Northwest **Power** and **Conservation** Council

November 6, 2018

MEMORANDUM

TO: **Power Committee Members**

FROM: **Ben Kujala**

SUBJECT: **Power Plan Provisions and Historical Context**

BACKGROUND:

Presenter: John Shurts, General Counsel, Council Staff

Summary: John Shurts will describe the provisions of the power plan based on the Northwest Power Act and give historical context about passage of the Act and how the power planning process started has developed over the years. This is the first two parts of a three-part series.

In December he will cover the present-day context and implications of the Act and the power plan.

See attached materials for outline and background.

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Northwest **Power** and **Conservation** Council

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Outline of power plan provisions of the Northwest Power Act

First in a series of briefings/discussions, in three parts;

1. **Power plan provisions of the Northwest Power Act**
2. Context at the time of the passage of the Act
3. Present-day context and implications

Road map of today's discussion:

1. **Power plan provisions in general, including basic directive and timing**
2. Relevant Purposes of the Act
3. **Procedure: public process for developing and adopting the power plan**
4. **Substantive considerations and elements of the power plan**
5. Relationship of the Council's power plan to Bonneville resource acquisitions
6. Relationship of the Council's power plan to resource decisions by others than Bonneville

relevant excerpts from the Act are attached at the end

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1. Power plan provisions in general, including basic directive and timing

Summary list of relevant provisions in NW Power Act:

- Power plan provisions are in Sections 4(d) through 4(g) (attached at back)
- Relevant definitions in Section 3 (attached)
- Purposes of Act in Section 2 inform how the Council is to understand and implement the power plan provisions (attached)
- Section 4(d)(2) and Sections 6(a), 6(b) and 6(c) describe the relationship of Bonneville's resource acquisitions to the Council's power plan (attached)

Basic directive to the Council:

Per Section 4(d)(1), Council is to adopt and transmit to Bonneville a "**regional conservation and electric power plan**."

Timing:

- Section 4(d)(1) Council is to "review" the power plan "not less frequently than once every five years."
- This section also recognizes that the plan "may be amended from time to time."
- Note that prior to the review of the plan or any major amendments, Section 4(h)(2) requires the Council to call for recommendations to amend the fish and wildlife program, thereby triggering first a fish and wildlife program amendment process under Section 4(h).

2. Relevant Purposes of the Act

2(1) to encourage, through the unique opportunity provided by the Federal Columbia River Power system,
- (A) conservation and efficiency in the use of electric power, and
- (B) the development of renewable resources within the Pacific Northwest

2(2) to assure the Pacific Northwest an adequate, efficient, economical, and reliable power supply

2(3) to provide for the participation and consultation of the states, local governments, consumers, customers, users of the Columbia River system (including federal and state fish and wildlife agencies and Indian tribes), and the public at large within the region in:
- (A) the development of regional plans and programs related to energy conservation renewable resources, other resources, and protecting, mitigating and enhancing fish and wildlife resources
- (B) facilitating the orderly planning of the region's power system, and
- (C) providing environmental quality

2(6) to protect, mitigate and enhance the fish and wildlife of the Columbia River and its tributaries…

3. Procedure: public process for developing and adopting the power plan

Process generally:

- **Sections 4(d)(1) and 4(g)** describe the process the Council is to follow in preparing the power plan.

- Lightly scripted, especially compared to fish and wildlife program. Reflects the significant differences between the role of the Council in power planning and its role in fish and wildlife program development, recognized by the Ninth Circuit (compare *Seattle Master Builders* in 1986 and *NRIC v. Council* in 1994).

Public hearings:

- **Section 4(d)(1)** requires the Council to hold a **public hearing** in each Council member's state prior to adoption of the plan or "any substantial, nontechnical amendments to the plan."

- Also provides that a public hearing shall also be held "in any other State of the region" "if the Council determines that the plan or amendments would likely have a substantial impact on that State in terms of major resources which may be developed in that State and which the Administrator may seek to acquire." Has never happened.

Draft power plan:

- The Act says nothing explicit about a **draft plan**, although implied by the notion of having public hearings on plan prior to adoption.

- The Council largely follows the notice and comment procedures specified in the federal Administrative Procedures Act, including:
  - wide public notice of the proposed or draft power plan -- and often of major elements of the plan in formulation before the draft
  - opportunities for written comment as well as to testify at public hearings
  - explanation at the end as to how the Council considered comments in shaping the final power plan
  - publication of notice of final plan in Federal Register

Participation and engagement:

- **Section 4(g)(3)** provides that the Council (and Bonneville) is to encourage the cooperation, participation, and assistance of appropriate federal agencies, state entities, state political subdivisions, and Indian tribes in the preparation, adoption, and implementation of the power plan. The Council (and Bonneville) are "authorized to contract" "with such agencies, entities, tribes, and subdivisions individually, in groups, or through associations thereof to (A) investigate possible measures to be included in the plan, [and] (B) provide public involvement and information regarding a proposed plan or amendment thereto.

- Sections 4(g)(1) and (2) add generally that the Council (and Bonneville) are to, among other things:
  - insure widespread public involvement in the formulation of regional power policies
  - maintain comprehensive programs to inform the public of major regional power issues
  - obtain public views on major regional power issues
  - secure the advice and comments of Bonneville's power sales customers and others
  - consult with the Bonneville customers and include the comments of the customers in the record of the Council's proceedings
  - recognize and not abridge the authorities of state and local governments, electric utility systems, and other non-federal entities responsible for the planning, supply, distribution, and operation of electricity generating facilities

Advisory committees:

- **Section 4(c)(11)** requires the Council to establish a "scientific and statistical advisory committee" to assist in the "development, collection, and evaluation of such statistical, biological, economic, social, environmental, and other scientific information as is relevant to the Council's development and amendment of a regional conservation and electric power plan."

- Section 4(c)(12) authorizes the Council to establish other advisory committees as the Council deems appropriate.

- Section 4(c)(13) directs the Council to ensure advisory committee members include, "to the extent feasible," representatives from and seek the advice of "Federal, and the various regional, State, local, and Indian Tribal Governments, consumer groups, and customers."

Judicial review of adopted power plan

- Adoption of the power plan is a final action subject to judicial review. Section 9(e)(1)(A)

- Challenges must be filed in the Ninth Circuit. Must be filed within sixty days after publication of the notice of final agency action in the Federal Register. Section 9(e)(5)

- By Section 9(e)(2), review is limited to the administrative record compiled of the decision. The scope of judicial review is governed by Section 706 of the federal Administrative Procedures Act, which means the court will set aside the Council's action if found to be:
  - arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law
  - contrary to constitutional right, power, privilege, or immunity
  - in excess of statutory jurisdiction, authority, or short of statutory right
  - without observance of procedure required by law

4. Substantive considerations and elements of the power plan - and relevant definitions

A. Substantive considerations and elements of the power plan

Basic directive/provisions:

- To reiterate**, Section 4d(1)** has the basic directive: Council is to adopt and transmit to Bonneville a "**regional conservation and electric power plan**."

- **Sections 4(e) and 4(f)** then detail the substantive priorities, considerations, and elements that the power plan must contain and reflect.

Power plan is to include "cost effective" resources with certain priorities:

Section 4(e)(1) specifies that the power plan is to "give priority to resources which the Council determines to be cost effective" with priority to be given "first, to conservation; second, to renewable resources; third, to generating resources utilizing waste heat or generating resources of high fuel conversion efficiency; and fourth, to all other resources." (Key definitions discussed below.)

Power plan is to include a resource scheme (or resource strategy) to reduce or meet Bonneville's obligations:

Section 4(e)(2) then provides that the Council's plan "shall set forth a general scheme for implementing conservation measures and developing resources pursuant to section 6 of this Act to reduce or meet the [Bonneville Power] Administrator's obligations…" (See below on what those Bonneville obligations are.)

