

Process Evaluation
of the
Non-Wires Solution Initiative

FINAL REPORT

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by:



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For BPA Internal Use Only

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1.0 Executive Summary

This report presents an independent assessment, conducted by GDS Associates (GDS), of the Bonneville Power Administration's (BPA) Non-Wires Solutions (NWS) initiative development process and the current state of the initiative. NWS is a broad effort to identify viable non-transmission alternatives to transmission expansion. BPA defines non-wires solutions as the broad array of alternatives, including but not limited to demand response, distributed generation, conservation measures, generation siting and pricing strategies that individually or in combination delay or eliminate the need for upgrades to the transmission system.

The primary source of information for this NWS evaluation is in-depth, confidential interviews conducted with fourteen (14) BPA staff members, both active and retired. Each interview was conducted by a cross-discipline team of two (GDS) consultants, one with expertise in interviewing techniques and energy efficiency, and the other with technical knowledge of electric transmission and distribution planning and operations.

The goal of this evaluation was to evaluate what has worked well and what has not in support of the NWS initiative development and progress. More specifically, the evaluation sought to:

- Assess the successes and weaknesses of the NWS initiative, including an evaluation of the development process, progress, and direction of NWS.
- Evaluate what processes have worked well and what have not to date.
- Evaluate individually, whether recommendations from the "Expansion of BPA Transmission Planning Capabilities" report were adopted and implemented according to the report. This study and subsequent report was the catalyst that helped launch the NWS initiative.

1.1 Overview of the Evaluation Methodology

GDS conducted in-depth, one hour interviews with fourteen individuals from the following functional areas within BPA:

- Operations & Planning
- Transmission Business Line
- Energy Efficiency
- Technology and Innovation
- Marketing & Sales
- Environmental Protection
- Load Forecasting

Individuals from these functional areas were selected because they are either actively involved in the NWS initiative or because GDS and BPA felt that they represented a unique perspective that could add significant value to the evaluation. In-person interviews were conducted with seven of the fourteen interviewees. These were determined by BPA to be key interviews, the results of which would be enhanced by in-person contact. The

remaining seven interviews were conducted by phone. An interview guide was used to assure that the same questions were addressed in all interviews. Questions on the interview guide were grouped into the following topics:

- Roles & Responsibilities
- Initiative Goals
- Initiative Design
- Initiative Implementation
- Transmission & Resource Planning
- Cost Impact & Allocation
- Initiative Resources
- Conclusions

While most of the questions asked during the interview were open-ended to allow for in-depth responses and probing by the interviewers, several closed-end questions were also included. These closed-end questions allowed each respondent to express their opinion on key aspects of the NWS initiative in a manner that can be more easily quantified, compared and summarized. Questions in the interview guide address the following aspects of the NWS initiative:

- Strengths and weaknesses in all areas of the process and the reasons why certain things are working well and others are not.
- NWS progress to date and success stories.
- Evaluation of the NWS planning process and identification of potential process improvements.
- Evaluation of the implementation process and implementation activities, with a focus on identifying and eliminating implementation barriers.
- Respondent knowledge of NWS goals and strategic direction, and suggested changes.
- Implementation of recommendations from the “Expansion of BPA Transmission Planning Capabilities” report: Evaluate whether each recommendation from the report was adopted and if so, what were the problems encountered and lessons learned. If a recommendation was not implemented, what is the status and why.

Each interview was recorded and transcribed and all of the responses to closed ended questions were entered into a database for tabulation and analysis.

1.2 Conclusions

The conclusions below summarize the detailed analysis of in-depth interview results which can be found in Section 7.0. They are grouped by the main research areas that were probed with each interviewee.

Before summarizing the results, it is important to note the following:

- This is an evaluation of a process that after five years has implemented some pilot programs, but has not yet selected any NWS options for implementation.

- The conclusions and recommendations that follow are based on information that was collected during the fourteen (14) in-depth interviews with BPA staff, as defined in the scope of work for this project
- A process evaluation, by design, solicits opinions from individuals with different roles, responsibilities and perspectives with regard to the program process that is being evaluated. Therefore, it is expected that there will be conflicting views that are influenced by these different perspectives.
- The findings and conclusions sections in this report summarize what was said to the GDS interview team as accurately as possible, highlighting consistent themes and significant differences of opinion on key issues.

Communications

- External Communications - BPA is doing a better job with external communications on the NWS initiative than it is with internal communications. In fact some interview participants expressed concern that BPA's external communications may have actually created unrealistic expectations that have not all been met. There was also some concern expressed that the level and quality of the external communications effort has dropped since an individual who spearheaded the communication effort retired.
- Internal Communications – Problems with internal communications, include lack of agreement between Energy Efficiency and Transmission Planning regarding the value and reliability of non-wires solutions. Bias for the solution (transmission or non-wires) that is aligned with the activities of their organization, and lack of common tactical goals are cited as reasons for this difference of opinion. The timeliness and extent of communication between BPA organizations that are involved in the NWS initiative, and not enough big picture communication at the staff level were also identified by interviewees as internal communication problems. .
- Suggestions for Improving Communications – The interview participants made a number of suggestions for improving communications that focused primarily on internal communications. They included, enhancing cooperation between Energy Efficiency and Transmission Planning through more joint goals and work efforts, and bringing Energy Efficiency into the process early enough to assure that BPA has adequate time to develop and implement non-wires alternatives.

Initiative Goals

- There is a fairly consistent understanding of the overarching goal of deploying non-wires solutions to defer transmission investment when it would be cost-effective and when it provides equivalent reliability. While there is much less consistency in the interviewee's description of short and intermediate term tactical goals, the most frequently mentioned tactical goals are probably the most important. These are: (1) identifying and incorporating changes into the

transmission planning process that will allow non-wires solutions to be appropriately considered; and (2) institutionalizing this new planning process. A summary list of interview participant descriptions of tactical (short & intermediate term) goals can be found in Table 7.2.1 in Section 7.2.

- Most interview participants believe that the NWS initiative has the goals right, but many also qualified their answers, saying that goals should not be politically driven and should be made clear to everyone involved. Others expressed concern that maybe expectations are too high, NWS is much more complex than originally envisioned and that it (the NWS initiative) may not work over the long run.
- Overall, the interview participants' opinion regarding how well goals have been met is that BPA has not been either outstanding or a failure in meeting initiative goals, but rather has been partially successful.

Initiative Design

- There is concern that NWS initiative activities including the transmission planning process, the NWS Round Table and pilot projects do not align well with what the initiative is intended to accomplish. Only half of the interview participants indicated that they were aligned and most of them qualified their answer. Concerns expressed included tools not being designed early enough, doing too many pilots, and not providing the opportunity for input to the decision making process at a stage where it might make a difference.
- Regarding BPA's implementation of major recommendations made in the "Expansion of BPA Transmission Planning Capabilities" report, interview participants indicated that recommendations regarding implementation of a new screening process have been the most adequately adopted. Those that were identified as not being adequately adopted involved reporting and communications, including production of a biennial system-wide report that describes the expected use of BPA's transmission facilities over the following 10 years, and entering into discussions with interested parties of the alternative cost-effective and reliable non-wires actions that they could take individually and collectively. Overall the group felt that BPA has been partially successful in implementing recommendations made in the "Expansion of BPA Transmission Planning Capabilities" report.
- The NWS Round Table has been useful, but some interview participants expressed concern that while it was useful early on, its role and value has diminished as the NWS initiative has matured. The biggest perceived benefits of the Round Table are that it allows different perspectives to be heard, fosters cooperation among various interest groups, and lends significant credibility to the effort, especially with the environmental community

Initiative Implementation

- The most successful aspects of the initiative are perceived to be those that involve external communications, the improved transmission planning process and a cultural change within TBL that allows non-wires solutions to be considered.
- There were significantly fewer aspects of the NWS initiative that interview participants identified as “not working as planned.” The responses, which were more focused on detail aspects of NWS initiative activities addressed: (1) Round Table goals and member commitments; (2) the transmission planning horizon and the impact of changing the preferred transmission planning option on potential non-wires solutions; and (3) the lack of local area data that is needed to assess the potential for non-wires solutions. A more complete listing of the most and least successful aspects of the NWS initiative, as identified by interview participants, can be found in Table 7.4.1 in Section 7.0.
- Regarding specific barriers and bottlenecks that limit the success of the NWS initiative, interviewees again brought up internal communications problems along with different view points on the value and reliability of non-wires solutions, inadequate staffing and funding, and the varying levels of importance that retail utilities in the region place on non-wires solutions.

