The Regular Meeting was convened by President Tanya Olson at 9:00 a.m. in the Commission Meeting Room. Those attending were Kathleen Vaughn, Vice President; Sidney Logan, Secretary; CEO/General Manager Craig Collar; General Counsel Anne Spangler; Assistant General Managers Tom DeBoer, John Haarlow, Glenn McPherson, and James West; Chief Information Officer Benjamin Beberness; other District staff; members of the public; Clerk of the Board Melissa Collins; and Deputy Clerks of the Board Traci Brumbaugh and Lela Wall.

* Items Taken Out of Order
**Non-Agenda Items

1. CEO/GENERAL MANAGER BRIEFING AND STUDY SESSION

   A. Updates

      1. Media. Media and Public Relations Liaison Neil Neroutsos presented a video from the District’s Live Wire online publication, featuring Senior Manager Generation Brad Spangler and reported on current news articles related to the District.

      *2. Other. CEO/General Manager Craig Collar announced that Chief Information Officer (CIO) Benjamin Beberness would be leaving the District at the end of the month and Dean Galvez will be interim CIO.

   B. Advanced Metering Infrastructure (AMI) Program Update

   Advanced Metering Infrastructure Project Executive Will Odell provided an update on the AMI Program. Roughly 70 million smart meters were deployed across the United States (US) by the end of 2016, this represents approximately half of US households. Washington has a lower percentage of households with smart meters; however, the majority of the Puget Sound utilities are moving forward with an AMI program.

   The advanced meters will have a two-way communication capability. In addition to capturing the interval usage data, the meters will be able to retrieve additional distribution system information, such as voltage, reactive-power, outage, restoration, notifications and various alerts. The District will need to utilize a wireless communication structure to transfer the data for collection and processing. The AMI process, including data collection and processing, SAP, analytics/reports, and customer accounting and billing was explained. Discussion continued regarding the District’s diverse geographic area, usage of different wireless communication, and manual meter reading.

   The AMI project is in alignment with the District’s Strategic Priorities which include the following drivers: serving customers, reliability, safety, cost management, resource planning, and operations. Mr. Odell provided examples and positive business impacts of the AMI Program from each Strategic Priority. Commissioner Vaughn requested that, prior to
the program roll-out, a cost-benefit analysis report to be prepared for the public, and stated that the Board would like to review the report prior to release.

A slide was shown that summarized the refreshed AMI Business Case, utilizing expected costs, expected benefits, and current assumptions. The key changes made since the last update included a revision in labor costs; demand-side management moved from a hard benefit to a soft benefit; increased manual meter reading costs; and the removal of the water AMI component. The AMI Program is expected to cost approximately $95 million over the next five-years, with analysis that covers an 18-year planning horizon. The AMI Business Case quantifies cost and identifies hard and soft benefits; however, soft benefits were not included in the Business Case. Key areas of benefit realization were meter reading, customer service, improved payment options, theft detection, and outage response. The AMI Business Case has a positive cumulative cash flow of $63 million and a positive Net Present Value of $12 million.

Mr. Odell listed and described project challenges, which include employee re-training and the transition plan; customer communications; use cases and requirements; business process reengineering and readiness; system implementation and SAP integration; wireless communication networks; and Behind the Meter and Home Area Network.

Staff is proposing to set-up a small AMI Test System by mid-summer for several aspects of the AMI deployment. The test system will utilize Smart Grid Lab and One Program test environments, solicit up to 500 employee volunteers to receive an advanced meter, and utilize Verizon’s cellular system for the wireless communications and Verizon’s cloud based solution. Mr. Odell explained the AMI Test System benefits. The Board volunteered to participate in the test.

A slide was presented with the five main phases of the AMI project timeline from 2017 through 2021. The timeline will solidify after the partners and vendors have been identified. The AMI staff and staff sponsor were recognized.

