

# 2008 WESTCONNECT ANNUAL PLANNING MEETING

## 2008 REPORT ERRATA

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The WestConnect Planning Management Committee met on January 14, 2009 in Las Vegas, Nevada for its second annual planning meeting. A quorum of WestConnect planning members were in attendance and heard presentations regarding the 2008 WestConnect Transmission Plan, the 2008 WestConnect Transmission Planning Report and the 2008 WestConnect Adequacy Report. Public comment was received from stakeholders in attendance and then the committee took action regarding the three documents following committee discussions. All three documents were approved by the Planning Management Committee pending a one week review period ending on January 21, 2009. This erratum documents the corrections and modifications received both during the annual meeting and during the review period following the annual meeting.

### **2008 WESTCONNECT TRANSMISSION PLAN**

- 1) Exhibit 6-5 – APS is the sponsor of the Palo Verde Hub – North Gila #2 project, not SRP as noted in this section of the Report.
- 2) Exhibit 6-5 and Table 3 – The correct in-service date for Sun Valley-TS9 is 2016, not 2014.
- 3) Exhibit 6-5 and Table 3 – Palo Verde – Sun Valley project is inadvertently listed twice.
- 4) Appendix A – APS, Section A-3 – APS supplied an updated Phoenix area transmission map included as **Attachment 1**.
- 5) Appendix I – IID Section (entire) – The correct contact information for all IID projects should be: David L. Barajas, (760) 482-3450, [dlbarajas@iid.com](mailto:dlbarajas@iid.com)
- 6) Appendix H – EPE, Section H-10 – Davis Electric and PSCo/Xcel Energy are not participants in the Diablo Autotransformer.
- 7) Appendix H – EPE, Section H-17 – Caliente-Coyote Rebuild project in-service date is 2011.
- 8) Appendix K – PSCo, Section K-13 – Tri-State is the sponsor of the San Luis Valley–Calumet project, PSCo is a participant. This listing is a duplicate and should be removed; Tri-State’s is correct.
- 9) Various Projects added to the WestConnect TPM database after close for final report preparation are included as **Attachment 3**. These projects are not included in the 2008 Transmission Plan summaries or Appendices.

### **2008 WESTCONNECT TRANSMISSION PLANNING REPORT**

- 1) Pages 23 and 24 – Portions of the two pages should read as follows:

*“The 2008 WWSIS activities primarily focused on the preliminary analysis including extensive statistical analysis for wind and/or solar sites and potential transmission. During the Stakeholder Meeting on August 14, 2008, an abnormality in the wind data was identified and found to be due to instabilities in the wind model runs and corrupt file transfers. The wind mesoscale modeling was re-run in the Fall of 2008 and the analysis is being re-run and*

*integrated into the current work product. As a result, the project schedule has been delayed. The data and results are being re-run and will be integrated into the current work product.*

*In 2009, the following tasks will be undertaken:*

- *Completion of analysis on the In Area scenario which will include statistical analysis on 11%, 23% and 35% renewable energy penetration and production simulation runs of 35% renewable energy. A review meeting in 1Q 2009 will review these results and present the Mega Projects and Local Priority scenarios. The statistical and production simulation analysis will be run on the Mega Projects and Local Priority scenarios. Quasi-steady-state analysis and Loss of Load Expectation will also be run and all of this analysis will be presented at a stakeholder meeting in the Summer of 2009. Two additional scenarios will also be selected. Potential additional scenarios include high solar, high geographic diversity, or high capacity value.*
- *The two additional scenarios will be analyzed as above. The complete analysis will be drafted in a report and presented to stakeholders in the Fall of 2009 with a Final report expected in December 2009.*

*Updates and appropriate support information will be posted on the WestConnect website. “*

- 2) Page 43, Bullet 4 – The word “Problematic” was intended to be “Programmatic”.
- 3) Exhibit 17-1 – Debra Lew of NREL provided an updated map to reflect the most current NREL WWSIS study area. The revised map is included as **Attachment 2**.
- 4) Table 6, Page 49 - The system improvements related to EOR, 8055 Path rating increase should read "IID/SDG&E System Upgrades".
- 5) Exhibit 6 – The system improvements related to EOR, 8,055 Path rating increase should read "IID/SDG&E System Upgrades"; The system improvements related to EOR, 9,300 Path rating increase should read “Navajo-Crystal and Perkins-Mead Upgrades”; The system improvements related to EOR, 11,700 Path rating increase should read “New Line – CEC approved by ACC. WECC Path Rating pending completion of Path Rating process.”

