

Appendix D: Proposed Regional Natural Gas Infrastructure Project Descriptions

Today's market for regional infrastructure capacity values reliability, diversity of supply and tidewater access for the export of LNG. It is only a matter of time before new capacity within the region will be required. Figure C5 on page 19 in the Capacity Section illustrates active regional infrastructure proposals, which include:

Enbridge T-South Expansions: Following a highly successful open season, Enbridge is proceeding to add 190 million cubic feet per day (MMcf/d) of additional capacity supported by long-term contracts under a cost-of-service framework, which will enable greater access for growing Montney production to attractive demand markets in the Pacific Northwest by late 2020. In addition, Enbridge continues to evaluate further expansion of its T-South system to provide incremental delivery options for growing Western Canada gas supply to markets in the Pacific Northwest. All expansions on T-South would require pipeline looping and compression and can be brought into service between 2021-2023.

FortisBC Southern Crossing Expansion: FortisBC's existing Southern Crossing pipeline system enables bidirectional gas flow between Spectra's T-South system at Kingsvale, BC, and TransCanada's BC system just upstream from the interconnection with GTN at Kingsgate, ID. The proposed expansion involves a 161-kilometre (100-mile) pipeline looping project on the segment between Kingsvale and Oliver, BC, and would facilitate access to an additional 300-400 MMcf/d of bidirectional capacity. This expansion would provide pipeline diversity and security of gas supply by moving Alberta-sourced gas east to west to serve existing demand and potential industrial projects proposed for the BC Lower Mainland and the I-5 Corridor. In addition, this expansion would also allow gas flow from Station 2 to the Kingsgate market, improving the utilization of BC pipeline capacity when demand is low during summer months.

Northwest Pipeline (NWP) Sumas Express: Williams NWP continues to assess the regional benefits of expanding its system along the I-5 Corridor from Sumas, WA, to the market areas in WA and OR. NWP believes that expanding in its existing corridor is both economical and permissible and can be accomplished in

a scalable manner to meet anticipated regional growth. Depending on ultimate market needs, NWP can meet demand growth by adding additional loop and compression at its existing compressor stations in the corridor.

Gas Transmission (GTN) Trail West/N-MAX: Project sponsor TransCanada GTN is working with NW Natural to develop the Trail West project. The Trail West project would consist of a 106-mile, 30-inch diameter pipeline that would run from GTN's mainline in central Oregon to a NW Natural/Northwest Pipeline hub near Molalla — enhancing delivery capacity to the I-5 Corridor. Trail West's initial design capacity is 500 MMcf/d, expandable to 1,000 MMcf/d. This project is projected to be in service during the fourth quarter of 2023.

Pembina Pacific Connector Gas Pipeline Project (PCGP): The PCGP is a 229-mile 36-inch diameter pipeline extending from Malin to Coos Bay, OR. PCGP will serve the Jordan Cove LNG export terminal. PCGP includes a compressor station located near Malin yielding a total project design capacity of more than 1,000 MMcf/d. PCGP will provide access to supplies from Western Canada and the U.S. Rockies via interconnections with GTN and the Ruby Pipeline.

TransCanada NGTL Enhancements: TransCanada currently has two projects to increase the capacity of the NGTL System West Path to the Alberta/BC border for export delivery services. An application was made and approved by the NEB in August 2018 for the Winchell Compressor Unit Addition. Construction of this project is underway and, when complete in November 2019, will provide 110 MMcf/d of incremental Firm Transportation to the Alberta/BC export delivery point. An application for the West Path Delivery Project, 22 kilometres (14 miles) of NPS 42 pipeline loop and two 30-megawatt compressor unit additions, is before the NEB with approval expected in Q3 2019. The West Path Delivery Project will provide 260 MMcf/d of incremental firm transportation service to the Alberta/BC export delivery point commencing in 2020. These projects are part of more than \$9 billion in planned NGTL System capacity expansion projects to 2022 that will connect new supply and intra-basin and export markets to the System.