

# Energy Gateway Update for Wyoming Infrastructure Authority

January 27, 2009

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# PacifiCorp Energy Gateway Program Update

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- PacifiCorp Overview
- Energy Gateway Foot Print
- Energy Gateway Program Overview and Update
- Energy Gateway Base Case Analyses
- Key Issues and Next Steps



# PacifiCorp Overview

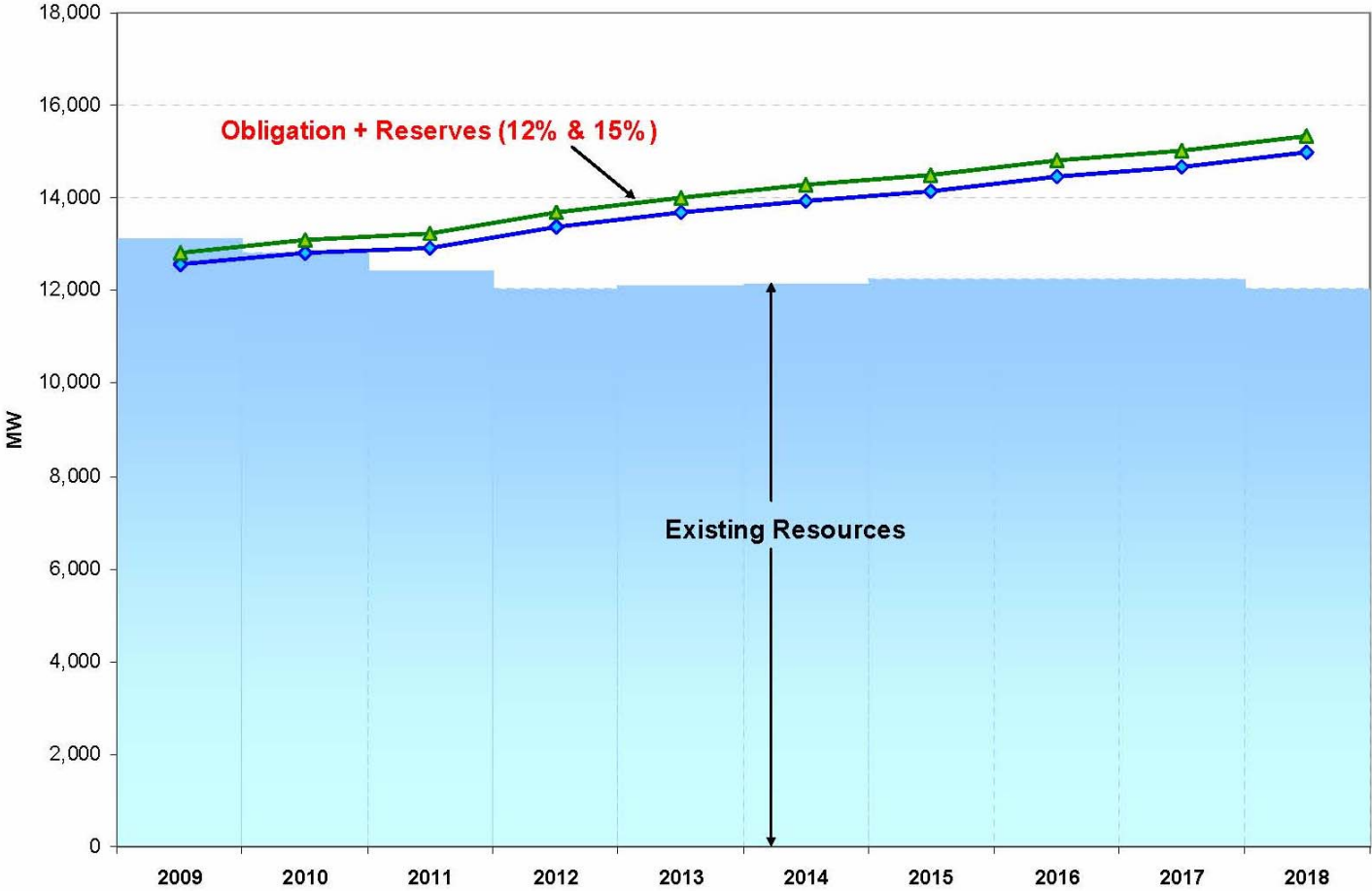


– Customers (million)	<b>1.7</b>
– Annual Call Volume (millions)	<b>5.7</b>
– Number of Meters (millions)	<b>1.8</b>
– Retail Energy Sales (TWh)	<b>53</b>
– Generating Capacity (MW)	<b>9,286</b>