## **2008 WESTCONNECT ADEQUACY REPORT**

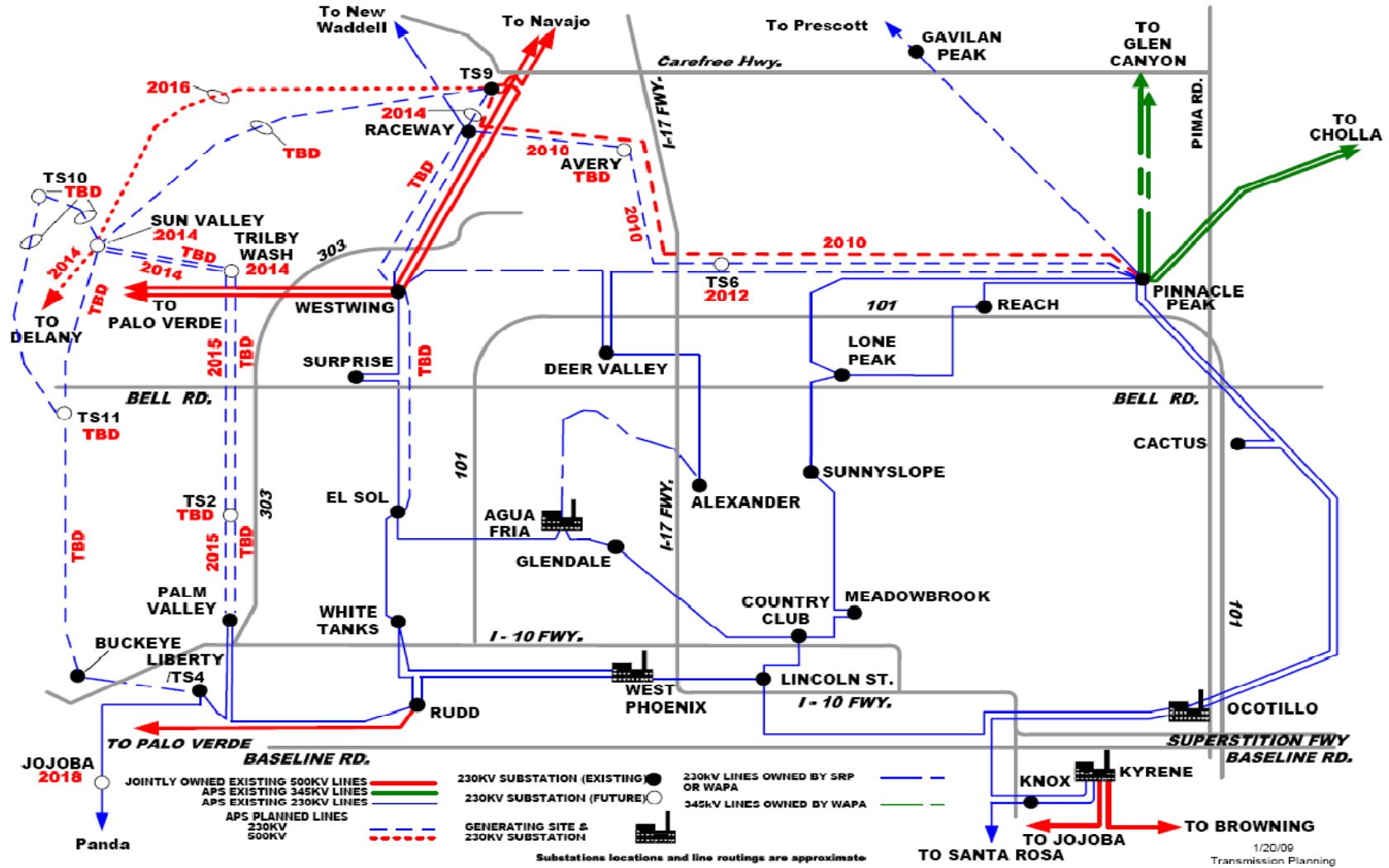
- 1) Table 5 – The name of the WestConnect case used for the study work was intended to be “2018”, not “2083” as indicated in the report.
- 2) Table 36, Page 64 – Remedial Action Schemes eliminated the following Category B overloads as described below:
  - Falcon 345/120 kV Overload – This element overloads are explained as “...there is an existing RAS for this outage that was not included in the analysis (See contingency description).

