

Tom Karier  
Chair  
Washington

Frank L. Cassidy Jr.  
"Larry"  
Washington

Jim Kempton  
Idaho

Judi Danielson  
Idaho



Joan M. Dukes  
Vice-Chair  
Oregon

Melinda S. Eden  
Oregon

Bruce A. Measure  
Montana

Rhonda Whiting  
Montana

January 4, 2007

## MEMORANDUM

**TO:** Council Members

**FROM:** Terry Morlan

**SUBJECT:** Power Division Work Plan for 2007

I will provide an overview of the Power Division Work Plan for 2007. The format of the work plan is substantially the same as last year's, but the elements have been reorganized to better match the actual work activities of the staff instead of the Action Items from the Fifth Power Plan. More detailed information on the work plan and changes that were made is available in the Power Committee packet.

Major issues that the Power Division and Council will be involved in during 2007 are not new; they are related to implementing the Council's Fifth Power Plan. Here is a list those issues:

- Confirming the feasibility and cost of integrating large amounts of wind generation into the Northwest power system;
- Refining and implementing the resource adequacy standards adopted by the Council;
- Concluding and implementing the Regional Dialogue Policy through new power sales contracts between Bonneville and its customer utilities.
- Organizing and tracking regional efforts to acquire the cost-effective conservation identified in the Power Plan;
- Identifying and developing the demand response potential in the region;
- Providing analysis of the power implications of a new biological opinion; and
- Participating in regional and west-wide efforts to improve transmission planning and operations, including providing inputs to WECC reliability and adequacy measures and assessments.

In addition to working on these major issues, the work plan identifies many other Power Division activities that are of crucial importance to our ability to monitor the status of the regional power system, provide information and analysis to support implementation of the power plan, and to develop a revised power plan in the next few years. The one page attachment to this memorandum summarizes the 26 work plan elements in a highly condensed form.

Attachment

## Item Number Description

### Plan Implementation

- 1 Coordinate Regional Conservation Activities
- 2 Revise & adopt state & federal energy codes and efficiency standards
- 3 Manage, Operate, and Secure Funding for the Regional Technical Forum
- 4 Other Conservation Implementation Activities
- 5 Demand Response
- 6 Confirm wind development potential
- 7 Reassess the role of coal-fired generation in the Fifth Plan
- 8 Establish regional and West-wide reporting standards for the assessment of adequacy
- 9 Carry out a process to establish adequacy standards for NW
- 10 Plan for long-distance transmission needs to support the resource development called for in the plan
- 11 Transmission Providers Work to Improve Utilization of Available Transmission Capacity
- 12 Region agrees to and begins implementation of transmission solutions
- 13 Bonneville and Council review respective policies re implementing 6©
- 14 Participate in Utility IRP Processes

### Monitoring and Analysis

- 15 Continued analysis of the CO2 production of the Northwest power system
- 16 Provide analysis and information about the plan and the regional energy system
- 17 Monitor Climate change science and policy
- 18 Monitor progress toward implementation of Council recommendations re Bonneville's Future role
- 19 Periodically report on load resource situation
- 20 Review data, forecasts underlying plan, recommend plan revision if necessary

### Planning Tools and Data

- 21 New demand forecasting system (Long and short-term forecasts)
- 22 Development and documentation of Olivia/ Portfolio model
- 23 Maintain the AURORA<sup>xmp</sup>™ Market Price Forecasting Model and prepare periodic near-term forecasts
- 24 Maintain and update data on electricity uses and conservation technologies
- 25 Maintain the power plant data base
- 26 Maintain and Improve Data for Fuel Price and Demand Forecasts

# 2007 Power Division Work Plan (January 2007)

## PLAN IMPLEMENTATION

### 1. Coordinate Regional Conservation Activities

COUNCIL STAFF	OTHERS
Tom Eckman, Charlie Grist	Council, BPA, utilities, SBC Administrators, Alliance, regulators, state energy offices, efficiency industry, other stakeholders

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Quarterly meetings with regional coordination group. Identify progress and gaps in implementation. Prioritize and develop and implement solutions.	Quarterly Meeting. Expand participating members.	Quarterly Meeting.	Quarterly Meeting
STATUS	Plan to meet in February to take up issue of cooperative evaluation of programs.			
COMMENTS	<b>Ongoing.</b> Formerly Action CNSV-3: Develop a strategic plan for conservation. Revised to be an ongoing assessment of progress and gaps and subsequent development of solutions to fill those gaps.			