Transmission Planning Issues

- Potential Impact on System Reliability – The overwhelming opinion was that the NWS initiative would have no positive or negative impact on system reliability, with some making the point that non-wires solutions must be designed to have no negative impact on reliability.
- Ease of Understanding – The response on this issue was mixed with a majority of the interview participants indicating that the NWS planning process is clear and understandable to those that need to know within BPA, but not so well understood by those outside of BPA.
- Proper Consideration of All Alternatives – Half of the interview participants said that they believe that the transmission planning process allows for proper consideration of NWS initiatives. Others that were outside of transmission and energy efficiency planning were not sure, indicating a lack of knowledge about the transmission planning process. A concern that was again mentioned is that the planning process does not allow adequate time for consideration of non-wires solutions.
- Proper Capturing of All Benefits and Costs of Each Alternative – This appears to be an area that needs further assessment as only three interview participants felt that the economic comparison of transmission and NWS appropriately captures all of the cost and benefits of each alternative. Concerns mentioned included not

capturing transmission construction overrun costs and not having all the information to do the location-specific deferral of distribution.

- Bias in the Process that Favors One Option Over Another – Two thirds of the interview participants believe that there is bias in the transmission planning process. Some said the bias was for transmission and others indicated it was for non-wires, with turf playing a role in which option was favored.

Cost Impact and Allocation Issues

- Interview participants were almost unanimous in their opinion that customers will perceive inequities in geographically targeted energy efficiency. Most talked about the perception being at the retail end-user level, while a couple felt that other utilities in the region that are not getting some of the NWS money might also perceive this as an inequity.
- Who pays for implementation of non-wires alternatives, is a very important issue that most agreed is not yet settled.

Initiative Resources

- The overwhelming response of interview participants was that, BPA does not have enough resources dedicated to the NWS initiative. Comments were mostly directed at what is perceived to be an inadequate level of Energy Efficiency staff.

Overall Program Assessment

- The strengths of the initiative are mostly perceived to be those that involve external communication and education, regional participation, cultural changes within the organization and the potential to provide a lower cost environmentally friendly solution.
- The weaknesses that were identified by the interview participants involve internal communications, not moving beyond pilots, not working out who will pay, inadequate staffing and funding, Round Table advocacy and commitment, and reliability concerns regarding non-wires solutions.
- Regarding suggested improvements to address the perceived NWS initiative weaknesses, interviewees focused on building more lead time into the transmission planning process to allow for proper consideration of non-wires solutions, educating and adding staff, getting more buy-in from regional utilities, increasing management commitment, and solving the issue of who will pay for non-wires solutions.
- The interviewees were almost unanimous in their opinion that NWS can be implemented fast enough to defer or eliminate the need for new transmission if changes are made to address program weaknesses. Moreover, ten of the fourteen

interview participants indicated that the chance of a NWS project being implemented in the next five years is at least 50/50.

1.3 Recommendations

1. Develop an external communications plan that includes a review of the mission of the NWS Round Table to determine if changes should be made to better align its role with current NWS initiative activities and goals. All communications goals should be measurable and also be included in the individual performance goals of at least one individual within the organization that is responsible for implementing the communications plan. To assure that stakeholder expectations are not set too high, all external communications regarding NWS activities and goals should be aligned with internal goals.
2. Review existing non-wires goals and identify or add joint Transmission Planning and Energy Efficiency tactical (staff level) goals to be worked on by a joint team of technical/planning staff from both organizations. This team should report to the existing joint NWS management team. The joint goals should be measurable and be reflected in the individual performance goals of all team members.
3. Review the NWS planning process timeline and make any changes that are necessary to assure that Energy Efficiency gets involved early enough to allow non-wires alternatives to be fully planned and developed as viable solutions.
4. Conduct a review of existing Transmission and Energy Efficiency Planning tools to determine if new or enhanced tools are needed to fully integrate non-wires alternatives into the transmission planning process. This should include a review of the benefit/cost analysis methodology to determine if it is properly capturing all of the benefits and all of the costs of both transmission and non-wires alternatives.
5. Identify local area data that is required to support a comprehensive and reliable analysis of non-wires alternatives, determine where gaps exist in BPA's currently available data, and assess the benefits and costs of collecting the additional information.
6. Work proactively with regional utilities and state commissions to address NWS funding issues, including who should pay for the implementation of non-wires solutions.
7. Prepare a manpower and staff training plan that reflects both current and future NWS requirements and the potential need to ramp up staff quickly as new transmission expansion projects are identified. Training should target both Energy Efficiency and Transmission Planning Staff and address planning tools, energy efficiency programs, load management technologies and the transmission planning process.

2.0 Introduction

This report presents an independent assessment, conducted by GDS Associates (GDS), of the Bonneville Power Administration's (BPA) Non-Wires Solutions (NWS) initiative development process and the current state of the initiative. NWS is a broad effort to identify viable non-transmission alternatives to transmission expansion. In 2001, BPA commissioned a study to evaluate its transmission planning function. The study resulted in a report titled "Expansion of BPA Transmission Planning Capabilities" which was written by a team of consultants (E3, Tom Foley, and Eric Hirst). This study and subsequent report was the catalyst that helped launch the NWS initiative.

The primary source of information for this NWS evaluation is in-depth, confidential interviews conducted with fourteen BPA staff members, both active and retired. Each interview was conducted by a cross-discipline team of two GDS consultants, one with expertise in interviewing techniques and energy efficiency, and the other with technical knowledge of electric transmission and distribution planning, and operations. GDS also reviewed a number of key NWS reports and other documents that were either available on the BPA website or provided by BPA.

3.0 Goal of the Evaluation

The goal of this evaluation was to evaluate what has worked well and what has not in support of the NWS initiative development and progress. More specifically, the evaluation sought to:

- Assess the successes and weaknesses of the NWS initiative, including an evaluation of the development process, progress, and direction of NWS.
- Evaluate what processes have worked well and what have not to date.
- Evaluate individually, whether recommendations from the “Expansion of BPA Transmission Planning Capabilities” report were adopted and implemented according to the report. If not, assess what did happen and the status of the recommendations. If a recommendation was implemented, identify if any problems were encountered.

4.0 Overview of NWS Initiative

The Bonneville Power Administration defines non-wires solutions as the broad array of alternatives, including but not limited to demand response, distributed generation, conservation measures, generation siting and pricing strategies that individually or in combination delay or eliminate the need for upgrades to the transmission system. BPA owns and operates 75 percent of the Pacific Northwest's electrical transmission system, a system that includes more than 15,000 miles of high-voltage transmission line and 285 substations. At peak usage, the system transports about 30,000 megawatts of electricity to customers in Oregon, Washington, Idaho and Montana, as well as to parts of Wyoming, Nevada, Utah and California. BPA did not undertake any substantial transmission construction between 1987 and 2003. Over that period, the BPA Transmission Business Line (TBL) upgraded communications and control systems, installed equipment for voltage support and made other technical fixes to strengthen the Northwest's transmission grid in areas where there were problems. Since 1999, the system has operated at or near capacity to meet demand. Some areas on the system are more congested than others, particularly at times when loads or transfers are heavy.

BPA has aggressively pursued conservation and energy efficiency for over 20 years. The idea of targeting these activities to geographic areas to defer constructing transmission lines began taking shape in 2001, when TBL started to consider a broader approach to transmission planning that included non-wires solutions. To help build a solid foundation for this new approach, TBL commissioned a study of its transmission planning process with a focus on incorporating non-wires solutions. The study reviewed the existing planning process and identified improvements that would ensure that options other than transmission line construction were appropriately identified and considered early enough in the planning process to make a difference. The resulting report entitled *Expansion of BPA Transmission Planning Capabilities: A Report on Non-Transmission Alternatives*, offered recommendations for improving the transmission planning process, and provided an approach for determining when non-wires solutions were cheaper, and equally reliable to construction of a new transmission facility. In 2002, BPA announced its Non-Wires Solutions initiative and committed to identifying and investigating:

- Least-cost solutions that may result in deferring potential transmission reinforcement projects.
- Ways to incorporate the planning methodology proposed in the study into the transmission planning process.
- Opportunities for and potential constraints on integrating non-wires solutions into the transmission system.
- A set of criteria to help determine when non-wires solutions are feasible and when they are not, including developing a set of screening tools for future non-wires candidates.
- Ways to integrate the work from this effort sufficiently early in the planning process so that non-wires solutions can make a difference.

Since creating the NWS initiative and identifying the above goals, BPA has developed a planning process that includes screening transmission projects for their potential as candidates for non-wires solutions, preparing a biennial system-wide report that looks ten

years into the future, conducting non-wires pilot projects and preparing a programmatic environmental impact statement (EIS) for transmission policy issues.

In 2003, the Non-Wires Solutions Round Table was formed to assist BPA in determining whether non-wires alternatives are viable options to transmission expansion. It also helps BPA determine economic, technical and institutional barriers preventing the implementation of non-wire solutions. The Non-Wires Round Table is now in its fourth year of attempting to build regional confidence and acceptance for a new approach to transmission planning.

To help develop their expertise with NWS options, BPA has completed analyses of such options for the Olympic Peninsula, Kangel-Echo Lake, Lower Valley, North Idaho and the Southern Oregon Coast. Additionally they have designed and implemented a pilot program to test the ability of specific non-wires measures in meeting transmission needs. Measures tested include demand reduction, distributed generation aggregation, direct load control, commercial building control, micro turbines, and motor load control. After almost four years of such analyses, BPA has not selected any transmission projects for NWS implementation.

