

2018 GAS OUTLOOK • SUPPLY

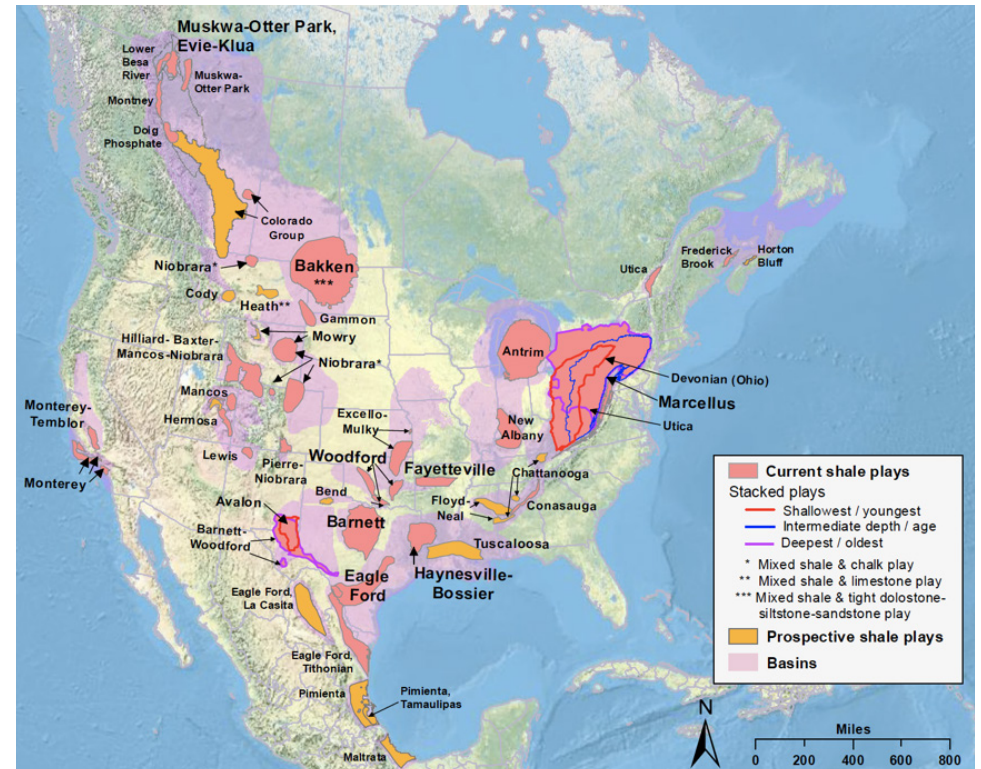
KEY FINDINGS

The technological renaissance that unlocked gas and oil from shale has gifted North America with a vast energy resource. (See Figures S1-S3 for current North American shale plays, production growth since 2000 and projected long-term supply through 2040.)

The Pacific Northwest is located adjacent to two prolific producing regions: The Western Canada Sedimentary Basin spanning Alberta and British Columbia, and the U.S. Rocky Mountain states. (See Figure S4.) More than two-thirds of the natural gas consumed in the region is sourced from Canada.

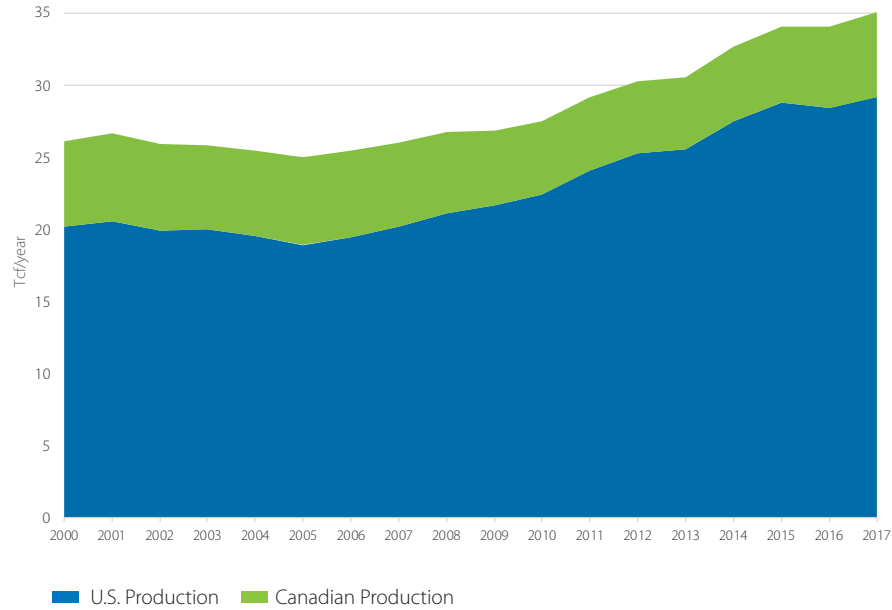
Projected growth in production in both regions is shown in Figures S5 and S6. The supply optionality resulting from Pacific Northwest consumers' connection to these basins is shown in Figure S7