Considerations in developing this resource scheme:

Section 4(e)(2) also requires that the Council develop this resource scheme "with due consideration" by the Council for:

- environmental quality
- compatibility with the existing regional power system
- protection, mitigation, and enhancement of fish and wildlife and related spawning grounds and habitat, including sufficient quantities and qualities of flows for successful migration, survival, and propagation of anadromous fish
- other criteria the Council might set forth in the plan.

Specific plan elements:

Section 4(e)(3) then lists specific **elements** the Council is to include in the power plan "[t]o accomplish the priorities," while leaving it to the Council to set forth the elements "in such detail as the Council determines to be appropriate":

(A) an energy conservation program to be implemented under this Act, including, but not limited to, model conservation standards [model conservation standards are further defined in Section 4(f)), along with a possible surcharge described in Sections 4(e)(3)(g) and 4(f)]

(B) recommendations for research and development

(C) a methodology for determining quantifiable environmental costs and benefits under section 3(4) of this Act [the definition of cost-effectiveness]

(D) a demand forecast of at least twenty years, to be developed in consultation with Bonneville, customers, states (including state agencies with ratemaking authority over electric utilities), and the public, "in such manner as the Council deems appropriate."

and

a forecast of power resources estimated by the Council to be required to meet the obligations of the Bonneville Power Administrator and the portion of the Administrator's obligations the Council determines can be met by resources in each of the priority categories listed in paragraph [4(e)](1). The resource forecast:

(i) shall include regional reliability and reserve requirements

(ii) shall take into account the requirements of subsection (h) on the availability of resources to the Administrator [the fish and wildlife program], and

(iii) shall include the approximate amounts of power the Council recommends should be acquired by Bonneville and may include, to the extent practicable, an estimate of the types of resources from which such power should be acquired

(E) an analysis of electricity reserve and reliability requirements and cost-effective methods of providing reserves designed to insure adequate electric power at the lowest probable cost

(F) the program adopted pursuant to subsection (h) [the fish and wildlife program]

(G) if the Council recommends surcharges pursuant to subsection (f) of this section, a methodology for calculating such surcharges

Model conservation standards:

- **Section 4(f)(1)** provides that the Council shall adopt "model conservation standards" into the plan "after consultation with the Administrator, states, political subdivisions, customers, and the public." Model conservation standards to be included in the plan shall include (but not be limited to) standards applicable to:
  - (A) new and existing structures
  - (B) utility, customer, and governmental conservation programs
  - (C) other consumer actions for achieving conservation

- Model conservation standards shall:

- reflect geographic and climatic differences within the region and other appropriate considerations
- be designed to produce all power savings that are cost-effective for the region and economically feasible for consumers, taking into account [available] financial assistance

- **Section 4(f)(2)**: **surcharge** authority

B. Key definitions

Cost-effective: What makes a resource **cost-effective** under the Act? "Cost-effective" defined in **Section 3(4)**:

- To be cost-effective a resource must:
  - be **reliable and available**
  - meet or reduce demand of the "consumers of the customers" at "an **estimated incremental system cost** no greater than that of the least-cost similarly reliable and available alternative measure or resource"

- "**System cost**" is then defined to mean "an estimate of all direct costs of a measure or resource over its effective life," including, "among other factors":
  - cost of distribution and transmission to the consumer, if applicable
  - waste disposal costs
  - end-of-cycle costs
  - fuel costs (including projected increases)
  - such quantifiable environmental costs and benefits as the Administrator determines, on the basis of a methodology developed by the Council as part of the plan are directly attributable to such measure or resource

- **Edge to conservation**. The "estimated incremental system cost" of any conservation measure is not to be considered greater than any nonconservation resource unless in excess of 110% of the incremental system cost of the nonconservation resource.

"**Resource**" (**Section 3(19))**: "Resource" means--

(A) electric power, including the actual or planned electric power capability of generating facilities, or

(B) actual or planned load reduction resulting from direct application of a renewable energy resource by a consumer, or from a conservation measure.

"**Electric power**" (**Section 3(9))**: "Electric power" means electric peaking capacity, or electric energy, or both.

"**Conservation**" (**Section 3(3))**: "Conservation" means any reduction in electric power consumption as a result of increases in the efficiency of energy use, production, or distribution.

“Renewable resource” (Section 3(16)) “Renewable resource” means a resource which utilizes solar, wind, hydro, geothermal, biomass, or similar sources of energy and which either is used for electric power generation or will reduce the electric power requirements of a consumer, including by direct application.

“Reserves” (Section 3(17)) “Reserves” means the electric power needed to avert particular planning or operating shortages for the benefit of firm power customers of the Administrator and available to the Administrator (A) from resources or (B) from rights to interrupt, curtail, or otherwise withdraw, as provided by specific contract provisions, portions of the electric power supplied to customers.

5. Relationship of the Council's power plan to Bonneville resource acquisitions

A. At Bonneville: By Section 4(d)(2) and Sections 6(a) through 6(c) of the Act, Bonneville is to act consistent with the Council's power plan in making decisions to acquire new resources.

Context and concept at time of the passage of the Act:

As will be discussed at other times, in the Northwest Power Act Congress envisioned that Bonneville, the federal power marketing agency selling at wholesale the electrical power produced by the Federal Columbia River Power System and "federal base system" resources (e.g., WNP-2), would also be a major engine (or the major engine) for adding new resources to the region's power system as needed by Bonneville's customers.

Bonneville resource acquisition authority:

- **Section 5** of the Act requires Bonneville to offer power sales contracts to public and private utilities in the region and others, without limitation to the amount in Bonneville's federal base system

- **Section 6** of the Act then authorizes and obligates Bonneville to **acquire sufficient resources** to meet its obligations

- Section 6 resource acquisition authority includes:
  - **Conservation resources**. Section 6(a) obligates Bonneville to acquire conservation and implement such conservation measures "as the Administrator determines are consistent with the [Council's power] plan."

  - **Generating resources**. Section 6(b) then requires Bonneville to acquire "sufficient resources":
    (A) to meet the agency's "contractual obligations" "after taking into account planned savings from [the conservation] measures"; and
    (B) "to assist [the agency] in meeting the requirements of section 4(h) of the Act" [that is, the fish and wildlife provisions]

  - **"Major" resources**. Section 6(c) provides additional specific procedures for acquiring "major" resources, defined in Section 3(12) to mean resources with a planned capability greater than 50 aMW and to be acquired for more than five years.

Bonneville's resource decisions to be consistent with the Council's power plan:

Sections 4(d)(2) and 6(a), 6(b), and 6(c) tie Bonneville's acquisition of new resources for these purposes directly to the Council's power plan by requiring that Bonneville's conservation and generating resource acquisitions be consistent with the Council's power plan, with certain narrowly specified exceptions.

B. At the Council: And so, what is the Council to include in the power plan concerning Bonneville's resource acquisitions? *See* Sections 4(e)(2), 4(e)(3)(A), 4(e)(3)(D) in particular.

- **Section 4(e)(2)** provides that the Council's plan "shall set forth a general scheme for implementing conservation measures and developing resources pursuant to section 6 of this Act *to reduce or meet the [Bonneville Power] Administrator's obligations*."

- **Section 4(e)(3)(A)** then provides the power plan is to contain "an energy conservation program to be implemented under this [Act]" - that is, to be implemented by Bonneville

- **Section 4(e)(3)(D)** also provides the power plan is to contain, along with a "demand forecast of at least twenty years,":

  "a forecast of power resources estimated by the Council to be required to meet [Bonneville's] obligations and the portion of such obligations the Council determines can be met by resources in each of the priority categories referred to in paragraph [4(e)](1). The resource] forecast:

  (i) shall include regional reliability and reserve requirements,

  (ii) shall take into account the effect, if any, of the requirements of subsection (h) [the fish and wildlife program] on the availability of resources to the Administrator, and

  (iii) shall include the approximate amounts of power the Council recommends should be acquired by Bonneville on a long-term basis and may include, to the extent practicable, an estimate of the types of resources from which such power should be acquired."

