

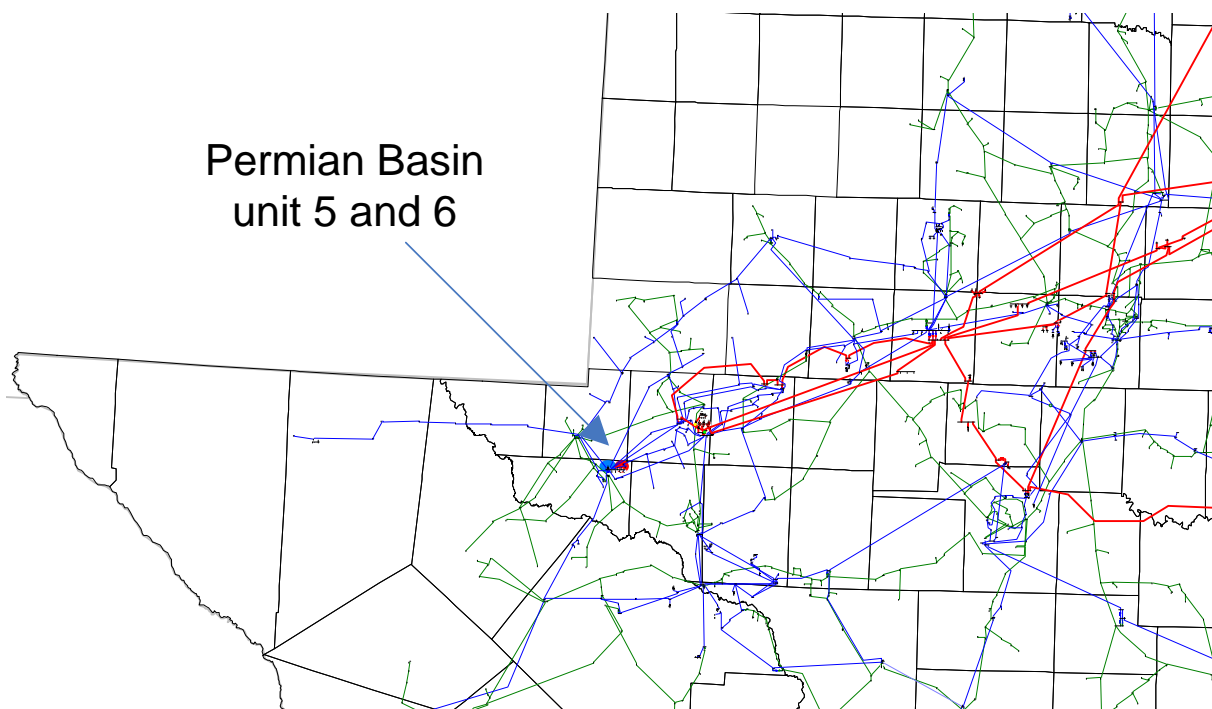
RMR Exit Strategy for Permian Basin Units 5 & 6

Pursuant to Protocol Section 6.5.9.2, Exit Strategy from an RMR Agreement, ERCOT is required to present to the Board a list of feasible alternatives that may, at a future time, be more cost-effective than the continued renewal of the existing RMR Agreement. This document serves as ERCOT's proposed exit strategy from existing or pending RMR Agreements. Pursuant to Protocol Section 6.5.9.5, RMR or MRA Contract Termination, the affected TDSP(s) and the Board must approve the strategy if the RMR Agreements have not been terminated.

Background

In February 2009, Luminant Generation Company, LLC (Luminant) submitted a Notification of Suspension of Operations for fourteen of its generation units located in various Texas counties. ERCOT's analysis determined that all but two units, Permian Basin Units 5 and 6, could suspend operations as requested by Luminant. Therefore, Permian Basin Units 5 and 6 have been designated as Reliability Must Run (RMR) units to meet planning criteria requirements and maintain load under normal and contingency conditions. ERCOT currently has an RMR Agreement for Permian Basin Unit 5. Luminant has indicated that it will suspend operations on Permian Basin Unit 6 in September 2009; therefore, the parties are working to finalize an RMR Agreement for that unit prior to that time.