- 3) Table 40, Page 22 and Page 69 – As a result of the explanation above and thus modifications in Table 36 this table should be changed to reflect two (2) overloads in Nevada Energy’s system (Instead of the five (5) originally reported).
- 4) Comments received but not addressed – 2 comments were received regarding the Appendix listing of included transmission projects. This appendix is a listing of the 2007 WestConnect Plan projects (not 2008) therefore the Appendix listings are correct and no modifications are reflected.

### **ATTACHMENTS (3)**

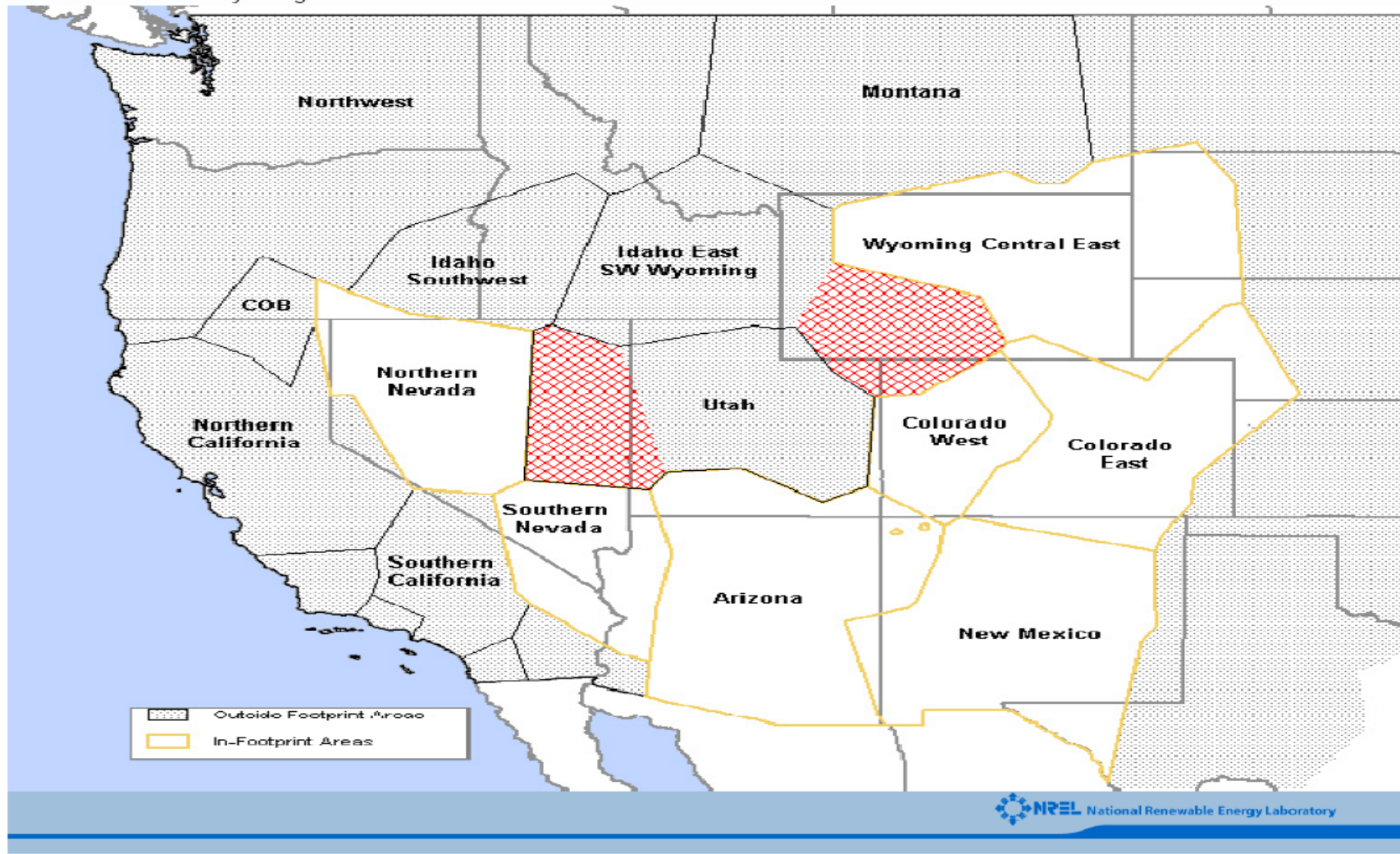
**ATTACHMENT 1 – REVISED APS PHOENIX METRO TRANSMISSION MAP**