5.0 Methodology

The evaluation of BPA's NWS initiative began with a review by GDS of key reports and other information regarding the initiative and high level transmission planning procedures. Additional information on the reports and other documents that were reviewed can be found in Section 6.0. Following this review, GDS conducted in-depth, one hour interviews with fourteen individuals from the following functional areas within BPA:

- Operations & Planning
- Transmission Business Line
- Energy Efficiency
- Technology and Innovation
- Marketing & Sales
- Environmental Protection
- Load Forecasting

Individuals from these functional areas were selected because they are either actively involved in the NWS initiative or because GDS and BPA felt that they represented a unique perspective that could add significant value to the evaluation. All interviews were conducted by a cross-discipline team of two GDS consultants, one with expertise in interviewing techniques and energy efficiency, and the other with transmission and distribution system planning and operations expertise. In-person interviews were conducted with seven of the fourteen interviewees. These were determined by BPA to be key interviews, the results of which would be enhanced by in-person contact. The remaining seven interviews were conducted by phone. An interview guide, which can be found in Appendix A, was used by the interviewers to assure that the same questions were addressed in all interviews. Questions on the interview guide were grouped into the following topics:

- Roles & Responsibilities
- Initiative Goals
- Initiative Design
- Initiative Implementation
- Transmission & Resource Planning
- Cost Impact & Allocation
- Initiative Resources
- Conclusions

While most of the questions asked during the interview were open-ended to allow for in-depth responses and probing by the interviewers, several closed-end questions were also included. These closed-end questions allowed each respondent to express their opinion on key aspects of the NWS initiative in a manner that can be more easily quantified, compared and summarized. All closed-end questions included measurable responses where for example, one equals "very successful" and five equals "not successful at all." Questions in the interview guide address the following aspects of the NWS initiative:

- Strengths and weaknesses in all areas of the process and the reasons why certain things are working well and others are not.
- NWS progress to date and success stories.
- Evaluation of the NWS planning process and identification of potential process improvements.
- Evaluation of the implementation process and implementation activities, with a focus on identifying and eliminating implementation barriers.
- Respondent knowledge of NWS goals and strategic direction, and suggested changes.
- Implementation of recommendations from the “Expansion of BPA Transmission Planning Capabilities” report: Evaluate whether each recommendation from the report was adopted and if so, what were the problems encountered and lessons learned. If a recommendation was not implemented, what is the status and why.

Each interview was recorded and transcribed and all of the responses to closed ended questions were entered into a spreadsheet database for tabulation and analysis.

6.0 Summary of Literature Review

As part of this process evaluation, GDS reviewed a number of key reports and other information on BPA's NWS initiative, including:

- Expansion of BPA Transmission Planning Capabilities: A Report on Non-Wires Solutions prepared by Energy and Environmental Economics, with consultants Tom Foley and Eric Hirst, November 2001.
- A Two-Year Report on BPA's Non-Wires Solutions Round Table Initiative, September, 2004.
- Assessment of Energy Efficiency, Demand Response, and Distributed Generation Potential in the Southern Oregon Coast Area, March, 2006.

The information contained in these and the many other key NWS publications and internal documents provided a solid base of knowledge for this evaluation. A complete list of all NWS reports and other documents that were reviewed can be found in Appendix C.

7.0 Findings

This section presents the results of the in-depth interviews conducted with BPA staff. In general, the interviews conducted during this evaluation proved to be very informative and offered an excellent opportunity to hear the details of NWS initiative goals, accomplishments, issues and opportunities from multiple perspectives.

A process evaluation, by design, solicits opinions from individuals with different roles, responsibilities and perspectives with regard to the program process that is being evaluated. Therefore, it is expected that there will be conflicting views that are influenced by these different perspectives. The findings and conclusions sections in this report summarize what was said to the GDS interview team as accurately as possible, highlighting consistent themes and significant differences of opinion on key issues.

Detailed results are grouped below into nine categories that are consistent with the key areas that were identified in the interview guide and probed during the interviews. These categories are:

- Roles & Responsibilities
- Communications
- Goals
- Initiative Design
- Initiative Implementation
- Transmission Planning
- Cost Impact & Allocation Issues
- Initiative Resources
- Overall Program Assessment

7.1 Roles, Responsibilities and Communications

Roles and responsibilities of the fourteen BPA interviewees were widely varied and included all aspects of the NWS initiative including transmission planning, transmission services, energy efficiency, internal and external communications, research, technology and load forecasting. Both management and non-management staff were interviewed so that we could gain a more balanced perspective and identify any significant differences of opinion that may exist across both functional and organizational lines. While most of the individuals that were interviewed are currently involved in the NWS initiative, we also included others that previously played key roles. This helped us gain better understanding of how the initiative has evolved over time.

When asked to describe their NWS responsibilities, all of the individuals that were interviewed demonstrated that they clearly understood their roles and how they fit into overall NWS process.

Interviewees were also asked how they would characterize the adequacy of internal and external communications regarding the NWS initiative, and what they would suggest to improve communications.

Adequacy of External Communications

- There was a general consensus that BPA has done a good job with external communications, with some concern that they may have actually created unrealistic expectations that have not all been met.
- Examples of useful external communications activities that were cited include the NWS Round Table, the NWS page on the Transmission Business Line's website and NWS newsletter that is no longer produced.
- There was another view expressed by an interviewee that people outside of BPA are "out of the loop." The recent decline in the frequency of NWS Round Table meetings and the timeliness of getting information out to the Round Table were cited as something that leaves the impression that BPA is not interested in communicating externally. This different perspective on external communications might be explained by another opinion that was expressed that external communications dropped off when the individual who spearheaded the communication effort retired.

Adequacy of Internal Communications

- Nine of the fourteen people interviewed identified problems with internal communication, including:
 - Transmission Planning and Energy Efficiency turf issues
 - Harder to find NWS information internally than it is externally
 - Minimum big picture communication at the staff level. Planners do not always understand how the information or analysis they provide will be used.
- One reason cited for the Transmission Planning and Energy Efficiency turf issues is differing definitions of NWS initiative success. "The energy efficiency side saw killing a transmission project as a success and the transmission side saw keeping a transmission project as a success."

Suggestions for Improving Communications

- Communicate with the Energy Efficiency group early in the process so that BPA has adequate time to develop and implement non-wires alternatives.
- Create a joint NWS work effort that cuts across organizations.
- Include NWS goals, including communication, in individual performance packages, such as those negotiated by management at the beginning of each year.
- Make internal communication more inclusive and timely across the entire agency, especially among internal participants in the NWS initiative. Let people know how the NWS initiative fits into their regular work and how important it is for the agency. Specific suggestions include monthly NWS updates, a newsletter and commitment by involved BPA organizations to integrate NWS information into their internal communications.

- Having staff within Transmission Planning that is dedicated to the NWS initiative would improve communications by giving Energy Efficiency staff and others involved in the effort a definite point of contact for ongoing communications.
- Better attendance at meetings and conference calls.
- Webcast meetings and then archive them for future viewing by outside parties.
- A greater commitment from NWS Roundtable members to work with BPA to get the word out to the general public about the NWS initiative

7.2 Initiative Goals

Each interview participant was asked to describe the major short, intermediate and long term goals of the NWS initiative, and whether or not these are the right goals. If they responded that some of the goals were not the right goals, then they were asked to provide suggestions on how goals might be changed. Finally each interviewee was asked to rank on a scale of one to five, where one is “met well” and five is “not met at all,” the extent to which they believe that the goals of the initiative have been met

Only two of the fourteen interview participants indicated that they were not at all familiar with any NWS initiative goals. Another said that they did not think that there were any major goals, but was familiar with the overall purpose of the initiative. Of those that stated that they were familiar with the goals, there was a fairly consistent understanding of the overarching goal of deploying non-wires solutions to defer transmission investment when it would be cost-effective and when it provided equivalent reliability. There was less agreement on the more tactical or short/intermediate term goals. The following table summarizes the tactical goals that were identified and the number of interview participants that identified each one as a tactical goal.