### 2. Revise & adopt state & federal energy codes and efficiency standards that capture all regionally cost-effective savings: (CNSV-6)

COUNCIL STAFF	OTHERS
Tom Eckman, Charlie Grist	Council, State and local code bodies, DOE, HUD, BPA, Utilities, SBC Administrators, and The Alliance

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	<ul style="list-style-type: none"> <li>Participate in federal standards rulemaking on 3-5 products during the coming year.</li> <li>Ongoing-- Work with state code</li> </ul>	Prepare energy savings and life cycle cost analysis for proposed revisions to Oregon residential energy code	Participate in federal standards rulemakings	Participate in federal standards rulemakings

	agencies in code revision cycles to adopt new codes where warranted.	Participate in Oregon code revision process		
STATUS	EPACT 2005 established standards for 15 products. These were issued October 18, 2005. EPACT 2005 also required that DOE promulgate new standards for an additional 10 products. Several states and NRDC are suing DOE to require the agency to meet its statutory deadlines. In 2005 OR and WA adopted efficiency standards on 6 additional products not covered by the new federal law.			
COMMENTS	<b>Ongoing:</b> Some potential in all four states to modify building codes in 2007. Participation and timing will be issue dependent and dependent on state schedules. Consider improving commercial MCS based on finalized NEEA study on NWBest.			

### 3. Manage, Operate, and Secure Funding for the Regional Technical Forum

COUNCIL STAFF	OTHERS
Tom Eckman, Charlie Grist	Council, BPA, Utilities, SBC Administrators, the Alliance, Regulators, the States

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	<ul style="list-style-type: none"> <li>Reconstitute the forum membership.</li> <li>Secure funding &amp; implement funding mechanisms.</li> </ul>	<ul style="list-style-type: none"> <li>Revise ProCost</li> <li>Complete annual survey of regional conservation progress</li> </ul>	<ul style="list-style-type: none"> <li>Suite of new and revised programs available to BPA customers by September</li> </ul>	Develop work plan for FY08
STATUS	Secured three year funding sponsorship commitments for at least \$285,000/yr. Circulating draft work plan for review and comment. Selection process for new members completed.			
COMMENTS	Ongoing. Continue to establish the RTF as the leading regional source for resolving technical issues in conservation. Includes planning and conducting about 10 one-day meetings per year. Manage about a dozen projects including market and technical research, and program evaluation. Support and enhance the Program Tracking and Reporting (PTR) system. Includes Conservation Tracking (CNSV-8). See RTF workplan for details.			

### 4. Other Conservation Implementation Activities

COUNCIL STAFF	OTHERS
Tom Eckman, Charlie Grist	Council, BPA, Utilities, SBC Administrators, the Alliance, Regulators, the States

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	<ul style="list-style-type: none"> <li>White Paper on Achievable Penetration Rates</li> <li>Assess 5<sup>th</sup> Plan targets in light of biennial assessment</li> <li>Scope SBC Performance Paper</li> </ul>	<ul style="list-style-type: none"> <li>RFP &amp; Contract for SBC paper</li> </ul>		<ul style="list-style-type: none"> <li>Final report on SBC Performance</li> </ul>
STATUS	Region appears to have achieved 5 <sup>th</sup> Plan's conservation target for 2005 and is well positioned to accomplish the 2006 target. BPA's <i>actual</i> conservation achievements in both 2005 and 2006 were below its share of target, but it met its savings goal by claiming savings carried over from prior years	Uncertainty concerning the resolution of issues in Regional Dialog constrained early participation in BPA's conservation CAA and CRC programs		
COMMENTS	<b>Ongoing.</b> Includes the following: Help implement aspects of Washington I-937; Work with regional utilities and SBC administrators on program implementation issues; Participate in regulatory forums on conservation targets, decoupling, and regulatory incentives; White papers on conservation issues important to implementation such as achievable acquisition rates and accounting for free riders; Assist utilities and Bonneville in reaching Council conservation targets. Funding and implementation for orphaned conservation efforts best done regionally (CNSV-7). Evaluate performance of System Benefits Charge (SBC) Programs: CNSV-13. Includes conservation monitoring MON-2.			