**PHOENIX METROPOLITAN AREA TRANSMISSION PLANS 2009-2018**



## ATTACHMENT 2 – UPDATED NREL WWSIS STUDY AREA MAP

The study footprint was revised due to stakeholder feedback. The red hatched regions are now included in the Nevada and Wyoming transmission areas. Additionally, any wind or solar site in the states of Nevada, Arizona, New Mexico, Colorado or Wyoming will be available to serve load in those states' transmission areas.



**ATTACHMENT 3 –2008 WESTCONNECT TRANSMISSION PLAN ADDITIONS**

**Black Hills Power Transmission Plan  
2009-2018**

**DONKEY CREEK-PUMPKIN BUTTES 230 KV LINE**

2009

<b>Project Sponsor:</b>	Black Hills Power
<b>Project Participants:</b>	None
<b>Project Description:</b>	A new 230 kV line from the new Donkey Creek 230 kV substation near Wyodak to the Pumpkin Buttes 230 kV substation
Voltage Class:	230 kV
Facility Rating:	550
Point of Origin:	Donkey Creek 230 kV (near Wyodak)
Point of Termination:	Pumpkin Buttes 230 kV
Intermediate Points:	None
Length of Line (in Miles):	50
Type of Project:	Planned
Routing:	
<b>Purpose of Project:</b>	Transmission customer needs and to improve system stability
<b>Estimated Cost (in 2009 Dollars):</b>	\$17,000,000
<b>Schedule:</b>	
Construction Start Date:	2008
Planned In-Service Date:	2009
Permitting Status:	
<b>Contact Information:</b>	
	Eric Egge 605-721-2646 eric.egge@blackhillscorp.com

# Black Hills Power Transmission Plan 2009-2018

## PUMPKIN BUTTES-DAVE JOHNSTON AREA

2010

**Project Sponsor:** Black Hills Power  
**Project Participants:** None  
**Project Description:** A new 230 kV transmission line between the Pumpkin Buttes 230 kV substation and the Dave Johnston area

Voltage Class: 230 kV  
Facility Rating: 550  
Point of Origin: Pumpkin Buttes 230 kV  
Point of Termination: Dave Johnston 230 kV area  
Intermediate Points: None  
Length of Line (in Miles): 60  
Type of Project: Planned  
Routing:

**Purpose of Project:** Transmission customer needs and improve system stability

**Estimated Cost (in 2009 Dollars):** \$22,500,000

**Schedule:**

Construction Start Date: 2009  
Planned In-Service Date: 2010  
Permitting Status:

**Contact Information:**

Eric Egge  
605-721-2646  
eric.egge@blackhillscorp.com

# Black Hills Power Transmission Plan 2009-2018

## MINNEKAHTA 230/69 KV SUBSTATION

2011

<b>Project Sponsor:</b>	Black Hills Power
<b>Project Participants:</b>	None
<b>Project Description:</b>	A new 230/69 kV substation on the Osage-Westhill 230 kV line
Voltage Class:	230 kV
Facility Rating:	70
Point of Origin:	Minnekahta 230 kV
Point of Termination:	Minnekahta 230 kV
Intermediate Points:	None
Length of Line (in Miles):	0
Type of Project:	Planned
Routing:	
<b>Purpose of Project:</b>	Increase load serving capability in the southern Black Hills
<b>Estimated Cost (in 2009 Dollars):</b>	\$6,500,000
<b>Schedule:</b>	
Construction Start Date:	2010
Planned In-Service Date:	2011
Permitting Status:	
<b>Contact Information:</b>	Eric Egge 605-721-2646 eric.egge@blackhillscorp.com

