

# **BPA's Interim Environmental Redispatch and Negative Pricing Policies**

Administrator's Final Record of Decision

May 2011



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# **ADMINISTRATOR’S FINAL RECORD OF DECISION ON BPA’S INTERIM ENVIRONMENTAL REDISPATCH AND NEGATIVE PRICING POLICIES**

## **I. INTRODUCTION**

This Final Record of Decision (“ROD”) documents the Bonneville Power Administration (“BPA”) Administrator’s decision to adopt, after consideration of public comments, the Environmental Redispatch and Negative Pricing Policies described in this document, on an interim basis, to ensure BPA can meet its legal responsibilities while BPA explores alternative solutions with stakeholders. The policies set forth in this Final ROD will take effect upon the Administrator’s execution of this ROD and remain in place until March 30, 2012.

Environmental Redispatch is designed to ensure BPA is taking all reasonable efforts to meet its legal responsibilities under the Clean Water Act (“CWA”), Endangered Species Act (“ESA”), and court order (collectively, “environmental responsibilities”), as well as BPA’s legal obligations under its authorizing legislation, such as the Pacific Northwest Electric Power Planning and Conservation Act (“Northwest Power Act”), the Federal Columbia River Transmission System Act (“Transmission System Act”), the Pacific Northwest Power Preference Act (“Preference Act”), and the Bonneville Project Act (collectively, “statutory responsibilities”), under specific hydro and load conditions, and after all reasonably practicable mitigating measures have been implemented. In addition, Environmental Redispatch will help provide options for BPA to maintain system reliability by balancing loads and resources within BPA’s Balancing Authority Area while meeting BPA’s environmental and statutory responsibilities.

When system conditions trigger Environmental Redispatch, BPA will replace scheduled generation in BPA’s Balancing Authority Area with Federal hydropower at no cost. However, BPA will not pay negative energy prices under these conditions.

## II. BACKGROUND

BPA issued a Draft ROD on February 18, 2011, detailing its proposed Environmental Redispach and Negative Pricing policies, and requested public comment on the Draft ROD. BPA received 41 comments on the Draft ROD both in support of and against BPA's proposals. After consideration of public comments, BPA is adopting the policies set forth in this Final ROD on an interim basis.

The following sections describe factors that affect BPA's ability to manage high flows for system reliability and to meet its environmental and statutory responsibilities. These sections will detail the evolution of the Federal Columbia River Power System ("FCRPS"), the operation of the FCRPS, and how BPA responded to the overgeneration events of June 2010.

### A. Evolution of the Federal Columbia River Power System and Federal Columbia River Transmission System

BPA was established pursuant to the Bonneville Project Act of 1937<sup>1</sup> to dispose of electric energy generated in the operation of the Bonneville Project located in the States of Washington and Oregon. The project was constructed and is operated by the U.S. Army Corps of Engineers ("Corps"). The BPA Administrator's authority to market power was expanded over the years as other Federal dams were built throughout the Pacific Northwest by the Corps and Bureau of Reclamation ("Bureau").<sup>2</sup> These facilities, and the transmission lines built by BPA to move the power generated, generally became known as the Federal Columbia River Power System (FCRPS).<sup>3</sup>

With the passage of the 1974 Transmission System Act,<sup>4</sup> the Administrator was, with minor exceptions, "designated as the marketing agent for all electric power generated by Federal generating plants in the Pacific Northwest" constructed by the Corps and the Bureau.<sup>5</sup> Many of the generating plants comprising the FCRPS are part of multiple purpose projects that are operated for many public purposes, including flood control, fish and wildlife protection, irrigation, power production, navigation, recreation, municipal water supply, and other purposes.<sup>6</sup> The Transmission System Act placed BPA on a "self-financing" basis, which removed BPA from the Congressional appropriations process for

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<sup>1</sup> 16 U.S.C. § 832 (2009).

<sup>2</sup> See, e.g., The Flood Control Act of 1944, 16 U.S.C. § 825s; Executive Order 8526, 5 Fed. Reg. 3390 (1940); see also *Aluminum Co. of Am. v. Central Lincoln Peoples' Util. Dist.*, 467 U.S. 380, 386 n.5 (1984); *U.S. Dep't of Energy, Bonneville Power Admin.*, 29 FERC ¶ 63,039, at 65,122 (Nov. 27, 1984).