## 5. Demand Response - cost-effectiveness methodology; cost and benefits of improved metering and communication technologies; exploring price mechanisms: DR-2; DR-4; DR-6; DR-8

COUNCIL STAFF	OTHERS
Ken Corum	Council, BPA, Utilities, Regulators

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Organizing meetings of Pacific	Work sessions of PNDRP	Conclusions and recommendations	Work on implementation of

	Northwest Demand Response Project (PNDRP) Genesys analysis of costs avoided by demand response in a hydro-dominated power system Continue to monitor Bonneville's work on non-wires alternatives to transmission construction	Report on analysis Progress report on DR Monitor development of DR (Ongoing) Continue to monitor Bonneville's work on non-wires alternatives to transmission construction	of PNDRP Continue to monitor Bonneville's work on non-wires alternatives to transmission construction	PNDRP's recommendations Continue to monitor Bonneville's work on non-wires alternatives to transmission construction
STATUS	As of 11/1/06, draft proposal for PNDRP waiting for revision by Regulatory Assistance Project Staff is participating on a technical advisory group for CA research on DR. Also presenting our work at national conferences on DR			
COMMENTS	PNDRP is cooperative effort (Council, BPA, state utility commissions, Regulatory Assistance Project and others) to stimulate development of demand response. PNDRP as proposed would address cost-effectiveness, improved metering and price mechanisms issues. Staff participating in CA efforts and national conferences.			

## 6. Confirm wind development potential

COUNCIL STAFF	OTHERS
King	Bonneville (Mainzer); Policy Steering Committee of Wind Integration Action Plan

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Wind Integration action Plan (WIAP) Technical Work Group issue draft first phase report. WIAP Policy Steering Committee approve first phase report and proposed follow-on organization	Establish proposed Northwest Wind Integration Forum. Initiate work on high priority actions (Some may be Council lead actions).		Complete highest priority (end-of-year 2007) actions.

STATUS	Preparing draft Wind Integration Action Plan containing findings of the first phase of work and recommended follow-on actions (Dec 2006).
COMMENTS	Bonneville and the Council initiated the Wind Integration Action Plan (WIAP) in 2006 to identify actions needed to integrate anticipated near- and longer-term wind power development (Action GEN-8A). The WIAP first phase report, scheduled for adoption by the WIAP Policy Steering Committee in February 2007, will identify specific actions to support anticipated near-term wind power development and to maximize the economic and environmental value of wind power over the longer-term. The report is expected to include recommendations incorporating the relevant portions of Actions GEN-8, -9 and -10, TX-1 and -2, and GEN-16. The Action Plan recommends formation of a Northwest Wind Integration Forum to oversee implementation of the recommended actions, and the Council is expected to play a key role in the work of the Forum, much like the Northwest System Reliability Forum. In addition, the Council is expected to be the lead organization for several of the recommended actions.

### 7. Reassess the role of coal-fired generation in the Fifth Plan

COUNCIL STAFF	OTHERS
King	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Prepare an assessment of the commercial status of advanced coal technologies suitable for Northwest applications, including supercritical steam-electric and gasification combined-cycle (Action GEN-7a).	Prepare a paper including background information on petroleum coke and a forecast of its availability through 2030.	Assemble cost, performance and other planning assumptions for "CO2-ready" IGCC and conventional coal plants. Complete a re-assessment of the timing, amount and technology of coal-based generation in the Fifth Plan.	
STATUS				
COMMENTS	Biennial Assessment findings indicate: (1) The accepted design availability of base load power generating technologies is higher than assumed in the Plan; (2) Spare gasifiers may need to be included in IGCC plants to accepted levels of plant availability, increasing costs above those assumed in the Plan; (3) Supercritical steam-electric technology has advanced more rapidly than anticipated; (4) IGCC efficiency may be less than anticipated in the Plan; (5) the capital cost of coal-fired power plants and other generating technologies has increased significantly since adoption of the Plan and (6) petroleum coke may be a feasible fuel for IGCC power generation in the Northwest. In view of these developments, staff has concluded that it is desirable to reassess the future role of coal-fired generation and specific coal technologies.			