– Line Miles	<b>77,000</b>
– Substations	<b>900</b>
– Number of Employees	<b>6,500</b>



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# System Load and Resource Balance\*



\* December 18, 2008 public IRP presentation



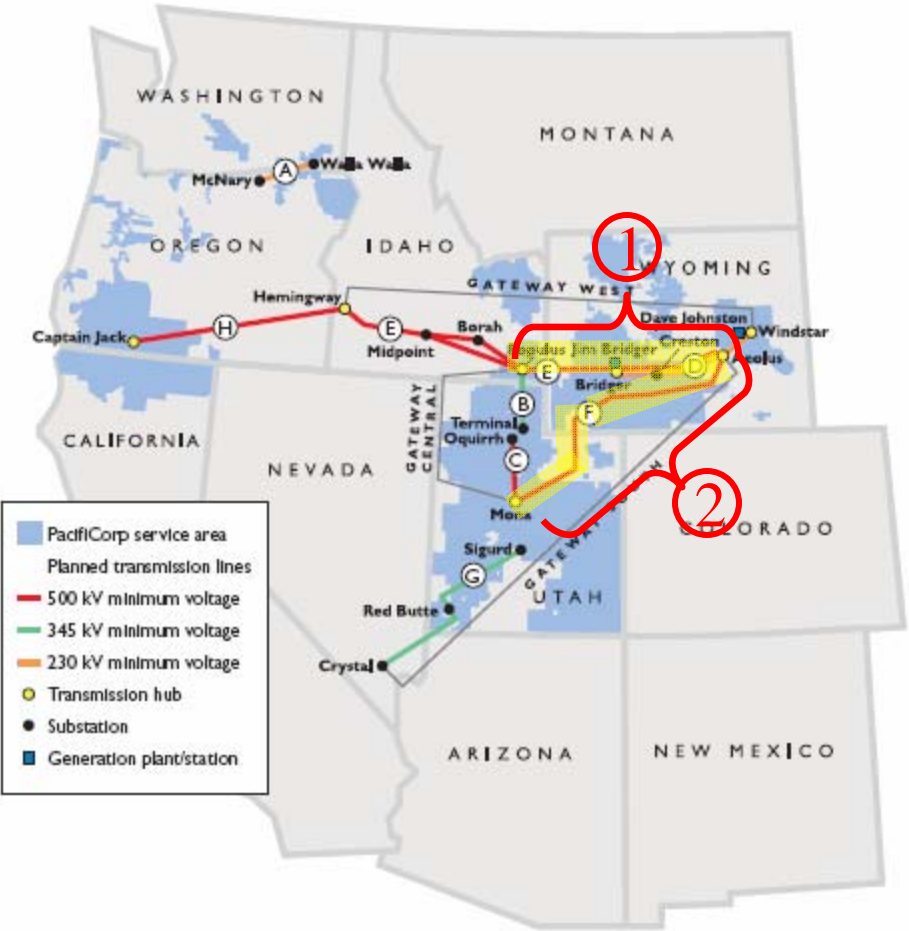
# Energy Gateway Program Overview



- 1900+ miles of high voltage transmission
- ~\$6.0B invested over 10 years
- Key segments in service by 2014
- Design “hub and spoke” concept
- Options to transport Generation
  - ▶ Wind
  - ▶ Thermal
  - ▶ New and Existing
- Planned to support up to 3000 MWs capacity
- PacifiCorp’s network allocation targeted at 1500MWs