<sup>3</sup> See, e.g., H.R. Rep. No. 976, 96th Cong., 2d Sess., pt. 2, at 26; 16 U.S.C. § 839a(10)(A).

<sup>4</sup> 16 U.S.C. § 838-838k (2009).

<sup>5</sup> *Id.* § 838f.

<sup>6</sup> See, e.g., Bonneville Project Act, 16 U.S.C. § 832 (2009); 43 U.S.C. § 485h(a)-(b) (2009); Federal Water Project Recreation Act, 16 U.S.C. §§ 460j-12, 460j-13, 460j-18 (2009); Flood Control Act of 1962, Pub. L. No. 87-874, § 203, 76 Stat. 1180 (1962); Flood Control Act of 1950, Pub. L. No. 81-516, § 204, 64 Stat. 170 (1950); Rivers and Harbors, Improvements Act, Pub. L. No. 79-14, 59 Stat. 10 (1945); Columbia Basin Project Act, 16 U.S.C. § 835j; H.R. Rep. No. 80-1507, at 2 (1948).

financing. As such, BPA funds its operations through revenues and borrowing authority granted to it under the Transmission System Act and subsequent acts. Today, BPA markets power generated at 30 Federal hydroelectric projects in the Pacific Northwest, and several non-Federal projects.<sup>7</sup>

The Federal Columbia River Transmission System (FCRTS) was developed simultaneously with hydroelectric development. BPA transmission lines were originally built to interconnect Federal generating resources and move the generation to the load areas. Over time, BPA transmission lines were also used to transmit power generated by non-Federal resources. The capability of the transmission system is tied to generation levels, especially at the critical hydroelectric projects along the Lower Columbia and Lower Snake Rivers.

Integrated operation of the Federal power and transmission facilities is reflected in the various statutory directions to the Administrator, which state that transmission service is to be made available to third parties if BPA transmission:

- “is not required for the transmission of Federal energy;”<sup>8</sup>
- is in “excess of the capacity required to transmit electric power generated or acquired by the United States;”<sup>9</sup>
- “is not in conflict with the Administrator's other marketing obligations;”<sup>10</sup> and
- can be provided “without substantial interference with his power marketing program.”<sup>11</sup>

The inter-related nature of generation and transmission is recognized throughout BPA’s organic statutes when it comes to finance, cash management, and cost recovery requirements.<sup>12</sup>

As indicated earlier, the Administrator is to make available transmission service to third parties once BPA’s needs have been met. The Federal Energy Regulatory Commission (“Commission”), starting in 1996, has issued several major orders designed to encourage competition and discourage public utilities that own, operate or control interstate transmission facilities from using them in a manner that favors the transmission provider’s power merchant function over other power suppliers.<sup>13</sup> A key feature of this

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<sup>7</sup> See Ass’n of Pub. Agency Customers v. Bonneville Power Admin., 126 F.3d 1158, 1163 (9th Cir. 1997) [hereinafter APAC].

<sup>8</sup> 16 U.S.C. § 837e. The priority is “to the needs of the Government.” H. R. Rep. No. 93-1375 at 56 (Sept. 25 1974).

<sup>9</sup> 16 U.S.C. § 838d.

<sup>10</sup> Id. § 839f(i)(1)(B).

<sup>11</sup> Id. § 839f(i)(3).

<sup>12</sup> See, e.g., Federal Columbia River Transmission System Act, 16 U.S.C. § 838(a); 16 U.S.C. §§ 838i(a), 838i(b)(12); Id. § 838k(b), as amended, Pub. L. 96-501, § 8(c), (d), 94 Stat. 2728 (1980); Bonneville Power Administration Financing, 1974: Hearings on S. 3362 Before the Subcomm. on Water and Power Resources, 93rd Cong., 2d Sess. 121-122 (1974).

