



## ColumbiaGrid Board of Directors

December 14, 2016 Minutes

A meeting of the Board of Directors of ColumbiaGrid, a Washington nonprofit corporation, was held at the ColumbiaGrid offices, 8338 NE Alderwood Road, Portland, Oregon 97220 on December 14, 2016.

### Attendees:

*Board of Directors:* Kris Mikkelsen; Ed Sienkiewicz

*Officers:* Patrick Damiano (President & CEO); Dan Dettmer (VP/Secretary-Treasurer)

*Members:* Kenny Dillon (Avista Corp.); Ravi Aggarwal (BPA); Laura Hatfield (Puget Sound Energy); John Martinsen (Snohomish PUD); Shirley Eshbach\* (Tacoma Power)

*Interested Persons, ColumbiaGrid staff, and other Participants:*

Tricia Dindinger, Paul Didsayabutra, Bo Gong, and Kevin Harris, (ColumbiaGrid); Steve Spina\* (Morgan Lewis); Rich Bayless\* (NTTG); Dana Reedy (Northwest Power Pool)

\* Attended via telephone

### Proceedings

- *Call to Order:* Kris Mikkelsen called the meeting to order at 9:30 a.m. A quorum of directors was present, and the meeting, having been duly convened, proceeded with business.
- *Provision of Notice:* No concerns or objections were raised as to sufficiency of notice.
- *Welcome:* All attendees introduced themselves.
- *Agenda:* No additions to the Agenda
- *Adoption of Minutes:* Minutes from the Board Meeting held on October 19, 2016, were adopted.
- Schedule of 2017 Board Meetings was presented; Ms. Mikkelsen moved and Mr. Sienkiewicz seconded the approval to continue with six Board Meetings per year, every third Wednesday of every other month.

### CEO Report provided by Patrick Damiano:

Mr. Damiano reported on ColumbiaGrid's annual update meetings with the utility commissions of Idaho, Oregon, and Washington. The Idaho PUC and Washington UTC meetings have been completed and the Oregon PUC meeting is scheduled for December 19.

Mr. Damiano explained that the annual meetings, with the State utility commissions, are pursuant to ColumbiaGrid's policy regarding involvement of the State utility commissions in ColumbiaGrid's regional planning activities. The meetings are typically open public meetings and all of ColumbiaGrid's members are welcome to attend. Avista and Puget Sound Energy attend either or both of the meetings with the Idaho PUC and Washington UTC, depending on which commissions have jurisdiction over their service territories. The focus of the meetings is to update the commissions on the Corporation's grid planning activities, FERC Order 1000 activities, and business and financial matters pertaining to the Corporation's role as a regional planning entity.

Mr. Damiano mentioned that a notable achievement for this year's updates is that ColumbiaGrid continues to enhance its grid planning and related services while, once again, being on-track to set a new record low annual operating efficiency with an annual overall cost to the funders of approximately \$2.6 M to \$2.7 M.

Attendees for the Idaho PUC meeting included Director Kris Mikkelsen, Kenny Dillon (Avista), a Bonneville political liaison, and Mr. Damiano. The Idaho Commission inquired about the 2017 budget related to the 2016 forecasted costs and noted ColumbiaGrid's achievement in lowering its operating costs.

Attendees for the Washington UTC Meeting included Director Ed Sienkiewicz, Director Kris Mikkelsen, Laura Hatfield and George Marshall (PSE), Kenny Dillon (Avista), and Mr. Damiano. The Washington UTC Commission was quite engaged in the planning discussion. Commissioner Phil Jones will be retiring from the WUTC. In light of the Commission losing Commissioner Jones' considerable experience in the area of grid planning regulation, the WUTC suggested that, upon seating a new Commissioner, that the WUTC, and some of their key staff, visit ColumbiaGrid for a primer on grid planning. ColumbiaGrid will follow-up with the Commission on a later date regarding such a visit.

