The Future Role of the Bonneville Power Administration in Power Supply

Introduction and Summary

The crown jewel of the Northwest Power System is the federal Columbia River Power System (FCRPS). The FCRPS consists of 31 dams on the Columbia River and its tributaries. On average, it supplies approximately 45 percent of the region's power. While the FCRPS was financed by the federal government, the debt has been and continues to be repaid by Northwest electricity users. The federal debt is now at market rates.

Despite the fact that Bonneville has not deferred any treasury payments since the early 1980s, it is continually attacked by organizations like the Northeast-Midwest Institute[1] and its congressional allies as being subsidized by the federal government. Their proposals generally run to privatizing Bonneville or requiring Bonneville to sell its power at market prices to benefit U.S. taxpayers as opposed to selling at cost to Northwest consumers who have paid for the system and are paying to restore fish and wildlife affected by the dams. While these proposals have not yet gained sufficient political traction, fighting them off has been a continual drain on the region's congressional delegation. Moreover, each time Bonneville finds itself in financial difficulties with treasury repayment at risk, the pressure for "reform" intensifies.

Over the last decade, the disparity between Bonneville's costs and market rates has frequently not been large and, in fact, at some times has been disadvantageous to Bonneville's customers. Nonetheless, the base of federal hydropower is likely to be low cost resource for many years to come. Preserving this benefit, for which Northwest consumers have paid, should be a high priority for the region. However, doing so in the face of recurring financial crises will be difficult. This calls for a re-examination of Bonneville's role in regional power supply and whether that role can continue as it has in the past without jeopardizing the region's legacy of reasonably priced power.

This paper outlines the problems that have faced Bonneville in recent years. This review suggests that, absent any changes in Bonneville's role in power supply, these problems are likely to continue to face Bonneville and the region in the future. It then reviews the solutions developed by several public processes carried out over the last decade. These include the Comprehensive Review of the Northwest Energy System, carried out in 1996, the follow-on Cost-Review and finally the Joint Customer Proposal and Regional Dialog of 2002. One common element of these processes was the recommendation of long-term contracts (20 years) to help protect the region from external efforts to appropriate the benefits of the Bonneville system. Another was to limit Bonneville's and the region's exposure to market risk by limiting Bonneville's role in serving loads beyond the capability of the Federal Base System to bilateral contracts where the customer bears the cost and risk of the resources acquired to serve. For various reasons, efforts to implement these recommendations have stalled.

[1] E.g. see *Rethinking Bonneville – Why BPA Must Be Reformed*, Richard Munson, Northeast-Midwest Institute, 2001, http://www.nemw.org/rethinkingbonneville.pdf

The Council believes that we cannot wait until another crisis before addressing the question of Bonneville's future role. The region needs to address the issue of Bonneville's future role in power supply now. The region's governors have recognized that perpetuating uncertainty regarding Bonneville's role in power supply risks the adequacy and economy of the region's power supply. The Governors have asked the Council and Bonneville to reinitiate the Regional Dialog. A number of discussions with representatives of customers, regulators, industry and environmental interests were have been held. The major conclusion drawn from these discussions is that while some things may have changed and need to be reexamined, many of the basic elements of the original Joint Customer Proposal that was submitted to BPA last fall still have regional support and could form the foundation for moving forward.

The following principles are proposed a guide as the region takes the question of Bonneville's future role. Because of the sensitive nature of the current negotiations on settlement of the current contract period benefits for the residential and small farm customers of the investor-owned utilities, a principle related to the long-term resolution of that issue has not been included at this time.

Proposed Council Principles for the Future Role of Bonneville

- The goal should be long-term contracts (20 years) both to protect the system from interventions from outside the region and to reduce uncertainty for both the customers and Bonneville.
- Bonneville's primary role, in addition to transmission, should be managing the operation and marketing the output of the Federal Columbia River Power System. The FCRPS is a multipurpose public resource and Bonneville has a record of real expertise in its operation and marketing.
- Bonneville's role in providing power beyond the capability of the federal base system should be limited to bi-lateral contracts or rate mechanisms that align the benefits and costs. This would limit Bonneville's exposure to market risks and reduce the uncertainty regarding who will be acquiring additional resources thereby reducing an impediment to resource development.
- Bonneville's role should be limited contractually. Although most customers' contracts run through 2011, these changes need to be enacted as soon as possible so as to protect the regional resource from outside interference and clarify the outlook for resource development
- Customer agreement to long-term contracts will require at minimum that Bonneville: 1) provide customers and others greater openness regarding their costs, the factors driving those costs and the decisions affecting them BEFORE decisions are made; 2) implement cost-reducing process improvements; and 3) rebuild trust with the customers and others that Bonneville is a good business partner.
- Revising Bonneville's role in acquiring and pricing the output of additional resources will require an allocation of the federal base system resources and benefits. Any allocation method for the FBS should be equitable and consistent with federal law while striving to create as broad constituency for Bonneville as possible.

- A significant amount of the system should be offered as a "Slice" product . The slice product effectively distributes hydro risk and, by virtue of more diverse decision-making, should reduce the impact of hydro variability on the market. However, any proposal must preserve the ability of the hydro system to support fish recovery. Care should be taken to preserve hydro system ability to support the development of renewable resources.
- Benefits should be provided for the residential and small farm customers of the region's investor-owned utilities in a way which is judged to be equitable by the parties and that is clear and transparent and not subject to manipulation by any of the parties.
- The question of service to the DSI's must be addressed. If power is made available to DSIs, the amount and term should be limited and contracts should be structured to allow Bonneville to capture benefits of DSI load interruptibility and provision of reserves. The smelters should be encouraged to reduce dependence on Bonneville power in the long-term.
- Any solution must contain a mechanism for ensuring continued regional development of cost-effective conservation, as determined through the Council's plans. . While limiting Bonneville's role to develop new power supplies to bilateral arrangements with customers is a major step in the right direction, it is not sufficient to ensure the development of cost-effective conservation given the disincentives to utility investment in conservation. Reliance on local implementation is appropriate so long as there is a focus on cost-effectiveness and accountability and a backup mechanism is included to ensure that conservation is implemented. A direct Bonneville role in implementation is appropriate where there are economies of scale or other benefits from Bonneville's direct involvement.
- Similarly, a mechanism is required for ensuring that cost effective renewable and high efficiency resources are developed. In particular, the ability of the hydro system to support the development of intermittent renewable resources, through the flexibility of the hydro system, should not be unduly impaired.

