

SECTION 7(b)(2) OF THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

IMPLEMENTATION METHODOLOGY

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**DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION**

**Implementation Methodology of Section 7(b)(2) of the Pacific Northwest
Electric Power Planning and Conservation Act**

I. Introduction

The Pacific Northwest Electric Power Planning and Conservation Act (“Northwest Power Act”), 16 U.S.C. § 839, confirms BPA’s obligation to establish and revise BPA’s rates for the sale and transmission of electric power. Section 7(b)(2) of the Northwest Power Act provides that:

after July 1, 1985, the projected amounts to be charged for firm power for the general requirements of public body, cooperative and Federal agency customers, exclusive of amounts charged such customers under subsection (g) for the costs of conservation, resource and conservation credits, experimental resources and uncontrollable events, may not exceed in total, as determined by the Administrator, during any year after July 1, 1985, plus the ensuing four years, an amount equal to the power costs for general requirements of such customers if the Administrator ...

makes a set of assumptions, outlined in the remainder of section 7(b)(2). These assumptions hypothetically remove the effects of certain provisions in the Northwest Power Act. In order to implement the provisions in section 7(b)(2), BPA has formulated a methodology that specifies how BPA will conduct the section 7(b)(2) rate test.

The implementation of section 7(b)(2) in any given BPA rate proceeding requires two distinct steps. The first step is to compare a set of annual rates developed under all the provisions of the Northwest Power Act before considering the effects of section 7(b)(2) (the Program Case), with a set of annual rates developed under the assumptions outlined in section 7(b)(2) (the 7(b)(2) Case). Both sets of rates are those applicable to public body, cooperative, and Federal agency customers (7(b)(2) Customers) and are based on the costs of power required to serve the General Requirements of those customers over the Five-Year Period.

If the rates in the Program Case are determined to be higher than those in the 7(b)(2) Case, then rate protection is to be afforded to preference customers and a second step is required. The allocated costs of the 7(b)(2) Customers must be reduced by the amount of rate protection afforded by the rate test and the difference allocated to other BPA rates pursuant to section 7(b)(3) of the Northwest Power Act. This potential reallocation must be made within the framework of sound ratemaking principles and BPA’s statutory obligations.

II. Definitions

This section contains definitions applicable to section 7(b)(2). Terms identified in the Northwest Power Act have the same meaning in this section, unless further defined.

1. Relevant Rate Case: The section 7(i) wholesale power rate adjustment proceeding being conducted at the time the projections for section 7(b)(2) are made, and in which any adjustment to rates in accordance with section 7(b)(2) may be reflected.
2. General Requirements: The public body, cooperative, and Federal agency customers' electric power assumed in the Relevant Rate Case to be purchased from BPA, exclusive of new large single loads. General Requirements are limited to power purchased from BPA under section 5(b) of the Northwest Power Act; section 5(c) purchases from BPA are not included.
3. 7(b)(2) Customers: Those firm power customers of BPA that are listed in section 7(b)(2) of the Northwest Power Act as subject to the rate test, *viz.*, public bodies, cooperatives, and Federal agencies.
4. Applicable 7(g) Costs: The costs identified in section 7(g) of the Northwest Power Act that are also listed in section 7(b)(2), *viz.*, costs chargeable to 7(b)(2) Customers for conservation, resource and conservation credits, Experimental Resources, and Uncontrollable Events.
5. Uncontrollable Event: A discrete event which differs from the continuum of changing events that occur in nature, business, and government (such as changes in water conditions, aluminum prices, and electricity markets) and that are routinely reflected in ratemaking.
6. Experimental Resources: Resources that are undergoing research and development and are funded by BPA in full or in part.
7. Five-Year Period: The rate recovery period of the Relevant Rate Case, plus the ensuing four years. If the Relevant Rate Case has more than a one-year rate recovery period, the Five-Year Period will be greater than five years.
8. Program Case: The entire process of calculating rates to be charged in the Five-Year Period of the Relevant Rate Case under the provisions of the Northwest Power Act other than section 7(b)(2), including all specific data, assumptions, and results.
9. 7(b)(2) Case: The entire process of calculating rates for the relevant Five-Year Period under the provisions of section 7(b)(2) of the Northwest Power Act, including all specific data, assumptions, and results.
10. Five Assumptions: The five differences between the Program Case and the 7(b)(2) Case specified in subsections (A) through (E) of section 7(b)(2) of the Northwest Power Act.

