

Generating Resources Advisory Committee
Friday, November 7, 2014
Notes

Meeting Time: 1:00 PM to 2:30 PM
Meeting Location: Northwest Power and Conservation Council and via Webinar
Facilitators: Steven Simmons & Gillian Charles, NW Power and Conservation Council

Attendees: Steve Simmons, Northwest Power and Conservation Council
Gillian Charles, Northwest Power and Conservation Council
Jeff King, J.C. King and Associates
Sima Beitinjaneh, Portland General Electric
Stefan Brown, Portland General Electric
Cameron Yourkowski, Renewable NW
Michael O'Brien, Renewable NW
Kathleen Newman, Oregonians for Renewable Energy Progress
Sandra Elverud, Portland General Electric

Attendees: Via Webinar
Anna Berg, Snohomish PUD
Luke Hansen, NorthWestern Energy
Anna Kim, Seattle City Light
Elizabeth Hossner
Rick Sterling, Idaho PUC
Kevin O'Meara, Public Power Council
Greg Nothstein
Gurvinder Singh
Robert Del Mar, Oregon DOE
Brian Dekiep, Northwest Power and Conservation Council
Nick Lawton, Lewis and Clark
Jeff Kugel, PNGC Power
Leann Bleakney, Northwest Power and Conservation Council
Bryan Neff, California...
Ehud Abadi, Bonneville Power Administration
Rob Petty, Bonneville Power Administration
Gail Hammer, Bonneville Power Administration
Larry Stene, Bonneville Power Administration
Keith Knitter, Grant County PUD
Sibyl Geiselman, Eugene Water and Electric Board
Philip DeVol, Idaho Power
James Gall, Avista
Zac Yanez, Snohomish PUD
Kurt Conger, Northwern Wasco PUD
Angela Tanghetti
Dave Levee, PwrCast
Bill Dickens, Tacoma Power

Purpose of Today's Meeting, Agenda

Note, we can revisit these assumptions between the draft and the final. Main purpose for today is to bring solar PV to a conclusion for the draft.

Assessment timeline

Solar pv changed the most in terms of cost since the Sixth Plan, so we dealt with it early in the Seventh Power Plan process

Definition – LBNL

Phil DeVol - IPUC website has publically available info – levelized cost around \$70, \$75/MWh

Specific Projects - Grand View – single axis, Boise City – dual axis

Rick Sterling – 11 other projects with signed PPAs, totaling 280 MW, in S. Idaho; one is 30 MW, others are 20MW

Rates in contract - ~\$62/MWh, not the costs

Stefan Brown – Installation costs? Steve – wrapped up in capital costs. Stefan – hard costs coming down pretty steadily, soft costs are a big component and who knows how much those will change. It might make sense to track them separately.

PGE engaged consultants on solar – in OR, tracking just doesn't pencil out for cost reasons. Examined fixed instead.

Steve – we need to be careful and not assume we know more than we do.

Stefan – messaging perspective – break out components

Nick Lawton – working with ETO on survey and benchmark Oregon soft cost – results in December.

SunShot Initiative

Capital Cost Projections

2016-2035

Simmons described meaning of reference plant

Gray – range from collected analysts

Capital costs when they come online –

Estimate of capital costs – 2016 - \$2,413

Fixed O&M costs – estimate from SunShot 2012, definitions. Levelized cost – definition.

Stefan – levelized cost based on Idaho, not going to work as good for those of us west of the cascades. Steve – focused on best location for the model.

Stefan – if you are using ITC, you are effectively choosing a non-utility owner.

Dave LeVee – tax depreciation. 5 year tax life. Steve – 5 yrs. MACRS. Dave - Beyond 2016?
Steve – yes.

Steve – wide range of levelized cost estimates. A lot of times what is included in terms of a single reported cost is not obvious. Easier comparing capital cost estimate. Tried to make it as transparent as possible what the Council counts in its levelized cost calculation. Purpose to compare generating costs to conservation.

Results today are from IOU.

Questions on property tax, integration costs.

RPM takes fixed levelized cost. Compare solar, gas turbine, conservation. RPM methodology.

Question on why you can't just take PPA prices and use those as the levelized costs.

Jeff – reason the building blocks are important. Need to go back to the essentials to apply other assumptions. Steve – past factual data... trying to determine what the future will look like.

Stefan – Transmission. Are you assuming S. ID reference plant is being delivered locally? Until Boardman/Hemingway is built, BPA can't get to S. ID. You have at least two wheels, until BPA is built and you can have one wheel all the way.

Cameron/Stefan – what is the variable transmission cost? Jeff – mandatory pick-ups in BPA. Stefan – I'll have to think about that. Cameron – transmission losses? Stefan - Going back to my previous point, if you have to have more than one wheel, you have to have more transmission losses.

Property tax is almost as large a contributor as O&M.

Stefan – no variable transmission costs in BPA. Something to check into.

Big takeaways - ITC calculation and IOU vs IPP Adding in recent Idaho projects to portfolio. Transmission losses and wheels. Annual degradation. Variable transmission costs.

Capital Cost chart – how do people feel about it?

Developable potential – B&V report for S. ID. 700 MW. Send thoughts on that.

Any other comments on the phone?

Cameron – next steps? Steve – we will work through the list. Drop-dead time before January. Work through list until then to get a more refined estimate.