Questions for Public Comment

The Council is interested in public comment on the following:

1. Do you think the question of Bonneville's future role in power supply needs to be addressed in the near future? If not, why?

2. Do you think proposed Council principles are appropriate guidance for consideration of Bonneville's future role? If not, why?

What's the Problem?

The problem is that Bonneville is financially and politically vulnerable and, as a consequence, the region and its economy are also vulnerable. Bonneville's financial vulnerability arises in part from its dependence on a highly variable hydroelectric base and the effects of a sometimes very volatile wholesale power market. Another source of vulnerability arises from the asymmetric nature of the obligations between Bonneville and many of its customers and how Bonneville has historically chosen to implement its obligations. Other vulnerabilities arise out of other choices Bonneville has made in serving other customers in the region. These vulnerabilities interact with the fact that Bonneville has high fixed costs in the form of the debt on the Federal Columbia River Power System and the three nuclear plants that were undertaken with Bonneville backing by the Washington Public Power Supply System, now Energy Northwest.[2] At times, these vulnerabilities can cause Bonneville to incur high costs that must either be passed on to customers and ultimately to the region's consumers or risk being unable to make Treasury payments. The former causes economic hardship in the region. The latter risks a political backlash from outside the region that could cause the Northwest to lose the long-term benefits of power from the federal system.

Hydro and Market Vulnerability

The federal base system (the federal dams on the Columbia and its tributaries, Columbia Generation Station, and some smaller projects) supply almost 8000 average megawatts of energy under critical water conditions, 6,800 average megawatts of which come from the hydroelectric system.[3] In years with extremely good hydroelectric conditions, hydro generation can be increased by over 3500 average megawatts. However, the month-to-month shape of hydro does not always match loads. Even under relatively good hydro conditions, Bonneville can be in the market some times to purchase power. Under poor hydro conditions, Bonneville can be in the market for a great deal of power and, depending on the overall resource situation, those conditions can drive prices up. Unfortunately, the risks and benefits are not symmetrical. When Bonneville has ample non-firm power to sell, it frequently drives prices down. The more volatile power markets are, the more difficult managing these risks becomes. If prices are high and Bonneville has non-firm power to sell, it is accused of gouging. If prices are high and Bonneville is faced with poor water and large purchase requirements, the costs can very quickly erode Bonneville's financial condition. Hydro and market risks have played a large part in creating the financial crisis of 2002-2003.

Asymmetric Obligations

Another source of Bonneville's financial vulnerability is the asymmetric nature of its relationship with its different customers groups. Bonneville has a legal obligation sell to public power customers at cost if asked. But, Bonneville's public customers do not have a legal obligation to buy from Bonneville until they have signed a contract. Bonneville may not have a legal obligation to sell to the direct service industries, but there are powerful political pressures to do so. And for investor owned utilities, Bonneville has an obligation to provide benefits to existing

[2] Of the three plants, only one, Columbia Generating Station, is operating. The other two were terminated before construction was complete. However, Bonneville still has responsibility for paying off the debt incurred during construction.
[3] Bonneville Power Administration 2000 Pacific Northwest Loads and Resources Study (Updated May 2002) http://www.bpa.gov/power/pgp/whitebook/2000/index.shtml

residential and small farm load but has struggled to find a means of doing so that is satisfactory to all parties. It also has a legal obligation to meet IOU load growth if requested although no such requests have ever been made. While these customer obligations have existed for over twenty years, they have become increasingly problematic as the wholesale power market has become more competitive and more volatile.

Public Customers

Bonneville is obliged to serve public agencies that choose to place their net power requirements on Bonneville.[4] Public agencies can choose to put their net requirements on Bonneville and, although Bonneville can impose a waiting period (notice) to allow it sufficient time to acquire the resources to serve that load, it must serve that load.

Bonneville is also required to sell its power at cost. It could, if it chose to do so, charge one cost-based rate for the power from the existing system and another cost-based rate for the power from new resources it must acquire to serve new or growing loads (tiered rates).[5] What the customers would pay in total wouldn't necessarily be much different than what is paid under the current melded rate. Those whose loads are growing more slowly than the average should experience lower costs. In addition, customers would get a much clearer economic signal of the real value of the resource options that may be available to them, many of which may be local. However, in the face of opposition from its customers, Bonneville has never chosen to implement such a rate structure. As a consequence, when Bonneville's rate looks attractive relative to the market, customers have little disincentive to placing as much load as they can on Bonneville, even if Bonneville must acquire new resources to serve it. The costs of those new resources will be spread to all the customers in the region.

The effect of these policies was seen in 2000-2001, when public customers, many of whom had taken loads off of Bonneville in 1996, increased their loads on Bonneville by ____ average megawatts for the new contract period beginning in October of 2001. At the time contracts were being signed, Bonneville power was expected to be very competitive relative to the market. Unfortunately, the timing was such that Bonneville was left with very little time to secure the necessary resources. Bonneville was forced to go to the market just when market prices were climbing to unprecedented levels. The high cost of the resources secured during that period have been a major contributor to the recent increases in Bonneville rates.

The reverse has also been true. When contracts are up for renewal, customers are free to not place load on Bonneville. In the mid-90's, customers petitioned Bonneville to be allowed to diversify their power supplies, i.e. purchase cheaper power on the market, even though there were several years left on their contracts. Although Bonneville could have tried to hold the customers to their contracts, it allowed them to diversify. The customers were required to pay an exit fee and it may have been a good business decision for Bonneville in terms of its relationship with its customers. However, it contributed to a period of financial instability for Bonneville.