11. DSI Loads: Those loads of direct service industries (DSIs) that are forecast to be served by BPA, during the Five-Year Period, pursuant to section 5(d)(1) or 5(f) of the Northwest Power Act.

12. Within or Adjacent: Relating to DSI customer loads determined in accordance with section 7(b)(2)(A) to be electrically within or adjacent to the geographic service territories of 7(b)(2) Customers.

13. Quantifiable Monetary Savings: The change in annual costs attributable to differences in resource financing or Reserve Benefits.

14. Reserve Benefits: The annual financial value of (1) resources designated by BPA as providing reserves, or (2) interruptible load that forestalls a resource acquisition by virtue of the ability to curtail the load at a time when off-line generation would otherwise need to be available to start up and serve load during unexpected conditions.

III. Legal Interpretation

BPA first published a Legal Interpretation of Section 7(b)(2) of the Pacific Northwest Power Planning and Conservation Act in 1984. 49 Fed. Reg. 23,998 (June 8, 1984). The first Legal Interpretation presented BPA's interpretation of section 7(b)(2) of the Northwest Power Act, incorporating principles of statutory construction and a review of legislative history. In addition, BPA considered the views expressed in a series of informal meetings with interested persons and in comments received in response to the publication of an earlier notice of a draft Legal Interpretation. The scope of the notice was limited to those issues that relied on statutory language or legislative intent for resolution.

Concurrent with the consideration of this revision to the Implementation Methodology, BPA is proposing revisions to the Legal Interpretation. This Methodology incorporates changes to conform to revisions to the Legal Interpretation.

Briefly, BPA interprets section 7(b)(2) as follows:

1. Section 7(b)(2) limits the 7(b)(2) Case to the Five Assumptions listed in section 7(b)(2) and the secondary effects of those assumptions.
2. Implementation of section 7(b)(2), and any subsequent reallocation pursuant to section 7(b)(3), will not conflict with the requirements of section 7(a).
3. Applicable 7(g) Costs are to be excluded from the Program Case revenue requirements and the 7(b)(2) Case revenue requirements prior to further determination of the 7(b)(2) Case power costs.
4. The appropriate Five-Year Period is the rate recovery period for the applicable rate case plus the ensuing four years.

5. 7(b)(2) Customers' loads include DSI Loads that are Within or Adjacent to the 7(b)(2) Customers' service territories.
6. BPA will use Appendix B of the Senate Report to assist in determining which DSI Loads are Within or Adjacent to the geographic service boundaries of 7(b)(2) Customers.
7. All DSI Loads assumed to be placed on 7(b)(2) Customers will be treated as firm loads.
8. Section 7(b)(2)(B) necessitates an examination of Program Case contracts in the determination of "Federal base system resources not obligated to other entities."
9. Section 7(b)(2)(B) requires the allocation of resource pools to load pools in the Program Case to be reconsidered in the 7(b)(2) Case.
10. Section 7(b)(2)(C) requires the exclusion of all costs relating to the section 5(c) exchange, otherwise known as the Residential Exchange Program, from the 7(b)(2) Case. In addition, the loads and resources associated with the exchange will also be excluded from the 7(b)(2) Case.
11. Section 7(b)(2)(D) identifies three additional resource types assumed to be available to meet the 7(b)(2) Customers' remaining General Requirements when FBS resources are exhausted. Type 1 are those resources not included in the FBS that are actually acquired by BPA from 7(b)(2) Customers in the Program Case. Conservation is a Type 1 resource. Type 2 are those resources owned or purchased by the 7(b)(2) Customers and not dedicated to load by public agencies or investor-owned utilities pursuant to section 5(b). These two types of resources are to be stacked in order of cost and then pulled from the stack to meet 7(b)(2) Customers' loads as needed, least expensive first. Type 3 resources are additional acquired resources not included in the FBS, which are priced at the average cost of all new resources acquired by BPA from non-7(b)(2) Customers during the Five-Year Period.
12. Section 7(b)(2)(E) requires an assessment of the Quantifiable Monetary Savings that are realized by public body financing of resources that are in the resource stack.
13. Section 7(b)(2)(E) requires an assessment of the value of Reserve Benefits acquired by BPA due to the Northwest Power Act.