Consistent with industry common practice, staff recommended the District offer a residential customer opt-out option from the AMI Program. The nationwide opt-out participation rate is approximately 1.5 percent. The added cost to support opt-out customers will be borne by those selecting the opt-out offer and not the overall customer base. Discussion continued regarding the communications plan. The Board stressed the importance of the communications plan and also the need for the Board to be able to review the plan. Commissioner Olson stated that she was willing to take more than one session in order for the Board to gain a better understanding of why and what staff is proposing.

Next steps include continuing to assemble the program team; developing the communications plan; finalizing the AMI Business Process Test System design and soliciting employees; developing program financing plan; updating AMI Business Case for water customers; and scheduling regular Commission updates. Mr. Odell and
Chief Information Officer Benjamin Beberness responded to questions regarding grants, security, software, Green Button initiative standardization, and smart meter life expectancy.

The meeting recessed at 9:57 a.m. and reconvened at 10:06 a.m.

C. H2O Supply Update

Short-Term Power Trader Mike Shapley facilitated a presentation on Water Year 2017 (WY’17), October 2016 through September 2017. Water supply forecast charts compared January through July, and April through September. Due to large amounts of precipitation in late February and March, the January through July forecast is 129 percent of average. The April through September forecast is 120 percent of average, and continues to increase due to wet weather conditions.

A water supply basin map for October 2016 through March 2017 showed that most of the basin exceeded 100 to 130 percent of average. A slide of monthly temperature anomalies show WY’17 to have significant cooling in December 2016 and January 2017. The National Oceanic and Atmospheric Administration’s (NOAA) map of the country’s forecasted and observed temperature and precipitation, from December 2016 to February 2017, was discussed. Maps were presented that compared sea surface temperatures for Region 3.4, showing a warming in temperature from January 2017 to March 2017; however, water off the west coast still remains cool. Maps and a chart of forecasted El Niño and La Niña conditions, and probable conditions, indicated a mostly weak El Niño or neutral conditions for the summer and fall.

The official three-month NOAA forecast maps for April through June (2017) were reviewed, and suggested near average conditions for the District’s area. The NOAA forecast for July through September (2017) suggested warmer temperatures and average precipitation.

Short-term Mid-Columbia (MID-C) Forward Prices showed a forward curve indicative of the over-supply which prompted the District’s sale of surplus power over the past 18-months. South Path (California) Forward Prices still show reasonable light-load prices. Beyond June, the over-supply should decrease and electricity use in the region should show an increase.

A Load and Resource Balance in Average Megawatt (aMW) chart showed Heavy Load Hours (HLH) and Light Load Hours (LLH) positions at Planned Water and Planned Wind. Overall, the forecast indicates a surplus in the short-term and average conditions after June 2017. A chart of the District’s share of Bonneville Power Administration (BPA) monthly Slice generation aMW’s was shared and discussed. Mr. Shapley responded to questions regarding the management of dams, Slice forecasts, and early water release for flooding control.
In conclusion, the region’s hydro is forecasted at above average April through June (2017) and at average for July through September (2017). California’s hydro is forecasted at above average for April through September (2017). California is expected to curtail renewables during the summer. The natural gas units that normally run this time of year are mostly sitting idle. There is currently an abundance of surplus in the region and in California. Commissioner Logan asked if NOAA provided modeling data on snow-pack and Mr. Shapley stated that he would provide that data to the Board.

D. Oso - East Arlington - Eagle Creek Project Update

Principal Engineer Bob Anderson provided an update on the Oso - East Arlington - Eagle Creek Project. The design and project teams have finalized a construction step-plan to allow construction to begin on the substation. The project goals for the Oso substation, include an upgrade from 55 Kilovolt (kV) to 115kv transmission voltage with Smart Grid capability, and to re-conductor the 11 miles of transmission line between Oso and East Arlington. For the East Arlington substation, there are three main project goals: (1) Replace the existing 115kV single bus with a six breaker ring bus; (2) Replace both distribution banks with new equipment including Smart Grid capability; and (3) Make improvements to the oil containment, drainage, and ground grid systems. A map was shown depicting the East Arlington and Oso service area, which serves approximately 10,000 customers. Reliability issues, lack of operational flexibility, equipment failures, non-standard line voltage, and growing load requirements were provided as reasons for the construction upgrade. Pictures of the East Arlington substation and equipment were presented.