6. Relationship of the Council's power plan to resource decisions by others than Bonneville

Resource acquisition decisions by others:

The Council's power plan is influential in the resource decisions of the region's non-federal utilities and in the decisions to review resource choices by the states' utility commissions . With the reminder that the only legal link *in the Northwest Power Act* to the power plan is *to Bonneville's* new resource acquisition decisions, and to Bonneville's authority to impose a surcharge recommended by the Council, under Section 4(f)(2)).

I-937 in Washington:

Washington voters, in making I937 part of Washington state law, have now tied a required analysis by Washington utilities of conservation potential to the Council's *conservation methodology* (not the plan's resource strategy). This is not a legal responsibility of the Council under federal law, but of the utilities in Washington under state law.

Northwest Power Act of 1980
Excerpts from Section 2 (purposes), Section 3 (definitions), Section 4(c)(11-13) (advisory committees), Sections 4(d-g) (power plan), Sections 6(a-c) (Bonneville resource acquisitions)

Section 2: Purposes

Section 2 The purposes of this Act, together with the provisions of other laws applicable to the Federal Columbia River Power System, are all intended to be construed in a consistent manner. Such purposes are also intended to be construed in a manner consistent with applicable environmental laws. Such purposes are:

2(1) to encourage, through the unique opportunity provided by the Federal Columbia River Power System--

2(1)(A) conservation and efficiency in the use of electric power, and
2(1)(B) the development of renewable resources within the Pacific Northwest;

2(2) to assure the Pacific Northwest of an adequate, efficient, economical, and reliable power supply;

2(3) to provide for the participation and consultation of the Pacific Northwest States, local governments, consumers, customers, users of the Columbia River System (including Federal and State fish and wildlife agencies and appropriate Indian tribes), and the public at large within the region in--

2(3)(A) the development of regional plans and programs related to energy conservation, renewable resources, other resources, and protecting, mitigating, and enhancing fish and wildlife resources,

2(3)(B) facilitating the orderly planning of the region's power system, and

2(3)(C) providing environmental quality;

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2(6) to protect, mitigate and enhance the fish and wildlife, including related spawning grounds and habitat, of the Columbia River and its tributaries, particularly anadromous fish which are of significant importance to the social and economic well-being of the Pacific Northwest and the Nation and which are dependent on suitable environmental conditions substantially obtainable from the management and operation of Federal Columbia River Power System and other power generating facilities on the Columbia River and its tributaries.

Section 3: Definitions

Section 3 As used in this Act, the term--
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3(3) "**Conservation**" means any reduction in electric power consumption as a result of increases in the efficiency of energy use, production, or distribution.

3(4) [Cost-effective]

(A) "**Cost-effective**", when applied to any measure or resource referred to in this Act, means that such measure or resource must be forecast--

(i) to be reliable and available within the time it is needed, and
(ii) to meet or reduce the electric power demand, as determined by the Council or the Administrator, as appropriate, of the consumers of the customers at an estimated incremental system cost no greater than that of the least-cost similarly reliable and available alternative measure or resource, or any combination thereof.

(B) For purposes of this paragraph, the term "system cost" means an estimate of all direct costs of a measure or resource over its effective life, including, if applicable, the cost of distribution and transmission to the consumer and, among other factors, waste disposal costs, end-of-cycle costs, and fuel costs (including projected increases), and such quantifiable environmental costs and benefits as the Administrator determines, on the basis of a methodology developed by the Council as part of the plan, or in the absence of the plan by the Administrator, are directly attributable to such measure or resource.

(C) In determining the amount of power that a conservation measure or other resource may be expected to save or to produce, the Council or the Administrator, as the case may be, shall take into account projected realization factors and plant factors, including appropriate historical experience with similar measures or resources.

(D) For purposes of this paragraph, the "estimated incremental system cost" of any conservation measure or resource shall not be treated as greater than that of any nonconservation measure or resource unless the incremental system cost of such conservation measure or resource is in excess of 110 per centum of the incremental system cost of the nonconservation measure or resource.

3(5) "**Consumer**" means any end user of electric power.

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3(7) "**Customer**" means anyone who contracts for the purchase of power from the Administrator pursuant to this Act.

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3(9) "**Electric power**" means electric peaking capacity, or electric energy, or both.

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3(12) "**Major resource**" means any resource that--

(A) has a planned capability greater than fifty average megawatts, and
(B) if acquired by the Administrator, is acquired for a period of more than five years.

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3(16) "**Renewable resource**" means a resource which utilizes solar, wind, hydro, geothermal, biomass, or similar sources of energy and which either is used for electric power generation or will reduce the electric power requirements of a consumer, including by direct application.

3(17) "**Reserves**" means the electric power needed to avert particular planning or operating shortages for the benefit of firm power customers of the Administrator and available to the Administrator (A) from resources or (B) from rights to interrupt, curtail, or otherwise withdraw, as provided by specific contract provisions, portions of the electric power supplied to customers.

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3(19) "**Resource**" means--

(A) electric power, including the actual or planned electric power capability of generating facilities, or
(B) actual or planned load reduction resulting from direct application of a renewable energy resource by a consumer, or from a conservation measure.

Section 4(c)(11-13) (advisory committees)

4(c)(11) The Council shall establish a voluntary scientific and statistical advisory committee to assist in the development, collection, and evaluation of such statistical, biological, economic, social, environmental, and other scientific information as is relevant to the Council's development and amendment of a regional conservation and electric power plan.

4(c)(12) The Council may establish such other voluntary advisory committees as it determines are necessary or appropriate to assist it in carrying out its functions and responsibilities under this Act.

4(c)(13) The Council shall ensure that the membership for any advisory committee established or formed pursuant to this section shall, to the extent feasible, include representatives of, and seek the advice of, the Federal, and the various regional, State, local, and Indian Tribal Governments, consumer groups, and customers.

Sections 4(d) through 4(g): Power Plan

4(d)(1) Within two years after the Council is established and the members are appointed pursuant to subsection (a) or (b) of this section, the Council shall prepare, adopt, and promptly transmit to the Administrator a regional conservation and electric power plan. The adopted plan, or any portion thereof, may be amended from time to time, and shall be reviewed by the Council not less frequently than once every five years. Prior to such adoption, public hearings shall be held in each Council member's State on the plan or substantial, nontechnical amendments to the plan proposed by the Council for adoption. A public hearing shall also be held in any other State of the region on the plan or amendments thereto, if the Council determines that the plan or amendments would likely have a substantial impact on that State in terms of major resources which may be developed in that State and which the Administrator may seek to acquire. Action of the Council under this subsection concerning such hearings shall be subject to section 553 of title 5, United States Code and such procedure as the Council shall adopt.

4(d)(2) Following adoption of the plan and any amendment thereto, all actions of the Administrator pursuant to section 6 of this Act shall be consistent with the plan and any amendment thereto, except as otherwise specifically provided in this Act.

4(e)(1) The plan shall, as provided in this paragraph, give priority to resources which the Council determines to be cost-effective. Priority shall be given: first, to conservation; second, to renewable resources; third, to generating resources utilizing waste heat or generating resources of high fuel conversion efficiency; and fourth, to all other resources.

4(e)(2) The plan shall set forth a general scheme for implementing conservation measures and developing resources pursuant to section 6 of this Act to reduce or meet the Administrator's obligations with due consideration by the Council for (A) environmental quality, (B) compatibility with the existing regional power system, (C) protection, mitigation, and enhancement of fish and wildlife and related spawning grounds and habitat, including sufficient quantities and qualities of flows for successful migration, survival, and propagation of anadromous fish, and (D) other criteria which may be set forth in the plan.