Certainly all of Bonneville's financial vulnerabilities cannot be attributed to its asymmetric obligations with respect to its public customers. But the question going forward is whether

[4] Net requirements are the difference between the customer's load and the capability of the customer's own resources dedicated to their load.
[5] Bonneville may have precluded itself from implementing tiered rates under the current contracts.

Bonneville can continue to accommodate these risks as it has in the past and preserve the long-term benefits of the federal system for the Northwest.

Residential and Small Farm Customers of Investor Owned Utilities

One of the major reasons for the Northwest Power Act was to address the inequity of customers of publicly owned utilities in the region having access to low cost federal power while customers of the region's investor-owned utilities did not. The remedy included in the Northwest Power Act is the so-called exchange provisions of Title 16, Chapter 12, Section 839 c (c). Under these provisions, any Northwest utility, public or private, may sell power equivalent to the requirements of the utility's residential and small farm load to Bonneville at the utility's average system cost and purchase from Bonneville the same amount of power at Bonneville's average system cost.[6] Practically speaking, this is purely a financial transaction, with the exchanging utility receiving a payment equivalent to the difference between the utility's average system cost and Bonneville's, multiplied by the amount of power involved. The Act requires that this payment flow directly through to reduce the rates of the utility's residential and small farm customers.

Under this approach, if a utility's average system cost were greater than Bonneville's it could receive a payment. However, those with lower system costs would not receive payment. Several utilities have not received exchange benefits for this reason. Moreover, there is a rate test provision that is intended to ensure that Bonneville's public agency customers do not pay more for power than they would have absent the Act. (Title 16, Chapter 12, Section 839 e (b)). The rate test, in effect, makes assumptions on what the world would have been like absent the Power Act and Bonneville calculates what rates would have been under these assumptions. If rates are higher with the exchange, the exchange rate is capped at the lower rate.

Unfortunately, the exchange has been a constant source of dispute within the region that frequently made no one happy. The methodologies for calculating the exchanging utilities' average system costs and the rate test are established by Bonneville. Investor-owned utilities and their regulators have argued that Bonneville has manipulated these calculations to minimize the benefits their residential customers receive. Publicly owned utilities have argued that the exchange costs have been far too high and criticized the assumptions used in the rate test calculations.

When the current contracts were being negotiated, many in the region, including the investor-owned utilities, state regulators and the Council, argued that rather than continue the exchange, Bonneville should negotiate an actual sale of power to the investor-owned utilities. The rationale was that this would reduce controversy and would increase regional political support for Bonneville. Ultimately, Bonneville decided that they could offer IOUs 1800 average megawatts of power for the 2002-2006 period of which 1000 would be in the form of an actual sale of power with the remainder in the form of either power or cash equivalent at Bonneville's discretion. For the 2007-2011 period, the total was increased to 2200 average megawatts. This compares to about 4000 average megawatts of actual IOU residential and small farm load and ____ average megawatts of load that had actually been in the exchange program.

[6] While publicly-owned utilities are eligible to participate in the exchange, most of the benefits have flowed through to the residential and small farm customers of investor-owned utilities.

At the time, Bonneville believed they could accomplish this without an adverse effect on Bonneville's rates. This was challenged in the courts by publicly-owned utilities. The run-up in the Western electricity market quickly drove up the cost of providing power for the residential and small farm loads of the IOUs. Bonneville bought out part of the obligation, but certainly at a greater cost than they had planned for. The IOUs, state regulatory commissions, and publicly-owned utilities are, as of this writing, still trying to negotiate a settlement of the legal challenge for the 2007-2011 period.

The issue is not whether Bonneville should provide benefits for the residential and small farm loads of the investor-owned utilities. That's the law and most would agree that achieving equity in access to the benefits of the federal system is an appropriate goal. The question is how. Can the system that was set up in the Power Act be made to work in a way that is satisfactory to all participants? Or is there a need for an alternative approach that is equitable, transparent and easy to understand and that does not expose Bonneville to extreme volatility in its costs?

Direct Service Industries

The direct service industries (DSIs) are primarily aluminum smelters. From 1981 through 2001, the DSIs had an undisputed right to Bonneville service. The Northwest Power Act authorized Bonneville to sell power to the DSIs and required that they offer initial 20-year contracts. Post 2001, it would appear that Bonneville could offer DSIs contracts, but it is not legally required to do so.

Most of the aluminum plants in the Northwest are older and less efficient than many of their competitors in the world aluminum market. This means they are extremely sensitive to the world price for aluminum and the price of electricity. In the 1980s, Bonneville instituted a variable rate that was tied to world aluminum prices. Bonneville's DSI rate decreased when world aluminum price fell below a lower threshold and increased when aluminum prices rose above an upper threshold. One interpretation was that this was an effort to bring greater stability to aluminum industry loads and Bonneville revenues. Others have referred to this as a subsidy to the industry. In any case, Bonneville assumed a significant amount of the risk involved in the direct service industries' businesses. In recent years, the advent of new smelting capacity in other parts of the world and increases in Northwest electricity prices have resulted in most of the Northwest smelting capacity essentially being "swing" plants -- economic to operate only when aluminum prices are relatively high and electricity prices are relatively low.

With the expansion of the competitive wholesale power market in the mid-1990s and the low market prices of that period, many aluminum customers lobbied Bonneville to be released from their contracts so that they could take load off of BPA. Bonneville responded with a special deal that reduced DSI rates and gave the DSIs access to the transmission system and protection against stranded costs in return for staying on Bonneville until the end of the contract. Although the Secretary of Energy at the time tried to stop this deal, political support for the DSIs caused the Secretary to back down.

With the approach of the expiration of those initial contracts in 2001, most believed that Bonneville was not required to sell to the DSIs post 2001, although it is authorized to do so.

