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September 7, 2016

MEMORANDUM

TO: Council Members

**FROM: Ben Kujala, Interim Power Division Director,
Chad Madron Project Analyst**

SUBJECT: Power Division Work Plan Update

BACKGROUND:

Presenter: Ben Kujala and Chad Madron

Summary Council staff manages a work plan related to Power Division tasks. This presentation will give an update on recent projects and priorities and how the work plan is managed.

Relevance The Power Division workplan gives a view through 2017 of what division staff will be doing to implement the Seventh Power Plan, maintain analytical capabilities and prepare for the Eighth Power Plan.

Background: Council Members were given a high level work plan for the division at the April 2016 meeting. We have attached it again for your review. We will also show samples of our more detailed internal work planning tools during the meeting.

Power Division Work Plan

2016/2017

Updated 3/31/2016

1. Guide affordable, adequate, clean energy future – implement Seventh Plan and plan for next Plan Development, including maintaining analytical capability

Action	Work Area	Timeframe (Calendar Year)
A. Implement Seventh Power Plan and related Council priorities	A.1. Conservation	
	1. Coordinate with regional entities (e.g. NEEA, BPA, utilities, regulators) to ensure the regional goal for cost-effective conservation is achieved. Cuts across a number of Action Items, ongoing priority	RCP Results reported annually in October of 2016 and 2017
	2. Engage with Bonneville to ensure the value of conservation is included in budgeting discussions, Cuts across a number of BPA related Action Items, ongoing priority	BPA IPR process and EE Budget Proposal in July or August of 2016, plus additional reporting later in timeframe
	3. Work with regional entities to ensure the model conservation standards are implemented, Cuts across MCS Action Items, ongoing priority	First Update in August 2017
	4. Continue to lead the Regional Technical Forum and engage in the development and approval of measure savings estimates and protocols	Budget/Workplan Approval and RCP Results in October of each year, Annual Report in June of each year
	5. Enhance the understanding, use, and reporting of capacity impacts from conservation. Cuts across a number of Action Items, includes tracking Utility IRPs, BPA EE Planning, is an ongoing priority	Part of RCP Results reported annually in October
	A.2. Demand Response	
	1. Convene forum and/or advisory committee to explore barriers and strategies to demand response development	December 2016
	2. Explore integration of “grid edge” technologies that may function similarly to DR in region into modeling	December 2016
	3. Coordinate with regional utilities and Bonneville to ensure demand response costs, capabilities, and potential are included in planning documents.	Report Annually, Starting August 2017

Power Division Work Plan

2016/2017

Updated 3/31/2016

	A.3. Forecasting and Economic Analysis	
	1. Improve long-term load forecast for emerging markets	Updates to Council in Mid 2016, Ongoing for 8th Plan
	2. Continued monitoring of regional sales, loads, temperatures, and economic state of the region	March and October of each year
	3. Continued monitoring of natural gas and oil situation in the region, national and international markets.	Council Update July 2016
	A.4. Generation Resources	
	1. Scope and develop energy storage white paper	September 2017
	2. Initiate ocean energy emerging technology roadmap and workgroup	Initial meeting by August 2017
	3. Track emerging technologies and development trends related to generating resources and utility scale storage	Ongoing - Updates to Council as needed
	A.5. System Analysis	
	1. Complete Redevelopment of GENESYS	October 2017
	2. Complete Annual Adequacy Assessments - Ongoing, Implementation	June 2016 and May 2017
	3. Update Marginal CO2 Emission Analysis - Implementation	March 2017
B. Maintain Analytical Capabilities	B.1. Conservation	
	1. Explore the development of an end-use conservation model (Maintain)	Go/No Go Decision December 2016
	B.2. Demand Response	
	1. Develop Supply Curve models for DR	December 2017
	B.3. Forecasting and Economic Analysis	
	1. Enhance modeling of electrification of transport system	Initial Update in December 2016
	2. Continued enhancement of Council's forecasting models for fuel supply and demand and prices	December 2017
	B.4. Generation Resources	
	1. Redevelop Council's resource revenue requirements finance model – MicroFin	September 2017
	B.5. System Analysis	
	1. Update AURORA & GENESYS data and parameters	GENESYS: checkpoints in April of each year ahead of adequacy reporting AURORA: December 2016

