

Tom Karier
Chair
Washington

Frank L. Cassidy Jr.
"Larry"
Washington

James A. Yost
Idaho

W. Bill Booth
Idaho



Joan M. Dukes
Vice-Chair
Oregon

Melinda S. Eden
Oregon

Bruce A. Measure
Montana

Rhonda Whiting
Montana

January 3, 2007

MEMORANDUM

TO: Power Committee

FROM: Jeff King

SUBJECT: Wind Integration Forum and Action Plan fourth quarter 2007 status report

A meeting of the Wind Integration Forum Steering Committee was held on November 27 at the Council's offices. The agenda included a review of current Northwest wind development activity, status reports on Wind Integration Action Plan activities, a description of the proposed Western Governors' Association Renewable Energy Zone project, and comments by Steering Committee members regarding wind power issues of concern. Draft meeting notes are circulating for approval and will be posted to the Wind Integration Forum website.

The fourth quarter summary matrix of the status of the Wind Integration Action Plan actions is attached. Significant progress has occurred in recent months on Actions 01 (Wind Capacity Value Assessment), Action 03 (High-resolution Dataset) and Action 08 (Transmission Plans of Service). Staff will provide additional information regarding these three actions at the Power Committee meeting.

The next meeting of the full Wind Integration Forum Technical Work Group is scheduled for January 31. The Steering Committee will next meet this coming summer on a date to be scheduled.

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Northwest Wind Integration Forum
Northwest Wind Integration Action Plan Status

January 2008

Action (Lead Org)	Task Lead	Status	Next steps	Issues	Target Completion
A01 Reassess capacity value of wind (Resource Adequacy Forum)	J. King (NPCC)	Contract w/Borismetrics negotiated. BPA funding, transferred to NPCC. Project output or wind data in hand for 12 projects and resource areas. Kickoff meeting Sep 07. Interim review Oct 07. Peak load events identified by NPCC Interim review Dec 07	Peak event capacity values and synthetic hourly wind dataset for reliability analysis due Jan 08. Cap value recommendation to Resource Adequacy Forum Jan 08. Evaluate need for follow-on effort.		Original Jul 2007. Revised Jan 2008
A02 Refine wind integration costs/Estimate potential for reducing costs (BPA & Regional Utilities) Avista BPA IPC PacifiCorp PSE PGE Grant PUD	C. Kalich (Avista) S. Barton/B. McManus (BPA) K. Bokenkamp (IPC) J. Apperson (PAC) J. Hoerner (PSE) T. Bettis (PGE) R. Noteboom (Grant) M. Milligan (NREL)	AVA - No new numbers to report. BPA - Analysis being refined, focusing on higher (3000+ MW) penetration levels. IPC - Methodological refinements have reduced cost estimates since preliminary results published. PAC - Collecting data from Marengo wind project, will assess regulating reserve levels. PSE - Collecting data from Wild Horse wind project. PGE - Initiating study Grant - Initiating study	Next meeting of Technical Work Group (Jan 08) will include session concerning recent developments in study methodologies, especially work underway at Idaho Power and Avista.		Continuing
A03 Develop high resolution (meso-scale) wind speed dataset (BPA)	J. Pease (BPA) M. Milligan (NREL)	BPA & NREL have contracted w/3TIER to develop 2 km resolution, 10 min. 2004-06 dataset at 10, 20, 50, 100, 200m elev. for PNW. Database complete Oct 07. Maps produced Nov 07.	Database being transferred to NREL. User interface in development at NREL, expected Mar - May 08.	NREL will serve as database host and will provide data to interested parties for research purposes	EOY 2007