Permian Basin Units 5 and 6 are located in Ward County, TX. Ward County is in the Far West weather zone which is sparsely populated with moderate load growth. The availability of Permian Basin Units 5 and 6 enable ERCOT to comply with NERC criteria by eliminating post-contingency violations. With Permian Basin Units 5 and 6 not available, several post-contingency thermal overloads during summer peak load conditions with low wind dispatch cannot be relieved.



ERCOT Independent Analysis

ERCOT performed an independent analysis of transmission upgrades or additions necessary to allow both Permian Basin Units 5 and 6 to exit from RMR Service. Generation dispatch patterns without the two Permian Basin units cannot resolve the post-contingency overloads. In accordance with Protocol Section 6.5.9.2, Exit Strategy from an RMR Agreement, this review includes only new or upgraded Transmission Facilities.

The following upgrades or additions to the Transmission Facilities are being proposed to allow both Permian Basin units to exit from RMR Service. Parts of the exit strategy are already approved or planned projects and the remainder represents the most direct method to mitigate post contingency overloads. Note that one set of upgrades or additions is necessary to allow the exit of Permian Basin Unit 5 and another set of upgrades is necessary to allow the exit of Permian Basin Unit 6.

Permian Basin Unit 5 Exit:

In this analysis, Permian Basin unit 6 was modeled as unavailable in accordance with ERCOT Operating Guide Section 5.1.4, Transmission Reliability Testing.

Problem 1:

The Ackerly Vealmoor to Ackerly to Ackerly Lyntegar Coop line would overload for the contingency outage of the Exxon Sharon Ridge to Bluff Creek 138 kV line.

Recommended Solution:

The direct solution to this problem is to upgrade Ackerly Vealmoor to Ackerly 69 kV line and Ackerly to Lyntegar Coop 69 kV line at a cost of approximately \$9 million. However, a variant of this upgrade is included as a part of the Lamesa Area Upgrades with the CREZ Implementation project submitted by Oncor Electric Delivery Company (Oncor) for Regional Planning Group (RPG) review. The project proposed for RPG review would rebuild the Lamesa to Ackerly 69 kV line section as a double circuit line with one circuit at 138 kV and one circuit at 69 kV.

At this time, only the upgrade of the 69 kV line is needed for RMR exit strategy purposes. The preliminary incremental cost provided by Oncor to use double circuit structures with one circuit in place is approximately \$2 million more than simply upgrading the single-circuit 69 kV line. However, this incremental cost is significantly lower than rebuilding the line if the RPG project is endorsed and provides additional flexibility for the area for increased wind production and connection to the CREZ facilities. ERCOT recommends that Oncor proceed with the implementation of this RMR exit project as double circuit construction with the 69 kV circuit in place. The addition of the 138 kV circuit will be studied as part of the economic portion of the five-year transmission plan later this year. The estimated in service date of this project is by December 2011.

Problem 2:

The Odessa #1 Autotransformer overloads under contingency outage of the Odessa #2

Autotransformer.

Recommended Solution:

Install a third autotransformer at Odessa EHV switch. The addition of a third Odessa EHV 345/138 kV autotransformer is a tier 4 RPG project with an estimated in-service date of December 2010 which Oncor has already studied and included in its transmission plan.

Permian Basin Unit 6 Exit:

This analysis assumes that the exit strategy for Permian Basin Unit 5 has been completed. In this analysis, a Permian Basin gas turbine and one combined cycle train at Odessa were alternately modeled as unavailable in accordance with ERCOT Operating Guide Section 5.1.4, Transmission Reliability Testing.

Problem 1:

The Ackerly Lyntegar Coop line to Lamesa 69 kV line would overload under the contingency outage of Exxon Sharon Ridge to Bluff Creek 138 kV line.

