OVERVIEW

As a clean, versatile, abundant and affordable North American energy resource, natural gas provides our region with many opportunities. As an energy resource, natural gas is reliable, efficient, and cost-effective when used directly for home space and water heating and cooking. It has proven to be a cleaner and more economical replacement for coal in the power generation sector and for gasoline and diesel in the transportation sector. More recently, it is increasingly useful in balancing the region's growing sources of intermittent renewable resources such as wind and solar.

Not surprisingly, natural gas is used to manufacture thousands of goods that we rely on every day, from life-saving pharmaceuticals to durable and weather resistant recreational gear we use to enjoy the outdoor lifestyle of the Pacific Northwest. And now the source of that natural gas is increasingly renewable itself – market forces and government policy are driving the development of renewable natural gas (RNG), which transforms human and agricultural waste into useful energy. This provides even greater prospects for a cleaner mix of natural gas resources to contribute to our energy and environmental future.

WHAT'S NEW

Readers will recall that the last several Outlook reports included two Demand Scenarios in addition to the comprehensive forecast: "Coal Replacement" and "Prospective Industrial Demand." We used these scenarios to explore potential impacts that plausible but as-yet-unplanned loads could have on regional demand and capacity utilization.

The overall demand forecast in this report now reflects additional demand for natural gas generation in the same time frame as expected coal retirements. However, new industrial developments remain speculative at this time. For these reasons, we have discontinued the Demand Scenarios.

2018

EXECUTIVE SUMMARY

IN THIS REPORT, we examine several dynamics affecting Pacific Northwest natural gas consumers. The Outlook relies primarily on external, publicly available resources for information on continental natural gas supply prospects and commodity prices, most notably the U.S. Energy Information Administration's (EIA) 2018 Annual Energy Outlook and Canada's National Energy Board's (NEB) Canada's Energy Future 2018.

Supply: Abundant
Prices: Low
Demand Growth: Modest
Capacity: Sufficient

Regional demand and capacity data are drawn from NWGA member company planning processes, including the most recent Integrated Resource Plans that our members have filed with utility commissions throughout the region.

Supply: North American natural gas supply is projected to remain abundant for the foreseeable future, despite continuing low prices. The supply basins on which the Pacific Northwest depends have demonstrated that the resource will be amply available for several generations to come.

The resource will be amply available for several generations to come

Prices: The relentless quest to drive production costs lower is allowing producers to operate economically even in a low-price environment. Inflation-adjusted natural gas spot prices at Henry Hub ($2017) are projected to remain below $5/dekatherm (Dth) until 2050.

Economical operations allow production to continue at low prices

Demand: The forecast growth rate for natural gas use in the region across all sectors ticked up from 0.8 percent/yr. in the last Outlook to 1.1 percent/yr. in this report. Forecast growth in the residential and commercial sectors are more robust than last year, while industrial demand is expected to grow at about the same pace. The forecast demand for natural gas to generate electricity is higher than last year, with the majority of growth expected to occur in the same time frame as the retirement of coal-fired generation serving the region.

Forecast growth in the residential, commercial and power generation sectors is more robust than last year

Capacity: NWGA members are constantly evaluating whether there is enough pipeline capacity to transport the gas from where it is produced (hundreds of miles away) to where it is needed and whether we have enough storage capacity to serve loads during the coldest weather. The current answer is yes, as long as the infrastructure is operating at its maximum total capacity. At this time, organic regional growth doesn't require any new capacity. However, the lead time to bring infrastructure into service is approaching five years, so vigilance remains important.

Capacity is sufficient with continued infrastructure operation at maximum capacity

REGIONAL ECONOMIC OUTLOOK

Dr. Grant Forsyth, Chief Economist, Avista Corp

Charles Dickens' French Revolution novel, *A Tale of Two Cities*, starts with the famous line, "It was the best of times, it was the worst of times…." This describes well the U.S. and Canadian climates as we enter 2019. Both countries have enjoyed a long period of growth, but with a back-drop of increasingly contentious policies and politics that could negatively impact growth.

Across forecasters, the consensus is for U.S. GDP growth to fall from nearly 3% in 2018 to about 2.5% in 2019. However, the 2.5% forecast is increasingly viewed as a soft number, with more downside risks related to monetary policy uncertainty, trade conflicts, a waning federal tax stimulus, and the federal government shutdown. That said, should the U.S. expansion continue into July, it will be the longest since the 1850s.

For Canada, the 2019 consensus growth expectation is 1.8%, which is slightly lower than 2018's 2% growth. The lower forecast reflects both ongoing trade conflicts, lower growth in the U.S., housing market weakness, and softer oil prices in 2019. For consumer inflation, the 2019 expectation for both countries is at or near the 2% target maintained by both the Federal Reserve (Fed) and the Bank of Canada (BOC).

Although the Fed and BOC have acknowledged financial markets' discomfort over recent interest rate increases, they have not firmly ruled out future rate increases. Statements from Jerome Powell and Stephen Poloz strongly suggest that future rate activity will be heavily data driven. Given increasing uncertainty about future economic growth, the emphasis on "data driven" gives them wide flexibly on future rate moves.

In the U.S. Pacific Northwest (PNW), Idaho, Oregon and Washington continued to outperform the U.S. In 2018, PNW employment growth was 2.8% compared to 1.6% nationally. With the PNW growing measurably faster than the U.S. since 2011, regional labor markets have tightened significantly. Leading indicators from the Fed suggest the PNW will likely grow faster than the U.S. in 2019. Therefore, employment growth in 2019 will likely exceed the U.S. consensus forecast of 1.4%. However, given the PNW's international trade exposure, a worsening conflict with China would cause the gap between PNW and U.S. growth to narrow considerably in 2019.

British Columbia (BC), with employment growth in excess of 3% in 2016 and 2017, saw growth cool to 1.1% in 2018, which was lower than Canada's 1.3%. BC's slower growth, driven by a slower housing market and a depleted labor force, was consistent with forecaster expectations. For 2019, the consensus forecast is for BC employment growth to jump to nearly 2% because of LNG Canada's construction of a new export terminal in Kitimat, BC. LNG Canada estimates that 4,500 to 7,500 construction jobs will be created for the build-out. Given BC's already tight labor market, this should increase wage pressures and in-migration from other provinces.

At the 2019 American Economic Association meetings, Former Fed Chair Ben Bernanke quipped, "As [former Fed Chair] Janet [Yellen] says, expansions don't die of old age. I like to say they get murdered instead." As noted above, a growing number of forecasters see increased downside risks to in 2019—let's hope it's not murder.