<sup>13</sup> Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, FERC Stats. & Regs. [Regs. Preambles 1991-1996] ¶ 31,036 (1996), Order No. 888-A, on reh’g, III FERC

initiative has been the establishment of Open Access Transmission Tariffs (“OATT”) providing for transmission services that meet the Federal Power Act’s just and reasonable, and not unduly discriminatory standard applicable to public utilities.<sup>14</sup> BPA has historically provided transmission access to others and is not a public utility under the Federal Power Act. However, as a matter of policy, in 1996, BPA adopted an OATT hewing closely to the Commission’s OATT, with changes designed to meet BPA’s and the region’s needs and practices.<sup>15</sup> At the time that BPA first adopted the OATT, and for some time thereafter, wind resources were practically non-existent in the Pacific Northwest.

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Stats. & Regs. [Regs. Preambles] ¶ 31,048 (1997), Order No. 888-B, on reh’g, 81 FERC ¶ 61,248 (1997), Order No. 888-C, on reh’g, 82 FERC ¶ 61,046 (1998), aff’d in part and remanded in part sub nom., Transmission Access Policy Study Group, et al. v. FERC, 225 F.3d 667 (D.C. Cir. 2000), cert. denied, Board of Water, Light & Sinking Fund Comm’rs v. FERC, 121 S.Ct. 1188, cert. granted, New York v. FERC, , cert. granted, Enron Power Mktg., Inc. v. FERC, 69 U.S.L.W. 3574, 2001 D.A.R. 1983 (U.S. Feb. 26, 2001): Open Access Same-Time Information System (formerly Real-Time Information Networks) and Standards of Conduct, Order No. 889, FERC Stats. & Regs. [Regs. Preamble 1991–1996] ¶ 31,035 (1996), order clarified, 76 FERC ¶ 61,009 (1996), order aff’d in part, remanded in part, Transmission Access Policy Study Group v. FERC, 225 F.3d 667 (D.C.Cir. 2000), cert. granted in part, New York v. FERC, 69 U.S.L.W. 3281 (U.S. Feb. 26, 2001), cert. granted, Enron Power Marketing, Inc. v. FERC., 69 U.S.L.W. 3382 (U.S. Dist. Col. Feb. 26, 2001), cert. denied, Board of Water, Light and Sinking Fund Comm’rs of the City of Dalton, Georgia v. FERC, 69 U.S.L.W. 3382 (U.S. Feb 26, 2001): Regional Transmission Organizations, Order No. 2000, FERC Stats. & Regs. [Regs. Preamble] ¶ 31,089 (2000), on reh’g, FERC Stats. and Regs. ¶ 31,092, 90 FERC ¶61,201 (2000), cert. denied, Public Utility District No. 1 of Snohomish County, Washington v. FERC, 272 F.3d 607 (D.C. Cir. 2001); Preventing Undue Discrimination and Preference in Transmission Service, Order No. 890, FERC Stats. & Regs. ¶ 31,241 (2007) , order on reh’g, Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 (2007), order on reh’g, Order No. 890-B, 123 FERC ¶ 61,299 (2008), order on reh’g, Order No. 890-C, 126 FERC ¶ 61,228, order on clarification, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

<sup>14</sup> See, e.g., Federal Power Act, 16 USC 824e(a).

<sup>15</sup> These tariffs apply transmission terms and conditions to all transmission users on a comparable, non-discriminatory basis. As noted in the 1996 Final Transmission Terms and Conditions Proposal, Administrator’s Record of Decision, at 5:

Similarly, the Public Generating Pool (PGP) stated

Comparability is a critical issue for all BPA customers who purchase transmission services from BPA. Much of the transmission terms and conditions testimony by PGP and others has focused on whether BPA’s proposal meets comparability requirements. . . . The proposed NT and PTP tariffs, as modified by the settlement, are a realistic approach to the needs of BPA in operating the Federal Transmission System while maximizing the customers’ ability to use the system. PGP believes that the proposed tariffs contain terms and conditions which are generally consistent with FERC’s pro forma tariffs. They appropriately balance the obligation to substantially conform to the pro forma tariffs with the specific needs of BPA’s customers in the Northwest. PGP believes that NT and PTP tariffs under the Settlement Agreements are equal to or better than the FERC pro forma tariffs when considered in light of the particularities of the Northwest hydro system and the historical usage of the Federal Transmission System.