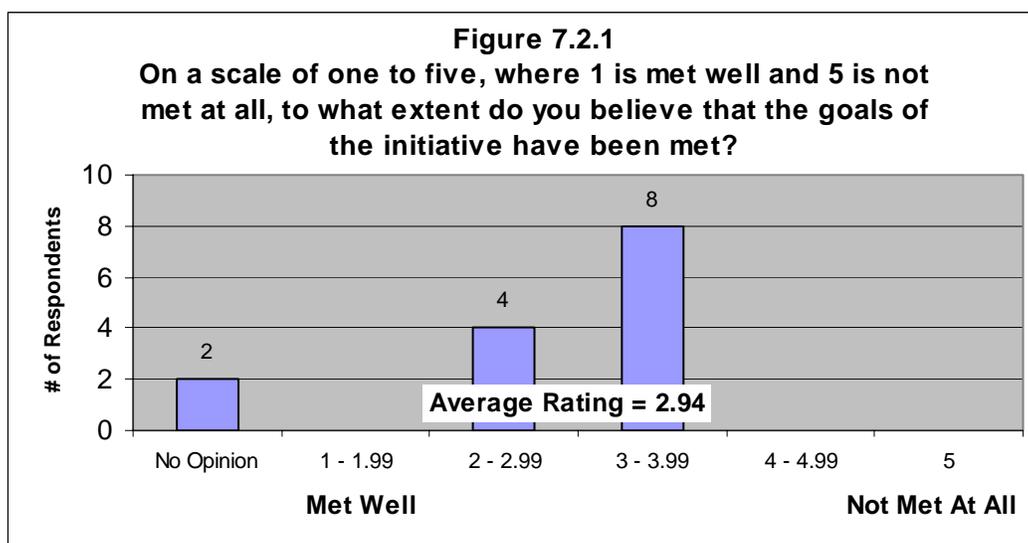
Tactical Goals	Number of Survey Participants
Incorporate NWS into the transmission planning process	4
Develop screening criteria for creating a level playing field for NWS and transmission alternatives	2
Identify changes that will need to be made to the planning process	2
Institutionalize new NWS practices	2
Educate staff, policymakers and stakeholders	1
Get input from stakeholders	1
Do something about lost retail utility revenues	1
Effectively manage the whole process	1
Look at alternatives at the time of the environmental review	1
Implement industrial load control strategies in the Puget Sound area	1

It is clear from the above response that the most frequently identified tactical goals all involve changing the transmission planning process at BPA to include equal consideration of non-wires alternatives.

Regarding whether or not the identified goals are the “right” goals, ten of the fourteen individuals interviewed said that they believed that the NWS goals were the right goals. Two were not familiar enough with the goals to comment, one individual was not sure and another felt that the goal should be to move from demonstration projects to actual deferral of a transmission line with a cost-effective non-wires solution. Many of those that indicated that the NWS initiative had the goals right also qualified their answers, saying that:

- Goals should not be politically driven
- Not sure NWS will work over the long run
- There could have been additional goals and they could have been made clearer
- Maybe the expectations are too high
- This is much more complex than originally envisioned

Figure 7.2.1 presents a summary of responses to a question that asked interview participants to rate on a scale of one to five, where one is “met well” and five is “not met at all,” the extent to which the NWS initiative goals have been met. The average rating of 2.94 is right about in the middle of the rating range, with 3 being the most common response. Clearly the group feels that BPA has not been either outstanding or a failure in meeting initiative goals, but rather has been partially successful.



7.3 Initiative Design

Interview participants were asked to identify major NWS activities and whether or not they aligned well with NWS goals. The interview team then reviewed with them each of the NWS recommendations made in the “Expansion of BPA Transmission Planning Capabilities” report, and asked if each recommendation has been adequately adopted. Interviewees were also asked to comment on problems encountered, lessons learned and the value of the NWS Round Table.

NWS activities involving planning and analysis, such as development of screening and analytical tools and integration of NWS into the transmission planning process were appropriately identified by half of the interviewees as major initiatives. The Round Table

and pilot projects were identified as major activities by four and five of the interview participants, respectively.

Half of the interview participants indicated that the NWS initiative activities align well with what the initiative is intended to accomplish, but most qualified their response, saying that:

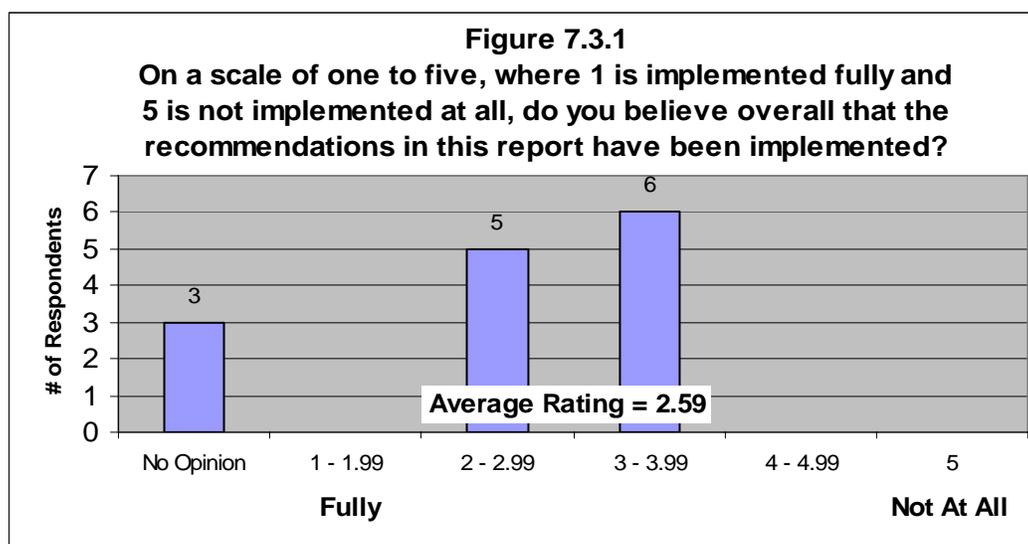
- BPA should have designed some of the tools right up front.
- There is not enough support and knowledgeable staff to do real projects.
- BPA probably did more pilots than were needed, and some of it was more busy work than strategic work.
- Projects like Bandon and Olympic Peninsula got started and then it seemed like they were just dropped.
- The process, as it is currently operated, is not providing the opportunity for input to the decision making process at a stage where it might make a difference.
- BPA may have erred in trying to apply NWS across the board. In some areas it is clear because of pattern of load growth and development that new transmission will be needed.

Table 7.3.1 below presents a summary of responses to a question that asked interview participants if specific major recommendations made in the "Expansion of BPA Transmission Planning Capabilities" report have been adequately adopted. The only overwhelming response that a recommendation has been fully adopted is seen for recommendation #7 in the table, which involves taking projects through the new screening process. Consistent with this response, seven of the twelve interview participants said that recommendation #2, the refinement and implementation of TBL's planning process to screen proposed transmission projects against various forms of suitably located and operated generation, load management and transmission pricing has been adequately adopted. Two recommendations stand out as those that may not have been fully adopted. These are recommendation #1 - Production of a biennial system-wide report that describes the expected use of BPA's transmission facilities over the following 10 years, and recommendation #5 - Ask interested parties to analyze the results of the workshop, and be prepared to enter into detailed discussions of alternative cost-effective and reliable non-wires actions that they could take individually and collectively.

Table 7.3.1				
Have NWS recommendations made in the "Expansion of BPA Transmission Planning Capabilities" report been adequately adopted				
NWS Recommendation	# of Respondents (N=12)*			
	Yes	No	Partially	Not Known
1. The production of a biennial system-wide report that describes the expected use of BPA's transmission facilities over the following 10 years.	2	8	-	2
2. Refinement and implementation of TBL's existing planning process to screen specific proposed transmission projects against the costs of various forms of suitably located and operated generation, load management, and transmission pricing.	7	-	2	3
3. TBL should produce a long-term view of the transmission plan that includes expected congestion points, and the associated long-run differential costs of delivering power to various points on the grid.	4	-	4	4
4. TBL should conduct a scoping workshop with interested parties to display and discuss the long-term view of the transmission plan and incorporate potential reinforcement plans identified by other parties into long-term view.	5	2	2	3
5. Ask interested parties to analyze the results of the workshop, and be prepared to enter into detailed discussions of alternative cost-effective and reliable non-wires actions that they could take individually and collectively.	3	7	1	1
6. Conduct a second workshop wherein all regional stakeholders can discuss options within their jurisdiction that can help to alleviate the problems identified in TBL's initial long term view.	3	5	3	1
7. Taking two of the currently proposed G-20 projects through the proposed new screening process. This effort would refine the proposed screening process and help decide whether economic and reliable alternatives exist to delay transmission construction of either or both projects.	11	-	1	-

* Total number of respondents equals 12 (out of 14 interviews). Two individuals were unfamiliar with the NWS recommendations made in the "Expansion of BPA Transmission Planning Capabilities" report and did not feel comfortable commenting on each recommendation

Following the discussion of the above individual recommendations, interview participants were then asked to rate the overall success in fully implementing the recommendations made in the "Expansion of BPA Transmission Planning Capabilities" report. Figure 7.3.1 below summarizes the responses to this question. The overall response is consistent with the mixed opinions expressed regarding whether or not individual recommendations have been adequately adopted. Again the group feels that BPA has been partially successful overall, with an average rating of 2.59, in implementing the recommendations made in the "Expansion of BPA Transmission Planning Capabilities" report.



