



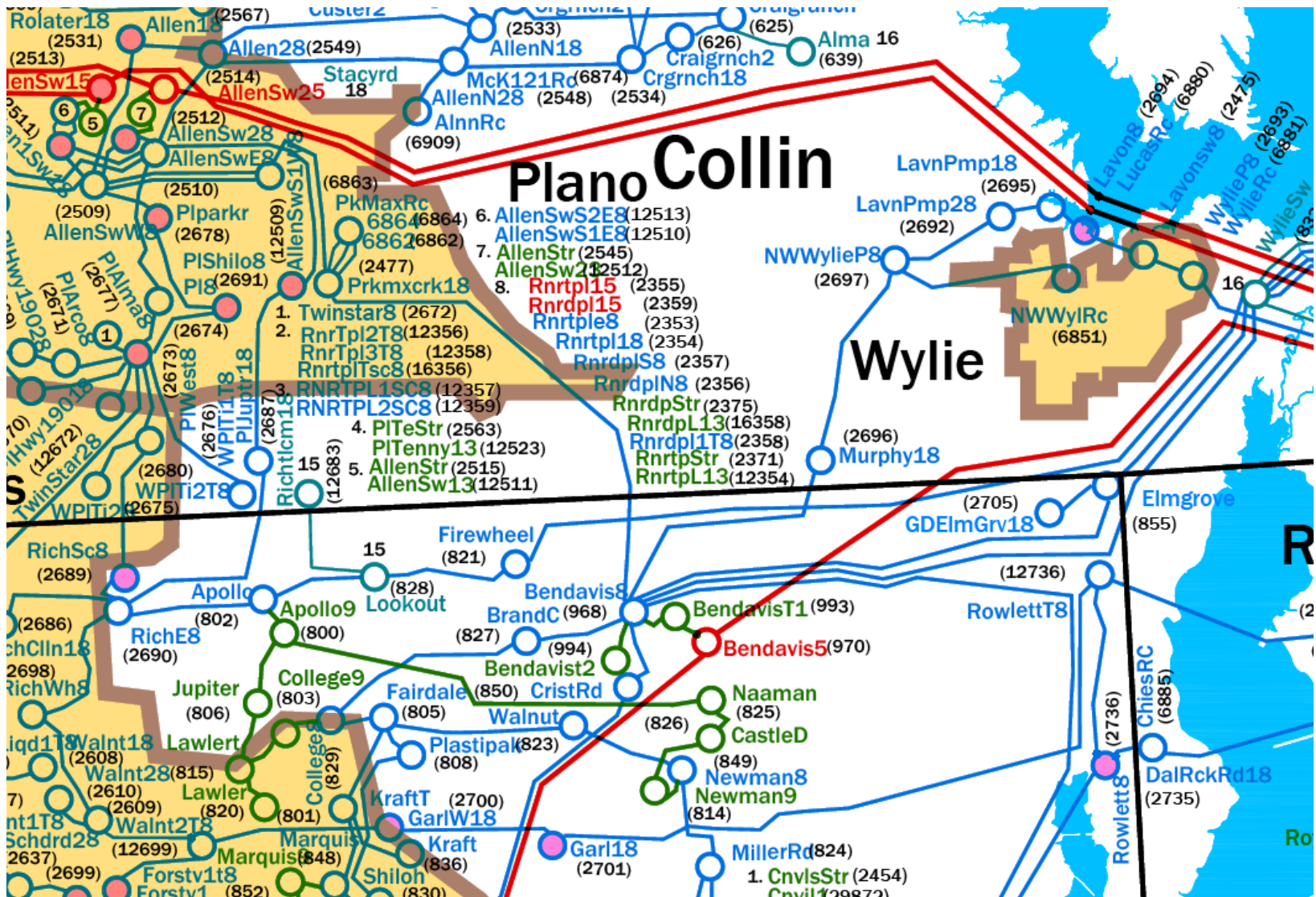
GP&L/ONCOR N-GRIP Transmission Project ERCOT Scope and Update

RPG Meeting
May 16, 2017

Introduction

- ❑ The northern Garland area is anticipating high load growth driven by three future data centers (100-120MW each). Two of the three data centers have already signed contract with GP&L.
- ❑ GP&L and Oncor submitted the N-GRIP transmission project to meet the reliability need in the area.
- ❑ The estimated cost of the project for both GP&L and Oncor is around \$78M.
- ❑ The estimated in service date of the project is Summer 2021.

Study Region



Study Assumptions

- The 2022 North/North Central (NNC) Summer Peak start case from 2017 Regional Transmission Plan (RTP) was selected as the base case for the study, and was modified as follows.
 - There are no generators that met Planning Guide Section 6.9 requirements in the study region need to be added to the study case.
 - Based on GP&L inputs, the thermal rating of the following transmission project was updated in the base case.
 - Upgrade 138 kV transmission line from Apollo to Wylie with a thermal rating of 495 MVA.
 - The load at the Lookout and Holford substations were modified based on the current GP&L forecast. Only data center load that have already signed contract with GP&L were included.

Analysis and Criteria

- ❑ Contingencies and criteria of reliability analysis
 - The study will include all contingencies consistent with Planning Guide Section 4.1.1.2 and criteria consistent with 2017 RTP.
 - NERC TPL-001-4 Contingencies.

- ❑ Sensitivity studies may be performed with generators in the study region that have already signed Interconnection Agreement but not met Planning Guide section 6.9 requirements yet.

- ❑ Sensitivity studies may be performed with the anticipated load for all three future data centers.

Preliminary Analysis Results

❑ Thermal Violation Results (P1, P2.1 and P7):

Branch	Rate B (MVA)	Max % Loading Cont.	
		w/o data centers	w/ data centers
Plano West to Richardson Alcatel Tap 138 kV ckt 1	206	<100	119.8
Plano West to Richardson Spring Creek 138 kV ckt 1	206	<100	109.6
Allen Switch to Plano Custer Road 138 kV ckt 1	334	100.3	100.9
College to Lawlert 69 kV ckt 1	110	<100	114.4
Jupiter to Lawlert 69 kV ckt 1	110	<100	103.4

Reliability Analysis Results

□ Bus Voltage Violation Results (P1, P2.1 and P7):

Name	Nom kV	Min Voltage Cont.	
		w/o data centers	w/ data centers
Firewheel	138	0.98	0.88
Holford	138	0.98	0.87
Lookout	138	0.98	0.87

Next Steps

- ❑ ERCOT is evaluating the options to resolve the reliability issues in the study region.
- ❑ Tentative timeline: ERCOT anticipates to complete the independent review and make a final recommendation by July RPG meeting, and present the project recommendation to TAC on July 27, and to ERCOT Board of Directors on August 08.



Questions?