## 8. Establish regional and West-wide reporting standards for the assessment of adequacy: ADQ-1

COUNCIL STAFF	OTHERS
Wally Gibson, John Fazio	Resource Adequacy Forum, WECC, NWPP, CREPC, BPA, regional utilities and regulators.

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Work with the PNUCC and the Forum to develop a prototype data-reporting standard.	Compare data received for 2007 with the data-reporting standard.  Refine the reporting standard as necessary.  WECC LRS present revised RA standards to Planning Coordination Committee (PCC)	Revise reporting standard, if necessary, based on the Forum's work on renewable resources and conservation (including demand response).  WECC PCC present revised RA standards to Board for approval, used in development of 2008 PSA	PNUCC sends out data requests for 2008 using the new data-reporting standard.
STATUS				
COMMENTS	Continue working with WECC Load and Resources Subcommittee (LRS) to improve Power Supply Assessment (PSA) and related WECC reports, including reporting standards -- Ongoing through year			

## 9. Carry out a process to establish adequacy standards for NW: ADQ-2

COUNCIL STAFF	PARTICIPANTS
Wally Gibson, John Fazio	Resource Adequacy Forum, NWPP, BPA, regional utilities and regulators, WECC, CREPC

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Develop a benchmarking process	Review and, if necessary, revise the	Based on the second quarter work,	Develop a final Forum proposal



	<p>for resource adequacy analysis.</p> <p>Update resource and load data required for analysis.</p> <p>Synchronize the GENESYS and HYDSIM (BPA) models.</p> <p>Develop alternatives for resource adequacy economic targets.</p> <p>Develop a guideline for individual utilities to interpret the regional standard for their own use.</p>	<p>definition of curtailment events used for LOLP analysis.</p> <p>Examine the relationship between cost and LOLP.</p> <p>Develop analysis to show that meeting the adequacy standard will not impact fish and wildlife operations.</p> <p>Perform a top-down assessment of the region's power supply and compare to PNUCC's bottom-up approach.</p>	<p>revise the energy and pilot capacity standards as necessary.</p> <p>Work with the WECC to make sure that the NW standard is consistent with WECC guidelines.</p>	<p>for resource adequacy standards and submit to the Council for public comment and vote.</p> <p>Prepare draft documentation to support the final proposal.</p>
STATUS				
COMMENTS				

**10. Plan for long-distance transmission needs to support the resource development called for in the plan: TX-1**

COUNCIL STAFF		OTHERS		
Gibson; King, Schilmoeller		Bonneville, other transmission providers, Power Pool; NTAC, WECC		
<b>TIMELINE</b>	<b>1<sup>st</sup> Quarter 2007</b>	<b>2<sup>nd</sup> Quarter 2007</b>	<b>3<sup>rd</sup> Quarter 2007</b>	<b>4<sup>th</sup> Quarter 2007</b>
MILESTONES	<p>Develop and adopt TEPPC and TAS work plans. First WECC biennial plan targeted at Feb 08</p> <p>ColumbiaGrid offers Planning and Expansion Functional Agreement</p>	<p>Specific TEPPC/TAS milestones will follow from work plan</p>	<p>Specific TEPPC/TAS milestones will follow from work plan</p>	<p>Specific TEPPC/TAS milestones will follow from work plan</p>

	for signature.  Northern Tier Transmission Group (NTTG) proposes to assume regional planning duties for participants under expected FERC tariff revisions.			
STATUS				
COMMENTS	<p>Staff co-chairing WECC Transmission Expansion Planning Policy Committee's (TEPPC) Technical Advisory Committee (TAS) -- ongoing. TEPPC provides framework and larger geographic scope studies for sub-regional planning groups like NTAC, NTTG and ColumbiaGrid in the Northwest.</p> <p>NTTG consists of PAC, Idaho, NWE, UAMPS, Deseret (latter two in Utah) and potentially PGE and BCTC and complements systems represented by ColumbiaGrid</p>			

# **11. Transmission Providers Work to Improve Utilization of Available Transmission Capacity: TX-2**

COUNCIL STAFF	OTHERS
Wally Gibson	Bonneville, other transmission providers, regional transmission customers, states