However, aluminum smelters are important to many local economies around the Northwest, and, as noted earlier, wield considerable influence. In addition, there are some possible benefits from having DSI load on the system. When operating, they are large loads that can be dropped almost instantaneously for short periods if necessary to maintain power system stability. They can provide a nighttime load to help maintain minimum flows on the river. And their load can be bought out for extended periods if necessary to deal with a hydro-related energy shortage. With some ingenuity, DSI operations might be able to be curtailed for periods of a few hours a day to allow Bonneville to take advantage of high market prices for power.

The current DSI contracts which began in October of 2001, amount to about 1425 average megawatts, about half of the potential DSI load in the region. These contracts are "take or pay" contracts, meaning that the DSIs must either take the power or pay liquidated damages -- the difference between what Bonneville would have received had the DSIs taken the power and what they did receive selling the power on the market. With the run up in market prices in 2000-01, Bonneville bought out as much of the DSI load as they could for a period of up to two years. The cost of the buyout was reasonable compared to the market price of power but a great deal more than no purchase at all.

Today, most pot lines are idle, and at least two companies have declared bankruptcy. There are, however, DSIs who believe that access to federal power at a melded rate is essential to their being able to operate post 2006. The pressures associated with importance of the DSIs to local Northwest economies and the resulting political influence the DSIs can wield cannot be discounted. However, the question going forward has to be whether some DSIs can be served in a way that helps minimize Bonneville's financial risk and vulnerability, not increase them, while not placing undue costs on other BPA customers.

Prescriptions

Over the years, several remedies have been prescribed for the problems just described. They include the 1996 Comprehensive Review, its follow-on Cost Review in 1988, the Joint Customer Proposal of 2002 and the Regional Dialogue that ensued. The prescriptions, the process by which they were developed and what happened as a result are described below.

The Comprehensive Review

The Comprehensive Review of the Northwest Energy System was initiated at the request of the four Northwest Governors.[7] It was made up of 20 members representing the electricity industry, government, regulators, other energy industries, and the environmental community. While Bonneville was not a member per se, they were represented by a high-ranking executive on an ex officio basis. The review worked for 11 months and held numerous public meetings. The Council staffed the Review and both current and past-Council members were on the steering committee. In its broadest sense, it was a response to the restructuring of the electricity industry that was under consideration at the time. However, its focus was primarily on the role of the Bonneville Power Administration. At the time, the West Coast was experiencing excess generating capacity and low gas prices. As a consequence, the market price of electricity was

[7] *Comprehensive Review of the Northwest Energy System -- Final Report: Toward a Competitive Electric Power Industry for the 21st Century*, Comprehensive Review Document CR 96-26, December, 1996. http://www.nwcouncil.org/library/1996/cr96-26.htm

low and customers, both publicly-owned utilities and DSIs, were clamoring to be allowed to diversify their power supply, i.e. buy more from the market and less from Bonneville. This raised the specter of Bonneville experiencing stranded costs and being unable to make its treasury payments in full.

The Review stated the problem as follows:

> "In some respects, the transition to a competitive electricity industry is more complicated in the Northwest because of the presence of the federal Bonneville Power Administration. Bonneville is a major factor in the region's power industry, supplying, on average, 40 percent of the power sold in the region and controlling more than half the region's high-voltage transmission. Bonneville benefits from the fact that it markets most of the region's low-cost hydroelectric power. It is hampered by the fact that it has high fixed costs, including the cost of past investments in nuclear power and the majority of the costs for salmon recovery. As a wholesale power supplier, Bonneville is already fully exposed to competition and is struggling to reduce its costs so that it can compete in the market. The transition to a competitive electricity industry raises many issues for the Bonneville Power Administration and the region. In the near term, how can Bonneville continue to meet its financial and environmental obligations in the face of intense competitive pressure? In the longer-term, when market prices rise and some of Bonneville's debt obligations have been retired, how can the Northwest retain the economic benefits of its low-cost hydroelectric power when the rest of the country is paying market prices? And finally, what is the appropriate role of a federal agency in a competitive market? The question is not only whether Bonneville can compete in the near term, but also, should it be a competitor?"[8]

The Steering Committee's goals for federal power marketing were to: 1) align the benefits and risks of access to existing federal power; 2) ensure repayment of the debt to the U.S. Treasury with a greater probability than currently exists while not compromising the security or tax-exempt status of the Bonneville Power Administration's third-party debt; and 3) retain the long-term benefits of the system for the region.[9]

The Comprehensive Review's key recommendations were:

- Bonneville's power was to be sold under long term (20 year) "subscription" contracts at cost. Shorter term contracts would include an option fee for the right to extend their contracts.
- The priority order for subscription would be implemented in a sequential multiphase process. Publicly owned utilities get first priority; direct service industries and representatives of residential and small farm customers of investor-owned utilities get second priority; other regional customers, such as representatives of investor-owned utility commercial and industrial customers, get next priority; and non-regional customers get last priority.
    - In the event there was oversubscription, preference would be given to longer-term contracts.

[8] Ibid. page 1.
[9] Ibid. p. 10

  - Public utilities would be limited to the highest contractual entitlements of the two highest consecutive years between 1997 and 2000 with some additional power reserved for the load growth of small full-requirements utilities
  - Each investor-owned utility customer subscription would be limited by the average total actual regional exchange load of its residential and small farm customers, again, in the two highest consecutive years between 1997 and 2001.
  - Each DSI would be limited by the average load in the two highest consecutive years between 1997 and 2001.
- Bonneville would not acquire resources to serve its customers' load growth except on a direct bilateral basis, where the customer takes on all the risk of the acquisition. However, Bonneville would be making spot-market power purchases sufficient to: 1) supplement monthly firm hydro energy in meeting current firm loads, and 2) store water for flow augmentation to help rebuild fish populations.
- A Customer Advisory Committee would be established that would consist mainly of subscribers, but also would include representatives of other interests. The committee would review Bonneville's budget requests, overall capital budgeting levels and operating cost levels, rate setting, key marketing issues, and provide input into the power-related capital and operating cost decisions of the Corps of Engineers and the Bureau of Reclamation. It was also proposed that the contracts contain ability for subscribers to call for binding arbitration on specific power cost-related items that do not affect implementation of fish recovery measures.