Regarding the NWS Round Table, most felt that it has been useful, with some indicating that it was useful early on, but its role and value has diminished. Here is a summary of their comments:

- Early on it was a forum for the transmission group and others to exchange ideas, but currently they seem to be outside of the decision process.
- The Round Table pulled together leaders and lent credibility, but participation was too selective and some that wanted to participate were excluded.
- BPA has received significant exposure and gained credibility with the environmental community
- Allowed a lot of different perspectives to be heard and fostered cooperation among various interest groups
- The Round Table was valuable in the beginning to get the process going and lend political support, but it has not been of much value in the analytical and implementation phases of the initiative.

7.4 Initiative Implementation

In this part of the interview participating BPA staff was asked about the most successful aspects of the NWS initiative and those that are not working as planned. They were also asked to identify specific implementation barriers or bottlenecks. The following table lists those aspects of the NWS initiative that the interview participants identified as most and least successful, which is defined as currently not working as planned.

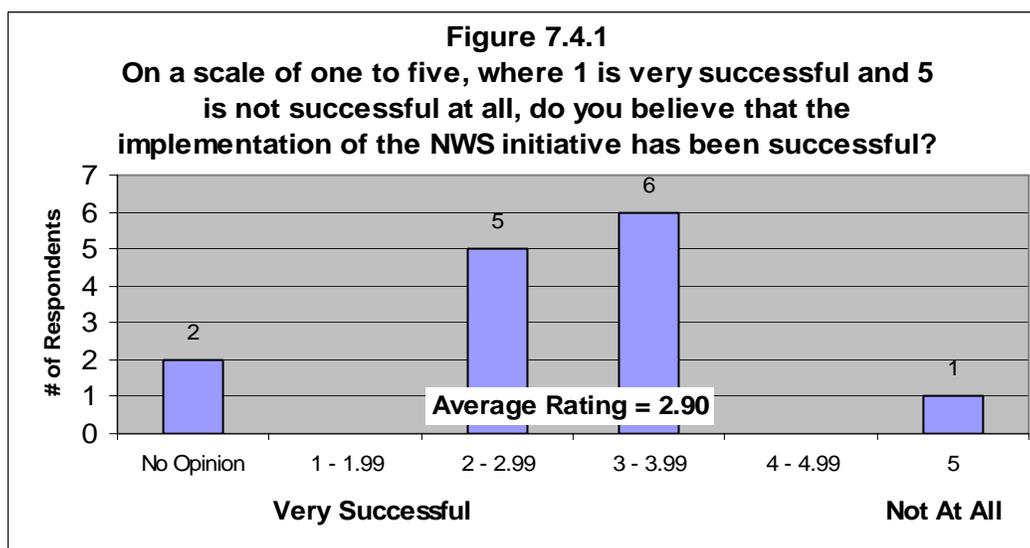
Table 7.4.1 Summary of Interview Participant Responses Most and Least Successful Aspects of the NWS Initiative	
Most Successful	Least Successful (Currently Not Working as Planned)
Getting the major players together to discuss what is in the best interest of the region	The Round Table – need more clarification of purpose and commitment by members
Getting the word out that BPA is interested in pursuing non-wires solutions	The transmission planning process - Horizon and staff focus is too short term and transmission frequently changes the preferred wires solution invalidating what non-wires is bringing to the table
The Round Table	Screening model – some of the model needed to be revised
Addressing institutional issues	Not being able to find an area where non-wires is the preferred alternative
Cultural change within TBL that now allows more acceptance of non-wires solutions	The public process
More open planning process	Lack of information for local areas has made the analysis more site specific and costly than anticipated
Learning from each other and gaining a common understanding of the problem and possibilities for viable solutions	
Just getting attention focused on non-wires solutions	
Work done to examine non-wires alternatives in a number of areas	
Improved planning process results in cost savings	
Demonstration/Pilot Projects including Lower Valley and South Coast of Oregon	

Regarding specific initiative barriers and bottlenecks, the interviewees mentioned the following issues as those that limit the success of the initiative.

- Different view points on the economics of transmission versus energy efficiency options. Transmission argues that if BPA will eventually need a line, it is more affordable to build it now, while Energy Efficiency says defer it now if you can and a few years down the road there might be a cheaper alternative.
- Inadequate staffing on the transmission side prevents them from fully developing wires solutions until late in the planning process.
- There is not enough money on the table unless you are allowed to capture the full value of the non-wires solutions. This includes avoided transmission, distribution and generation costs.
- Regional retail utilities may not place as much importance on the non-wires type solution.
- Siting of distributed generation resources because of environmental concerns

- Energy efficiency does not work proactively with TBL. Instead they respond to requests, as necessary. There is a lack of communication at the technical level.
- The planning process within TBL is not very transparent
- Skepticism on the part of transmission planners regarding the reliability of non-wires solutions.
- Lack of funding for implementation of NWS initiatives
- BPA is a very risk averse organization that tends to want to keep doing what it has always done.
- No joint goals (definition of success) for transmission planning and energy efficiency.

Consistent with the responses to the other quantitative questions regarding meeting NWS goals and adopting recommended approaches, interview participants as a group again said that BPA has been somewhat successful in implementing the NWS initiative. Most responses were clustered around an average rating of 3.



7.5 Transmission Planning Issues

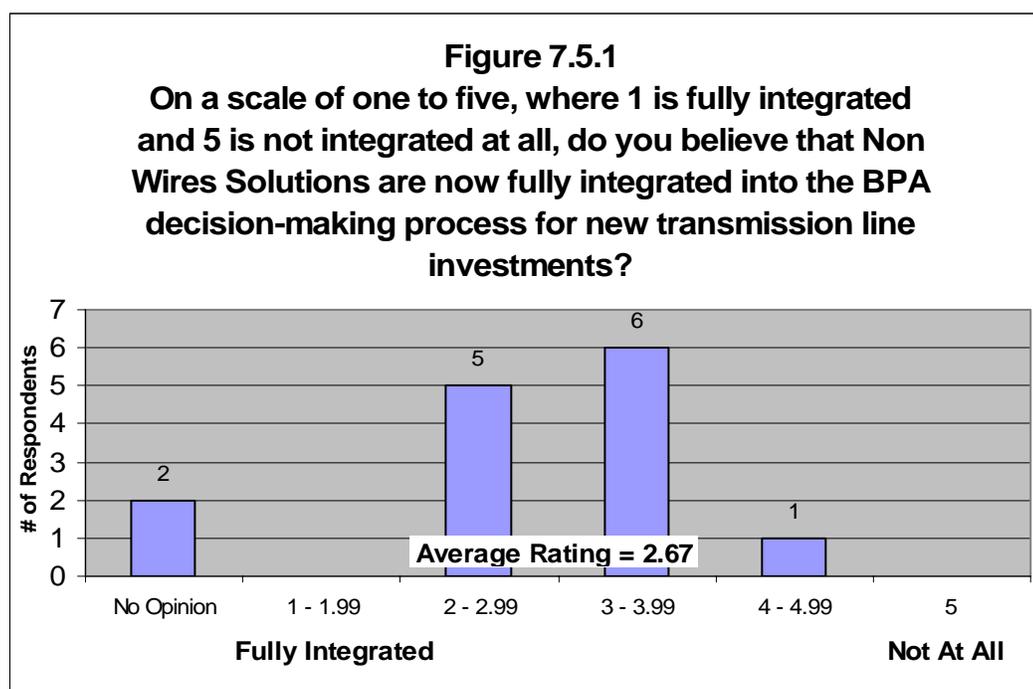
In this important section of the interview, interview participants were asked to comment on the following aspects of the integrated transmission/NWS planning process:

- Potential Impact on System Reliability – The overwhelming opinion was that the NWS initiative would have no positive or negative impact on system reliability, with some making the point that non-wires solutions must be designed to have no negative impact on reliability. One interviewee felt that NWS could actually improve reliability slightly by making more options available.
- Ease of Understanding – Half of the interview participants felt that the NWS planning process is clear and understandable. A few others said that it was, but offered qualifiers that it was not as clear to those outside of BPA and that it was

not as clear on the energy efficiency side. Nine of the interviewees said that the method of comparing alternatives was not well understood by stakeholders.

- Proper Consideration of All Alternatives – Half of the interview participants said that they believe that the planning process allows for proper consideration of transmission and NWS initiatives. Only two said that it did not allow for proper consideration. The others were really not sure. One concern mentioned was that the planning process timeline did not allow adequate time for consideration of non-wires solutions.
- Proper Capturing of All Benefits and Costs of Each Alternative – Only three interview participants felt that the economic comparison of transmission and NWS appropriately captures all of the cost and benefits of each alternative. Five definitively said no, while several others either did not know or were not sure. Comments from those that did not say yes included:
 - Some non-wires benefits have not been well defined.
 - We do not capture transmission construction overrun costs
 - We do not have all the information needed to do the location specific deferral of distribution
- Bias in the Process that Favors One Option Over Another – Of the nine interview participants that said there was a bias, three felt that the bias was for transmission options, two for non-wires and the remaining four primarily saw it as a turf issue. If you are in transmission planning you favor transmission options and if you are in the energy efficiency group your bias is towards non-wires solutions. Six participants provided an opinion on the appropriateness of the bias that they perceived, with three saying that it was fine and three that it was not. Two reasons cited for why this bias is appropriate are transmission system reliability and that it is necessary to force discussion and more creative analysis.