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	<p>NTTG working to establish process to address ATC calculations on behalf of members</p> <p>ColumbiaGrid has delayed addressing NW OASIS and ATC calculations (timing uncertain)</p>			
STATUS				
COMMENTS	NTTG consists of PAC, Idaho, NWE, UAMPS, Deseret (latter two in Utah) and potentially PGE and BCTC and complements systems represented by ColumbiaGrid			

**12. Region agrees to and begins implementation of transmission solutions: TX-3**

COUNCIL STAFF	OTHERS
Wally Gibson	Bonneville, other transmission providers, regional transmission customers, states, IPPs

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	ColumbiaGrid works with Bonneville to develop redispatch protocols for Summer 07 operation  Northern Tier Transmission Group (NTTG) working to establish regulation sharing program (will address some wind integration problems for members)	ColumbiaGrid works with Bonneville to develop redispatch protocols for Summer 07 operation		
STATUS				
COMMENTS	NTTG consists of PAC, Idaho, NWE, UAMPS, Deseret (latter two in Utah) and potentially PGE and complements systems represented by ColumbiaGrid.			

**13. Bonneville and Council review respective policies re implementing 6©: MON-9**

COUNCIL STAFF	OTHERS
Legal Division	Council, Bonneville

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Initiate discussions with Bonneville after release of Regional Dialogue ROD	Bonneville and Council processes on 6c policy revision	Complete revised 6c policy	
STATUS				
COMMENTS				

#### 14. Participate in Utility IRP Processes

COUNCIL STAFF	OTHERS
Assigned staff for each utility	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Participate in WA CTED administrative rulemaking process for HB1010. Ongoing participation in utility IRP process and advisory groups. Report on completed IRPs as they become available. Compare plans to Council's resource portfolio	Participate in CTED administrative rulemaking process for HB1010 and I-937	Summary report on IRPs Participate in CTED administrative rulemaking process for HB1010 and I-937	
STATUS	Staff is working with utilities, PUCs and ETO to help incorporate risk measures into planning Presented overview of Council IRP process at WA CTED's initial HD1010 workshop			
COMMENTS	Participation in utility IRP processes is a key strategy for encouraging regional achievement of the plan and for tracking progress in its implementation. (See action items GEN 1- 6 and CNSV – 8) : Help implement new Washington IRP requirements (HB1010). Participate in conservation aspects of regional utility IRPs. Track assigned regional IRPs. Get utility IRPs to consider 5 <sup>th</sup> Plan findings on the cost and risk benefits of conservation. Participate in BPA IRP if they do one for augmentation or Tier 2 products.			

## MONITORING AND ANALYSIS

#### 15. Continued analysis of the CO2 production of the Northwest power system

COUNCIL STAFF	OTHERS
King	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
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MILESTONES	<p>Refine and extend the July 2006 forecast of the CO2 production of the Northwest power system, including the following cases:</p> <ul style="list-style-type: none"> <li>• Base</li> <li>• Low conservation</li> <li>• High renewables</li> <li>• No summer spill</li> <li>• Lower Snake R. dam breaching</li> </ul>			
STATUS				
COMMENTS	<p>A draft forecast of regional power system CO2 production was brought to the Power Committee at its July 2006 meeting. At that meeting, the Committee requested refinement of the analysis and additional cases. The Committee agreed to a plan of work presented at its August meeting. This work was subsequently deferred for completion of the Biennial assessment of the Fifth Plan and the first phase of the Wind Integration Action Plan (WIAP) project. The CO2 assessment will be resumed following release of the draft first phase WIAP report in January 2007. Meanwhile, Bonneville has requested the Council to add the Lower Snake River dams breaching case to this assessment.</p>			

**16. Provide analysis and information about the plan and the regional energy system**

OWNERS	OTHERS			
All Staff				

  

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES				
STATUS				
COMMENTS	<p>This is an ongoing activity that requires a substantial amount of staff time and resources. Council adopted a policy for approval of analysis requests of different magnitudes and sensitivities.</p>			

**17. Monitor Climate change science and policy: MON-4**

COUNCIL STAFF	OTHERS
John Fazio, Ken Corum	University of Washington Climate Impacts Group, BPA, EPA, Congress

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Monitor political actions regarding emissions. Monitor research on climate change.	Council staff white paper on Climate Change. Review and update the relationship between temperature and loads, for modeling purposes.		
STATUS				
COMMENTS	This is an ongoing process. As new information is received, it will be assessed and reported to the Council.			