4(e)(3) To accomplish the priorities established by this subsection, the plan shall include the following elements which shall be set forth in such detail as the Council determines to be appropriate:

(A) an energy conservation program to be implemented under this Act, including, but not limited to, model conservation standards;

(B) recommendation for research and development;

(C) a methodology for determining quantifiable environmental costs and benefits under section 3(4);

(D) a demand forecast of at least twenty years (developed in consultation with the Administrator, the customers, the States, including State agencies with ratemaking authority over electric utilities, and the public, in such manner as the Council deems appropriate) and a forecast of power resources estimated by the Council to be required to meet the Administrator's obligations and the portion of such obligations the Council determines can be met by resources in each of the priority categories referred to in paragraph (1) of this subsection which forecast (i) shall include regional reliability and reserve requirements, (ii) shall take into account the effect, if any, of the requirements of subsection (h) on the availability of resources to the Administrator, and (iii) shall include the approximate amounts of power the Council recommends should be acquired by the

Administrator on a long-term basis and may include, to the extent practicable, an estimate of the types of resources from which such power should be acquired;

(E) an analysis of reserve and reliability requirements and cost-effective methods of providing reserves designed to insure adequate electric power at the lowest probable cost;

(F) the program adopted pursuant to subsection (h); and

(G) if the Council recommends surcharges pursuant to subsection (f) of this section, a methodology for calculating such surcharges.

4(e)(4) The Council, taking into consideration the requirement that it devote its principal efforts to carrying out its responsibilities under subsections (d) and (h) of this section, shall undertake studies of conservation measures reasonably available to direct service industrial customers and other major consumers of electric power within the region and make an analysis of the estimated reduction in energy use which would result from the implementation of such measures as rapidly as possible, consistent with sound business practices. The Council shall consult with such customers and consumers in the conduct of such studies.

4(f)(1) Model conservation standards to be included in the plan shall include, but not be limited to, standards applicable to (A) new and existing structures, (B) utility, customer, and government conservation programs, and (C) other consumer actions for achieving conservation. Model conservation standards shall reflect geographic and climatic differences within the region and other appropriate considerations, and shall be designed to produce all power savings that are cost-effective for the region and economically feasible for consumers, taking into account financial assistance made available to consumers under section 6(a) of this Act. These model conservation standards shall be adopted by the Council and included in the plan after consultation, in such manner as the Council deems appropriate, with the Administrator, States, and political subdivisions, customers of the Administrator, and the public.

4(f)(2) The Council by a majority vote of the members of the Council is authorized to recommend the Administrator a surcharge and the Administrator may thereafter impose such a surcharge, in accordance with the methodology provided in the plan, on customers for those portions of their loads within the region that are within States or political subdivisions which have not, or on the Administrator's customers which have not, implemented conservation measures that achieve energy savings which the Administrator determines are comparable to those which would be obtained under such standards. Such surcharges shall be established to recover such additional costs as the Administrator determines will be incurred because such projected energy savings attributable to such conservation measures have not been achieved, but no case may such surcharges be less than 10 per centum or more than 50 per centum of the Administrator's applicable rates for such load or portion thereof.

4(g)(1) To insure widespread public involvement in the formulation of regional power policies, the Council and Administrator shall maintain comprehensive programs to--

(A) inform the Pacific Northwest public of major regional power issues,

(B) obtain public views concerning major regional power issues, and

(C) secure advice and consultation from the Administrator's customers and others.

4(g)(2) In carrying out the provisions of this section, the Council and the Administrator shall--

(A) consult with the Administrator's customers;

(B) include the comments of such customers in the record of the Council's proceedings; and

(C) recognize and not abridge the authorities of State and local governments, electric utility systems, and other non-Federal entities responsible to the people of the Pacific Northwest for the planning, conservation, supply, distribution, and use of electric power and the operation of electric generating facilities.

4(g)(3) In the preparation, adoption, and implementation of the plan, the Council and the Administrator shall encourage the cooperation, participation, and assistance of appropriate Federal agencies, State entities, State political subdivisions, and Indian tribes. The Council and the Administrator are authorized to contract, in accordance with applicable law, with such agencies, entities, tribes, and subdivisions individually, in groups, or through associations thereof to (A) investigate possible measures to be included in the plan, (B) provide public involvement and information regarding a proposed plan or amendment thereto, and (C) provide services which will assist in the implementation of the plan. In order to assist in the implementation of the plan, particularly conservation, renewable resource, and fish and wildlife activities, the Administrator, when requested and subject to available funds, may provide technical assistance in establishing conservation, renewable resource, and fish and wildlife objectives by individual States or subdivisions thereof or Indian tribes. Such objectives, if adopted by a State or subdivision thereof or Indian tribes, may be submitted to the Council and the Administrator for review, and upon approval by the Council, may be incorporated as part of the plan.

Section 6: Conservation and Resource Acquisition

6(a)

(1) The Administrator shall acquire such resources through conservation, implement all such conservation measures, and acquire such renewable resources which are installed by a residential or small commercial consumer to reduce load, as the Administrator determines are consistent with the plan, or if no plan is in effect with the criteria of section 4(e)(1) and the considerations of section 4(e)(2) and, in the case of major resources, in accordance with subsection (c) of this section. Such conservation measures and such resources may include, but are not limited to--

(A) loans and grants to consumers for insulation or weatherization, increased system efficiency, and waste energy recovery by direct application,

(B) technical and financial assistance to, and other cooperation with, the Administrator's customer and governmental authorities to encourage maximum cost-effective voluntary conservation and the attainment of any cost-effective conservation objectives adopted by individual States or subdivisions thereof,

(C) aiding the Administrator's customers and governmental authorities in implementing model conservation standards adopted pursuant to section 4(f), and

(D) conducting demonstration projects to determine the cost effectiveness of conservation measures and direct application of renewable energy resources.

(2) In addition to acquiring electric power pursuant to section 5(c), or on a short-term basis pursuant to section 11(b)(6)(i) of the Federal Columbia River Transmission System Act, the Administrator shall acquire, in accordance with this section, sufficient resources--

(A) to meet his contractual obligations that remain after taking into account planned savings from measures provided for in paragraph (1) of this subsection, and

(B) to assist in meeting the requirements of section 4(h) of this Act.

The Administrator shall acquire such resources without considering restrictions which may apply pursuant to section 5(b) of this Act.

6(b)

(1) Except as specifically provided in this section, acquisition of resources under this Act shall be consistent with the plan, as determined by the Administrator.

(2) The Administrator may acquire resources (other than major resources) under this Act which are not consistent with the plan, but which are determined by the Administrator to be consistent with the criteria of section 4(e)(1) and the considerations of section 4(e)(2) of this Act.

(3) If no plan is in effect, the Administrator may acquire resources under this Act which are determined by the Administrator to be consistent with the criteria of section 4(e)(1) and the considerations of section 4(e)(2) of this Act.

(4) The Administrator shall acquire any non-Federal resources to replace Federal base system resources only in accordance with the provisions of this section. The Administrator shall

include in the contracts for the acquisition of any such non-Federal replacement resources provisions which will enable him to ensure that such non-Federal replacement resources are developed and operated in a manner consistent with the considerations specified in section 4(e)(2) of this Act.

(5) Notwithstanding any acquisition of resources pursuant to this section, the Administrator shall not reduce his efforts to achieve conservation and to acquire renewable resources installed by a residential or small commercial consumer to reduce load, pursuant to subsection (a)(1) of this section.

6(c)

(1) For each proposal under subsection (a), (b), (f), (h) or (l) of this section to acquire a major resource, to implement a conservation measure which will conserve an amount of electric power equivalent to that of a major resource, to pay or reimburse investigation and preconstruction expenses of the sponsors of a major resource, or to grant billing credits or services involving a major resource, the Administrator shall--

(A) publish notice of the proposed action in the Federal Register and provide a copy of such notice to the Council, the Governor of each State in which facilities would be constructed or a conservation measure implemented, and the Administrator's customers;

(B) not less than sixty days following publication of such notice, conduct one or more public hearings, presided over by a hearing officers, at which testimony and evidence shall be received, with opportunity for such rebuttal and cross-examination as the hearing officer deems appropriate in the development of an adequate hearing record;

(C) develop a record to assist in evaluating the proposal which shall include the transcript of the public hearings, together with exhibits, and such other materials and information as may have been submitted to, or developed by, the Administrator; and

(D) following completion of such hearings, promptly provide to the Council and make public a written decision that includes, in addition to a determination respecting the requirements of subsection (a), (b), (f), (h), (l), or (m) of this section, as appropriate--

(i) if a plan is in effect, a finding that the proposal is either consistent or inconsistent with the plan or, notwithstanding its inconsistency with the plan, a finding that it is needed to meet the Administrator's obligations under this Act, or

(ii) if no plan is in effect, a finding that the proposal is either consistent or inconsistent with the criteria of section 4(e)(1) and the considerations of section 4(e)(2) of this Act or notwithstanding its inconsistency, a finding that it is needed to meet the Administrator's obligations under this Act.

