
Application of Public Service Company)	Sixteenth set of Audit of CPUC Staff
of Colorado for Approval of HDVC)	
Converter Cost Recovery Mechanism)	Dated August 26, 2005
Docket No. 05A-161E		

GENERAL AUDIT REQUEST NO. Audit16-1:

Please provide copies of any studies that may show how the electrical system is affected at Boone and Lamar with the wind generation at 162MW in conjunction with the tie at a 210 MW export (W-E) level with an outage of the Boone-Lamar 230kV line.

RESPONSE:

The studies are provided on a compact disk labeled Attachment Audit16-1.A1 in the zipped file called "cpuc16-1&2A.zip". The actual report files within the zip file are:

Zip File	Report File Name(s)	By	Description
A	1. Task8_FinalReport.pdf	Electranix	Lamar Back to Back System Studies
	2. Task8_Addendum_Final_Report_Oct28_2002.pdf	Electranix	Addendum to Lamar Back to Back System Studies

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GENERAL AUDIT REQUEST NO. Audit16-2:

Please provide copies of any studies that may show how the electrical system is affected at Boone and Lamar with the wind generation at 162MW in conjunction with the tie at a 210 MW export (E-W) level with an outage of the Boone-Lamar 230kV line.

RESPONSE:

The studies are provided on a compact disk labeled Attachment Audit16-1.A1 in the zipped files called "cpuc16-1&2A.zip", "cpuc16-1&2B.zip", "cpuc16-1&2C.zip", "cpuc16-1&2D.zip", "cpuc16-1&2E.zip", and "cpuc16-1&2F.zip". The actual report files within the zip files are:

Zip File	Report File Name(s)	By	Description
A	1. Task8_FinalReport.pdf	Electranix	Lamar Back to Back System Studies
	2. Task8_Addendum_Final_Report_Oct28_2002.pdf	Electranix	Addendum to Lamar Back to Back System Studies
B	1. R07-03R - Golden Prairie Wind Farm+App.pdf	PTI	Golden Prairie Wind Farm Contingency Analysis and Dynamic Stability Analysis
C	1. GI-2004-02-SIS-r1.pdf	PSCo	Interconnection System Impact Study Report for 238 MW Wind Facility Near Lamar
	2. CG2_final_report_Jan_2005.pdf	Electranix	PSCAD Interactions Study and PSLF Transient Stability Study for 238MW Colorado Green II Wind Farm (Supporting documentation for C.1.)
D	1. GI-2004-11-SIS.pdf	PSCo	Interconnection System Impact Study Report for 69 MW Wind Generation Near Lamar
	2. Signal Hill dynamic stability modeling notes and assumptions.pdf	PSCo	Supporting documentation for D.1.
	3. Signal no networkupgrades nolamargen.pdf	PSCo	Supporting documentation for D.1.
	4. Synchronous Condenser at La Junta Notes.pdf	PSCo	Supporting documentation for D.1.
E	1. GI-2004-4-SIS-Final.pdf	PSCo	Interconnection System Impact Study Report for 280 MW Wind Generation Near Lamar
F	1. DcStudy1.pdf	Electranix	Voltage Analysis of the Lamar DC Converter

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GENERAL AUDIT REQUEST NO. Audit16-3:

Please provide copies of any documentation that says how the tie will be operated when taking into consideration the wind generation at Lamar.

RESPONSE:

The Boone-Lamar line rating (536 MVA) cannot reasonably be exceeded with the present interconnections at Lamar. 372 MW of generation can be injected from the Tieline and the Colorado Green Wind Project.

Please see Attachment Audit16-3.A1 for an operating guide and a training guide for operations.

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GENERAL AUDIT REQUEST NO. Audit16-4:
When was the Lamar ac-dc-ac converter tested?

RESPONSE:

Power transfer testing commenced 17 November 2004 and continued until 6 May 2005.

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GENERAL AUDIT REQUEST NO. Audit16-5:

When did it (the HVDC Converter) go into commercial operation?

RESPONSE:

The HVDC tie was made commercially available 17 May 2005.

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GENERAL AUDIT REQUEST NO. Audit16-6:

What is the rating of the converter - 200MW, 210MW, or what did it test at?

RESPONSE:

The rating of the converter is 210 MW bidirectional.

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