The final question in this section of the interview asked participants to rank on a scale of one to five, where one is “fully integrated” and five is “not integrated at all”, the extent to which non-wires solutions are now fully integrated into the BPA decision-making process for new transmission line investments. Once again, the responses were clustered around an average response, indicating that the overall feeling is that there is still some work to be done before the planning process can be considered fully integrated. Figure 7.5.1 below presents a summary of the responses to this question. The average response at 2.67 is just slightly better than the midpoint of the range.



7.6 Cost Impact & Allocation Issues

Interview participants were asked if they felt that some customers might perceive inequities if energy efficiency is geographically targeted as part of a non-wires solution, and where BPA and other stakeholders stand on the issue of who pays for implementation of non-wires alternatives.

On the issue of customers perceiving inequities in geographically targeted energy efficiency, the response was almost unanimous (one interviewee had no opinion) that yes, customers will perceive inequities. Most talked about the perception being at the retail end-user level, while a couple felt that other utilities in the region who are not getting some of the NWS money might perceive this as an inequity. In explaining their response to this question several interviewees pointed out that:

- While customers might perceive inequities they would be wrong, because this is about avoiding future investment which will benefit everyone; and
- Somebody always sees inequity in what BPA does, especially the mentality of west (heavily populated area) vs. the east (rural area).

Regarding the issue of who pays for implementation of non-wires alternatives, there was general agreement that this is a very important issue that is not yet settled. However, there were differing opinions on the specifics of what has been decided to date and what the ultimate solution should be. These included the following:

- The Round Table got stuck on this issue, other than agreeing that we will handle it on a case-by case basis
- BPA would be willing to pay if we could capitalize it, but retail utilities will still have to deal with the lost revenues issue

- We have not yet figured out the best approach, but we need to come up with an equitable way of sharing costs with retail utilities
- The expectation is that BPA will pay, but it remains an undecided issue
- Those who benefit should pay, but it appears that nobody can really determine what the local value is, so that leaves BPA as the likely candidate to pay for most of it
- We are willing to pay for a certain amount to defer a transmission project
- This issue remains unsettled. The political process whereby these costs are allocated is totally without guidance

7.7 Initiative Resources

The following question was asked regarding NWS initiative resources: Are the resources available for this initiative sufficient to achieve the stated initiative goals? (In your response, please consider staffing levels, staff skills and training).

The overwhelming response was no, BPA does not have enough resources. Only three interview participants felt that the resources were adequate, while one had no opinion. Comments were mostly directed at what is perceived to be an inadequate level of energy efficiency staff and the need for better staff training. One specific area where additional training is recommended is load management.

Regarding energy efficiency staffing, one interviewee said that the energy efficiency staff is “decimated,” while another felt that energy efficiency did not have enough staff to “do concurrent studies.” This might be explained by a comment made by another interviewee who said “it’s been two years since we have a looked at specific project proposals.....So yeah it would take us time to actually get geared back up again to actually do that.” Another perspective on this issue, provided by a member of the energy efficiency group, is that the group has always responded when asked to do something and that they have thrown whatever resources are necessary at this because it has been a priority.

7.8 Overall Program Assessment

In the final section of the interview GDS asked interview participants to summarize their thoughts regarding the NWS initiative by responding to a series of questions that covered strengths and weaknesses of the NWS Initiative and what improvements can be made. We also asked if non-wires solutions can be implemented fast enough to defer investment in a new transmission, and finally to rank the likelihood that a NWS project will be implemented in the next five years.

Table 7.8.1 below summarizes interview participant’s opinions regarding the strengths and weaknesses of the NWS initiative.

Table 7.8.1 Summary of Interview Responses NWS Initiative Strengths & Weaknesses	
Strengths	Weaknesses
Identified changes that need to be made to transmission planning and implementation	Everyone in the organization has not bought into the initiative
Getting buy-in through the Round Table	Have not yet moved beyond pilot projects
Learning to think “outside the box”	Not enough education of all the customers
Educating the region about potential for non-wires solutions	Have not worked out the issue of who benefits and who pays
People working together	The cost and time to implement a non-wires solution
Education both internally and externally	Lack of NWS operating experience
Potential for less environmental impact	Not understanding the challenges of finding a real project
Regional participation	Too much political muscle on the Round Table
It has gotten the transmission business line to “consider and act differently than they did before”	Communications between the business lines
The potential to save BPA money by deferring or eliminating a transmission project	Inadequate staff
Good public relations because “very few people want to see transmission built anymore....they don’t like transmission lines in their backyard”	Not enough commitment from round table members to actually “go back and do something about it”
The greatest strength is “the idea itself”	Could impact reliability
	Pursuing non-wires could be seen as “ducking our responsibility towards renewable resources such as, wind generation”
	It has gotten away from being a public process
	What to do if the non-wires solution doesn’t work out
	The greatest weakness is “there’s nobody to carry this out”
	Resource funding – “The initiative has kind of evaporated”

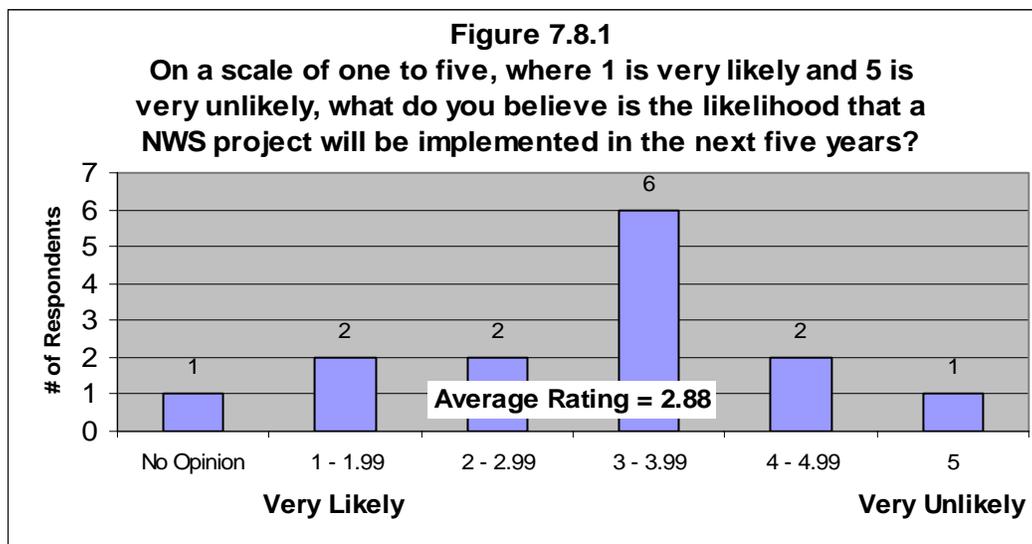
Suggestions from the interviewees to address the above weaknesses included:

- More lead time in the planning process for NWS initiatives
- Management needs to make a clear decision on whether or not they “want a public process and/or an internal only process”
- Better understanding internally about the NWS initiative
- Get some commitments up-front from regional utilities as to what they are willing to implement
- Adding adequate qualified staff
- More commitment from management on the transmission side
- Further emphasizing the need to capture the full value non-wires solutions
- Clear transmission planning guidelines on issues such as reliability
- Regionalize the costs for non-wires solutions
- Make the process more transparent internally by improving communications

Regarding whether or not NWS can be implemented fast enough to defer or eliminate the need for new transmission the interviewees were almost unanimous in responding that it could, but with the following caveats:

- If there is full backing of the Administrator and senior management and commitment from the regional utilities
- If we have proper staffing
- If it is a major line with long lead time and we evaluate the alternative at the beginning of the process
- If larger loads are targeted

Finally, interview participants were asked to rate on scale of one to five, where one is “very likely” and five is “very unlikely,” the likelihood that a NWS project will be implemented in the next five years. Responses to this question showed more diversity of opinion than responses to any of the other quantitative questions. Two of those that felt it was likely to very likely that an NWS project will be implemented in the next five years cited as reasons, the support of the Administrator and the short duration peak load periods in many areas which are more conducive to non-wires solutions. Another said that “the will is there, (we) just need to find one (project).” On the other side of this issue, the individual who said it was unlikely to very unlikely that a project would be implemented in the next five years said that “there hasn’t been adequate resources provided to this task, and the emphasis behind the initiative seems to have evaporated.” Overall, ten of the fourteen interview participants indicated that the chances of a NWS project being implemented in the next five years is at least 50/50. The results for this question are summarized in Figure 7.8.1.



8.0 Conclusions

This section presents the conclusions that GDS has reached from its review of the findings presented in Section 7.0, above. These conclusions are based on information that was collected during the fourteen in-depth interviews with BPA staff, as defined in the scope of work for this project.