IV. The Program Case

In performing the 7(b)(2) rate test, the Program Case is the Five-Year Period projection of the average annual power rates for serving the General Requirements of the 7(b)(2) Customers conforming with all the provisions of the Northwest Power Act before considering the effects of section 7(b)(2). All rate proposal determinations, decisions, and assumptions for the rate recovery period regarding revenue requirements, loads, resources, cost allocation, and rate

design will be used. All data for the ensuing four years will be consistent with or extrapolated from rate recovery period data. Ratemaking methodologies, such as those based on the rate directives in the Northwest Power Act and those used to allocate costs and revenue adjustments to BPA customer classes, will be unchanged over the Five-Year Period.

If BPA uses its section 7(e) rate design discretion to implement an alternative tiered rate form, that rate design flexibility will be applied subsequent to the section 7(b)(2) rate test. In such cases, the rate test will continue to be performed with all cost allocated to, and all loads included in, the 7(b) load pool, without respect to the tiering of such costs and loads.

1. Load Forecast

A load forecast will be developed for every BPA rate proposal independent of any requirements for implementing section 7(b)(2). It will include estimates of BPA programmatic conservation savings for the forecast period. The treatment of power sales contracts that expire during the Five-Year Period will be the subject of each Relevant Rate Case. This forecast will provide the load estimates for the Program Case.

2. DSI Loads

A load forecast of purchases by DSIs from BPA will be developed for the Five-Year Period. This forecast, without consideration of the rate schedule under which the power is sold, will define the DSI Loads for the Program Case.

3. Resources

Regional resource generation studies are also conducted for BPA's rate proposals. These studies determine the capability of BPA's and the region's hydro and thermal resources for the Five-Year Period. The resource study results will be consistently applied through the Five-Year Period except as modified to reflect the start of commercial operation or retirement of generating resources and also for the planned effect or expiration of relevant contracts or purchases. Firm and secondary hydroelectric generation will be based on these studies. Assumptions about the level of surplus firm power sales for the Program Case will be the same as those made for the Relevant Rate Case.

4. Revenue Requirements, Including Residential Exchange Costs

BPA's repayment process will be used for the determination of BPA revenue requirements through the Five-Year Period. Costs will be projected over the Five-Year Period using budget estimates, when available. Estimates of future inflation and real cost escalation and planned additions to BPA's power system will be used when budget estimates are unavailable.

5. Surplus Firm and Secondary Sales

The Program Case establishes the forecast of revenues from surplus power sales, whether the surplus is firm or secondary.

6. Subtracting Applicable 7(g) Costs

Prior to comparing the Program Case rates to the 7(b)(2) Case rates, section 7(b)(2) directs that the Applicable 7(g) Costs are to be subtracted from the Program Case rate. To accomplish this, the amounts of Applicable 7(g) Costs allocated to the 7(b) rate pool will be removed from the Program Case rates. To do so, the allocated Applicable 7(g) Costs will be expressed as a unit rate comparable to the 7(b) rate and will be subtracted from the annual 7(b) rates to calculate the adjusted Program Case rates.

7. Summary Methodology for the Program Case

The procedures and data from the rate proposal cannot be described in detail in this document. They are properly rate case determinations that are outside the scope of the Methodology for implementing section 7(b)(2). The Section 7(b)(2) Methodology must be flexible enough to incorporate the procedures and data from the rate proposal for which the section 7(b)(2) rate test is being conducted. These procedures and data, as part of a BPA rate filing, are in turn subject to review and comment pursuant to section 7(i) of the Northwest Power Act. The Section 7(b)(2) Methodology can require only that the rate proposal procedures and data be modeled or incorporated as accurately as possible, which will be subject to examination during the Relevant Rate Case.

