



# Western Wind and Solar Integration Study Stakeholder Meeting Next Steps

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# Additional Scenarios and Analysis

- Original plan was to analyze 2 additional scenarios, e.g.,
  - High solar penetration
  - High geographic diversity
  - High load correlation
- We aren't seeing a huge difference between the 3 scenarios (In-Area, Local Priority, Mega Projects)
- Lack of quality solar data for large PV systems on short timescales makes it difficult to look at high solar penetration

# Some Options for Follow-on Scenarios and Analysis

- Run 20% wind / 3% solar in both WestConnect footprint and rest of WECC
  - Need this to really understand what happens when we jump from 20% wind / 3% solar to 30% wind / 5% solar. Is it because of the penetration jump within the footprint or the penetration jump in the rest of WECC?

In Footprint		Rest of WECC	
Wind	Solar	Wind	Solar
10%	1%	10%	1%
20%	3%	10%	1%
20%	3%	20%	3%
30%	5%	20%	3%

New  
Penetration  
Mix

# More Options

- Investigate value of energy storage
  - Long term storage – pumped hydro
  - Short term storage – for regulation or spinning reserve
  - PHEV and/or demand response
- Change the non-renewable portfolio
  - Look at different retirement scenarios and replacement of inflexible units
- Implications of market operations
  - Evaluate market alternatives for including wind in day-ahead markets
- Carbon pricing sensitivity
- Others?

# Feedback

- Analysis Results
  - Do the assumptions make sense?
  - Do the results make sense?
- Proposed follow-up analysis
  - What important follow-up pieces of analysis need to be done?
  - Are there other questions that need to be answered that aren't addressed here?
- Usefulness and relevance
  - Are we answering the right questions?
  - Is this applicable to your utility's concerns and decision?

Comments requested in writing by August 12, 2008.

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