#### **Treasurer's Report for Period Ending November 30, 2016 provided by Dan Dettmer:**

- Mr. Dettmer gave the Treasurer's Report, responding to questions and discussing where each program is in relationship to its budget and its benchmark Maximum Total Payment/Funding Obligation. Mr. Dettmer noted that both the PEFA and General Funding agreement were in the second year of their 2-year Payment Cycle. Overall YTD costs are 22% under budget and are forecasted to remain 22% below budget by year-end. PEFA costs are below budget due to salaries (open position) and due to the pre-payment of legal and engineering software costs; similarly, General Funding agreement costs are lower in several categories led by salary, consulting, and directors' meetings costs. He highlighted that total company expenses of \$155k in November were the lowest this calendar year and possibly ever. Mr. Dettmer continued by reviewing and explaining notable YTD actual and forecasted costs on pages 4 – 13 of the Treasurer's Report.

#### **2017/18 Budget Preview provided by Dan Dettmer:**

Mr. Dettmer reviewed the two-year 2017/2018 Budget which was presented for Board approval noting the following items:

- 2017 will be the beginning of a new 2-year cycle for Corporate and PEFA expenses and mark the beginning of the new Fifth Funding Agreement.
- When approved, the 2017 draft budget will be the lowest budget in company history at approximately \$3.3M, in line with forecasted costs in 2016 also being the lowest ever.
- The budget includes staffing considerations for filling an open engineering position and includes a shift in certain costs from Corporate to PEFA for staffing and engineering software to better reflect actual work emphasis.
- The 2018 Budget allows for a 2% CPI adjustment; the 2018 Budget will be reset in December 2017 when the Board approves the next two-year rolling budget.

Discussion followed relating to how one would best describe the overall size of the organization from a financial perspective in light of the yearly budgeted funding / functional agreements, as compared to the more unique short-term functional agreements that ColumbiaGrid has entered into from time to time. After this discussion, Ms. Mikkelsen complimented the staff on lowering costs and for the continued quality of engineering work. She moved that the 2017/2018 Budget be approved, which was seconded by Mr. Sienkiewicz.

#### **FERC / Federal Matters Update provided by Steve Spina:**

Mr. Spina gave an update on Federal matters and noted the following:

- FERC will likely realize an impact from the presidential election as all three current commissioners -- Chairman Norman Bay, Colette Honorable and Cheryl LaFleur are Democrats. Commissioner Honorable's term ends July 1<sup>st</sup> and would need to be re-appointed to a three year term. A Republican will likely be designated as Chairman at which point it would be traditional for Commissioner Bay to step down.
- Various names are being circulated including Neil Chatterjee, a longtime energy aide to Senate Majority Leader Mitch McConnell. With the appointment of up to three new commissioners, we may see an entirely different focus for the commission in 2017, and there will be at least two Republicans on the Commission and possibly three and two Democrats.
- We likely won't see a lot of activity from FERC from now until after the inauguration on January 20<sup>th</sup>; after that, business as usual, such as focusing on storage rule-making.

- The Trump Administration is not looking to stop wind or solar development, but we may see the subsidies or tax-credits go away.
- Transmission development will likely continue and there has been some mention that it may qualify as part of the 'infrastructure' focus of the new administration.
- The Clean Power Plan probably won't be enacted, but if the DC Circuit acts to approve it, then it may move forward.
- Some of the Western Inter-connection states are already moving forward with their own clean power generation plan and the new Administration will likely not be able to do anything to stop their efforts.
- With Governor Rick Perry's nomination to be Secretary of the DOE, he will likely not dismantle the organization.
- There may be an opportunity for this next Congress to introduce a comprehensive Energy Bill; the type of legislation that only comes around every dozen years or so.