Figure S1. North American Gas Plays



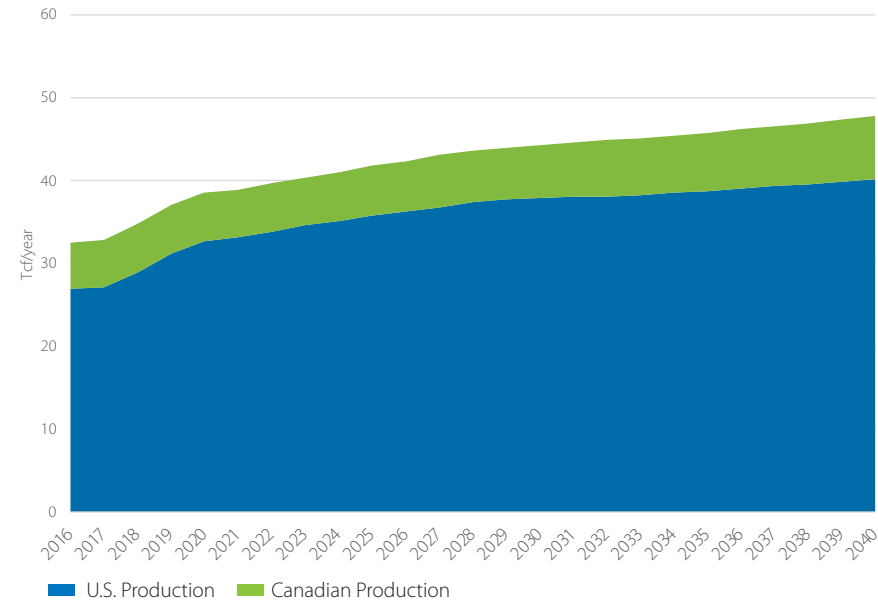
Source: U.S. EIA, 2011

Figure S2. U.S. Shale Propels 41% North American Production Increase from 2005-2017