# Interdependency of 500 kV facilities

- Current system 230 and 345 kV
- No 500 kV in footprint
- Need “n-1” backup
- (1) Energy Gateway West
  - ▶ Aeolus to Populus
- (2) Energy Gateway South
  - ▶ Aeolus to Mona

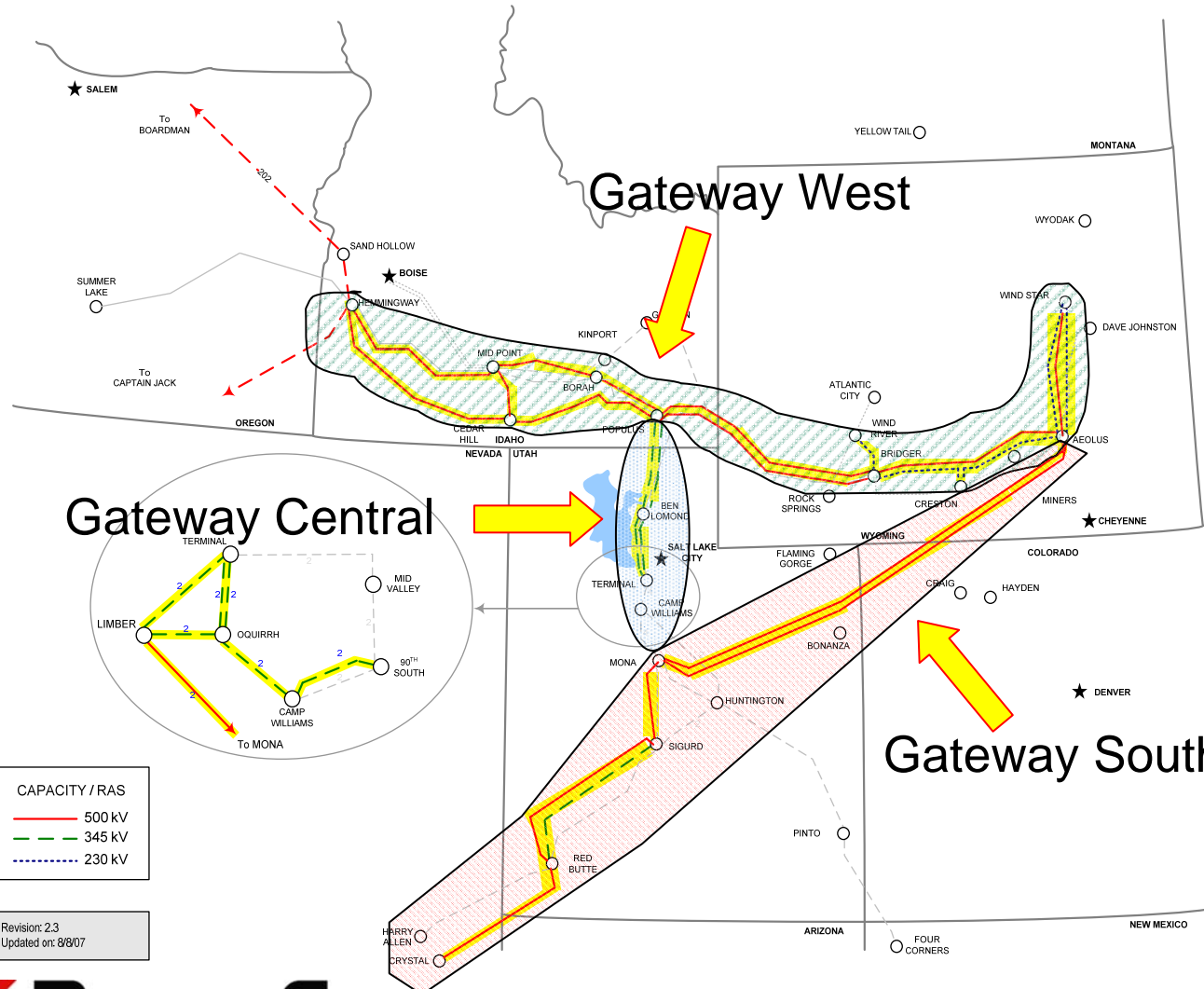


# Energy Gateway Progress Update



- Technical
  - ▶ Issued Phase 1 rating report for key Energy Gateway segments – 11/21/08
  - ▶ Obtained Phase 2 rating approval for Populus-Terminal Line (Segment B)
- Commercial
  - ▶ Completed revised permitting agreement with Idaho Power
  - ▶ Completed equity offering and open access service offering
- Siting and permitting
  - ▶ Community and landowner events
  - ▶ Mona – Oquirrh draft EIS – April 09
  - ▶ Energy Gateway West draft EIS – Dec. 09
- Regulatory
  - ▶ FERC incentive rate declaratory order – 10/21/08

# Energy Gateway Base Case Analysis



## Base Case Generation Assumptions – Phase I

- WECC Phase I Comprehensive Progress Reports for Gateway West and Gateway South completed - November 21, 2008
- 3 base case scenarios were included in the analysis:
  - ▶ Scenario 1a / 1b - Evaluated the system under a wide range of thermal vs. wind resource conditions based on the following assumptions:
    - Wyoming high thermal and moderate wind resources based on the 2007 PacifiCorp Integrated Resource Plan.
    - High wind and moderate thermal resources modeled in (1b) base case based on OASIS queue requests and projections
  - ▶ Scenario 1c: Developed to evaluate the southern Utah transmission system (TOT 2C/2B) and Mona South path under simultaneous S to N flow conditions.
- Gateway West (West of Bridger) utilized the Case 1a base case
- Gateway West (East of Bridger) and Gateway South utilized all three base cases.
- Ultimately, specific economic and technology evaluations and siting/permitting processes will need to run their course before specific resources that will be served by the Gateway Project are determined.