### **Transmission Grid Planning Update provided by Paul Didsayabutra:**

#### **Major activities since the October's Board meeting which include:**

- 2016 Sensitivity Studies consist of 3 Studies. Study results were shared/discussed with planning participants
  - Five year Extra Heavy Winter
  - N-1-1 Study
  - High Renewable Scenario
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- 2017 Biennial Transmission Plan
  - After completion of Sensitivity Studies, staff has started developing the 2017 Biennial Plan
  - Currently draft-write-up has been issued and due date for the first review is December 29<sup>th</sup>, 2016
  - Major contents include; summary of System Assessment and study results, summary of Sensitivity Studies, summary of Economic Planning and Transient Stability activities and studies, Order 1000 activities, summary of Study Team activities and results, Status of transmission projects.
  - The first draft of the report is scheduled to be published January 9, 2017
- 2017 Study Program & potential new studies
  - ColumbiaGrid will create additional base cases (5 Year Heavy Summer and Winter 2023) for the members. This will increase the total number of base cases that ColumbiaGrid will produce this year to 9.
  - Geomagnetic Disturbance (GMD) will be added in the study program
  - MOD-033 will also be conducted. The scope of this study focuses on Steady-State and Dynamic System Model Validation and consists of R1 and R2 requirements.
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    - Kick-off meeting to discuss R1 will be held early January
- South of Allston Independent Review is almost complete
- Order 1000/ITPs/WPR
  - Regional coordination is ongoing
  - Recent discussions include; ITP evaluation, Information exchange and coordination, 2017 Interregional Coordination Meeting, WECC ADS/RAC
  - ColumbiaGrid Order 1000 Needs meeting will be held on February 9, 2017
- New Study Team and other major activities
  - Sensitivity Study for Long-Term Alcoa Shutdown
    - Kick-off meeting was held December 9, 2016
    - Currently the group is working on the base case and ColumbiaGrid will perform the study.
    - Next meeting will be held on February 10, 2017.
  - ColumbiaGrid will continue to monitor other ongoing activities that could result in new Study Team(s).
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- NW Case Management System (NWCMS)
  - Step 3 of NWCMS project is ongoing
    - The vendor has confirmed that the software enhancement will be completed by early January 2017 with expected completion in late January.
  - Ongoing discussions regarding needs, benefits and scope of additional features beyond step 3

- ADS/RAC proposal update (WECC activities)
  - JPTRFF report and recommendations were presented and approved on the December 6, 2016.
    - The approval results in the implementation of RAC and ADS, starting in 2017.
    - RAC Governing Body will be comprised of RAC Chair, Scenario Development Subcommittee Chair, Studies Subcommittee Chair, Modeling Subcommittee Chair and Data Subcommittee Chair.
    - The Nomination Committee (5 members) will make initial appointment of; RAC Chair, RAC Subcommittee Chairs and Subcommittee governing body
    - Additional workgroups may be created in the future
    - The works that are being conducted as part of PCC and TEPPC will be transferred to the new structure.
  - An objective of creating the ADS is to improve the consistency between power flow and PCM
- 2017 Planning Meetings & Interregional Coordination Meeting
  - Planning meeting in 2017 are as follows:
    - 02/09/2017-Portland
    - 04/13/2017-Portland
    - 06/08/2017-Portland
    - 08/10/2017-Seattle/Tacoma area
    - 10/12/2017-Portland
    - 12/07/2017-Portland
  - Order 1000 Interregional Coordination Meeting:
    - 02/23/2017-Portland

**Major activities in the next 3 months:**

- Draft 2017 Biennial Transmission Plan will be issued in January 2017
- 2017 Study Program will be finalized by March 2017
- SOA Independent Review-Issue final report on 12/30/2016
- Interregional Coordination Meeting will be held on February 23, 2017

**South of Allston (SOA) Independent Review Update**

- The process is almost complete
- The panel has gone through significant details of the Transmission Review Group for SOA path
- The final report will be issued by December 30, 2016

**Economic Planning Study Update provided by Kevin Harris:**

- Background
- ColumbiaGrid EPS is intended to provide insight into changing Western Market and potential impacts to the NW power system
  - Provide annual study based on the latest information
  - This presentation is based on preliminary work using WECC 2026 Common Case v1.30 as the starting point
  - Modeling objective: A day-ahead market where areas commit and dispatch control supply for their own needs prior to market sales.
- Study Assumptions
  - Started with the WECC 2026 Common Case v1.30 dataset
  - Changes made to update the models based on the most current information:
    - Behind the Meeting (BTM) PV in CA increased from 7650 to 12120MW
    - BTM-PV outside of CA increased from 1240 to 4065 MW
    - Net modeled wind/solar in CA BA 8240/24710MW
    - Net modeled wind/solar of 29590/33600 MW for the entire WECC
    - Net increase of wind/solar of 11185MW with 79% of the increase located in CA
    - Applied applicable changes issued by NTTG
    - Correction to monthly load shapes
    - Adjusted CA annual load forecast to properly account for BTM-PV