In the case of subsection (f) of this section, such decision shall be treated as satisfying the applicable requirements of this subsection and of subsection (f) of this section, if it includes a finding of probable consistency, based upon the Administrator's evaluation of information available at the time of completion of the hearing under this paragraph. Such decision shall include the reasons for such finding.

(2) Within sixty days of the receipt of the Administrator's decision pursuant to paragraph (1)(D) of this subsection, the Council may determine by a majority vote of all members of the Council, and notify the Administrator--

(A) that the proposal is either consistent or inconsistent with the plan, or

(B) if no plan is in effect, that the proposal is either consistent or inconsistent with the criteria of section 4(e)(1) and the considerations of section 4(e)(2).

(3) The Administrator may not implement any proposal referred to in paragraph (1) that is determined pursuant to paragraph (1) or (2) by either the Administrator or the Council to be inconsistent with the plan or, if no plan is in effect, with the criteria of section 4(e)(1) and the considerations of section 4(e)(2)--

(A) unless the Administrator finds that, notwithstanding such inconsistency, such resource is needed to meet the Administrator's obligations under this Act, and

(B) until the expenditure of funds for that purpose has been specifically authorized by Act of Congress enacted after the date of the enactment of this Act.

(4) Before the Administrator implements any proposal referred to in paragraph (1) of this subsection, the Administrator shall--

(A) submit to the appropriate committees of the Congress the administrative record of the decision (including any determination by the Council under paragraph (2)) and a statement of the procedures followed or to be followed for compliance with the National Environmental Policy Act of 1969.

(B) publish notice of the decision in the Federal Register, and

(C) note the proposal in the Administrator's annual or supplementary budget submittal made pursuant to the Federal Columbia River Transmission System Act (16 U.S.C. 838 and following).

The Administrator may not implement any such proposal until ninety days after the date on which such proposal has been noted in such budget or after the date on which such decision has been published in the Federal Register, whichever is later.

(5) The authority of the Council to make a determination under paragraph (2)(B) if no plan is in effect shall expire on the date two years after the establishment of the Council.

Northwest **Power** and **Conservation** Council

November 2018

Historical context for the power plan provisions of the Northwest Power Act of 1980

Second in a series of briefings/discussions, in three parts

- Power plan provisions of the Northwest Power Act
- **Context at the time of the passage of the Act**
- Present-day context and implications

Road map of today's discussion: Historical context for the power plan provisions of the Northwest Power Act of 1980

1. Based in the post-war structure of the electrical power industry in the Pacific Northwest.
2. High demand growth for electricity in 1950s/60s, with expectations that it will continue and new resources will be needed.
3. Bonneville and the Hydro-Thermal Power Program is the 1960s solution
4. Hydro-Thermal Power Program eventually collapses in a cloud of massive financial losses, huge rate hikes, bond defaults, environmental short-comings, and other legal and policy problems.
5. Paving the road to the Northwest Power Act.
6. Considerations out of the context that directly inform the power plan provisions of the Northwest Power Act.

1. Based in the post-war structure of the electrical power industry in the Pacific Northwest.

- Vertically-integrated regulated utilities and regulated wholesale sales as in the rest of the country. But the region is unusual in having more publicly-owned utilities, and more small publicly-owned utilities than elsewhere.

- Especially unlike most other places in the country, dominant at the center is not just a Columbia River hydropower system, but a *federal* Columbia River hydropower system and federally owned transmission system. With a federal power marketing agency controlling a huge amount of the generating assets of the region, relatively low-cost, sold at wholesale at cost, an agency also controlling a major portion of the transmission system.

- 1950-70s is the real period of the development and culmination of the Columbia hydrosystem, run-of-the-river and storage (both US and Canadian through the Treaty). Mostly federally owned, but mixed in non-federal in both Columbia and Snake. Pacific Northwest Coordination Agreement (PNCA) to optimize.

- Across the landscape, publicly-owned and investor-owned utilities that are partial or full requirements customers of Bonneville and/or have low-cost hydro of their own. Law expresses a preference for publicly owned utilities in access to Bonneville power, but the agency tries to serve everyone it can in the region, seeing itself as a central engine of regional economic development. *See* Bonneville Project Act of 1937 ('in order to encourage the widest possible use of all electrical energy that can be generated…") And after Federal Columbia River Transmission System Act of 1974, Bonneville is also self-financing.

- Bonneville customers also include direct service industries (especially aluminum companies) that are a significant source of load at Bonneville and that can function as reserves, but also a source of high volatility in load.

2. High demand growth for electricity in 1950s/60s, with expectations that it will continue and new resources will be needed.

- Growth in demand for electricity in post-war period is high, as economy develops on the back of low-cost hydropower and post-war prosperity. (slide)

- Expectation is that this will continue, demand growth that is relatively inelastic or insensitive to price. (slide)

- And so, also an expectation that a significant amount of new generating resources will be needed to meet this demand growth. While in this period there are still plans to develop additional hydro-generation capacity, the sense is also that major hydropower

development is largely tapped out, and so the new resources will mostly be big thermal plants (coal and nuclear).

- Long planning and development lead-time for a new plant, plus significant costs compared to hydro investments.

- Lots of uncertainty as to who will bear risk and cost of new resources vs. who gets to benefit from the existing low-cost hydrosystem.

3. Bonneville and the Hydro-Thermal Power Program is the 1960s solution.

- Bonneville and the region's utilities agree in late 1960s that Bonneville and utilities will act together to address this problem -- not utility by utility as a utility projects a need for power -- with Bonneville conceived of as the central pivot in helping the region's utilities develop new power plants, mostly coal and nuclear. And at first Bonneville will even act as the financier for some plants through a "net billing" mechanism.

- The point of the Hydro-Thermal Power Program is as it sounds -- Bonneville will agree to acquire the output of the new higher-cost thermal plants developed by the utilities and meld with the output of the lesser-cost hydropower system.

- Higher costs and risks of new thermal plants would thus be melded with certainty and low-cost of existing hydro, in essence socializing the cost and risk (and easing the costs and difficulties of financing, even if not "net billed"). Note than while the Hydro-Thermal Power Program is a regional approach developed and pushed by Bonneville and the utilities, and not a policy or program developed or explicitly authorized by Congress or the Administration, the HTPP certainly has support from DC (Congress and Nixon Administration), at least at first.

- The Hydro-Thermal Power Program vision at its greatest extent included plans to develop by 1990 more than 20,000 megawatts of thermal power -- a number of coal plants and up to 20 nuclear plants -- and more than 20,000 megawatts of new hydropower capacity.

- Out of the first or "net billing" phase of the Hydro-Thermal Power Program the region gets the Centralia coal plant, the Trojan nuclear plant (now gone from the map), and a start on three nuclear plants by the Washington Public Power Supply System (WPPSS), only one of which (WPPSS 2) will ever be completed and come on line. This Phase I of the Hydro-Thermal program is also when the region sees the beginning of the coal plant developments at Boardman, Colstrip, and Jim Bridger. These are not "net billed," but development of these plants is seen part of the regional HTPP, spurred by plans to integrate at least some of the output into the Hydro-Thermal concept.

- Cost overruns and an IRS ruling in 1972 end "net-billing." In Phase II of the Hydro-Thermal Power Program, utilities at Bonneville's urging agree to build among other

things 5,800 megawatts of nuclear power and 1000s of megawatts of new hydropower. These plans include most notably WPPSS 4 & 5. None are completed.