The Committee also recommended that the governors of Idaho, Montana, Oregon and Washington appoint a transition board to oversee implementation of these and other recommendations. In particular, the board should periodically determine whether the subscription process is making adequate progress or whether another approach is necessary.

The Cost Review

Following on the heels of the Comprehensive Review, in 1997, the Governors asked the Council to establish a "cost-control forum" to assist the Bonneville Power Administration (Bonneville) in controlling the costs it recovers through rates. This was in preparation for the subscription process for the post-2001 period.[10] The actual subscription process was scheduled to begin in August of 1998. To accomplish the Cost Review, the Council recruited a "Management Committee" composed of 11 members. It was composed of four Council members, two Bonneville executives and 5 "outside" experts in management and cost-control. The chairman of the Management Committee had also been the chairman of the Comprehensive Review Steering Committee. The principles from the Comprehensive Review that guided the Cost Review were:

- **Market** the power products of the federal system for relatively long terms (five years or more) to Northwest customers at cost based rates through a subscription system. This recommendation is central to achieving the primary goal of the Comprehensive Review.

- **Return** Bonneville to its historic role of marketing and transmitting power produced by the FCRPS, rather than becoming an aggressive marketer of power products and services in the competitive marketplace;

[10] *Cost Review of the Federal Columbia River Power System-- Management Committee Recommendations,* Document CR 98-2, March 10, 1998. http://www.nwcouncil.org/library/1998/cr98-2.htm

- **End** Bonneville's responsibility to acquire resources to meet the load growth of customers, except on a bilateral basis where the customer accepts the risk and financial obligations associated with such acquisitions;

- **Limit** Bonneville's financial support of conservation acquisition to current contractual obligations and certain market development activities, provided they are self-sustaining by 1999. Also limit support for conservation market transformation in proportion to the share of regional firm loads served by Bonneville;

- **Define** Bonneville's responsibility for renewable resource development (beyond current wind and geothermal pilot projects) to limited research and development support, and to renewable resource purchases on the behalf of, and funded by, customer utilities; and

- **Require** Bonneville's transmission rates, terms and conditions to be designed and implemented in a manner that is comparable to those developed by investor-owned utilities (IOU) subject to Federal Energy Regulatory Commission (FERC) regulation.

The work of the Cost Review Management Committee was driven by the objective of achieving a high level of long-term Northwest subscription. The Committee believed that Bonneville's wholesale customers were facing a period of unprecedented uncertainty and risk. There were new suppliers and increased price competition in the marketplace. With the onset of retail competition, utilities were uncertain of their future loads. It was the Management Committee's view that these utilities were unlikely to buy power from Bonneville on a long-term basis unless they perceived Bonneville's price to be very low relative to these risks. Thus, the Management Committee believed that the key to a high level of long-term subscription was to reduce the costs as much as possible, consistent with the Comprehensive Review and sound business practices. This, it was thought, should enable Bonneville to price its subscription products well below current market price expectations. Bonneville was working toward a cost structure that would allow it to compete successfully in a 2-cent-per kilowatt-hour market.

The Management Committee challenged Bonneville and other agencies of the power system (U.S. Army Corps of Engineers (Corps), the Bureau of Reclamation (Bureau), and the Supply System) to beat that goal by a substantial margin. The Management Committee believed that the goal of pricing power well below market expectations would enable Bonneville to return to its roots as envisioned by the Comprehensive Review. Those roots are a focus on Bonneville's core missions of marketing and transmitting the firm power output of the FCRPS for relatively long terms to regional customers, and of meeting its environmental responsibilities. That is a role that the Committee believed was sustainable, both competitively and politically. While Bonneville would continue short-term marketing of nonfirm power, the emphasis on long-term firm contracts would allow Bonneville to reduce staff and expenses associated with many marketing and related support activities. In this environment, Bonneville would not be engaged in acquiring additional power resources to meet the load growth of customers. Nor would it have a large responsibility for the development of conservation and renewable resources. Staffing and other expenses related to these activities could be reduced. These directions all are consistent with the recommendations of the Comprehensive Review of the Northwest Energy System.

What Happened?

When the Final Report of the Comprehensive Review was completed and delivered to the governors in December of 1996, nineteen of the twenty members signed the document. The twentieth did not sign because he believed that the fish and wildlife considerations in the report were not adequate.

However, the fact that almost all signed the document did not mean that each individual or the organizations they represented was committed to the implementation of each element of the recommendations. As the negotiation of the subscription contracts proceeded through the late '90s, the contracts moved farther and farther away from the blueprint of the Comprehensive Review.

The Governors established the Transition Board called for in the Review. However, with the exception of periodic reports, the Transmission Board generally left the development of the subscription contracts to Bonneville and the customers. The rationale was that since subscription was a contractual relationship between Bonneville and its customers, Bonneville should take the lead. In addition, the resources available to the Transition Board were not adequate to allow direct participation in the detail of all the negotiations. Moreover, the dominant concern of the day was more about whether or not Bonneville would secure enough contracts to cover its costs than the form of the contracts. The Transition Board instead focused much of its effort to the broader policy question of the degree to which Bonneville's transmission should be subject to the same regulation as that of most other transmission owners.

The cost target of the Cost Review was incorporated into Bonneville's rate case for the 2002-2006 period. However, the underlying assumptions about a more limited Bonneville role were not reflected in Bonneville's organization.

With the prospect of cheap Bonneville power (2 cents in 2000) and the expectation of increasing market prices, customers who had taken load off of Bonneville in the mid-90's wanted back on. And most wanted all their loads served as they had always been served, at a single, melded rate. The exceptions were a number of customers who opted for a new product, the "slice" product. With this product, customers agreed to purchase a percentage of the output of the system, whatever that might be, and accept the benefits and risks associated with that output. In a good water year, they would receive a percentage of the firm and non-firm power produced by the system and would be responsible for using or marketing that power; in a bad water year, they would receive very little non-firm power and might have to purchase additional power to meet their obligations. The slice product amounts to about 1600 average megawatts out 6600 average megawatts of public load.