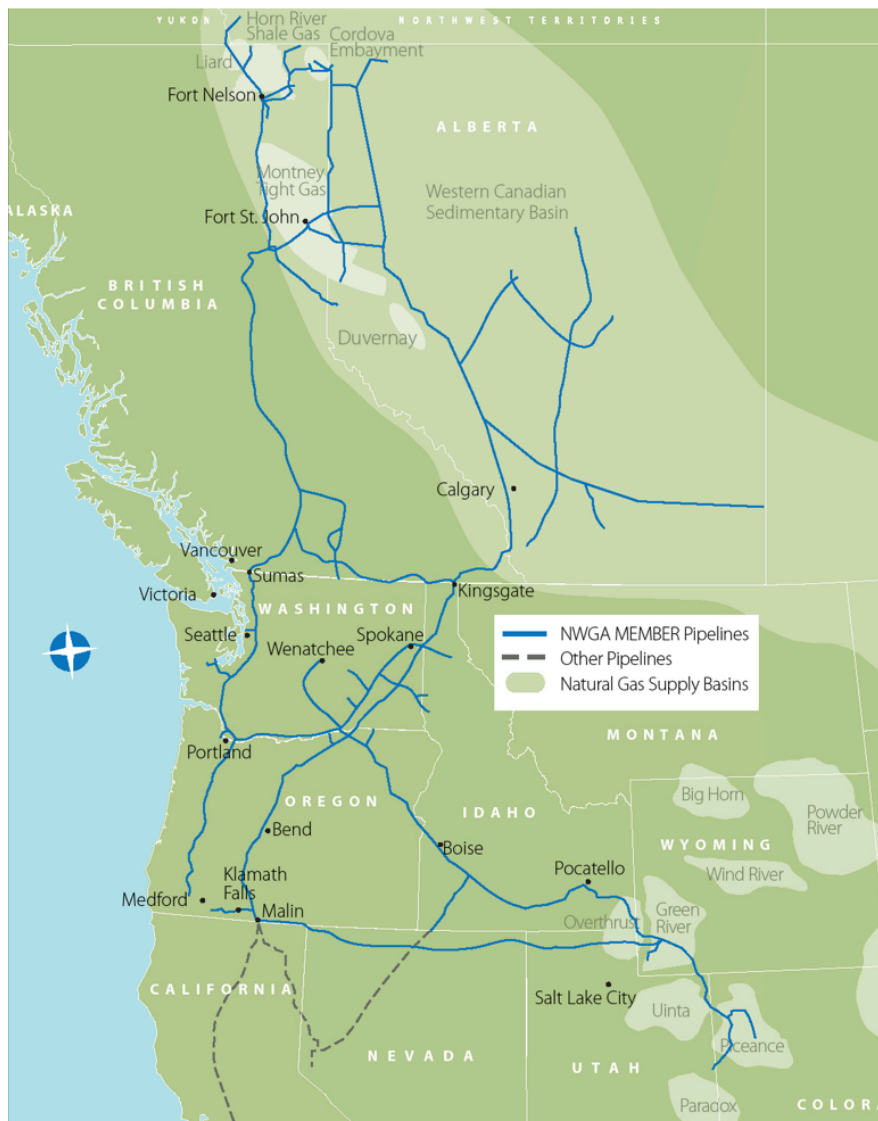
Source: U.S. EIA Data Tables, U.S. Natural Gas Production, 01/31/2019 Statistics Canada, Tables 25-10-0047-14 (2000-2015); 25-10-0055-01 (2016-17)

FIGURE S3. North American Production Projected to Increase 47% from 2016-2040



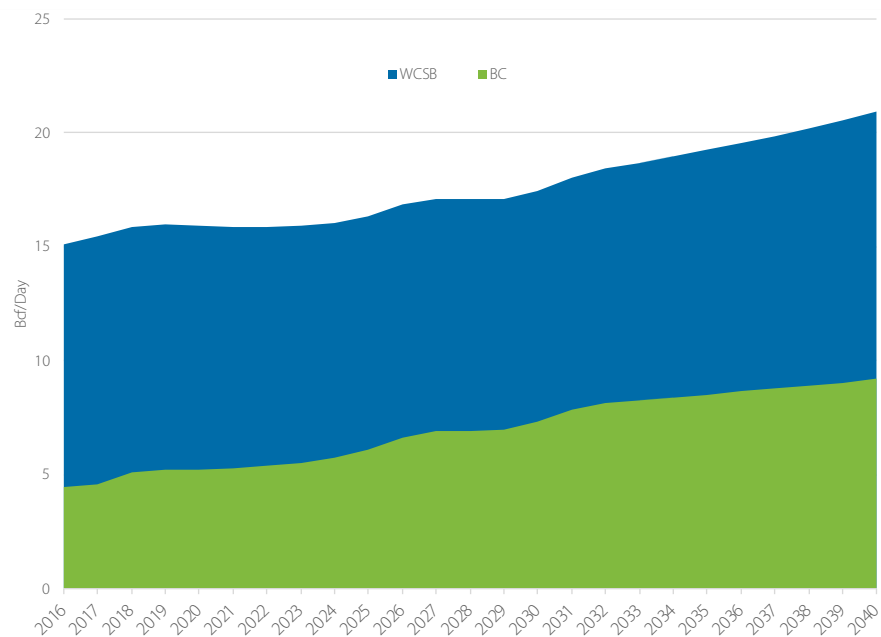
Source: EIA, 2018 Annual Energy Outlook Table 13 – Natural Gas Supply, Disposition & Prices NEB, Canada's Energy Future 2018, Reference Case Appendix – Natural Gas Supply