An aerial view of the East Arlington substation showed the United States Navy (US Navy) yard, north of the substation, and an abandoned District pole yard, south of the substation. One of the key factors in the construction of the substation will be the use of the District’s abandoned pole yard. The District plans to build a new double bank substation on the pole yard property, which will be called Eagle Creek, and will ultimately replace the double bank at the East Arlington substation across the street.

A series of schematics were shown of the construction sequence, and included the projected project timeline of April 2017 through end of September 2017. Details of the Eagle Creek substation construction were provided. On a weekend, at the end of September, the US Navy will experience the first of three planned outages to enable re-routing of the transmission line, energizing the Eagle Creek substation, and the transferring of transmission line from the East Arlington substation to Eagle Creek. The other two outages are planned for March and April of 2018. The District is working closely with key area customers to help mitigate any unintentional impacts. It is anticipated that all of the East Arlington distribution circuits will be transferred to the Eagle Creek substation by January 2018. The last step needed to de-activate the East Arlington substation will take place March 2018 and the final construction step will be completed in approximately April 2019. Risks to the construction schedule, and steps to minimize the impact to customers were discussed. The Board requested to be made aware of the planned construction outages. Mr. Anderson stated that
the Board will be notified of the outages and he responded to questions regarding meeting with Mayors and Council of affected cities, construction contracts, budget, and timelines.

Mr. Anderson reviewed the project cost estimates, with overhead expenses totaling $23.6 million, and identified the District’s design and project teams, coordination and cooperation from customers, funding, and management support as key project success factors.

*E. Regional Electric Vehicle Study*

Government and External Affairs Director Jessica Matlock and Senior Manager Energy Services George Pohndorf facilitated a presentation on the Regional Electric Vehicle Study. Ms. Matlock began with 2016 statistics for plug-in electric vehicles (PEV) registered in the state, showed a map of public charging station locations; and discussed the District’s fleet of electric and hybrid-electric vehicles. A bubble chart was used to highlight the complexity and level of involvement from different consortiums in the electrification of transportation. It was noted that electric vehicle legislation has only been passed on the state level.

Ms. Matlock stressed the need for the District to be involved with organizations that are interested in installing electric vehicle stations, so that the District may, among other things, investigate the system impacts of PEV adoption, identify opportunities to collaborate with customers, and study which programmatic approaches that make the most sense to the District. Commissioner Vaughn requested data regarding the most current number of vehicles registered in Snohomish County, to determine the percentage of electric vehicles (EV) in the County. Ms. Matlock stated that she would provide the Board with this information. General Counsel Anne Spangler and Ms. Matlock responded to questions regarding the availability of federal grant funds and potential legal issues surrounding provision of charging rebates. Ms. Matlock reminded the Board that EV is still in the discovery phase.

The Pacific Northwest Utility Electrification Collaborative (PNW Collaborative), which is comprised of the District, Seattle City Light, Tacoma Power, Chelan PUD, and Puget Sound Energy, hired Energy and Environmental Economics (E3) Consulting to evaluate the economic impacts of transportation electrification in the Pacific Northwest. The final report of the Regional Electric Vehicle Study was released on March 15, 2017.

The Regional Electric Vehicle Study sought to answer whether EV adoption resulted in a lower spend on energy across the combined utility and transportation sector and what the outcome was for utility ratepayers.