8.1 Communications

- External Communications - BPA is doing a better job with external communications on the NWS initiative than it is with internal communications. In fact some interview participants expressed concern that BPA's external communications may have actually created unrealistic expectations that have not all been met. There was also some concern expressed that the level and quality of the external communications effort has dropped since an individual who spearheaded the communication effort retired.
- Internal Communications – Problems with internal communications, include lack of agreement between Energy Efficiency and Transmission Planning regarding the value and reliability of non-wires solutions. Bias for the solution (transmission or non-wires) that is aligned with the activities of their organization, and lack of common tactical goals are cited as reasons for this difference of opinion. The timeliness and extent of communication between BPA organizations that are involved in the NWS initiative, and not enough big picture communication at the staff level were also identified by interviewees as internal communication problems. .
- Suggestions for Improving Communications – The interview participants made a number of suggestions for improving communications that focused primarily on internal communications. They included, enhancing cooperation between Energy Efficiency and Transmission Planning through, more joint goals and work efforts and bringing Energy Efficiency into the process early enough to assure that BPA has adequate time to develop and implement non-wires alternatives.

8.2 Initiative Goals

- There is a fairly consistent understanding of the overarching goal of deploying non-wires solutions to defer transmission investment when it would be cost-effective and when it provides equivalent reliability. While there is much less consistency in the interviewee's description of short and intermediate term tactical goals, the most frequently mentioned tactical goals are probably the most important. These are: (1) identifying and incorporating changes into the transmission planning process that will allow non-wires solutions to be appropriately considered; and (2) institutionalizing this new planning process.
- Most interview participants believe that the NWS initiative has the goals right, but many also qualified their answers, saying that goals should not be politically driven

and should be made clear to everyone involved. Others expressed concern that maybe expectations are too high, NWS is much more complex than originally envisioned and that it (the NWS initiative) may not work over the long run.

- Overall, the interview participants' opinion regarding how well goals have been met is that BPA has not been either outstanding or a failure in meeting initiative goals, but rather has been partially successful.

8.3 Initiative Design

- There is concern that NWS initiative activities including the transmission planning process, the NWS Round Table and pilot projects do not align well with what the initiative is intended to accomplish. Only half of the interview participants indicated that they were aligned and most of them qualified their answer. Concerns expressed included tools not being designed early enough, doing too many pilots, and not providing the opportunity for input to the decision making process at a stage where it might make a difference.
- Regarding BPA's implementation of major recommendations made in the "Expansion of BPA Transmission Planning Capabilities" report, interview participants indicated that recommendations regarding implementation of a new screening process have been the most adequately adopted. Those that were identified as not being adequately adopted involved reporting and communications including: (1) production of a biennial system-wide report that describes the expected use of BPA's transmission facilities over the following 10 years; and (2) entering into discussions with interested parties of the alternative cost-effective and reliable non-wires actions that they could take individually and collectively. Overall the group felt that BPA has been partially successful in implementing recommendations made in the "Expansion of BPA Transmission Planning Capabilities" report.
- The NWS Round Table has been useful, but some interview participants expressed concern that while it was useful early on, its role and value has diminished as the NWS initiative has matured. The biggest perceived benefits of the Round Table are that it allows different perspectives to be heard, fosters cooperation among various interest groups, and lends significant credibility to the effort, especially with the environmental community.

8.4 Initiative Implementation

- The most successful aspects of the initiative are perceived to be those that involve external communications, the improved transmission planning process and a cultural change within TBL that allows non-wires solution to be considered.
- There were significantly fewer aspects of the NWS initiative that interview participants identified as "not working as planned." The responses, which were more focused on detail aspects of NWS initiative activities addressed: (1) Round Table goals and member commitments; (2) the transmission planning horizon and

the impact of changing the preferred transmission planning options on potential non-wires solutions; and (3) the lack of local area data that is needed to assess the potential for non-wires solutions.

- Regarding specific initiative barriers and bottlenecks that limit the success of the NWS initiative, interviewees again brought up internal communications problems along with different view points on the value and reliability of non-wires solutions, inadequate staffing and funding, and the varying levels of importance that retail utilities in the region place on non-wires solutions.

8.5 Transmission Planning Issues

- Potential Impact on System Reliability – The overwhelming opinion was that the NWS initiative would have no positive or negative impact on system reliability, with some making the point that non-wires solutions must be designed to have no negative impact on reliability.
- Ease of Understanding – The response on this issue was mixed with a majority of the interview participants indicating that the NWS planning process is clear and understandable to those that need to know within BPA, but not so well understood by those outside of BPA.
- Proper Consideration of All Alternatives – Half of the interview participants said that they believe that the transmission planning process allows for proper consideration of NWS initiatives. Others that were outside of transmission and energy efficiency planning were not sure, indicating a lack of knowledge about the transmission planning process. A concern that was again mentioned is that the planning process does not allow adequate time for consideration of non-wires solutions.
- Proper Capturing of All Benefits and Costs of Each Alternative – This appears to be an area that needs further assessment as only three interview participants felt that the economic comparison of transmission and NWS appropriately captures all of the cost and benefits of each alternative. Concerns mentioned included not capturing transmission construction overrun costs and not having all the information to do the location-specific deferral of distribution.
- Bias in the Process that Favors One Option Over Another – Two thirds of the interview participants believe that there is bias in the transmission planning process. Some said the bias was for transmission and others indicated it was for non-wires, with turf playing a role in which option was favored.

8.6 Cost Impact and Allocation Issues

- Interview participants were almost unanimous in their opinion that customers will perceive inequities in geographically targeted energy efficiency. Most talked about the perception being at the retail end-user level, while a couple felt that other

utilities in the region that are not getting some of the NWS money might also perceive this as an inequity.

- Who pays for implementation of non-wires alternatives, is a very important issue that most agreed is not yet settled.

8.7 Initiative Resources

- The overwhelming response of interview participants was that, BPA does not have enough resources dedicated to the NWS initiative. Comments were mostly directed at what is perceived to be an inadequate level of Energy Efficiency staff.

8.8 Overall Program Assessment

- The strengths of the initiative are mostly perceived to be those that involve communication and education, regional participation, cultural changes within the organization and the potential to provide a lower cost environmentally friendly solution.
- The weaknesses that were identified by the interview participants involve internal communications, not moving beyond pilots, not working out who will pay, inadequate staffing and funding, Round Table advocacy and commitment, and reliability concerns regarding non-wires solutions.
- Regarding suggested improvements to address the perceived NWS initiative weaknesses, interviewees focused on building more lead time into the transmission planning process to allow for proper consideration of non-wires solutions, educating and adding staff, getting more buy-in from regional utilities, increasing management commitment, and solving the issue of who will pay for non-wires solutions.
- The interviewees were almost unanimous in their opinion that NWS can be implemented fast enough to defer or eliminate the need for new transmission if changes are made to address program weaknesses. Moreover, ten of the fourteen interview participants indicated that the chance of a NWS project being implemented in the next five years is at least 50/50.

9.0 Recommendations

1. Develop an external communications plan that includes a review of the mission of the NWS Round Table to determine if changes should be made to better align its role with current NWS initiative activities and goals. All communications goals should be measurable and also be included in the individual performance goals of at least one individual within the organization that is responsible for implementing the communications plan. To assure that stakeholder expectations are not set too high, all external communications regarding NWS activities and goals should be aligned with internal goals.
2. Review existing non-wires goals and identify or add joint Transmission Planning and Energy Efficiency tactical (staff level) goals to be worked on by a joint team of technical/planning staff from both organizations. This team should report to the existing joint NWS management team. The joint goals should be measurable and be reflected in the individual performance goals of all team members.
3. Review the NWS planning process timeline and make any changes that are necessary to assure that Energy Efficiency gets involved early enough to allow non-wires alternatives to be fully planned and developed as viable solutions.
4. Conduct a review of existing Transmission and Energy Efficiency Planning tools to determine if new or enhanced tools are needed to fully integrate non-wires alternatives into the transmission planning process. This should include a review of the benefit/cost analysis methodology to determine if it is properly capturing all of the benefits and all of the costs of both transmission and non-wires alternatives.
5. Identify local area data that is required to support a comprehensive and reliable analysis of non-wires alternatives, determine where gaps exist in BPA's currently available data, and assess the benefits and costs of collecting the additional information.
6. Work proactively with regional utilities and state commissions to address NWS funding issues, including who should pay for the implementation of non-wires solutions.
7. Prepare a manpower and staff training plan that reflects both current and future NWS requirements and the potential need to ramp up staff quickly as new transmission expansion projects are identified. Training should target both Energy Efficiency and Transmission Planning Staff and address planning tools, energy efficiency programs, load management technologies and the transmission planning process.

Appendix A – Interview Guide

Process Evaluation of the BPA’s Non-Wires Solutions Initiative BPA Staff & Stakeholder Interview Guide 4/26/07

Date _____
Interviewers _____
Name _____
Organization _____
Title _____
Phone _____
Email _____

Note: Interviewees will be contacted at a scheduled date and time via telephone or in person. All interviewers will use this guide to assure that each person interviewed is asked to respond to the same questions, but the language is not intended to be verbatim.