4. Hydro-Thermal Power Program ultimately collapses in a cloud of massive financial losses, huge rate hikes, bond defaults, environmental short-comings, and other legal and policy problems.

- As noted above, cost overruns and an IRS ruling put an end to Bonneville's use of the net-billing financing mechanisms.

- With the passage of the National Environmental Policy Act in 1969 (NEPA), federal courts (federal district court in Oregon and the Ninth Circuit Court of Appeals) will also shut down the Hydro-Thermal Program for failure by Bonneville to engage in a review of the environmental effects of spurring the development of this many thermal power plants and acquiring the output and a review of possible alternatives. *Port of Astoria v. Hodel; NRDC v. Hodel.*

- Program also collapses under the sheer financial and management weight of the projects.

- Collapse leaves what can only be called a financial and public policy disaster in its wake:

  - At the end, billions invested with little power to show, especially in the realm of nuclear power and WPPSS.

  - Bond assumption: Bonneville assumes the debt obligation on the bonds for WPPSS 1-3. Huge financial burden that still carries forward into today -- Bonneville annual debt payments for one nuclear plant of roughly the same magnitude as the annual debt payments for entire federal hydro system.

  - Bond default. At roughly the same time, public utilities default on bonds for WPPSS 4-5, the nation's largest municipal bond default ever.

  - Huge rate increases. Absorbing the costs of these thermal plants also lead to huge rate increases. Bonneville power rates increase more than 400% over five years in the late 1970s/early 80s. Northwest retail electric rates saw a similar increase. (slide)

- Excellent sources for the Hydro-Thermal Program, its collapse, and its implications are:

  - U.S. Comptroller General (GAO), "Pacific Northwest Hydro-Thermal Power Program -- A Regional Approach to Meeting Electric Power Requirements" (1974)
  - U.S. Comptroller General (GAO), "Region at the Crossroads -- The Pacific Northwest Searches for New Sources of Electricity" (1978)
  - Lee, Klemka, and Marts, *Electric Power and the Future of the Pacific Northwest* (1980)

- Bonneville Power Administration, *Columbia River Power For the People: A History of Policies of the Bonneville Power Administration* (1981)
- Pope, *Nuclear Implosions: The Rise and Fall of the Washington Public Power Supply System* (2008)

and my favorite:
- Howard Gleckman, "WPPSS: From Dream to Default" in The Bond Buyer (1984)

5. Paving the road to the Northwest Power Act.

- As the Hydro-Thermal Program collapses, it becomes more and more clear that the whole enterprise happened with an extraordinary combination of dubious legal authority; financially irresponsible investments; dubious demand forecasting assumptions and other misguided planning; horrendous project management; neither environmental review nor internalization of environmental costs; complete lack of input from or even awareness by the public or the region's governors -- a public policy disaster of biblical proportions.

- And yet, the central problem statement remained: Did the region need new resources? And if so, who would bear the risk and cost of developing new resources while others would continue to benefit from low-cost hydropower? E.g.:
  - Notices of insufficiency from Bonneville (1976)
  - Oregon's plan to turn the entire state into a public utility

- Attention turns to Congress for help in finding a regional solution

- Chinook and sockeye runs collapse in Snake from depressed but fishable numbers in the 1950s to runs by early 1970s that are no longer fishable Idaho, with sockeye petitioned for listing under the new federal Endangered Species Act. Coincides with completion of Snake run-of-river projects and with systemwide storage and new water management operations. Those concerned about this development see everyone on the planes heading to DC to solve the peculiar energy crisis and get on the planes to join them.

6. Considerations out of the context that directly inform the power plan provisions of the Northwest Power Act.

- **Bonneville role/Council and power plan.** Perhaps surprising in hindsight, given what had just happened with the Hydro-Thermal Power Program, the decision in the Northwest Power Act is to use the same model, just institutionalize it in law with some obvious protections:

  - Bonneville is given an obligation to serve that it did not have in law before. Expectation is that publics and IOUs will largely bring load growth to Bonneville to serve. Section 5 of the Northwest Power Act. Bonneville is also directed to issue new 20-year power sales contracts with the direct service industries.

- Augment, not allocate. Bonneville is then authorized and even obligated to acquire new resources to serve load demands brought to Bonneville by its customers that cannot be served by the federal base system. Section 6. The expectation is that this load growth will come, and Bonneville will meld low-cost hydro with the output of higher-cost new resources, socializing the cost and risk. (In Section 7 on rates, the Northwest Power Act does not require Bonneville to meld the costs into one rate, but relatively clear this was the basic, expected premise.) .

- What was different?
  (1) Clear legal authority, rules and constraints.

  (2) Explicit direction to Bonneville in Section 6a to develop a program to acquire conservation. See below.

  (3) And especially, creation of the regional, interstate compact agency **Council** and its independent **power plan**. "Planning" is a core concept in the natural resource policy world of 1970s (e.g., Natural Forest planning; FLPMA and federal land use planning; state land use planning; even NEPA). And then shaped to our context are power plan provisions intended to force, among other things:
     -- an independent and publicly developed demand forecast
     -- a hard and total look at different resource costs and considerations;
     -- priority to conservation resources and renewable resources, and a required conservation part to the plan;
     -- requirements to involve regional political and public input;
     -- integrate environmental costs

     Council's plan has to look at entire region's needs in planning for Bonneville resources, as entire region's needs might very well come to Bonneville.

     Bonneville then has an obligation to acquire resources consistent with the Council's power plan, with narrowly-tailored exceptions that allow for Bonneville to deviate from the plan yet while also requiring consistency with the basic premises in the Act that are to drive the plan (or Congressional approval).

- **Demand forecast**. Beginning to be huge questions about how appropriate are the projections of high, inelastic demand growth. Hence, the explicit focus on the Council to do the demand forecast in the power plan provisions. Even so, expectations of continued economic development and continued load growth.

- **New resources -- conservation**. The "conservation revolution" as some have called it. This is also a moment in time when there is a conceptual shift nationwide, recognizing that the marginal cost of new generating resources, especially new big thermal plants, may be significantly greater than originally thought. Coupled with the growing

recognition that conservation should be seen as a resource as well as generation; that conservation may have significantly lower costs than the cost of what was still seen as the obvious alternative resource (big thermal plant); and especially that the Pacific Northwest had particularly huge potential for low-cost conservation investments, given our history of development in a world of low-cost electricity. Hence, the provisions in Power Act so explicitly focused on conservation as a priority resource. (Even so, Power act is passed also with the sense that eventually the region would need new generating resources, too, and they would quite likely be big thermal plants with long lead-time and high costs and so also with the continued uncertainty and risk associated with those types of developments

- **Environmental considerations.** Another moment in time captured in Northwest Power Act: internalizing environmental costs of power system development. Do it within this central Bonneville resource/Council planning context. For new resources, factor in total system costs, including waste costs and other quantifiable environmental costs. and emphasis or priority on conservation and renewable resources is another way of recognizing. For existing system resources, explicit protection and mitigation obligation; fish and wildlife program; ratepayers must bear the costs of the program.

- **Public/regional input.** Another key moment in time captured in the Northwest Power Act. One of the perceptions is that we found ourselves in this mess in part due to decisions made by Bonneville and utilities behind closed doors with no input from the public or the region, especially the region's elected officials. This particular mood combines with a revolution in administrative law and governance in the second half of the 20th century in terms of decisionmaking in public, with new requirements for making decisions in public meetings, involving the public's participation, explaining decisions on the public record; allowing the public to seek judicial review, etc. Hence, the provisions in the Power Act emphasizing regional and public participation.

- **Uncertainty and adaptive management.** While not explicitly stated in the Act, the power plan provisions and power plan quickly become a forum for recognizing and embracing the inherent uncertainty in trying to project the future, and thus figuring out how to plan and manage in the face of that uncertainty. This is a moment in time when concepts of "adaptive management" in the face of uncertainty become part of the natural resource conceptual landscape. *E.g.*, Holling, *Adaptive Environmental Assessment and Management* (1978). A natural fit especially given the locus of some of the problems in the demand projections of 1960s and 70s.