PGP Brief, WP-96-B-PG-01/TC-96-B-PG-01, at 5-6.

There has been a dramatic surge of wind generation in the Pacific Northwest in recent years, and the amount of wind generation is expected to double in the next several years. This has occurred as a consequence of a number of factors, including BPA's decision to adopt an OATT and other related policy decisions that have aided the development of wind generation in BPA's Balancing Authority Area. Recent events and the expected growth in wind generation have revealed the need for BPA to take action in order to ensure FCRPS operations remain reliable and consistent with BPA's environmental and statutory responsibilities.

## **B. Operation of the FCRPS Projects**

BPA's marketing directives are diverse and often competing. BPA is, for example, required to establish rates to assure timely repayment to the U.S. Treasury, while keeping rates as low as possible consistent with sound business principles.<sup>16</sup> At the same time, BPA must act to protect, mitigate, and enhance fish and wildlife, including spawning grounds and habitat, of the Columbia River and its tributaries.<sup>17</sup>

The Administrator and other Federal agencies responsible for managing, operating, or regulating hydroelectric projects on the Columbia River and its tributaries must exercise their responsibilities "in a manner that provides equitable treatment for such fish and wildlife with the other purposes for which such system and facilities are managed and operated."<sup>18</sup> The Administrator must act "consistent with" the Pacific Northwest Electric Power Planning and Conservation Council's ("Council") Fish and Wildlife Program ("the program").<sup>19</sup> The Administrator and Federal water managers must take the program "into account . . . to the fullest extent practicable" at each relevant stage of decision making.<sup>20</sup>

High flows create specific fish-protection needs. When water is spilled over a spillway at a dam, it creates bubbles of air in the water. As the water plunges into the deep pool at the base of the dam, the air bubbles carried to a certain depth are subjected to hydrostatic pressure that forces them to dissolve into the water. The amount of Total Dissolved Gas ("TDG") generated varies with water temperature, spill volumes, and spillway plunge depth.

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<sup>16</sup> See, e.g., 16 U.S.C. § 838g.

<sup>17</sup> 16 U.S.C. § 839(6).

<sup>18</sup> Id. § 839b(h)(11)(A)(i). BPA provides equitable treatment to fish and wildlife by undertaking mitigation measures on a system-wide basis as described in greater detail in Northwest Environmental Defense Center v. Bonneville Power Admin., 117 F. 3d 1520, 1532-34 (9<sup>th</sup> Cir. 1997). In other contexts, the Ninth Circuit Court of Appeals has determined that BPA has authority to protect fish and wildlife by imposing restrictions on transmission access. California Energy Res. Conservation and Dev. Comm'n v. Bonneville Power Admin., 831 F.2d 1467, 1477-78 (9<sup>th</sup> Cir. 1987), cert denied, 488 U.S. 818 (1988).

<sup>19</sup> The program, by statute, consists of "measures to protect, mitigate, and enhance fish and wildlife affected by the development, operation, and management of [hydroelectric facilities on the Columbia River and its tributaries] while assuring the Pacific Northwest an adequate, efficient, economical, and reliable power supply." 16 U.S.C. § 839b(h)(5). Congress directed the Council to include in the program measures that would "provide flows of sufficient quality and quantity between [the dams] to improve production, migration, and survival of such fish. . . ." Id. § 839b(h)(6)(E)(ii).

<sup>20</sup> Id. § 839b(h)(11)(A)(ii).

TDG is a serious concern in the Columbia River because excessive TDG levels threaten the health of the aquatic ecosystem, and salmonids in particular. Excessive TDG produces physiological problems known as gas bubble trauma that in extreme cases can be fatal to fish. The states of Washington and Oregon have delegated authority to set TDG levels under the CWA. Currently, the water quality standard for TDG levels is 110% for both states based on biological considerations.

The water management offices of the Corps, Bureau, and BPA plan and operate the hydroelectric facilities. These agencies determine the volume and pathway (generator, spillway, removable spillway weir, etc.) of water released at hydroelectric projects, with the goal of operating FCRPS projects consistent with state TDG standards.