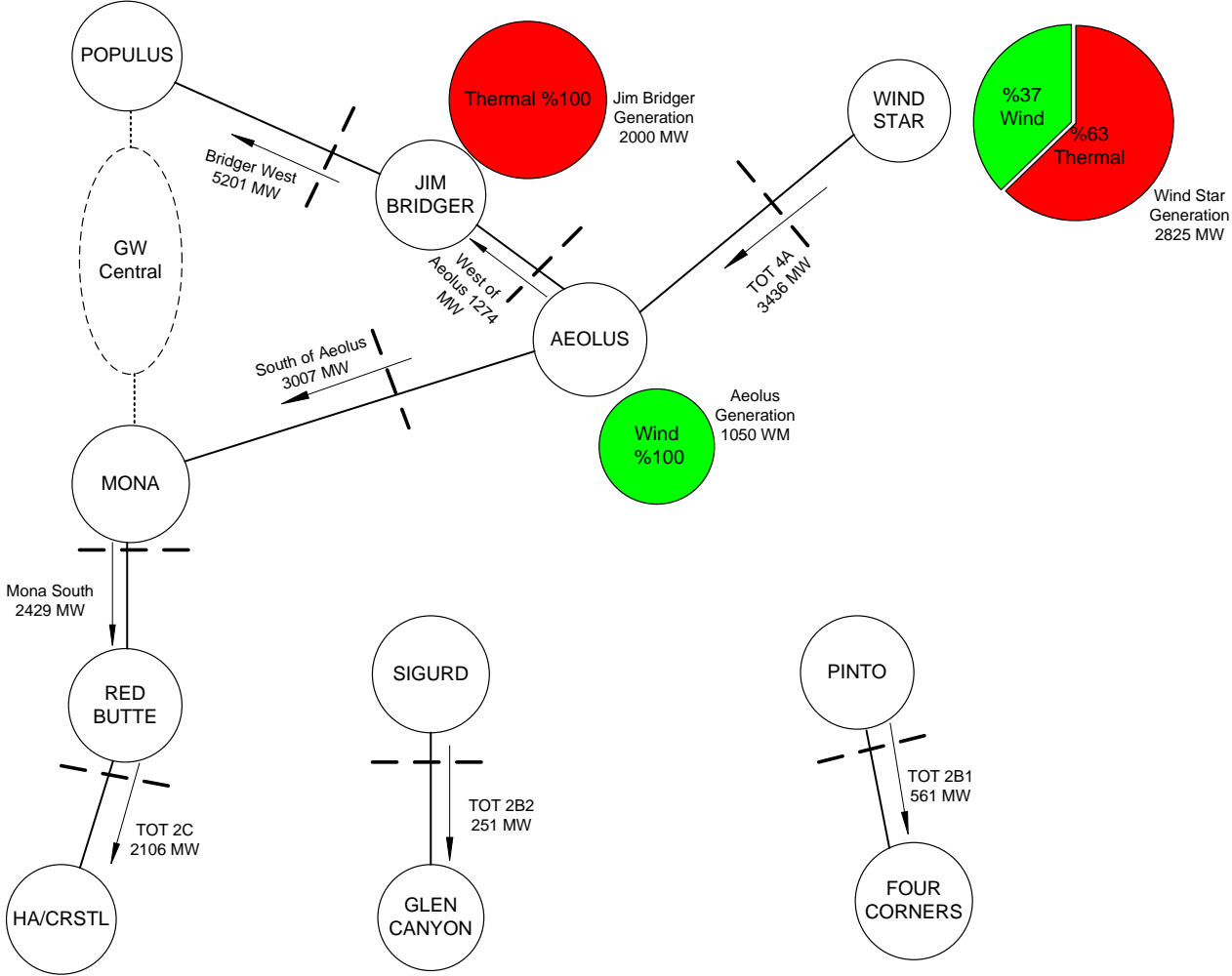
# Wyoming Base Cases 1a vs. 1 b Comparison

Case 1 a/d - Generation Projects (Moderate Wind Generation)				Case 1 b (new) - Generation Projects (HighWind Generation)**			CASE 1A/B COMPARISON		
Location	Generation Type		Zone Total	Generation Type		Zone Total	Generation Type		Zone Total
	Thermal	Wind		Thermal	Wind		Thermal	Wind	
Dave Johnston Area	275		2825	275		1953	0		-872
Other Windstar					575				
Windstar	1500	1050		600	503		-900	28	
Creston			1050			2279			1229
Foot Creek					187.5			187.5	
Other Aeolus					434				
Aeolus		1050			1657.5			1041.5	
Spence			0		493	493		493	493
Jim Bridger Area	1500		2000	500	150	1150	-1000	150	-850
Upper Green River	500			500			0		
Subtotal	<u>3775</u>	<u>2100</u>		<u>1875</u>	<u>4000</u>		<u>-1900</u>	<u>1900</u>	
Total	5875			5875			0		