Slides associated w/ discussion of “Historical context for the power plan provisions of the Northwest Power Act”

John Shurts
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Northwest Power and Conservation Council
November 2018

Northwest Power and Conservation Council

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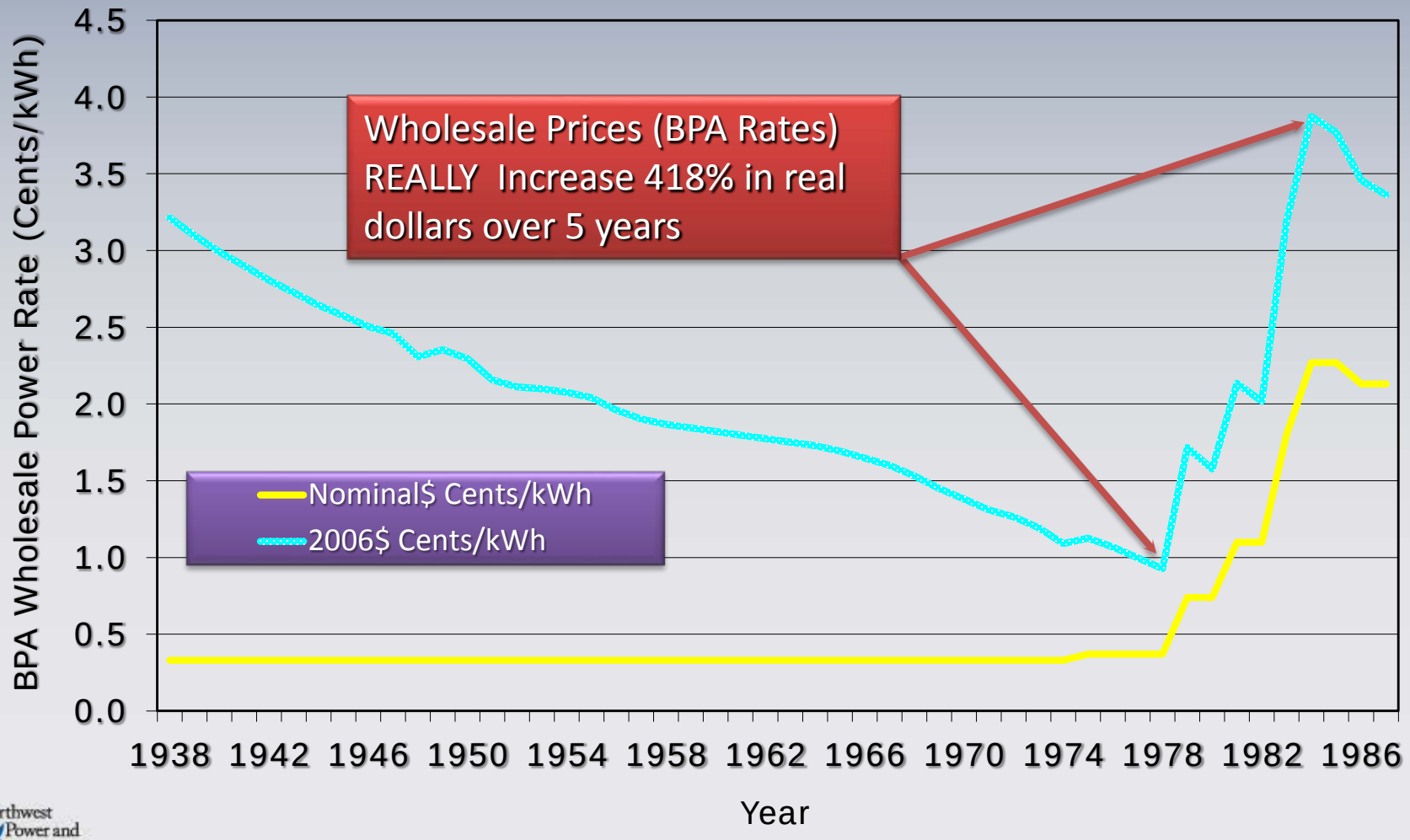
Bonneville rates 1938 to 1986



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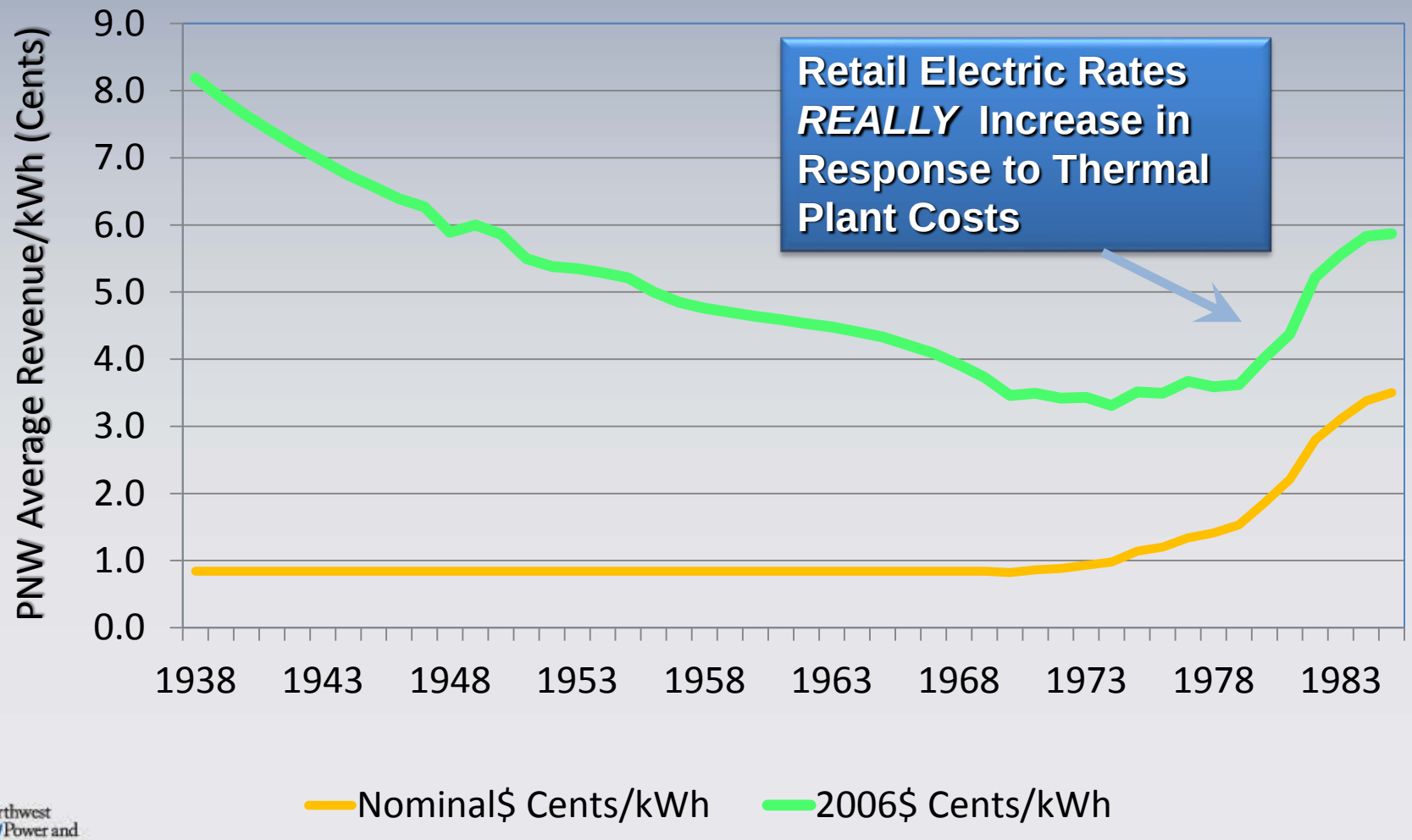
PNW Retail Electric Rates 1938 to 1985