But Bonneville still had the responsibility for managing the variability and risk of the remainder of the federal system. In addition, as was noted earlier, the decision was made to serve 1425 average megawatts DSI load and to provide 1000 average megawatts of actual power to the region's investor owned utilities as part of the benefit for the residential and small farm customers of the IOUs. The net effect, as has been well documented by Bonneville itself, is that Bonneville was faced with the necessity of "augmenting" its system by approximately 3300 average megawatts to serve the loads it was committed to serving during the October, 2002

through September, 2006 period.[11] Moreover the timing of the signing of the new subscription contracts was such that Bonneville had little more than a year to contract for many of the necessary resources. Unfortunately, this coincided with Western electricity crisis. Bonneville was on the market to augment the system at a time when electricity prices were at unprecedented highs. Bonneville attributes $3.9 billion of the higher costs it is experiencing for the 2002-2006 period to the costs of augmenting the system.[12]

To take this a step further, one could argue that the uncertainty regarding who was going to be serving those 3300 megawatts was a contributing factor to the Western electricity crisis. Had the recommendations of the Comprehensive Review been followed more closely, the uncertainty regarding responsibility for resource development would have been much less and perhaps utilities would have committed to development of new resource that could have at least partially mitigated the price run up of 2000-2001. Would this have prevented the crisis? No. Would it have lessened it? To some extent.

The Joint Customer Proposal

In mid-2002, a group of Bonneville customers, representing a majority of public power and all of the investor-owned utilities in the region, unveiled an unprecedented proposal to change the future role of Bonneville in power supply. What was unprecedented about this proposal was not so much its substance, which was in many ways reflective of the recommendations of the Comprehensive Review, but the fact that such a wide spectrum of utility interests had coalesced around it. In a narrow sense, this proposal was the product of an effort to reach a settlement to the publicly owned utilities' legal challenge to the benefits to be provided to the residential and small farm customers of the investor owned utilities that were part of the 2001 contracts. In a larger sense, however, this was a response to the frustrations and concerns all had experienced with Bonneville, and, in particular the aftermath of 2000-2001.

The objectives of the Joint Customers were stated as follows:[13]

1. To create a common interest between BPA's regional preference utility and investor owned utility customers by allocating to such customers equitable, secure and long-term benefits of the Federal base system (FBS).
2. To expose all BPA's customers to the same risks and benefits of changes to the costs and output of the FBS.
3. To reduce BPA's presence in the wholesale power market as a buyer and seller of power.
4. To enhance the ability of BPA to make its Treasury payments in full and on time across a broad range of possible futures.
5. To allocate the costs of procuring power for future load growth to the serving utility.
6. To reduce BPA's need to augment the FBS and its reliance on market revenues from the sale of secondary energy by shifting to utilities through expanded use of the Slice product

[11] *What Led to the Current BPA Financial Crisis? A BPA Report to the Region,* AKA "The Lessons Learned" report, Bonneville Power Administration, April 2003. p 10.
[12] Ibid
[13] *Investor-Owned Utility/Preference Utility Proposal For The Future Role Of The Bonneville Power Administration,* October 29, 2002 Draft, p 1

the obligation to procure resources to serve their load growth and the marketing of secondary energy.

7. To settle outstanding litigation in a manner that is fair to all parties, and that avoids future litigation over the allocation of FBS benefits.
8. To implement the foregoing consistent with existing statutes, without federal legislation.

Key elements of the proposal, in much abbreviated form, were:[14]

1. New 20-year contracts for power supply or financial benefits for regional utility customers. Power supply contracts would be on a take or pay basis.
2. Allocation of the net capability of the federal system to preference agencies based on their projected 2007 net requirements. Power would be first allocated to those customers that elect to take the "slice" service.[15] with the remainder going to those who elect to take requirements service.[16]
3. Slice customers would be responsible for all the costs associated with shaping their slice to meet loads and any load growth.
4. It was anticipated that there would be sufficient power available to serve the requirements customers initial loads with some left over. Bonneville was to manage the excess with the costs and benefits going to the requirements customers. When additional resources were required to serve the requirements customers, the costs of augmenting the system were to go to those customers.
5. Investor-owned utilities were to receive a financial benefit for their residential and small farm customers in settlement of their statutory rights to residential exchange benefits and their rights to purchase their net requirements from Bonneville. The financial benefit was to be calculated as the difference in the cost of power from a hypothetical combined cycle combustion turbine and the cost of Bonneville Power.
6. The loads of newly formed public utilities up to 75 average megawatts would be served at a melded rate that includes Bonneville's costs in serving its slice and requirements customers. Load above 75 average megawatts would be served at the cost Bonneville incurs in acquiring the necessary resources.
7. Up to 650 average megawatts of DSI load could be served on a take or pay basis at a melded rate(600 average megawatts of smelter load, 100 megawatts per smelter, and 50 average megawatts of non-smelter load) with the costs of the power required to serve this load melded into Bonneville's costs.
8. Conservation targets would be established through the Council's periodic power plans. Bonneville would budget for the conservation associated with their loads, including the IOU load used in determining the benefits for their residential and small farm customers. Conservation would be implemented by utilities using funding from BPA under the

[14] Ibid, pages 2-22.

[15] The slice customer would be contracting for a percentage of the output of the system and would be responsible for managing the variability in that output. They would also pay the costs of producing that output and would not pay any of the costs associated with providing requirements service.

[16] In requirements service, Bonneville is obligated to serve the customers net requirements, including acquiring additional resources to do so, if necessary.

Conservation and Renewables Discount program. A percentage of that would be used for funding renewables. Bonneville would administer the program, perform periodic audits and would be able to charge utilities that do not do their share and use those funds to implement conservation and renewables. Bonneville would continue to fund low-income weatherization, market transformation and RD&D.