For a number of years, the FCRPS Biological Opinions (“BiOps”) have included flow augmentation and spill operations for fish passage to benefit ESA listed fish at the Corps’ mainstem Columbia and Snake River projects. The spill operations can sometimes generate TDG levels in excess of the 110% TDG level. Consequently, Oregon and Washington provide “waivers” with criteria for generating TDG for a 12 hour average up to 120% at the project tailrace.<sup>21</sup> Washington has an additional limit of 115% at the project forebay when conducting operations to benefit ESA listed fish during the months of April to August. These waiver levels are designed to allow some spill flexibility for fish passage while limiting biological harm. TDG constraints remain at 110% outside the fish migration period.

In considering the ecological objectives of the ESA and CWA, operations are planned to comply with the ESA Biological Opinions (“BiOps”) <sup>22</sup> and applicable state and tribal water quality standards, to the extent practicable.<sup>23</sup> For Spring 2011, these spill and water quality constraints have also been adopted by court order. On March 24, 2011, Judge James A. Redden issued a Court Order in the on-going BiOp litigation mandating

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<sup>21</sup> Washington’s waiver allows a maximum TDG one hour average of 125%. Oregon’s waiver allows a maximum TDG two hour level of 125%.

<sup>22</sup> In Natl. Wildlife Federation v Natl. Marine Fisheries Serv., Judge Redden states, “BPA’s choice, however, ‘to operate certain turbines outside the 1% peak efficiency requirement’ standard set out in the 2000 and 2004 FCRPS BiOps, and sacrifice the biological needs of listed species to satisfy its sales commitments to customers was wrong. This was not a system emergency. It was a marketing error, and ESA-listed salmon and steelhead paid the price. This, the law does not permit. Under the circumstances here, threatened and endangered species must come before power generation.” No. CV 01-640-RE, 2007 WL 1541730 at 2 (D. Or. May 23, 2007)

<sup>23</sup> In the NOAA 2008 BiOp, NOAA’s Reasonable and Prudent Alternative action (“RPA”) provides: “The Corps and BPA will provide spill to improve juvenile fish passage while avoiding high TDG supersaturation levels or adult fallback problems. Specific spill levels will be provided for juvenile fish passage at each project, not to exceed established TDG levels (either 110 percent TDG standard, or as modified by State water quality waivers, currently up to 115 percent TDG in the dam forebay and up to 120 percent TDG in the project tailwater, or if spill to these levels would compromise the likelihood of meeting performance standards....” NOAA FCRPS 2008 BiOp, Appendix, Reasonable and Prudent Alternative Table, RPA Action 29 at 32 (May 5, 2008) (available at [https://pcts.nmfs.noaa.gov/pls/pcts-pub/pcts\\_upload.summary\\_list\\_biop?p\\_id=27149](https://pcts.nmfs.noaa.gov/pls/pcts-pub/pcts_upload.summary_list_biop?p_id=27149)).

that 2011 spring fish operations be conducted as set forth in the 2011 Spring Fish Operation Plan (“FOP”).<sup>24</sup> The 2011 Spring FOP states that, from April to August, the Corps will manage spill levels for fish passage to avoid exceeding 120% TDG in project tailraces, and 115% in the forebay of the next project downstream consistent with the current State of Washington TDG upper limits. BPA anticipates that a summer FOP will be adopted in the near future.

Many structural changes have been made at FCRPS dams to lower the TDG levels created by spill. These changes consist of spillway flow deflectors<sup>25</sup> at every lower Snake and mainstem Columbia River FCRPS project included in the FCRPS BiOp, with the exception of The Dalles Dam.<sup>26</sup> Based upon preliminary information, the United States Army Corps of Engineers (“Corps”) and BPA have collectively spent over \$100 million on the design, construction, and operation for spillway flow deflectors on the Snake River and mainstem Columbia River projects to help alleviate TDG conditions in the rivers.

Releasing water through generators produces less TDG compared to releases through the spillway and other structures. However, water cannot be released through generators unless there is load for the energy produced to serve. Therefore, during periods of excess spill, available federal hydroelectric turbines need to be run for environmental reasons, as keeping the generators loaded minimizes TDG.