In summary, the Program Case will be BPA's best projection of its rates without considering the effects of section 7(b)(2). The exact procedures for the rate calculation in the Program Case cannot be determined until BPA has prepared its rate proposal. However, the rate test modeling will reflect the rate proposal procedures as completely as possible in producing the Program Case when the rate test is conducted for that rate proposal.

V. The 7(b)(2) Case

The language of section 7(b)(2) not only directs BPA to conduct a rate test for the 7(b)(2) Customers, but also provides a considerable amount of direction as to how the rate test is to be conducted. BPA's Legal Interpretation provides the general approach to developing the 7(b)(2) Case. Based on this, the 7(b)(2) Case will be modeled in the same way as the Program Case, except where section 7(b)(2) provides specific assumptions that modify the Program Case. The modeling of these Five Assumptions and their secondary effects may lead to different results than the underlying premises and ratemaking processes that will be held constant between the two cases. The remainder of this section outlines how the 7(b)(2) Case rate calculations for the Five-Year Period will be developed.

1. Load Forecast

The initial loads that will be used in the 7(b)(2) Case will be the same General Requirements as those used in the Program Case, except that they will not include estimates of programmatic conservation savings being acquired by BPA because conservation is a non-FBS

resource. In addition, conservation is a resource acquired by the Administrator pursuant to section 6 and, therefore, conservation resources are required to be included in the 7(b)(2) Case resource stack. Because conservation resources must be included in the resource stack to be drawn to meet remaining loads if needed, they have not already been acquired, and therefore they cannot have reduced the loads of the 7(b)(2) Case. To remove the effects of the acquisition of conservation, the 7(b)(2) Customer loads will be increased by conservation being acquired by BPA. Power sales contracts that expire during the Five-Year Period, except for requirements and DSI contracts, will be recognized as expiring as scheduled. This forecast will provide the load estimates for the 7(b)(2) Case.

2. DSI Loads

DSI Loads will be examined on a plant-by-plant basis to reflect whether or not they are Within or Adjacent. All Within or Adjacent DSI Loads will be included in the General Requirements of the 7(b)(2) Customers during the Five-Year Period. DSI Loads not Within or Adjacent are assumed to be served by private utilities. The forecast operating levels of the DSIs that are transferred to public and private utilities are assumed to be served as 100 percent firm loads.

3. Resources

Section 7(b)(2)(B) requires the Administrator to assume that public body, cooperative, and Federal agency customers are served first with FBS resources, and 7(b)(2)(D) requires that additional resources be assumed to serve the remaining general requirements of the 7(b)(2) Customers. As in the Program Case, the FBS in the 7(b)(2) Case will be reduced by any contractual, statutory, or treaty obligations on these resources that were in existence prior to passage of the Northwest Power Act (statutory and treaty including the Canadian Entitlement return, the Hungry Horse Reservation, and Bureau pumping power).

Any contract that BPA enters into subsequent to December 5, 1980, that exchanges FBS capacity for energy, exchanges seasonal FBS energy, or for the sale of FBS capacity with the return of the energy, will be assumed only if there is FBS surplus to 7(b)(2) Customer needs. Therefore, the energy and revenue from such contracts will not be recognized in the 7(b)(2) Case unless there is an FBS surplus in the 7(b)(2) Case. If the FBS surplus does not allow full recognition of these contracts, then a *pro rata* share of energy and revenues will be recognized in the 7(b)(2) Case.

Any surplus FBS resources remaining after meeting FBS obligations, 7(b)(2) Customer loads, and contracts subsequent to December 5, 1980, will be assumed to be sold in the wholesale energy markets at the forecast price assumed in the Program Case for such sales.