9. A requirement for some mechanism to ensure that the commitment made by the customers to BPA's financial security under the new, long-term contracts is matched by an *enforceable* ability to ensure that rates they will pay are based only on necessary and legitimate costs.
10. Fish and wildlife costs would continue to be a legitimate cost of the system to be borne by the customers.

The Regional Dialog

In response to the Joint Customer Proposal (JCP), the Council and Bonneville held a number of public meetings throughout the region during the early fall of 2002. This process was dubbed the Regional Dialogue. The purpose of these meeting was to get public input on the JCP and alternatives to the JCP to define the future role of Bonneville in power supply. After the conclusion of these meetings, the Council reviewed the oral and written testimony received and developed its own set of recommendations to Bonneville.[17] Bonneville was to use these recommendations and the other information received during the Regional Dialogue to develop its own proposal that would be noticed in the Federal Register and be the subject public hearings. The administrator's decision would then establish policy for the development of new contracts.

In general the Council's recommendations endorsed the direction of the JCP with some changes. The Council identified a number of problems that Bonneville faces. The Council viewed these problems as the consequence of a mismatch between how Bonneville is called upon to operate and the realities of the evolving electricity system. The problems include:

- Periodic lack of clarity regarding load-serving responsibility and the uncertainty that creates for the development of new resources;
- Lack of clear economic signals to many parties in the region regarding the true costs of new power supplies and the value of alternatives;
- Exposure of Bonneville to high electricity market risks resulting from the periodic ability of customers to place load on or take load off of Bonneville;
- A perception of inequality in the distribution of the benefits of the federal power system within the region.
- The financial risk to the U.S. Treasury and the resulting political risk to the long-term interests of the region if at some time, Bonneville is unable to absorb the risks of uncertain loads, a highly variable hydroelectric system and a potentially volatile wholesale market.

The Councils recommendations can be summarized as follows:

[17] *Northwest Power Planning Council Recommendations on the Future Role of Bonneville in Power Supply*, Council Document 2002-19, December 17, 2002. http://www.nwcouncil.org/library/2002/2002-19.htm

- Support for 20-year contracts because they will provide contractual protection from the efforts of those outside the Northwest to appropriate the benefits of the federal Columbia River system; demonstrate regional commitment to the federal system and buffer Bonneville and thereby the Treasury from the risks of losing or gaining loads with shorter contracts.
- Support offering the slice product and expanded use of that product. This product meets the needs of some customers; it results in greater diversity in the electricity market; it lessens Bonneville's impact on the market and its exposure to market and hydropower risk; it improves the liquidity of the power market; and, it provides clarity with respect to responsibility for meeting load growth and clear economic signals regarding the cost of serving load growth.
- Support for Bonneville offering of a requirements product, as it meets the needs of many customers in the region. However, the Council is concerned about the lack of clarity regarding responsibility for meeting load growth once any surplus federal base system resources have been absorbed. The Council recommended that Bonneville clearly indicate that the load growth of customers receiving this product will be served by tiered rates or the equivalent that charges the cost of the new resources needed to meet load growth. To do otherwise would perpetuate conflict between growing and non-growing utilities and not send appropriate price signals to the customers.
- Support for Bonneville providing a block power product independent of the slice product. However, the Council believes that the block power product should be conditioned as described in the Joint Customer Proposal – that the costs Bonneville incurs in shaping power to the blocks be passed on to the block customer and that the block product not contain a load growth element. This is essential to aligning benefits and risks, providing clarity with regard to load responsibility and clear economic signals regarding the cost of load growth.
- Support for settling the issue of the level of benefits provided the residential and small farm customers of investor-owned utilities. To do so will reduce intra-regional animosities and give a broader cross-section of the region direct involvement in the well being of the federal system. While the Council did not endorse any particular formula, the Council supported the idea of a transparent approach that was not subject to manipulation.
- The Council supported limited service to DSIs at Bonneville's industrial rate in an amount not to exceed 600 MW. It recommended that contracts allow Bonneville to capture benefits of DSI load interruptibility and provision of reserves to offset the cost of DSI service to other customers. The Council also recommended contract provisions to help maintain aluminum plant operation during periods of low aluminum prices and adequate electricity supplies, provided this can be accomplished without imposing additional costs on other customers. The smelters were encouraged reduce dependence on Bonneville power in the long-term.
- The Council insisted that Bonneville's role in power supply include a realistic approach to ensuring that the region develops cost-effective conservation. The thrust of the customer proposal that makes more customers responsible for meeting their load growth

is a major step in the right direction. It is, however, not sufficient given the disincentives to utility investment in conservation, even though it is a lower-cost resource.

The Council supported establishment of Bonneville's conservation budgets based on the Council's plan and load served by Bonneville. However, the Council also asserted that Bonneville has the obligation and authority to establish conservation targets and to develop mechanisms to ensure conservation is captured for the entire load of its preference customers, not just the portion served by Bonneville and that Bonneville should use its authorities to the fullest extent possible to ensure the region attains conservation goals established for the entire retail load of customers that can place load on Bonneville. The Council supported the use of a mechanism like the Conservation and Renewables Discount to support local implementation in concept. However, the existing mechanism must be redesigned to ensure cost-effective acquisitions, encourage best practices and minimize the cost of acquisition consistent with achieving the savings. The mechanism also must limit expenditures on activities that do not clearly support the development of tangible savings and ensure accountability.

The Council asserted that a broader range of conservation activities should be carried out by Bonneville at the regional level than is envisioned in the customer proposal. This is because there are a number of activities that can be carried out more effectively if they are approached on a coordinated regional basis with local implementation.

- The Council emphasized the important role that Bonneville has played in research, development and demonstration for renewables and recommended a continued role for Bonneville in that area. In general, the Council supported some level of acquisition of renewable resources at costs higher than the market price of electricity where such acquisition is justified by the additional environmental and risk mitigation values that renewables can bring to the power system. The Council is currently developing its Fifth Power Plan. The Council's plan should guide renewable resource development in the region.
- The Council supported the joint customers' intent that the combination of slice/block/requirements operations not affect the determination and implementation of Bonneville's fish and wildlife obligations. Under the proposal, Bonneville, the Corps of Engineers and the Bureau of Reclamation will continue to meet the federal government's Indian trust and treaty responsibilities. Furthermore, greater clarity with respect to load responsibility should result in more timely development of new resources and reduce the potential periods of resource inadequacy. This should reduce the frequency with which the region would be forced to compromise fish operations on the hydropower system to maintain power supply adequacy.