BPA, as the Balancing Authority, must ensure that there is balance between loads and resources in order to maintain transmission system reliability. Because the FCRPS projects need to be run for environmental reasons, BPA must reduce other generation in its Balancing Authority Area to maintain balance and comply with mandatory Reliability Standards developed by the North American Reliability Corporation (“NERC”) and approved by the Commission.<sup>27</sup>

Since the 1970s, BPA and other Northwest hydro producers have routinely sold surplus power produced during times of high flows at very low prices to utilities in the Northwest and California to encourage operators of coal, oil, natural gas, and other power plants to reduce the output of their plants and replace it with surplus hydropower when available.<sup>28</sup> Over the years, however, a number of factors have made it increasingly difficult to manage TDG levels due to high flows. In the 1990s, the wholesale power market was

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<sup>24</sup> Natl. Wildlife Federation v. Natl. Marine Fisheries Serv., No. CV 01-640-RE, Order for 2011 Spring Operations (Mar. 29, 2011).

<sup>25</sup> Flow deflectors are structural devices that redirect water as it comes over the spillway of a dam in a manner that reduces the depth the water plunges into the pool below, helping to reduce the TDG levels.

<sup>26</sup> At the Dalles, flow deflectors were not considered effective due to existing spillway design. Other structural modifications, however, including a fish training wall, have been constructed to help improve juvenile fish survival.

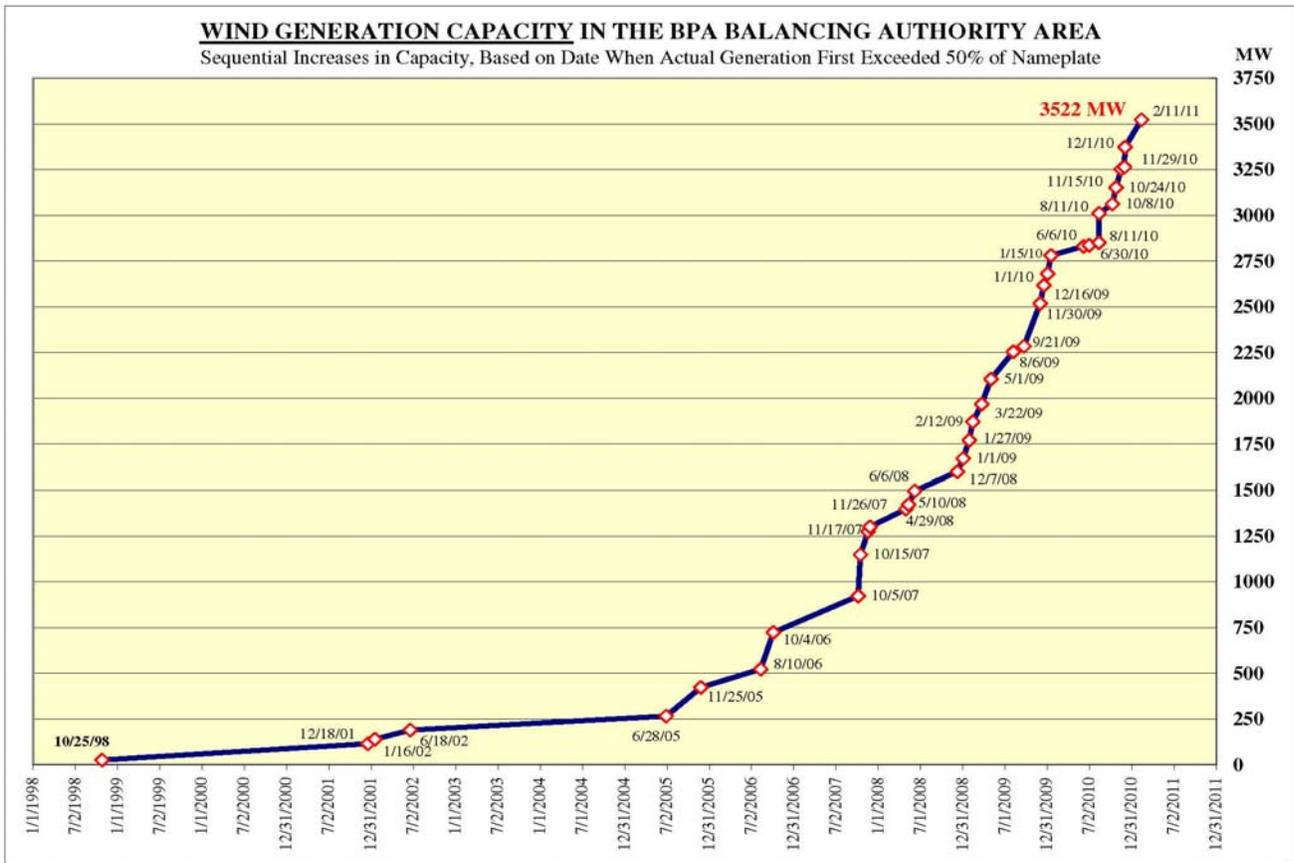
<sup>27</sup> For example, NERC Reliability Standard BAL-001-0.1a requires Balancing Authorities to “maintain Interconnection steady-state frequency by real power demand and supply in real-time.”

