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February 4, 2009

Colin Persichetti
Director, Marketing & Trading
PacifiCorp Merchant Function (Merchant)
825 NE Multnomah St., 600-LCT
Portland, OR 97232

**RE: Transmission System Impact Study (OASIS AREF #531024)
REDB-PACE (PACE-NNH) 600 MW PTP**

Dear Mr. Persichetti:

Enclosed is a System Impact Study report dated February 2009 for the above-referenced request. This completes the System Impact Study Agreement, executed December 16, 2008. Consider this the final version of the System Impact Study report.

PacifiCorp Transmission Services will close the work order for accumulating the related System Impact Study costs and the transmission customer will be credited or charged the difference between actual and estimated study costs.

If you have any questions, please call me at (503) 813-5588 or Dennis Desmarais at (503) 813-6079.

Sincerely,

Nita O'Hara
Account Manager, Transmission Services

Enclosure

Transmission Service Request
System Impact Study Report

Completed for
PacifiCorp Merchant
(“Transmission Customer”)

Proposed Transmission
REDB-PACE (PACE-NNH)
Point-to-Point Service Request
AREF 531024
600 MW

February 2009

1.0 Description

The Transmission Customer submitted a 600 MW point to point (PTP) transmission service request on PacifiCorp's Open Access, Same-time Information System (OASIS) as listed below:

Queue	OASIS AREF	Completed Request Received	Type of Service	POR	POD	MW	Start	End
1090	531024	12/3/08	PTP	REDB	PACE	600	6/1/12	6/1/13

2.0 Scope of the Study

This study identifies the requirement to provide transmission service for Q1090 for 600MW of firm point to point transmission between the point of receipt, REDB and point of delivery PACE. This report is based on the study which we had already performed.

3.0 Study Assumptions

The following key assumptions were used in performing this study.

- Studies were performed with TOT2B (TOT2B1- -600 MW and TOT2B2- -300 MW) path flows at their present non-simultaneous maximum rated levels for south to north.
- The point of delivery is assumed to be the Wasatch Front load area generally defined by Camp Williams, Terminal, Midvalley, 90S and Spanish Fork. This area is north of Wasatch Front South boundary.
- The following planned system reinforcement were assumed to be in service by 2012:
 - The Mona- Oquirrh transmission line
 - Huntington-Pinto series compensation
 - SVC at Red Butte
 - Sigurd- Three Peak 345 kV series compensation
 - Harry Allen second 230/345 kV transformer (Planned addition to NV Energy system)
 - Three Peak 345/138 kV substation
 - 2-15 Mvar switched capacitors at Parowan 138 kV
 - 2-30 Mvar switched capacitors at Red Butte 138 kV
 - 2-30 Mvar switched capacitors at St George 138 kV
 - NV Energy is separately studying the requirement, if any, on their system to deliver 600 MW to PacifiCorp 345 kV interconnection on the Harry Allen-Red

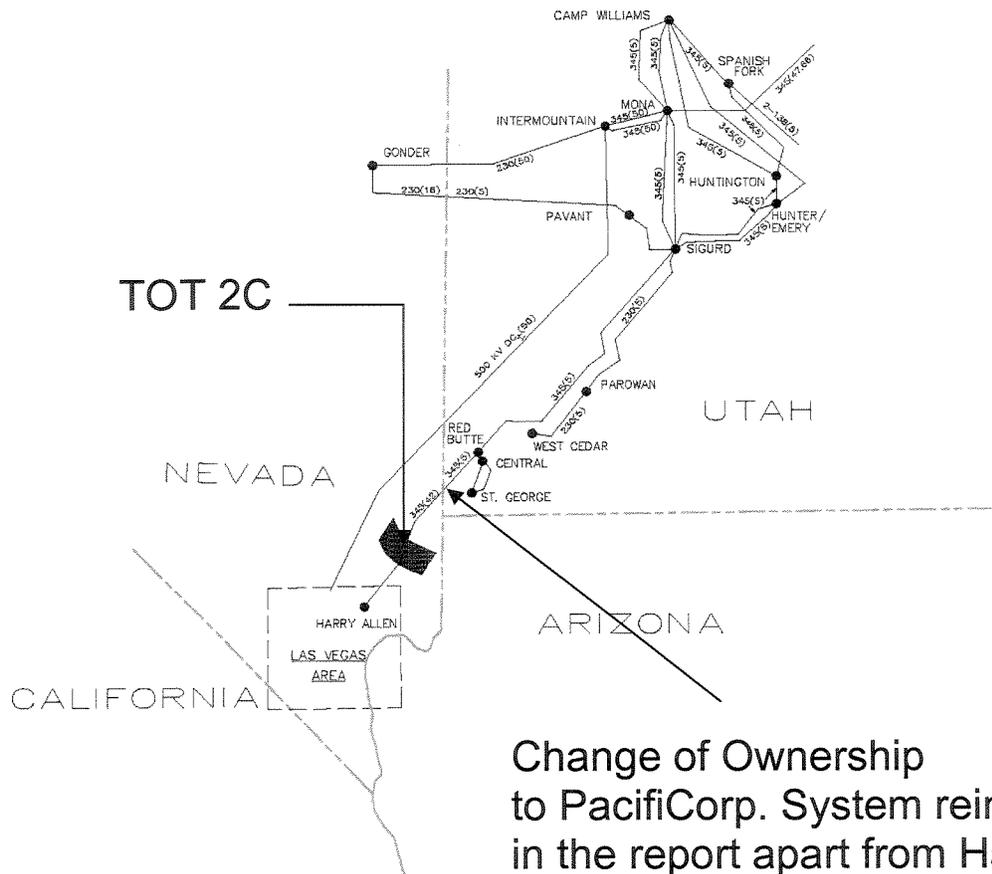
Butte line at the Utah/Nevada border. For the purpose of this study, these improvements, if any, are assumed to be in service.

