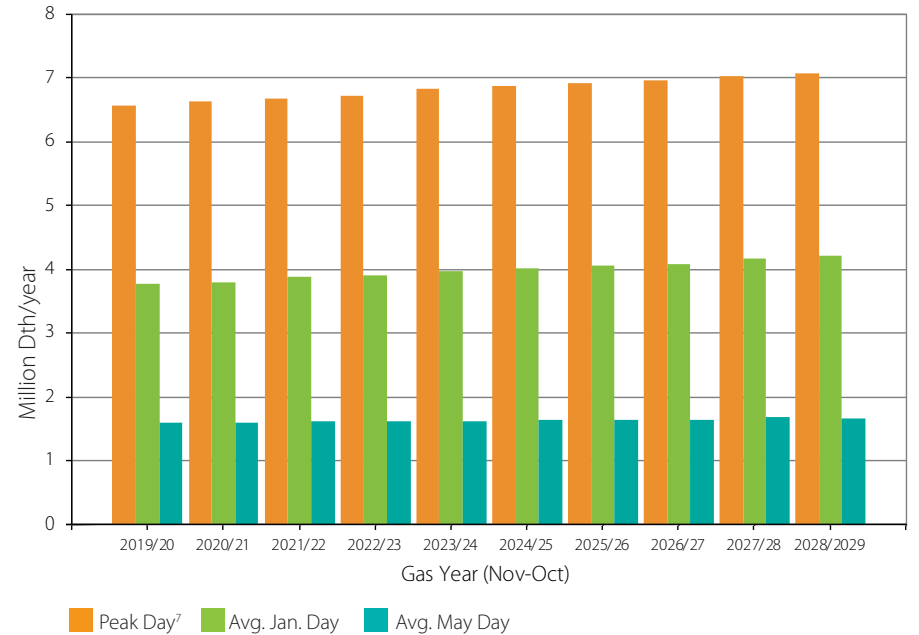
NOTES: Residential, commercial and industrial demand for natural gas is expected to grow at a slightly slower pace than forecast in last year’s Outlook, while generation demand is anticipated to grow at a slightly greater rate. The forecast step increase in gas demand for generation shown in 2021-2022 coincides with the retirement of several coal-fired generation units currently serving the region, including Boardman in Oregon (end of 2020), Centralia Boiler 1 in Washington (end of 2020), and Colstrip Units 1 & 2 in Montana (mid-2022). This forecast demonstrates the expectation that natural gas will play an increasingly important role in maintaining system reliability and affordability as policymakers drive the region toward a cleaner energy future.

FIGURE D3. Declining Per Capita Consumption in Residential and Commercial Sectors



NOTES: While the number of residential and commercial natural gas consumers in our region has grown 124 percent since 1990, per capita usage of natural gas has dropped 32 percent due to energy efficiency efforts, including more efficient gas appliances.

FIGURE D4. Peak and Average Day Demand Forecast



NOTES: The Pacific Northwest uses the least amount of gas during the month of May. Gas used to generate electricity for air conditioning typically ramps up in June before tailing off during the fall. January is the month during which our region typically uses the most gas to heat space and water for homes and businesses.

Natural gas utilities design their systems to serve demand on the coldest day likely to occur in the territories they serve. Figure D4 illustrates that demand for natural gas on those days can nearly double the demand experienced during an average winter day. While each company approaches its planning standard a little differently, “peak” or “design” days are typically based on actual 24-hour average temperatures recorded at representative locations. A comparison of the NWGA member company weather design standards can be found in Appendix B.

⁷ Peak Day values represent firm sales and transportation customers only.