Power Division Work Plan

2016/2017

Updated 3/31/2016

C. Prepare for 8th Plan	C.1. Conservation	
	1. Data development to enhance or improve estimates for conservation supply curves. (8th Plan), Includes contract work in both 2016 and 2017	Ongoing, Many updates completed by December 2017
	C.2. Demand Response	
	1. Data development to enhance or improve estimates for demand response supply curves.	Ongoing, some updates completed by December 2017
	C.3. Forecasting and Economic Analysis	
	1. Improve Industrial Sales Data	Ongoing, Many updates completed by December 2017
	C.4. Generation Resources	
	1. Update generating resource datasets and tools	Ongoing - Provide regular updates to Council
	C.5. System Analysis	
	1. Redo of Climate Change analysis using newly available data (8th Plan)	December 2017

Power Division Work Plan Update

September 13, 2016



Division Work Tracking

- High Level Work Plan Categorizing Work Flow
- Detailed Division Work Plan
 - Maintained Often by Team Members/Chad
 - Reviewed Once a Month as a Team, with more Urgent Items Clearly Marked
 - Used to Set Dates and Deliverables, Kick Off Meetings, Other Planning and Collaboration
- Individual Teams have Granular Work Plans



Division Work Flow

Implement the Power Plan

- The Plan is a Living and Active Process
 - The Action Plan Points the Way
- Collaboration to Drive Action

Maintain Analytical Capabilities

- Enhancing Current Resources and Tools
 - GENESYS, MicroFin, Etc...
- New Data Sources and Modeling Pushing the Envelope and Testing Ideas in Advance of Next Plan

Division Work Flow

Prepare for the 8th Plan

- Data Development, Contract Work and Updates -
 - Working with others now so material is available for 8th plan
- Tool sets and Data for Forecasting, Generation Resource Tracking and Resource Adequacy

Ongoing Work and Collaboration

- Work with other Organizations like NEEA and Energy Trust on Review Boards and on Specific Workgroups
- Annual Resource Adequacy Study
- Updates to Generation Resource Information
- Updated Fuel and Load Forecasting Data and Methodologies

Highlights from Work Plan

- **Energy Efficiency and Demand Response:**
 - Regional Conservation Progress Survey (RES-1)
 - Working with BPA and others on Items like Modeling the Value of Conservation (BPA-5), Hard to Reach Markets (MCS-1), etc...
 - Collaborate with NEEL on Forum around Rate Design to Promote EE (REG-11)
 - Updates to Industrial EE and Load Data
 - Form DRAC and Schedule First Meeting
 - Work with NEEA on DR Market Transformation (RES-5)

Highlights from Work Plan

- **Forecasting and Economic Analysis, and Generation Resources:**
 - Review Methods for Peak Load Forecasting (ANLYS-4)
 - Enhance Modeling of Electrification of Transport System (ANLYS-5)
 - Update Generating Resource Datasets and track Emerging Technologies (ANLYS-13)
 - Track state RPS - policies, progress (ANLYS-13)
 - Track regional carbon emissions data and update on historic co2 emissions

Highlights from Work Plan

- **System Analysis and Cross Cutting Priorities**
 - Redevelopment of GENESYS (ANLYS-22, 23)
 - Updates to RPM Optimization (ANLYS-21)
 - Complete Reassessment of Adequacy Standard as part of 2022 Adequacy Study Work (COUN-5, 6)
 - Develop Plan for Starting New System Integration Forum (COUN-1)
 - Create Report on Marginal Carbon Production (ANLYS-21)
 - Visit State Utility Commissions to Discuss 7th Plan