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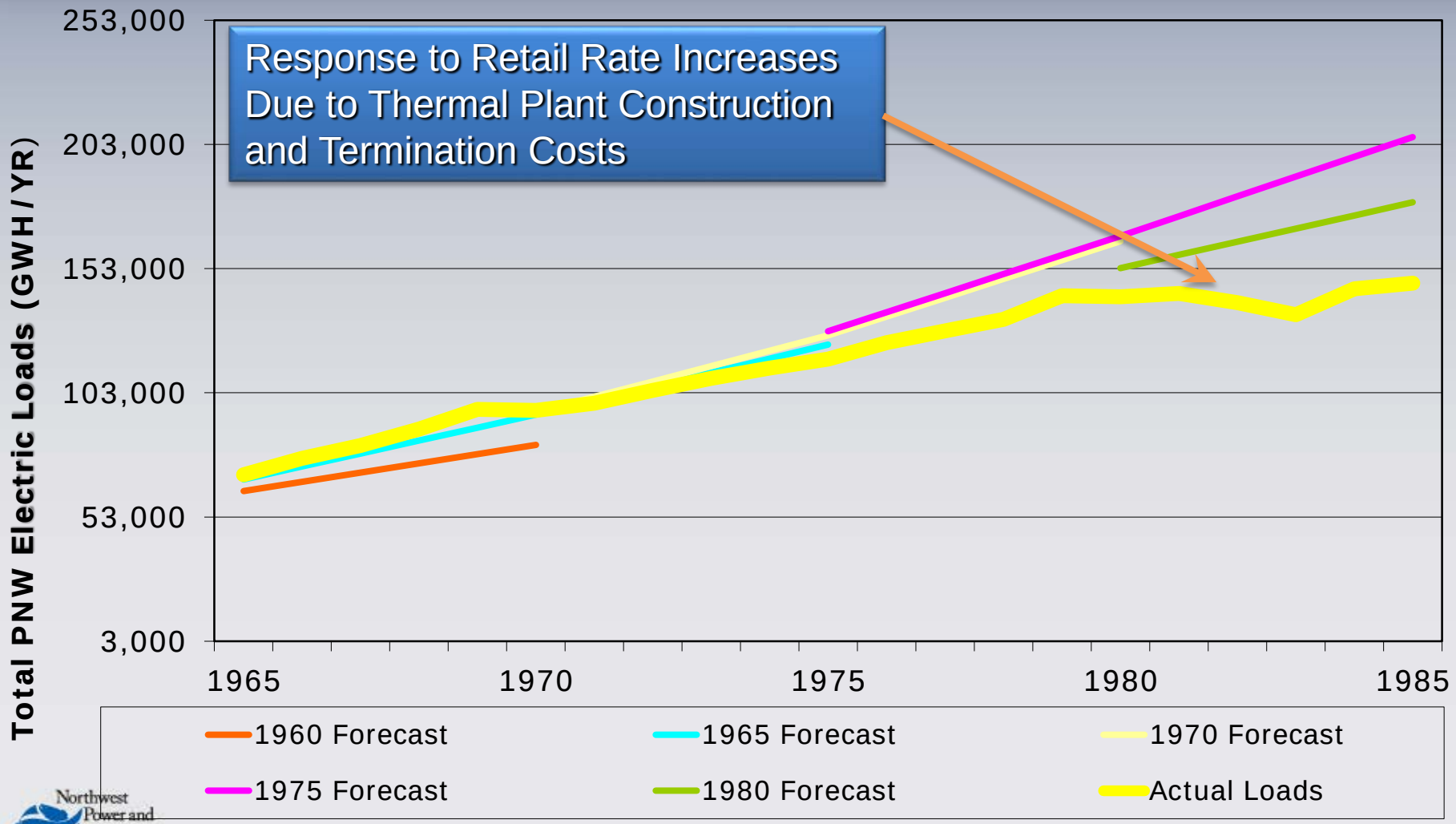
Demand Forecasts vs. Actual Use 1960 to 1985



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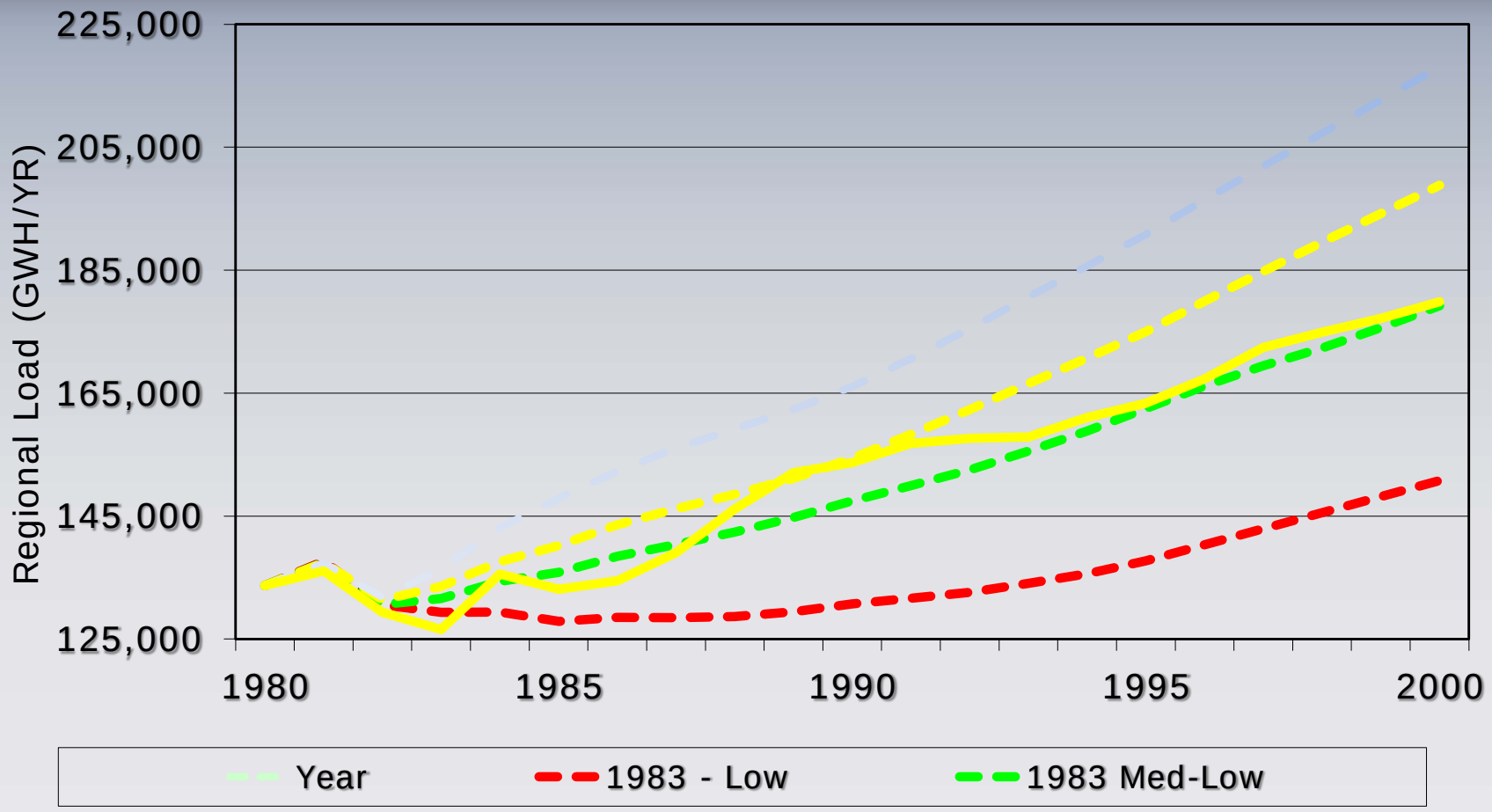
First Power Plan (1983) Demand Forecast for 1983 to 2003



Notice that there was no "Medium" or "Base Case" Forecast!

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