<sup>28</sup> However, when river flow cannot be physically stored and power houses are fully loaded, so-called “involuntary” spill can still result in excess of TDG limits. Some involuntary spill occurs in almost all years.

deregulated. In this environment, load and resource balance is no longer managed by utilities alone. Rather, generation has increasingly been developed by private parties independent of load requirements and sold outside the balancing authority area where the generation resides. The source balancing authority is left to deal with balancing loads and resources using the resources available to the balancing authority, such as the FCRPS. In addition, as previously explained, BiOp requirements have resulted in higher flows during fish migration season. Despite these complexities, the system has been managed consistent with all environmental and statutory responsibilities, and system reliability has been maintained.

### C. The Growth of Wind Generation

In recent years, nearly 3,400 megawatts of wind power capacity has connected to the FCRTS, adding variable renewable generation to the hydro base of the Columbia River system. The amount of wind generation interconnected to BPA’s transmission grid is expected to double in the next few years. The majority of this wind generation is exported out of BPA’s Balancing Authority Area and the wind generation operates independently of load demand, increasing the likelihood of overgeneration conditions. The following graph illustrates the recent growth of wind generation in BPA’s Balancing Authority Area:



WIND\_InstalledCapacity\_current.xls 3/15/2011

The rapid increase in wind power in the Northwest has increased the Northwest power system's maximum generation output significantly. It also requires balancing reserve capacity to compensate for within-hour movement and forecast error. Providing this capacity now consumes a significant portion of the operating flexibility of the FCRPS. Maintaining balancing reserve capacity through overgeneration conditions reduces BPA's ability to manage such conditions.

The provision of balancing reserves is necessary to maintain system reliability in BPA's Balancing Authority Area. BPA must use the FCRPS as a backstop for variations in the amount of generation and load that occur during an operating hour compared to the hourly schedule generators and load serving entities provide prior to each operating hour. Almost all loads and generators have some amount of variation between their actual hourly energy used or provided and the amount scheduled. As the Balancing Authority, BPA is responsible for maintaining the balance between overall generation and load required to maintain a reliable system.

The actual output of wind generation varies from the scheduled amount more frequently and in greater magnitude than loads or traditional thermal generators. BPA has had to significantly increase the amount of capacity it maintains for meeting its reliability obligations as the amount of wind generation interconnected to the system has increased.

This capacity is provided in the form of either incremental (inc) balancing reserves or decremental (dec) balancing reserves. To provide inc balancing reserves, BPA must ensure that enough flows are available to increase FCRPS generation to counterbalance output of the wind generation fleet below the submitted hourly schedule. When providing dec balancing reserves, BPA must ensure that water can be spilled or stored in order to decrease FCRPS generation if power produced by the wind generation fleet increases above the submitted hourly schedule. Failing to address the need for this reservation of capacity could affect BPA's ability to reliably operate the FCRPS.