Where are we now?

Bonneville's process for developing a response to the input received during the regional dialog was essentially put on hold while the Bonneville and its customers wrestled with proposed rate adjustments. During that time, some things appear to have changed. Many public customers may no longer be willing to turn in their exisiting contracts for new contracts that begin in October of 2006. With the exception of the DSI contracts and about 600 average megawatts of public utility load, most contracts do not expire until October of 2011. Under a normal time frame, this would mean that the negotiation of new contracts for most of Bonneville's loads

would be put off until 2008 or 2009. This would mean perpetuating the uncertainty about Bonneville's future role in power until well into the period in which decisions about resource development will have to be made. In addition, the discussions between public customers and the investor-owned utilities appear to have shifted away from the search for a long-term solution to the question of the benefits to the residential and small farm customers of the IOUs to a shorter term solution for the 2006 – 2001. On a more positive note, Bonneville and its public customers have made some progress toward providing a greater measure of openness regarding Bonneville's costs.

The region's governors have recognized that perpetuating uncertainty regarding Bonneville's role in power supply risks the adequacy and economy of the region's power supply. The Governors have asked the Council and Bonneville to reinitiate the Regional Dialog. A number of discussions with representatives of customers, regulators, industry and environmental interests were have been held. The major conclusion drawn from these discussion is that while some things may have changed and need to be reexamined, many of the basic elements of the original Joint Customer Proposal that was submitted to BPA last fall still have regional support and could form the foundation for moving forward.

Proposed Council Principles for the Future Role of Bonneville in Power Supply

The Federal Columbia River Power System remains important to the region's economy. It can continue as such only if the Bonneville Power Administration can successfully navigate the risks and uncertainties, both economic and political, that have confronted the agency for the past few years and will continue to face the agency in the future. Many of these risks and uncertainties are linked to Bonneville's role in power supply and how it chooses to implement that role. In addition, the uncertainty regarding Bonneville's role is an impediment to the timely development of power and conservation resources in the region. The Council believes the region needs to move forward with the definition of Bonneville's future role now, rather than waiting until the expiration of existing contracts is close at hand. The following principles are proposed a guide. Because of the sensitive nature of the current negotiations on settlement of the current contract period benefits for the residential and small farm customers of the investor-owned utilties, a principle related to the long-term resolution of that issue has not been included at this time.:

Proposed Council Principles for the Future Role of Bonneville
(Note: The following may change pending Power Committee Review)

- The goal should be long-term contracts (20 years) both to protect the system from interventions from outside the region and to reduce uncertainty for both the customers and Bonneville.
- Bonneville's primary role, in addition to transmission, should be managing the operation and marketing the output of the Federal Columbia River Power System. The FCRPS is a multipurpose public resource and Bonneville has a record of real expertise in its operation and marketing.

- Bonneville's role in providing power beyond the capability of the federal base system should be limited to bi-lateral contracts or rate mechanisms that align the benefits and costs. This would limit Bonneville's exposure to market risks and reduce the uncertainty regarding who will be acquiring additional resources thereby reducing an impediment to resource development.
- Bonneville's role should be limited contractually. Although most customers' contracts run through 2011, these changes need to be enacted as soon as possible so as to protect the regional resource from outside interference and clarify the outlook for resource development
- Customer agreement to long-term contracts will require at minimum that Bonneville: 1) provide customers and others greater openness regarding their costs, the factors driving those costs and the decisions affecting them BEFORE decisions are made; 2) implement cost-reducing process improvements; and 3) rebuild trust with the customers and others that Bonneville is a good business partner.
- Revising Bonneville's role in acquiring and pricing the output of additional resources will require an allocation of the federal base system resources and benefits. Any allocation method for the FBS should be equitable and consistent with federal law while striving to create as broad constituency for Bonneville as possible.
- A significant amount of the system should be offered as a "Slice" product . The slice product effectively distributes hydro risk and, by virtue of more diverse decision-making, should reduce the impact of hydro variability on the market. However, any proposal must preserve the ability of the hydro system to support fish recovery. Care should be taken to preserve hydro system ability to support the development of renewable resources.
- Benefits should be provided for the residential and small farm customers of the region's investor-owned utilities in a way which is judged to be equitable by the parties and that is clear and transparent and not subject to manipulation by any of the parties.
- The question of service to the DSI's must be addressed. If power is made available to DSIs, the amount and term should be limited and contracts should be structured to allow Bonneville to capture benefits of DSI load interruptibility and provision of reserves. The smelters should be encouraged to reduce dependence on Bonneville power in the long-term.
- Any solution must contain a mechanism for ensuring continued regional development of cost-effective conservation, as determined through the Council's plans. . While limiting Bonneville's role to develop new power supplies to bilateral arrangements with customers is a major step in the right direction, it is not sufficient to ensure the development of cost-effective conservation given the disincentives to utility investment in conservation. Reliance on local implementation is appropriate so long as there is a focus on cost-effectiveness and accountability and a backup mechanism is included to ensure that conservation is implemented. A direct Bonneville role in implementation is appropriate where there are economies of scale or other benefits from Bonneville's direct involvement.

- Similarly, a mechanism is required for ensuring that cost effective renewable and high efficiency resources are developed. In particular, the ability of the hydro system to support the development of intermittent renewable resources, through the flexibility of the hydro system, should not be unduly impaired.

Questions for Public Comment

The Council is interested in public comment on the following:

3. Do you think the question of Bonneville's future role in power supply needs to be addressed in the near future? If not, why?

4. Do you think proposed Council principles are appropriate guidance for consideration of Bonneville's future role? If not, why?

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