# Black Hills Power Transmission Plan 2009-2018

## ST. ONGE 230/69 KV SUBSTATION

2013

<b>Project Sponsor:</b>	Black Hills Power
<b>Project Participants:</b>	None
<b>Project Description:</b>	A new 230/69 kV substation tapping the existing Lange-Lookout 230 kV line
Voltage Class:	230 kV
Facility Rating:	150
Point of Origin:	St. Onge 230 kV
Point of Termination:	St. Onge 230 kV
Intermediate Points:	None
Length of Line (in Miles):	0
Type of Project:	Planned
Routing:	
<b>Purpose of Project:</b>	Additional load serving capability in the Black Hills
<b>Estimated Cost (in 2009 Dollars):</b>	\$2,700,000
<b>Schedule:</b>	
Construction Start Date:	2012
Planned In-Service Date:	2013
Permitting Status:	
<b>Contact Information:</b>	
	Eric Egge
	605-721-2646
	eric.egge@blackhillscorp.com

# Black Hills Power Transmission Plan 2009-2018

## TECKLA-OSAGE 230 KV LINE

2013

**Project Sponsor:** Black Hills Power  
**Project Participants:** None  
**Project Description:** A new 230 kV line connecting the existing Teckla and Osage 230 kV substations.

Voltage Class: 230 kV  
Facility Rating: 460  
Point of Origin: Teckla 230 kV  
Point of Termination: Osage 230 kV  
Intermediate Points: None  
Length of Line (in Miles): 60  
Type of Project: Planned  
Routing:

**Purpose of Project:** Increase load serving capability, increase transfer capability

**Estimated Cost (in 2009 Dollars):** \$10,300,000

**Schedule:**

Construction Start Date: 2011  
Planned In-Service Date: 2013  
Permitting Status:

**Contact Information:**

Eric Egge  
605-721-2646  
eric.egge@blackhillscorp.com

# Black Hills Power Transmission Plan 2009-2018

## OSAGE-LANGE 230 KV LINE

2015

**Project Sponsor:** Black Hills Power  
**Project Participants:** None  
**Project Description:** A new 230 kV line connecting the existing Osage and Lange 230 kV substations

Voltage Class: 230 kV  
Facility Rating: 460  
Point of Origin: Osage 230 kV  
Point of Termination: Lange 230 kV  
Intermediate Points: None  
Length of Line (in Miles): 75  
Type of Project: Planned  
Routing:

**Purpose of Project:** Increased load serving capability, increase transfer capability

**Estimated Cost (in 2009 Dollars):** \$11,400,000

**Schedule:**

Construction Start Date: 2013  
Planned In-Service Date: 2015  
Permitting Status:

**Contact Information:**

Eric Egge  
605-721-2464  
eric.egge@blackhillscorp.com

# San Luis River Colorado Project Transmission Plan 2009-2018

## SLRC POWER CENTER, TRANSMISSION LINE

2011

<b>Project Sponsor:</b>	San Luis River Colorado Project
<b>Project Participants:</b>	Arizona Public Service, Western Area Power Administration - DSW
<b>Project Description:</b>	The transmission lines, substation upgrades, and generator are known as the San Luis Rio Colorado Project. The project consists of the Power Center, consisting of the GDD Substation and gas fired power plant (to be constructed by Generadora Del Des
Voltage Class:	230 kV
Facility Rating:	The "line" will be a double circuit 230 kV with each line rated at 800 MW and limited by the transformers at North Gila to 688 MVA for each circuit. Interconnection to Gila Substation will be via a new 230kV yard with both lines and a 300MVA transformer.
Point of Origin:	San Luis Rio Colorado Power Center switchyard in SLRC, Sonora, Mexico
Point of Termination:	North Gila 500kV substation, Operated by Arizona Public Service (APS)
Intermediate Points:	Gila 161kV substation, owned and operated by the Western Area Power Administration (WAPA)
Length of Line (in Miles):	27
Type of Project:	Planned
Routing:	See description in the project description section and the Department of Energy, Record of Decision dated August 21, 2008
<b>Purpose of Project:</b>	The transmission line will allow power generated from the SLRC Power Center to be transmitted and sold into the United States.
<b>Estimated Cost (in 2009 Dollars):</b>	\$ 102,000,000
<b>Schedule:</b>	
Construction Start Date:	2009
Planned In-Service Date:	2011
Permitting Status:	
<b>Contact Information:</b>	Joseph Bojnowski, North Branch Resources, LLC 203-426-4097 nbrllc@msn.com