**18. Monitor progress toward implementation of Council recommendations re Bonneville's Future role: MON-8**

COUNCIL STAFF	OTHERS
Terry Morlan	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Review and comment on Bonneville Regional Dialogue ROD	Comment on ROD? Follow progress in developing contracts and products	Ongoing - Bonneville developing contracts for post 2011 to be signed in October 2007	
STATUS				
COMMENTS				

**19. Periodically report on load resource situation – Regular semi-annual reports: MON-1**

COUNCIL STAFF	OTHERS
John Fazio, Terry Morlan	BPA, PNUCC, other utilities

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Report on forecasted water conditions and power supply status through the end of summer.	Assess the status of the power supply 3 and 5 years out relative to the newly adopted energy and capacity standards.  Compare the Council's top-down assessment to PNUCC's bottom-up assessment and reconcile differences.	Assess the power supply status for the upcoming winter.  If necessary, based on the 3 and 5-year assessment, take actions as outlined in the adequacy warning implementation plan.	Update load and resource data for next year's analysis.
STATUS				
COMMENTS	The Council maintains a power supply outlook web page, which contains a summary of the water supply, loads, resource development, imports and exports and other adequacy assessments.			

## 20. Review data and forecasts underlying plan, recommend plan revision if necessary: MON-7

COUNCIL STAFF	OTHERS
Morlan lead with others	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Biennial Monitoring Report - Jan.		Interim assessment of loads, resources, fuel prices etc.	
STATUS				
COMMENTS	Ongoing: Maintain data bases on loads, fuel and power prices, and resources. Requires ongoing collection and analysis of data on demand, fuel prices, evolving technology for generation and efficiency, hydroelectric capability			

## PLANNING TOOLS AND DATA

## 21. New demand forecasting system (Long and short-term forecasts)

COUNCIL STAFF	OTHERS
Massoud Jourabchi	Demand Forecasting Advisory Committee, BPA staff

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Produce short-term hourly load forecast for non-DSI. Produce report on application of short-term forecasting model for Resource Adequacy capacity standards and targets. Present short-term and long-term modeling methodologies to the Advisory committee. Present to Council forecast for summer of 2007-2010. Map out and start long-term model enhancements. Conservation & end use inputs for 2020 forecasting system	Complete test of long-term demand forecasting system's structure. Complete documentation of short-term forecasting model Update short-term model with 2004 and 2006 load data*.	Acquire long-term economic forecast Complete long-term model enhancements.  Work with Demand Advisory group on long-term forecasting model assumptions.  Produce preliminary forecast with exogenous market prices. (2008-2028). Present preliminary forecast to Advisory committee.	Initiate review of linkage of short-term and long-term models with other models used in-house.  If completed, present a preliminary long-term forecast to Council.
STATUS				
COMMENTS	We will need help from NWPP on updating model with 2003-2006 hourly data.			



## 22. Development and documentation of Olivia/ Portfolio model

OWNERS	OTHERS
Michael Schilmoeller	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Complete data editor interface and Council staff beta test	Revise writing routines to incorporate changes identified in task list (3/8/03, rev. 02, 3/13/06)	Evaluate and possibly implement transmission flow model. Prepare class materials and help files	Utility training classes
STATUS				
COMMENTS	Work on Olivia has proven difficult to plan. Some of this is inherent in the work. Because our concepts – not to mention the computer implementation – are original, there is no template for this work. We only know the problems we have run into to date. It seems impossible to forecast when or how versions of the software on which we rely, Excel, Crystal Ball, etc., will change. Some of it, however, is inherent in the nature of our work. More pressing studies and tasks displace development of this application. We will periodically communicate our progress.			