Action (Lead Org)	Task Lead	Status	Next steps	Issues	Target Completion
A04 Develop transmission planning methodology addressing optimal level of transmission investment to serve proposed wind development (NTAC)	Vacant	NTAC effort halted Q3 07 w/request that Columbia Grid pick up effort. NPCC staff discussion w/Columbia Grid re: restarting effort Dec 07.	NPCC staff to set up meeting of interested parties to discuss need objectives, approach and responsibilities (Feb - Mar 08).		Original Sep 2007. Revised to be determined.
A05 Apply transmission planning methodology (NTTG Columbia Grid)	Not assigned	2008 Task	Dependent on completion of A04		Initiate by EOY 2007
A06 Review regulatory barriers (OPUC)	M. Galbraith (NPCC)	Completed OPUC workshop on 5/11/07. Risk allocation issues for non-firm and conditional firm transmission utilization were also vetted at conference of western regulatory commissions in Santa Fe, NM on September 14. OPUC staff member with responsibility for implementing this Action has left the OPUC. Organizational responsibility re-assigned to M. Galbraith at NPCC.	Prepare outline of barriers and potential solutions for regional utility commissions (M. Galbraith). Assemble regulators from all four states in early 2008 for focused work session.		End of 2007
A07 Improve use of transmission (BPA)	M. Jackson (BPA)	BPA pilot redispatch project implemented during summer 2007. Phase 2 being expanded to include generators outside of BPA control area in 2008. BPA and other regional utilities including conditional firm product offerings in their FERC Order 890 tariffs. Idaho Power has developed a proposal to allow 200 MW of additional wind projects onto their existing transmission system by using congestion management tools as a way to defer eventual construction.	Define, implement Phase 2 of BPA redispatch pilot. Monitor implementation, workability of conditional firm service.		Continuing
A08 Develop plans of service for W. of McNary, I-5 Corridor and N&S Cross-Cascades reinforcements (BPA)	K. Kohne (BPA)	Plans of Service prepared and WECC Regional Planning Review (RPR) underway for W. of McNary and I-5 Corridor projects. Cross-Cascades: Continue joint studies.	RPR report to WECC by end of Dec. 2007 for W of McNary; later for I-5 Corridor.	Additional proposals for transmission into and out of McNary area being brought into scope of RPR analysis.	EOY 2008

Action (Lead Org)	Task Lead	Status	Next steps	Issues	Target Completion
A09 Develop transmission financing model (BPA)	M. Jackson (BPA)	Working w/stakeholders, BPA has developed a new model for financing commercial transmission infrastructure. BPA plans to use third party financing, supported by transmission service commitments (Precedent Agreements) secured through a Network Open Season process and determinations of future beneficial uses. Precedent Agreements will be used to winnow the BPA interconnection queue.	First Network Open Season planned for Feb - Mar 2008.		Model development complete
A10 Evaluate delivery of wind energy from Montana (NTAC)	Not assigned	Several major transmission projects to access remote wind resource areas, including MT have been proposed in recent months. Western Governor's Assn proposed Western Renewable Energy Zone (WREZ) project would identify prime renewable resource zones and evaluate transmission needs.	Steering Committee inclined to evaluate existing transmission proposals rather than to define conceptual transmission upgrades. However, NPCC staff requested to follow WREZ effort.	Organize effort to evaluate proposed projects.	Jul 2008
A11 Evaluate wind forecasting network (BPA)	E. Mainzer (BPA)	2008 Task			Jul 2008
A12 Report on ACE Diversity Interchange pilot (Participating utilities)	C. Opatrny	Pilot complete Jul 07. Benefits appear to be considerably greater than costs and many important technical issues have been clarified. Results being evaluated by NW Power Pool for application to entire Pool.			Pilot Complete

Action (Lead Org)	Task Lead	Status	Next steps	Issues	Target Completion
A13 - Expand market for flexibility (Wind Integration Forum)	E. Mainzer (BPA)	A task force consisting of PacifiCorp, Grant, NorthWestern, PowerEx, BCTC, PGE, Avista and BPA representatives have developed a Dynamic Load Following product, to allow a balancing area operator to procure within-hour flexibility from another balancing area or independent power producer. The team has worked through the technical issues associated with providing the service and is developing a standard term sheet. Legal and regulatory issues associated with pricing of the service are being ironed out.	Plans are underway to develop one or two pilot transactions in early 2008.		EOY 2007
A14a - Characterize flexibility augmentation options (Wind Integration Forum)	M. Galbraith (NPCC)	A Flexibility augmentation Subcommittee discussed ideas intended to lead to a task workplan at the Dec 08 kickoff meeting.	NPCC staff will complete a work plan and organize two webinars, one featuring experts in conventional flex aug technologies and a second featuring experts in advanced flex aug technologies.		EOY 2008
A14b - Characterize flexibility tradeoffs (NPCC)	J. King (NPCC)	2008 Task	Incorporate in work plan for 6 th Power Plan		EOY 2008
A15 Develop planning framework to maximize value (NPCC)	J. King (NPCC)	2008 Task	Incorporate in work plan for 6 th Power Plan		6th Power Plan
A16 Establish Wind Integration forum (NPCC)	J. King (NPCC) E. Mainzer (BPA)	Charter adopted Apr 2007. Print version of WIAP Aug 2007. Tech Work Group mtgs May, Jul 07; Steering Committee mtgs Jan, Nov 07. Qtrly task status memo Sep, Nov 07.	Next meeting of Tech Work Group Jan 08. Next meeting of Steering Committee Summer 08.		Ongoing