The Regional Cost Test (RCT) asked if the region of Washington and Oregon would be better off economically due to EV adoption. A RCT Net Benefits bar chart identified vehicle cost, charger cost, energy, and generation capacity as the key cost drivers. The key benefits drivers were identified as gasoline avoidance, vehicle operation and maintenance savings, and tax credit, resulting in approximately $1.39 billion, at present value, over 20 years of benefit back to the regional economy. Mr. Pohndorf responded to questions regarding the loss of gasoline tax revenue for road maintenance and new EV goals for the region.
The next chart changed the perspective from total value across the economy, to benefits per vehicle sold. Using the same cost and benefit drivers, by the number of vehicles, the regional benefit of $1,941 per vehicle sold was calculated. Discussion continued regarding the expiration of the EV tax credit. A RCT Sensitivities 20 year horizon tornado chart was used to compare changing input values. Sensitivities used were vehicle and charger price, gasoline price, generation capacity, adoption, electric energy price, charger infrastructure, carbon price and carbon emission rates. The chart showed the sensitivities with the largest impact included vehicle, charger, and gasoline prices. Commissioner Vaughn inquired if the cost of EV battery disposal or storage was figured into any of the sensitivity categories. Mr. Pohndorf replied that he would research to see if battery storage expense was included in the study and report back to the Board.

Next, the Regional Ratepayer Impact Measures (RIM) were discussed. The report sought to find out if the EV adoption in Washington and Oregon would increase or decrease average retail rates. The RIM test results showed benefits of $278 million regionally and $387 per vehicle sold. In general, adoption of EV would provide regional downward rate pressure. The RIM Sensitivities chart was presented, showing energy cost and generation capacity costs as the two largest variables to impact the analysis, dependent on individual utilities. Discussion continued regarding managed EV charging as a value for the District and other utilities.

District results were highlighted with a graph forecasting 57,000 (PEV) in Snohomish County by 2036 and PEV sales expected to reach 8 percent of new electric light-duty vehicle sales by 2030.

Mr. Pohndorf listed the key differences in the District’s Case from the Regional Case, which included distribution network area, generation capacity prices, system load shape, additional RPS cost, and retail and discount rates.

The RCT results for the District’s service area showed, over 20 years, $83.1 million of present value in benefit across the transportation and energy sector and $1,513 per vehicle sold, which is higher than the regional average. Mr. Pohndorf stated that this one piece of study gives some sense of how District customers would be impacted. Discussion continued regarding charging habits and mitigating capacity cost to improve the value benefit. The District RCT Sensitivities Study results were similar to the Regional RCT Sensitivities Study.

The District’s Ratepayer Impact Measure (RIM) is the most relevant study for District customers. The District RIM showed $59 million net present value over 20 years of downward pressure to offset other costs and $1,070 per vehicle sold. The RIM Sensitivities showed that generation capacity price mattered greatly and could possibly be handled through managed charging. Discussion continued regarding technology surrounding managed charging.

Mr. Pohndorf briefly touched on the generalized Transmission and Distribution Cost study. Case studies on electrification of taxis, buses, fleets and other transportation were also completed for the study. The District’s case study showed positive RCT and RIM benefits,
that managed charging improves RIM benefits, and EV adoption could avoid nearly 1 million tons of carbon emission over a 20 year period.

The conclusions of the study suggested that there are significant benefits of electric vehicle adoption and, while the market is new, the positive results are fairly durable across a wide range of scenarios. Managed charging holds promise and system impacts appear to be manageable, if equally distributed.

The next steps include consideration of program opportunities, continue to engage with the PWN Collaborative, develop a better understanding of potential local distribution impacts, learn through pilot programs, and continue to engage District customers to understand their interests. Discussion continued regarding program opportunities.

The meeting recessed at 11:55 a.m.

**RECONVENE REGULAR MEETING**

The Regular Meeting was reconvened by President Tanya Olson at 1:30 p.m. in the Commission Meeting Room. Those attending were Kathleen Vaughn, Vice President; Sidney Logan, Secretary; CEO/General Manager Craig Collar; General Counsel Anne Spangler; Assistant General Managers Tom DeBoer, John Haarlow, Glenn McPherson, and James West; Chief Information Officer Benjamin Beberness; other District staff; members of the public; Clerk of the Board Melissa Collins; and Deputy Clerk of the Board Traci Brumbaugh.

Changes to the agenda were made as follows: Agenda Item 5A was removed, at staff’s request.

* **Items Taken Out of Order**

**Non-Agenda Items**

2. **RECOGNITION/DECLARATIONS**

   A. Employee of the Month for April – Michelle Hagglund

   Michelle Hagglund was recognized as Employee of the Month for April.