Interviewers will introduce themselves, remind the individual being interviewed of their scheduled interview appointment and the purpose of the call:

As you know, I am part of the NWS process evaluation team, and we are conducting interviews with BPA staff to determine how people involved in the NWS Initiative think it is operating, what is working well, and what needs to be improved. All of the information you provide will be treated as confidential.

Explain that you would like to record the interview so that their responses will be accurately documented, and reemphasize that all information provided (including the interview recordings) is confidential, and no individual responses or interview recordings will be provided to BPA.

If they object to the recording, let them know that is OK and proceed with the interview.

I. Roles and Responsibilities (5 min)

1. What are your responsibilities related to the NWS Initiative? *
2. How would you characterize the adequacy of internal and external communications regarding the initiative? *
3. What (if anything) would you suggest be done to improve communications? *

II. Initiative Goals (5 min)

4. How would you describe the major goals of the initiative? (Short, Intermediate and Long Term) *
5. Do you believe that these are the right goals? (If not, ask: How should the initiative goals be changed?)
6. On a scale of one to five, where one is met well and five is not met at all, to what extent do you believe that the goals of the initiative have been met? *

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
Met well Not met at all

(If the respondent does not know or has no opinion, circle the “X” here)

III. Initiative Design (10 min)

7. What are the major initiative activities and do these activities align well with what the NWS Initiative is intended to accomplish?
8. Are you familiar with the NWS recommendations made in the “Expansion of BPA Transmission Planning Capabilities” report? I’d like to review the major recommendations briefly with you and have you tell me whether or not you feel that each recommendation has been adequately adopted and implemented, what problems were encountered and what lessons have been learned.*

List of major NWS recommendations to be addressed by the Interviewer

- The production of a biennial system-wide report that describes the expected use of BPA’s transmission facilities over the following 10 years.
 - The refinement and implementation of TBL's existing planning process to screen specific proposed transmission projects against the costs of various forms of suitably located and operated generation, load management, and transmission pricing.
 - TBL should produce a long-term view of the transmission plan that includes expected congestion points, and the associated long-run differential costs of delivering power to various points on the grid.
 - TBL should conduct a scoping workshop with interested parties to display and discuss the long-term view of the transmission plan and incorporate the potential reinforcement plans identified by other parties into the long-term view.
 - Ask interested parties to analyze the results of the workshop, and be prepared to enter into detailed discussions of alternative cost-effective and reliable non-wires actions that they could take individually and collectively.
 - Conduct a second workshop wherein all regional stakeholders can discuss options within their jurisdiction that can help to alleviate the problems identified in TBL's initial long term view.
 - Taking two of the currently proposed G-20 projects through the proposed new screening process. This effort would refine the proposed screening process and help decide whether economic and reliable alternatives exist to delay transmission construction of either or both projects.
9. On a scale of one to five, where one is implemented fully and five is not implemented at all, do you believe overall that the recommendations in this report have been implemented fully? *

1 _____ 2 _____ 3 _____ 4 _____ 5
Implemented fully Not implemented at all

(if the respondent does not know or has no opinion, circle the “X” here)

10. Has the NWS Round Table been of help to the process? *

IV. Initiative Implementation (10 min)

11. Are there aspects of the initiative that are not currently working as planned? *

12. Can you identify any specific initiative barriers and bottlenecks? *

13. What have been the most successful aspects of the initiative to date? *

14. Can you please cite specific success stories?

15. On a scale of one to five, where one is very successful and five is not successful at all, do you believe that the implementation of the NWS initiative has been successful? *

1 _____ 2 _____ 3 _____ 4 _____ 5
Very Successful Not successful at all

(if the respondent does not know or has no opinion, circle the “X” here)

V. Transmission & Resource Planning Issues (15 min)

16. Do you believe that the NWS Initiative will have an impact on system reliability? *

17. Is the NWS planning process clear and understandable? *

18. Is the method of comparing alternatives well understood by all stakeholders?

19. Does the planning process allow for the proper consideration of both transmission and NWS initiatives? *

20. Does the economic comparison of transmission and NWS appropriately capture all of the costs and benefits of each alternative?

21. Do you believe that there is any bias in the planning and decision making process that favors one transmission option over another? If so, is this appropriate? *

22. On a scale of one to five, where one is fully integrated and five is not integrated at all, do you believe that Non Wires Solutions are now fully integrated into the BPA decision-making process for new transmission line investments? *

1 _____ 2 _____ 3 _____ 4 _____ 5
Fully integrated Not integrated at all

(if the respondent does not know or has no opinion, circle the “X” here)

VI. Cost Impact & Allocation Issues (3 min)

23. Do you feel that some customers might perceive inequities if energy efficiency is geographically targeted as part of an NWS alternative to transmission line expansion? *

24. Where are BPA and other stakeholders on the issue of who pays for NWS? (BPA, generators, distribution companies)

VIII. Initiative Resources (2 min)

25. Are the resources available for this initiative sufficient to achieve the stated initiative goals? (In your response, please consider staffing levels, staff skills and training). *

VIII. Conclusions (10 min)

26. What do you think are the greatest strengths of the NWS Initiative?*
27. What are the major weaknesses? *
28. What improvements can be made to address these weaknesses?*
29. Can Non-Wires Solutions be implemented fast enough at BPA to postpone or eliminate the need for new T&D facilities? *
30. On a scale of one to five, where one is very likely and five is very unlikely, what do you believe is the likelihood that a NWS project will be implemented in the next five years? *

1 _____ 2 _____ 3 _____ 4 _____ 5
Very Likely _____ Very Unlikely

(If the respondent does not know or has no opinion, circle the “X” here)

31. What specific reasons are behind your response *
32. Would like to tell me anything else about the initiative? *

Questions marked with a “*” are critical questions that need to be asked by the interviewer.

Appendix B – Introductory Letter to Interviewees

Dear Interviewee,

GDS Associates, Inc. (GDS), an energy and engineering consulting firm, has been retained by BPA to conduct an independent process evaluation of the Non-Wires Solutions Initiative. In depth interviews with BPA staff are a significant part of this effort. Each interview will be conducted by two GDS consultants, Amber Roberts from our energy efficiency practice and Seth Brown from our transmission group. La Capra Associates, a Boston based energy consulting firm is assisting GDS with this evaluation.

We would like to thank you for your participation in this important project and provide you with the following background information on the consulting team.

GDS Associates is a multi-service engineering and management consulting firm, headquartered in Marietta Georgia, with offices in Auburn, Alabama; Austin, Texas; Manchester, New Hampshire; Madison, Wisconsin; and Manchester Maine. Since its inception in 1986, GDS has enjoyed considerable growth and now employs a staff of over 100 consultants. GDS has a broad array of engineering, management, strategic, economic, and programmatic consulting expertise and specializes in energy, energy efficiency, telecommunications, water and utility planning issues.

La Capra Associates, Inc. has provided objective, strategic consulting services to utilities, regulators, consumers and market participants within the electricity, natural gas and water industries for nearly 25 years. They have extensive experience in energy planning, market analysis, utility ratemaking, and regulatory policy.

GDS and La Capra Associates have both completed feasibility studies of non wires alternatives for our utility clients, and have worked together on numerous projects including providing planning and competitive procurement services to the Connecticut Energy Advisory Board. Transmission projects proposed to address reliability concerns in Connecticut are a focal point of this project.

The GDS/La Capra team thanks you again for your participation in this project and looks forward to speaking with you about the NWS Initiative.

Dick Spellman
President
GDS Associates

Appendix C – List of Reviewed Reports and Other Information Sources

1. Assessment of Energy Efficiency, Demand Response, and Distributed Generation Potential in the Southern Oregon Coast Area, 03/13/06
2. BCTC's Discussion Paper on Exploring Non-Wires Transmission Alternatives, 03/2/06
3. A Two-Year Report on BPA's Non-Wires Solutions Round Table Initiative, 9/24/2004
4. Olympic Peninsula Study of Non-Wires Solutions to the 500-kV Transmission Line from Olympia to Shelton and a transformer addition at Shelton, 8/13/2004
5. Non-Wires to Lower Valley Power and Light Transmission System Reinforcement Project, 8/16/2004
6. Draft Study of Pipes and Wires, 2/26/2004
7. Expansion of BPA Transmission Planning Capabilities: A Report on Non-Wires Solutions prepared by Energy and Environmental Economics, with consultants Tom Foley and Eric Hirst, November 2001, 12/6/2002
8. Kangley-Echo Lake Economic Screening and Sensitivity Analysis Report, 3/4/2003
9. Non-wires Solution Update, January 2005, 01/14/05
10. Non-Wires Solutions Questions & Answers
11. Round Table goals for 2005, 12/10/04
12. Round Table Roles
13. Roadmap for Round Table
14. Letter of Invitation to Round Table Members From Steve Wright
15. Annual Non-Wires Solutions Goals, (Fiscal Years 2004 – 2007)
16. Transmission Construction Alternatives Screening Criteria Template