- Southern Utah path scheduling was performed by adjusting the levels of load and generation in Utah, Arizona, and Nevada and modifying the area interchange in the case. Phase shifters at Pinto, Sigurd, and Harry Allen were adjusted to accommodate the desired flows.
- Transmission elements were modeled according to existing PacifiCorp plans. It is possible that the configuration of these elements will change during the planning/rating process.
- Cases were screened with the PacifiCorp developed contingency processor for steady-state (N-0) and contingency (N-1 and N-2) conditions, including bus voltages and branch and equipment loading.
- In order to obtain a higher rating on the REDB-PACE path (TOT 2C-600 MW S-N), the project will have to go through the WECC project Rating Review process. Since the path is jointly owned by PacifiCorp and NV Energy, it is anticipated that the two companies will cooperatively conduct any and all necessary studies. This process will include simultaneous studies of all the parallel TOT2 lines at their full rated capacity. When completed, these studies may identify limitation to the simultaneous capacity of the system (which may restrict simultaneous use of capacity under certain conditions), or may identify the need for new facilities or modification of planned facilities in order to avoid simultaneous limitations.
- Results were developed for south to north flows (S-N) only.

4.0 Study Summary:

With light loads in the Southwestern Utah area, the TOT2C path demonstrated acceptable steady-state and contingency performance up to a flow of 350 MW. For TOT2C flows higher than 350 MW, the various N-2 outages, including Spanish Fork-Huntington and the Camp Williams-Emery 345 kV lines, result in loading on the Mona-Huntington 345 kV line that exceeds its emergency rating. This will require the implementation of a generator tripping RAS at Huntington for various N-2 outages, which is yet to be determined and implemented. A summary of the path rating and required reinforcements is shown in Table 1.

Load Year	S-N TOT2C Path Rating	Required Reinforcements (in addition to Base Case reinforcements)
2010-2015	350 MW	None
	500/600 MW	Huntington Generator Tripping RAS Scheme (for Emery North N-2)
Table 1 - South to North (S-N) TOT2C Path Rating with Reinforcements		



Change of Ownership to PacifiCorp. System reinforcement in the report apart from Harry-Allen Transformer are all in PacifiCorp Control Area. This report does not address improvements in the NV Energy system (if any).

5.0 Cost Estimate

For the Huntington Generator Tripping RAS Scheme (for Emery North N-2) the cost would be approximately \$100,000.00.

6.0 Conclusions

The transmission system reinforcements required for 600 MW TOT2C path rating for south to north flows are shown in Table 2 below:

S-N TOT2C Path Rating	Required Reinforcements (in addition to Base Case reinforcements)
600 MW	Huntington Generator Tripping RAS Scheme (for Emery North N-2)
Table 2 - South to North (S-N) Reinforcements	

In order to obtain a higher rating on the REDB-PACE path (TOT 2C-600 MW S-N), the project will have to go through the WECC project Rating Review process. Since the path is jointly owned by PacifiCorp and NV Energy, it is anticipated that the two companies will cooperatively conduct any and all necessary studies. This process will include simultaneous studies of all the parallel TOT2 lines at their full rated capacity. When completed, these studies may identify limitation to the simultaneous capacity of the system (which may restrict simultaneous use of capacity under certain conditions), or may identify the need for new facilities or modification of planned facilities in order to avoid simultaneous limitations.

All active higher-priority transmission service requests and system improvements necessary to serve them were considered in this study. ***If any of the active higher-queued requests or study assumptions are withdrawn or changed, PacifiCorp reserves the right to restudy this request, and the results and conclusions could significantly change.***

7.0 Participation by Affected Systems

Transmission Provider has identified NV Energy as affected system. A copy of this study report will be shared with the affected system.