3. **COMMENTS FROM THE PUBLIC**

   Pete Rainey, Gold Bar, provided a handout, by reference made a part of the packet. Mr. Rainey spoke about aspects of the Sunset Fish Passage and Energy Project, which he said are not correct, including the associated costs and the amount of power generated during cold weather, and expressed hope that current staff would reconsider the project.

   Julia Bent, Lake Forest Park, discussed climate change and questioned whether the cost of the Sunset Fish Passage and Energy Project could be used for a renewable resource, like solar, that was not dependent on the water flow of the Skykomish River.
CEO/General Manager Craig Collar responded that the processes in place to determine the viability of the project are through the Federal Energy Regulatory Commission (FERC) licensing effort and engaging with stakeholders, as well as the District’s Integrated Resource Plan (IRP). Mr. Collar emphasized that no money is being spent on the project at this time, as it is still in the permit process.

Commissioner Olson went on record as saying that she is looking forward to the District’s updated IRP because she has several questions regarding the viability of the Sunset Falls project. Mr. Collar responded that the timing of the 2017 IRP and engaging with stakeholders should come together toward the end of this year. Commissioner Vaughn added that, there will be thorough discussion, and reiterated that the Board has not made any decision on the Sunset Fish Passage and Energy Project.

Lora Cox, Gold Bar, said that she would speak during the April 25, 2017, Commission meeting about the Sunset Falls area landslides.

4. CONSENT AGENDA

A. Approval of Minutes for the Regular Meeting of March 28, 2017

B. Bid Awards, Professional Services Contracts and Amendments

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Contract Acceptance Recommendations:
Public Works Contract No. CW2225897 with Michels Corporation, Michels Power Division

C. Consideration of Certification/Ratification and Approval of District Checks and Vouchers

A motion unanimously passed approving Agenda Item 4A - Approval of Minutes for the Regular Meeting of March 28, 2017; 4B - Bid Awards, Professional Services Contracts and Amendments, including a Cooperative Purchase Recommendation; and 4C - Certification/Ratification and Approval of District Checks and Vouchers.

5. ITEMS FOR INDIVIDUAL CONSIDERATION

A. Consideration of a Resolution Authorizing the CEO/General Manager or Designee to Execute a Contract for CEF 2 Electric Utility Grant With the Washington State Department of Commerce for Funding for the District’s Arlington Microgrid Project

This item was removed from the agenda.

6. COMMISSION BUSINESS

A. Commission Reports

Commissioner Logan discussed a recent article that was featured in the District’s internal Highlights publication regarding the District’s safety achievements, and mentioned his introductory meetings with staff.

Commissioner Vaughn wanted to confirm that staff received a copy of the letter she shared during the March 28, 2017, Commission meeting from Bonneville Power Administration (BPA) Senior Vice President, Power Services Mark Gendron. Ms. Vaughn provided the Board with a copy of a Resolution in support of the operation of Energy Northwest’s (ENW) Columbia Generating Station, which was sent out to the 93 participants of that nuclear plant. Commissioner Olson requested staff’s input on the Resolution at such time when the topic is revisited and the entire Board is present.

Commissioner Vaughn reported on her attendance at the Making the Case for Nuclear Energy in the 21st Century Town Hall Seattle discussion, which was presented in part by ENW.

Customer Service Manager Taylor Ostrander responded to Commissioner Vaughn’s questions regarding the February 2017 Customer Service supplemental report, specifically the increase in call handling times. Mr. Ostrander attributed the increase of call handling times to the number of new hires in the department and the hold time now being captured in the call handling time, but said that he expected the handling time to begin to decrease.
7. GOVERNANCE PLANNING

A. Governance Planning Calendar

There were no changes to the Governance Planning Calendar.

ADJOURNMENT

There being no further business or discussion to come before the Board, the Regular Meeting of April 11, 2017, adjourned at 2:27 p.m. An audio file of the meeting is on file in the Commission Office and available for review.

Approved this 25th day of April 2017.

(not present)

Secretary

President

Vice President