If FBS resources, after meeting obligations, are insufficient to meet the loads of the 7(b)(2) Customers, then three types of additional resources can be added to serve those loads. These additional resources are defined in section 7(b)(2)(D) and are: (a) actual and planned resource acquisitions by BPA from 7(b)(2) Customers consistent with the Program Case, including conservation resources; (b) existing 7(b)(2) Customer resources not currently dedicated to

regional load by preference customers or IOUs; and (c) all other needed resources, acquired at the average cost of actual and planned resource acquisitions by BPA from non-7(b)(2) Customers consistent with the Program Case. The Type 1 and Type 2 resources will be assumed to come online to meet the remaining General Requirements of the 7(b)(2) Customers after FBS service in order of least-cost first. The resources will then be brought online in the exact amount required to meet the 7(b)(2) Customers' remaining General Requirements. However, once brought online, the resources will remain online throughout the Five-Year Period, even if loads are lower in subsequent years. In such cases, the excess resources will be assumed to be sold at the average cost of all the excess resources and the revenues credited to the 7(b)(2) Case rates.

4. Revenue Requirement

Except for specific exclusions resulting from the Five Assumptions and their secondary effects, the revenue requirement for the 7(b)(2) Case will be the same as the Program Case. The specific exceptions are:

(1) all costs related to the Residential Exchange Program will be removed, including the identified BPA costs of implementing the program. Any costs included in the Program Case that are the result of a settlement of Residential Exchange Program claims will also be excluded;

(2) all costs of any acquisition of new resources will be removed;

(3) Applicable 7(g) Costs will be removed; that is, the costs of conservation, billing credits, experimental resources, and uncontrollable events.

In addition to these explicit exclusions, the secondary effects of their exclusion will be considered. Specifically, for example, the Program Case repayment study will be performed without the excluded costs to determine the interest and amortization applicable to the 7(b)(2) Case.

5. Surplus Firm and Secondary Sales

The load and resource situation in the 7(b)(2) Case may be considerably different from that in the Program Case. The increase in the region's firm load due to the 100 percent firm service to Within or Adjacent DSI Loads, a different load forecast for the 7(b)(2) Case due to conservation removal, and a potentially different set of resources all imply that a different level of surplus firm power may be projected for the 7(b)(2) Case than for the Program Case. The level of surplus firm sales in the 7(b)(2) Case will be determined in the same manner as it is in the Program Case. However, any sales of surplus firm power projected to be made in the Program Case to serve interruptible DSI Loads will not be made in the 7(b)(2) Case. Any firm surplus FBS in the 7(b)(2) Case will be assumed to be sold at the average rate of post-Act contract sales in the Program Case. Any difference between costs allocated to surplus firm and revenues from the sale will be allocated to 7(b)(2) Customers.

Secondary energy generation of the region's hydroelectric system will also be assumed to be the same as in the Program Case. However, the secondary energy sales will be increased in the 7(b)(2) Case to reflect additional sales due to the removal of interruptible DSI Load.

6. Financing Benefits

Section 7(b)(2)(E)(1) requires that BPA assume that Quantifiable Monetary Savings to 7(b)(2) Customers resulting from reduced public utility financing costs for the first two types of non-FBS resources described above were not achieved in the 7(b)(2) Case. Therefore, any additional resources required to serve the General Requirements of 7(b)(2) Customers will not reflect the financing cost reductions implicit in resource acquisitions by public bodies.

A list of eligible resources will be developed, containing cost and sponsor information for each resource. For those resources actually acquired by BPA in the Program Case, and for those resources not dedicated to load and assumed available to BPA, BPA will estimate the financing costs for the resource sponsor assuming that BPA had not acquired the resource output. Finally, when detailed financing cost and sponsor information is not available for planned 7(b)(2) Customer resources, BPA will follow the same procedures, assuming projected public sponsored resource costs. Any changes in financing costs determined from this analysis will be included in the costs of the resources in the 7(b)(2) Case.

For conservation resources acquired by BPA, the financing benefits may include an increased amount of debt financing compared to the Program Case. The amount of debt financing assumed in the 7(b)(2) Case will be determined in the Relevant Rate Case.

7. Reserve Benefits

Section 7(b)(2)(E)(ii) requires BPA to assume that the Quantifiable Monetary Savings resulting from Reserve Benefits were not achieved. Reserve Benefits result from BPA's designated resources or restriction rights on loads provided for in power sales contracts. In the 7(b)(2) Case, these resources and restriction rights may be unavailable to BPA. Without the restriction rights, for example, BPA would incur the costs of providing an equivalent amount of reserves from another source. Therefore, it will be assumed that BPA will incur a level of costs for the benefit of public utilities based on the value of the reserves provided by the designated resources or restriction rights to the Program Case as determined in BPA's rate proposal. The value of reserves determination is currently based, in large part, on the cost of an alternative reserve resource. Also, if the level of reserves provided by the resources or restriction rights is insufficient in the 7(b)(2) Case, based on BPA planning criteria, then additional reserve resource costs will be added in the 7(b)(2) Case.