Recommended Solution:

Upgrade Ackerly Lyntegar Coop to Sparenburg 69 kV line and Sparenburg to Lamesa 69 kV line. This is part of the Lamesa Area Upgrades with the CREZ Implementation proposal submitted by Oncor and currently being reviewed by RPG. The proposed project is to rebuild the Lamesa to Ackerly 69 kV line section as a double circuit line with one circuit at 138 kV and one circuit at 69 kV at a cost of approximately \$9 million.

At this time, only the upgrade of the 69 kV line is needed for RMR exit strategy purposes. The preliminary incremental cost provided by Oncor to use double circuit structures with one circuit in place is approximately \$2 million more than simply upgrading the single-circuit 69 kV line. However, this incremental cost is significantly lower than rebuilding the line if the RPG project is endorsed and provides additional flexibility for the area for increased wind production and connection to the CREZ facilities. ERCOT recommends that Oncor proceed with the implementation of this RMR exit project as double circuit construction with the 69 kV circuit in place. The addition of the 138 kV circuit will be studied as part of the economic portion of the five-year transmission plan later this year. The estimated in service date of this project is by December 2011.

Problem 2:

Overload of Big Spring SS to Big Spring West under contingency outage of Odessa EHV to Quail Switching Station and Odessa EHV to Longshore.

Recommended Solution:

Implementation of the RPG approved Oncor Stanton East – Big Spring Switch 138 kV line rebuild project will alleviate the overload problem of Big Spring Switch to Big Spring West 138 kV line. This project has a proposed in-service date of December 2010.

Economic Considerations:

Luminant has provided a fixed O&M budget for Permian Basin Unit 5 for the remaining eight months of 2009 as a part of the RMR contract negotiations which resulted in an hourly estimated standby price in the RMR Agreement of \$3.87/MW/hour. Although the budget included some one-time costs, the estimated annual fixed costs that would be uplifted on an on-going basis are greater than the \$1.83 million that would be required to justify the cost of the entire double-circuit line with only the 69 kV circuit in place from Ackerly Vealmoor to Lamesa under the normal ERCOT economic planning criteria¹. While the entire length of this line is not needed to exit the RMR Agreement for Permian Basin Unit 5, this comparison is made to illustrate that the construction of this line is well justified, given that the comparison does not consider the additional benefits that would accrue due to the completion of this line; namely, that the upgrade would also allow the exit of the pending RMR Agreement for Permian Basin Unit 6 and ending of the fixed costs that would be associated with it. In addition, there would be the additional benefit of avoiding the above-market energy costs that would be incurred and uplifted due to the need to run these RMR units. Thus, the upgrade of the Ackerly Vealmoor to Lamesa line is economically well justified. All of the other upgrades that were shown to be necessary to exit the RMR Agreements have already been justified due to other requirements.

Summary

To exit Permian Basin Unit 5:

- Upgrade Ackerly Vealmoor to Ackerly 69kV line and Ackerly to Lyntegar Coop 69 kV line using double circuit construction with one circuit in place. The preliminary estimated cost of the entire line from Ackerly Vealmoor to Lamesa is \$11 million with an in-service date by the end of 2011.
- Third autotransformer installation at Odessa EHV switch estimated in-service date of December 2010. This project is already in the Transmission Project Information and Tracking (TPIT) database with an in-service date of December 2010.

To exit Permian Basin Unit 6:

- Upgrade the remainder of the Ackerly Vealmoor – Lamesa (Ackerly Lyntegar Coop to Sparenburg 69 kV line and Sparenburg to Lamesa 69 kV line) using double circuit construction with one circuit in place. The preliminary estimated cost of the entire line from Ackerly Vealmoor to Lamesa is \$11 million with an in-service date by the end of 2011.
- Completion of the Oncor Stanton East – Big Spring Switch 138 kV line, which has already been approved through RPG Review, with an in-service date of December 2010.

¹ The annual carrying cost of the transmission investment (roughly 1/6 of the capital cost) must be less than the annual cost savings as a result of the upgrade.