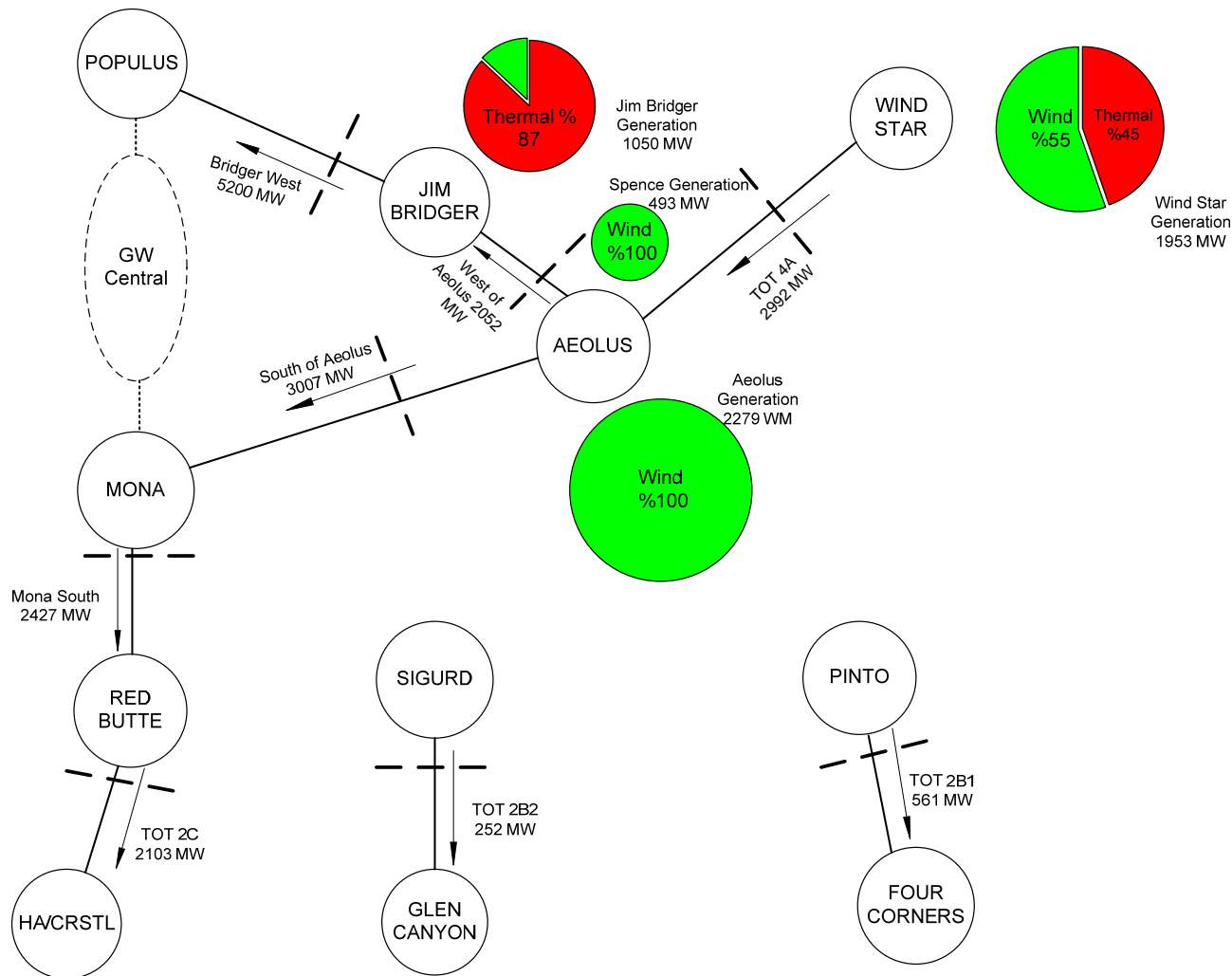
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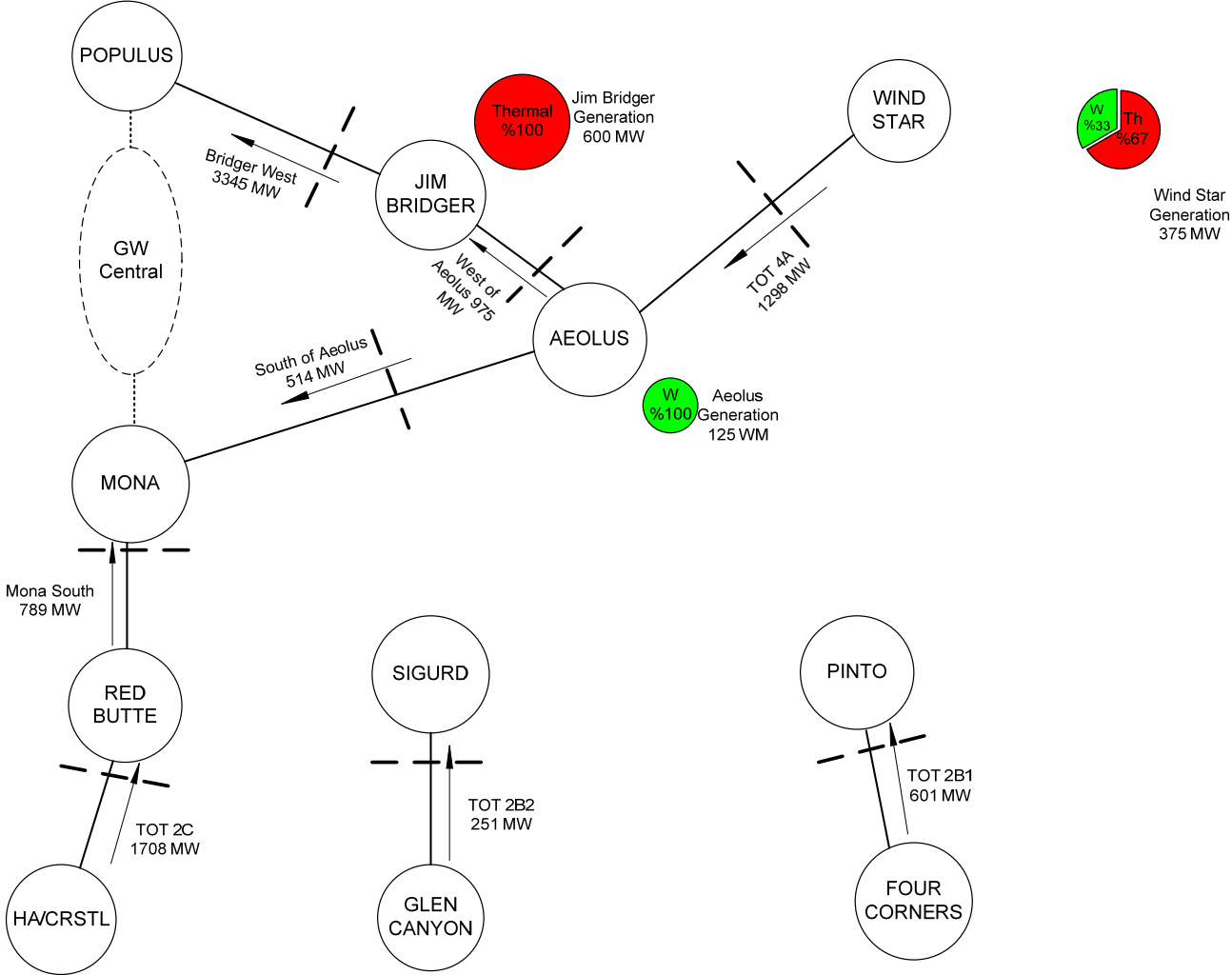
# WY 2015 Case 1a – High Thermal / Moderate Wind



# WY 2015 Case 1b – High Wind / Moderate Thermal



# WY 2015 Case 1c – High Southern UT S-N Path Flows



## Key Issues and Next Steps

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### Key Issues:

- System is planned at 3000MWs; scalable
- Decision to deliver 1500MWs needed shortly to maintain engineering and permitting schedules
- Rigid delivery structure is necessary to maintain schedule
- Customers and equity partners have declined participation opportunities
- US Government participation a possibility
- Resource support (capacity and energy via ancillary services) will be necessary

### Next Steps:

- Mona – Oquirrh draft EIS – April 2009
- CPCNs – July 2009
- Gateway West draft EIS – December 2009
- Mona – Oquirrh final EIS – December 2009



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Questions?

Energy Gateway website

[www.pacificorp.com/energygateway](http://www.pacificorp.com/energygateway)



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