FIGURE S4. Source of Natural Gas for the Pacific Northwest



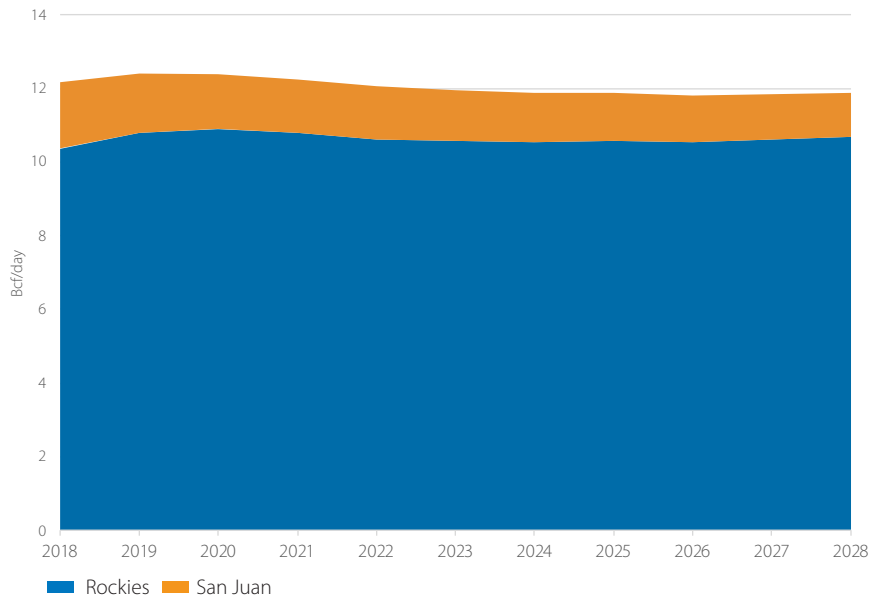
Source: NWGA

FIGURE S5. BC Drives Projected 38% WCSB Production Growth from 2016-2040



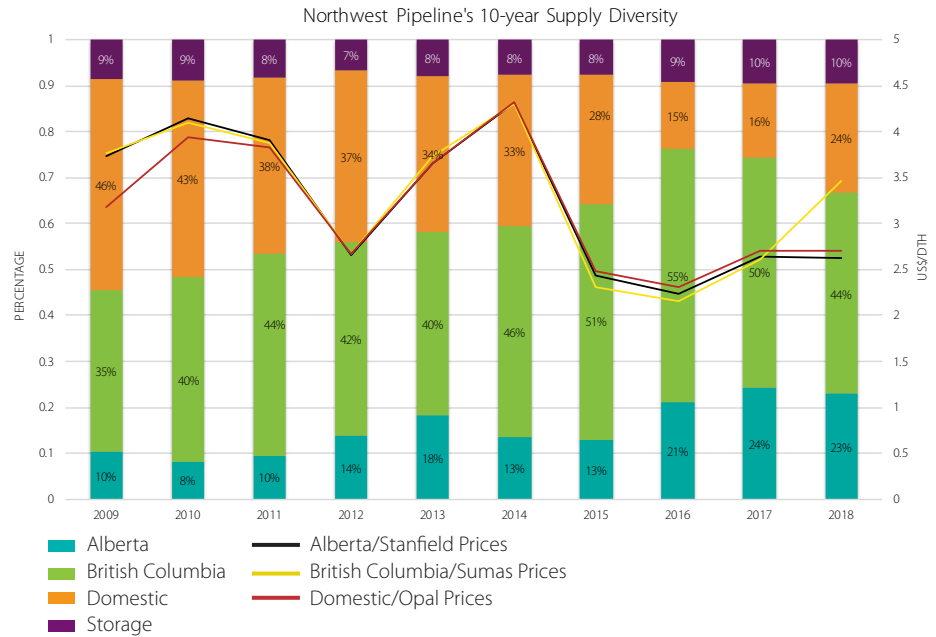
Source: NEB, Canada's Energy Future 2018

FIGURE S6. Rocky Mountain Production Predicted to Remain Flat



Source: Wood Mackenzie 2018 H2, published with permission

FIGURE S7. Connection to Three* Basins Provides Supply Optionality**



Source: Northwest Pipeline through 12/31/2018

* For purposes of this chart, the Alberta and British Columbia portions of the WCSB are depicted separately, hence "three" basins instead of two.

**Does not include volumes of Alberta-sourced gas shipped to the region via FortisBC's Southern Crossing pipeline or served directly from TransCanada's GTN pipeline.