- Station service was deleted from PCM
    - Non-Dispatchable supply corrections. Modeling of non-dispatchable resources that were modeled as dispatchable resources in WECC dataset i.e., geothermal were corrected
    - Changed the modeling of dispatchable hydro in CA to respond to shift in peak demand
    - Applied AB32 Import Fee as an hourly constraint
    - Hydro generation on the Columbia River was changed to Proportional Load Flowing only (PLF)
    - The start cost of CC and GT's in CA was lowered to zero to reduce mid-day cycling. These adjustments were made to ensure that the simulation results will be consistent with historical behaviors.
  - Three sensitivity Cases are conducted:
    - Case R0: No new capacity is installed
    - Case R5: Five generic CC are added
    - Case R7: Seven generic CC are added
- Study Results focus on power flow on the following major paths:
  - West of Cascade Monthly:
    - With the retirement of Centralia and Colstrip 1&2 flow shifts from North to South path
    - Net North/South flow is within historic range
  - West of Cascade Flow Direction
    - With the retirement of Centralia and Colstrip 1&2 flow shifts from North to South path
    - Net North/South flow is within historic range
  - West of Cascade Flow Hourly
    - Difficult to determine if change in flow is significant
    - Flow from BC is impacting hourly flow on West of Cascades (Clean up item)
    - Need multi-year average and operating range is see potential impact on flow (green area in previous charts)
    - Including previous year of operation would give insight into current market behavior
  - Flow to Hatwai
    - Historic flow: 960 MW
    - Avg. flow from cases: 25 MW
    - Reduction in flow 935 MW
    - Retirement of Colstrip 1 & 2: 614 MW
    - Mile City AC-DC-AC intertie exports 200 MW in all but summer months (import 200 5/5 – 8/4)
    - NWMT has a higher load forecast
  - Northwest Dispatchable Generation
    - Dispatchable generation remain relatively constant between the cases
    - In Case R0 existing NG supply makes up 68% of the reduced coal generation
    - Most of the change in generation between the three case is seen in Feb, Mar, Aug, Sep and Oct
    - To Do: Run with 2001 Hydro year (Critical year)
  - California Duck Curve
    - 24,710 MW of solar in CA matters
    - Duck Curve or observed load: Load minus solar generation
    - The Duck Curve changes traditional relationship
    - This results in a significant impact on ramp rate
  - California Duck Curve Ramp Rate
    - Load w/o solar the avg. daily ramp of 12,000 MW ramp in 7 hrs. is exceeded during three months
    - Load minus solar a 12,000 MW ramp in 3 hrs. is seen in all but one month
  - From the study results:
    - When developing a power flow case, selecting the time of day will be as import as the season
    - Uncertainty surrounding operational flexibility on the Columbia River generation could significantly impact the study results
    - Traditional On-Peak 16 hour block sales to California no longer fits current and long term market
    - To adequately describe interaction in the Western market, the On-Peak time period needs to be divided into three new periods: Morning Ramp, Mid-Day, Evening Ramp
    - During light load months in California, intra-day sales could see exports/imports/export

- During some hours, imports on PDCI and exports COI were observed
  - Market Issues
    - Balance Areas (BA) are obligated to serve load and have a balanced day-ahead schedule
    - In general, for DA, current market clearing price do not support daily cycling of CC external to CA
    - Potential options for California to support its daily ramp:
      - Contracts: Daily exchange, mid-day sales
      - Higher clearing price to support daily unit cycling
    - As issues become apparent, more products may be developed to support California evening ramp
- To Do
  - Update BC and review Hydro operations
  - Additional review of Hydro operation
    - Any Hydro plants on Hydro-Thermal Coordination (HTC) will respond to CA Market Locational Marginal Prices (LMP)
    - What's reasonable operation to expect?
  - Review PAR (i.e. Phase Shifter Transformers) operations
  - Reduce starts for CC outside of California control
    - Plants outside of California should only cycle mid-day if they are reasonable compensate for to start
  - Increase starts for CC and GTs in California to respond to the duck curve
  - 2001 Hydro will help identify supply issues when run with the three cases: R0, R5 and R7

**State Utility Commissions and Tribal Updates:**

There were no reports on behalf of the States or Tribes.

**Board and other Stakeholder Announcements:**

Dana Reedy from NWPP commented that there will be a January 24, 2017 Northwest Operational Conference call Meeting.

Rich Bayless, NTTG, highlighted recent activities including the work being done on the 2016-2017 Draft Regional Transmission Plan which would be posted for stakeholder comment later this month.

No Board announcements.

**Adjournment:** The Board meeting was adjourned at 1:20 p.m.