## 23. Maintain the AURORA<sup>xmp™</sup> Market Price Forecasting Model and prepare periodic near-term forecasts

COUNCIL STAFF	OTHERS
King	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Review recent AURORA releases (Versions 8.3 and 8.4); update version if warranted. Review and update the AURORA input data base as needed (Also see “Maintain the power plant data base”).	Prepare a near-term market price forecast using fuel prices from the EIA short-term energy outlook and current water year conditions.		
STATUS				
COMMENTS	The AURORA <sup>xmp™</sup> Market Price Forecasting Model is used by the Council to prepare market price forecasts and for certain analyses of resource cost-effectiveness, system operations and environmental impacts. An annually-updated short-term market price forecast is used to assess the electricity price implications of current water year conditions and fuel prices and of possible near-term changes in system operations. The near-term price forecast would ideally be completed during the first quarter, but is shown as a second quarter item because of competing work items in the first quarter.			

## 24. Maintain and update data on electricity uses and conservation technologies

COUNCIL STAFF	OTHERS
Tom Eckman, Charlie Grist	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Conservation & end use inputs for 2020 forecasting system	Review new residential housing characterization survey Review Energy Star new homes lighting persistence research		
STATUS	Working with NEEA and larger PNW utilities and ETO to secure customer characteristics data			
COMMENTS	<b>Ongoing.</b> Includes: Compile new measures lists; Develop new commercial prototypes for analysis; Convert 5 <sup>th</sup> Plan Supply Curves to new ProCost model including off-line adjustments; Fill out supply curves in \$60-\$80/MWh range; Investigate revising ProCost to include Crystal Ball or other mechanism to assess alternate avoided cost futures; Update ProCost inputs for T&D deferral benefit; Update EUIs from NEEA DEI study; Develop inputs to feed Energy 2020 forecasting system; Prepare to calibrate conservation supply curves and forecasting system; Harvest NEEA New Building Baseline Characteristics data;			

## 25. Maintain the power plant data base

COUNCIL STAFF	OTHERS
King	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Post updated inventories of existing and proposed power plants. Update the GenRes input data file for the GENESYS model in support of reliability model benchmarking studies. Update the Resource input database of the AURORA model.	Post updated inventories of existing and proposed power plants. Review the GENRES input data file in support of the long-term system reliability assessment.	Post updated inventories of existing and proposed power plants. Review the GENRES input data file in support of the winter system reliability assessment.	Post updated inventories of existing and proposed power plants. Prepare assessment of progress toward Fifth Plan generating resource optioning and development targets (Action GEN-7)
STATUS				

COMMENTS	The Council maintains an inventory of existing and proposed power generation projects that is updated on a quarterly basis and posted to the Council's website. This inventory is used to develop the regional generating resource data files for GENESYS and AURORA models. In 2007 we plan to update the Generating Resource (GenRes) input data for GENESYS during the first quarter to support the benchmarking studies planned by the System Reliability Forum. We will review GenRes and update it as necessary to support the second quarter long-term reliability assessment and the third quarter winter reliability assessment. Though it is not certain that GENESYS will be the model selected for ongoing assessment of system reliability, a similar schedule of updates and reviews will be needed in future years for whatever model is selected for this application. We also will establish an annual schedule for updating the Northwest portion of the AURORA Resource input data file to support a first-quarter near-term price forecast and other studies.
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## 26. Maintain and Improve Data for Fuel Price and Demand Forecasts

COUNCIL STAFF	OTHERS
Massoud Jourabchi, Terry Morlan, Ken Corum	

TIMELINE	1 <sup>st</sup> Quarter 2007	2 <sup>nd</sup> Quarter 2007	3 <sup>rd</sup> Quarter 2007	4 <sup>th</sup> Quarter 2007
MILESTONES	Maintain data bases on energy consumption, electricity and fuel prices, hourly temperatures, energy conservation, enduse inputs to the long-term and short-term forecasting systems.	Develop a revised fuel price forecast for natural gas, coal, and oil.	Present revised fuel price outlook to Council and post to web site.	
STATUS	Enhance database for short-term forecasting on hourly monthly, seasonal basis			

COMMENTS	Ongoing. Council staff maintains data bases to monitor and forecast electricity prices, fuel prices for natural gas, oil and coal. We maintain data bases on consumption of electricity and other fuels, as well as electricity loads at the generator. We also track commercial and residential floor stock. These data are inputs to forecasting models and analysis and they help monitor performance of the forecasts.
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