

Generating Resources Advisory Committee

12/18/14

Steve Simmons & Gillian Charles

Agenda

10:00 AM **Welcome, Introductions**

10:10 AM Utility-scale Onshore Wind – Preliminary Resource Evaluation and Assessment

10:45 AM Natural Gas Peaking Technologies – Preliminary Resource Evaluation and Assessment

→ Frame, Aeroderivative, Hybrid Intercooled, Recip

11:30 AM Briefing on Council’s Direction on Environmental Methodology

11:50 AM Update on Council’s Regional Hydropower Potential Scoping Study

12:00 PM Lunch – on your own

1:00 PM Emerging Technologies – Assumptions and Treatment in the Draft Seventh Plan

1:20 PM Energy Storage Technologies

→ High Level Overview – Presentation from Ken Dragoon, Flink Energy Consulting

2:50 PM Wrap up, Discussion of Next GRAC Mtgs

3:00 PM Adjourn

Role of GRAC

- Advisory committee established to assist in development of Council's Power Plan
- Two year charter
 - Renewed March 2014
 - Members appointed May 2014
- GRAC serves in advisory capacity
 - No votes are taken
 - Role is to review information, vet assumptions and information, and provide feedback to the Council
- Aim for active participation and exchange of ideas and information

Follow up to 11/7/14 GRAC meeting on Utility Scale Solar PV

- Follow up to November 7 GRAC discussion around Levelized Cost of Energy for Solar PV and the impact of the Investment Tax Credit
- Summary - 2 tax benefits associated with solar that act to reduce levelized costs
 1. Accelerated tax depreciation schedule
 2. Investment Tax Credit
- Comparison to recent LBNL report by Mark Bolinger on capturing the value of renewable energy tax incentives – wide range of potential PPA prices (and LCOE) based on how well the owner can exploit tax benefits (\$61 to (\$94 per MWh)
 1. Sponsor Equity/Debt model
 2. Sales-Lease Back model
- Council MicroFin model results compare well with Sponsor Equity/Debt model – after slight adjustment to tax depreciation logic
- Plan to use IPP sponsor option in MicroFin (instead of IOU)
- Next to look at IOU sponsor normalization

Review of Nov. 19 GRAC Webinar on Hydropower Potential

- NWSHA presented results from study to GRAC on November 19
- Council staff presented overview of study, results, and proposed next steps to Council at December 9 Council Meeting
- See presentation later in the morning...

Thank You

Advisory committees play an important role in the Council's power planning process and we appreciate your participation and expertise.

Please don't hesitate to contact us with any questions or comments.

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Next GRAC Mtgs

- Tuesday, January 27 (Tentative)
 - Presentations from experts on pumped storage
 - Presentation from NuScale/Energy NorthWest on small modular nuclear
- February (date TBD)
 - Biomass, Conventional Geothermal, Hydropower