VI. Rate Test Computer Model

Conducting the section 7(b)(2) rate test requires the use of a computer model to develop the rate projections for the Program Case and the 7(b)(2) Case. The exact form of the Program Case procedures cannot be determined until the time of the Relevant Rate Case for which the rate test is being conducted. The 7(b)(2) Case is inextricably linked to the Program Case as a result of the general approach applied to modeling the 7(b)(2) Case. Therefore, to the maximum extent

possible, the exact structure and form of the computer model should be the same as used in determining BPA's actual power rates.

VII. Comparison of Rates

For each of the two Cases, the Program and the 7(b)(2), the rate test model will produce a set of annual average energy rates for the Five-Year Period. These two sets of rates will be used to determine if a reallocation of costs pursuant to section 7(b)(3) is required. The relevant rates for the comparison from the Program Case are BPA's average annual 7(b) rate less Applicable 7(g) Costs. The relevant rates from the 7(b)(2) Case are the per-kilowatt-hour power costs of serving the General Requirements of the 7(b)(2) Customers.

The 7(b) rate in the Program Case will be developed in the same manner as it is in BPA's rate proposal. The 7(b)(2) rate in the 7(b)(2) Case will include the costs of resources required to serve the 7(b)(2) Customers, along with all other costs and revenue adjustments not excluded by the Five Assumptions and their secondary effects. These costs and revenue adjustments include, but are not limited to, BPA's administrative and general costs, the FBS allocation of contract revenue deficiencies, and secondary revenue credits.

Prior to comparison with the 7(b)(2) rates from the 7(b)(2) Case, the 7(b) rates from the Program Case will be reduced by the Applicable 7(g) Costs listed in section 7(b)(2). All the costs of BPA conservation programs, billing credits, Experimental Resources, and Uncontrollable Events that were allocated to the 7(b) rates will be subtracted. The reduced Program Case rates will then be compared to the 7(b)(2) rates to determine if the 7(b)(2) rates are lower, on average, than the Program Case rates.

The comparison between the Program Case and the 7(b)(2) Case rates will be conducted for the Five-Year Period and will consider the time value of money. Therefore, the two sets of rates will be discounted back to the beginning of the first year of the Relevant Rate Case at BPA's projected future nominal borrowing rate, and then a simple average will be computed over the Five-Year Period. The discounted average rates will be rounded to the nearest tenth of a mill per kilowatt-hour. If the simple average of discounted 7(b)(2) Case rates is less than that of the Program Case rates, then a determination of an amount of rate protection to be reallocated in BPA's rate proposal is required.

VIII. Determination of Rate Protection Amount

If it is determined that the results of the rate test require a reallocation of costs for BPA's rate proposal to effect the rate protection, then the amount to be credited to the 7(b)(2) Customers and reallocated to BPA's other non-PF Preference sales must be calculated. This credit reflects the fact that it is a rate period adjustment that is based on a Five-Year Period determination. The difference in average discounted rates will be multiplied by the preference customer loads for the Relevant Rate Case to determine the reduction in the 7(b)(2) Customers' rate period costs.

IX. Conclusion

The section 7(b)(2) rate test, up to and including the point at which the rate protection amount is determined, is conducted outside of the mainstream of BPA's rate development process. Although the rate test reflects the Five Assumptions and their secondary effects used in the rate proposal, the rate test has no impact on BPA rates until the rate protection amount is included in BPA's rate design. At this point, any adjustment made to reflect the rate test results in BPA rates must be done within the overall framework of the rate development process and of BPA's ratemaking objectives and statutory requirements. Therefore, the section 7(b)(2) rate test results will be included as a step in BPA's rate design process, consistent with other statutory provisions and BPA's ratemaking objectives.