The amount of reserves that BPA holds is partially a function of the hourly scheduling timeframe. BPA is participating in regional efforts to expand intra-hour scheduling and has a number of internal initiatives underway to allow for more flexible means for scheduling energy. To the extent these efforts successfully help accommodate the variability of wind generation, BPA hopes to be able to partially reduce reserve amounts. Continued growth of wind generation, however, will require BPA to increase the amount of reserves it must carry. As a result, while intra-hour scheduling may help reduce reserves in the near term, it will not solve the overgeneration condition itself since the region will still face more on-line generation than there is load to absorb it.

#### **D. The June 2010 Events**

High flows in the Columbia River system can create conditions where water can no longer be stored or spilled and need to be run through FCRPS generators in order to operate consistent with BPA's environmental responsibilities. In June 2010, the BPA Balancing Authority Area faced a potential oversupply of generation due to surging

spring runoff and high generation levels from wind generators. The generation levels in the BPA Balancing Authority Area would have exceeded load and export commitments if generation was not reduced. BPA at all times maintained system reliability; however, excess generation in relation to loads and exports creates high frequency, which, if unmitigated, could negatively impact system reliability. These conditions also led to a lack of demand for Federal hydropower even at zero cost and threatened to create adverse water conditions in the Columbia River system.

High flows in the Columbia River system are not rare; there is a one-in-three chance of flows at least as high as those of early June 2010 occurring in any year and lasting for one month or more. High flows are more likely to occur in spring runoff periods, when the winter snow begins to melt, increasing river flows. Managing high flow events consistent with BPA's environmental responsibilities can require operation of FCRPS power generation to avoid certain levels of spilled water over the dams.

The events of early June 2010 illustrate how the increase in wind generation has influenced the ability to manage high flows on the Columbia River.<sup>29</sup> After a dry winter, spring 2010 river flows were expected to stay fairly low. Throughout April and May, FCRPS operation focused on providing enough river flow and spill to meet objectives designed to protect ESA listed juvenile salmon migrating to the Pacific and on refilling reservoirs in Idaho, Montana and Washington by July. In early June, however, a strong Pacific jet stream brought storm systems with heavy precipitation and runoff. Snake River streamflows nearly tripled, and Columbia River streamflows nearly doubled. The resulting flows exceeded those needed to meet flow and spill objectives for fish passage. Federal water management staff focus shifted to developing strategies and modifying operations to reduce excess spill and minimize excessive TDG production to the extent practicable.

BPA worked with the Corps, Bureau, and Northwest and California utilities to reduce spill in excess of the required levels in the BiOp and shift spill away from the fish passage routes on the Columbia and Snake rivers. To reduce excess spill, system operators:

- Reduced generation of the Columbia Generating Station nuclear plant to the lowest level possible without risking its ability to return to full power.
- Cancelled or delayed non-essential generating unit outages and transmission control maintenance.
- Arranged to use 2 feet of flood control space at John Day Dam to reduce involuntary spill and prevent lower Columbia flooding.
- Shaped Hungry Horse and Dworshak dams' generation as much as possible into heavy load hours.
- Coordinated a 5 kcfs reduction at Arrow Dam with B.C. Hydro.
- Reduced flows at Albeni Falls Dam as much as possible.

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<sup>29</sup> BPA released a report detailing the events that occurred in June 2010 and the steps BPA took to mitigate the situation. The report is available at:  
<http://www.bpa.gov/corporate/AgencyTopics/ColumbiaRiverHighWaterMgmt/>.

- Reduced decremental wind balancing reserves.
- Coordinated to move generation around the system to minimize capacity reduction on intertie lines to California while maintaining transmission reliability.
- Disposed of over 73,000 MWh of BPA power at zero sales price for the month of June.

After all these steps were taken, TDG levels were managed consistent with BPA's environmental responsibilities. Operationally, there was very little else that could have been done to reduce excess spill and manage system TDG levels. Because BPA was not able to find sufficient load for turbines to avoid involuntary spill, spill volumes were incurred up to the TDG standards equivalent to 745,000 megawatt-hours or about 1,000 average megawatts for lack of load in June.

During this time, most Northwest thermal generation shut down or reduced to minimum operating levels. These generation owners obtained low-cost or free Federal hydropower to replace thermal generation. Thermal generation normally finds it economical to displace their fuel with lower-cost hydropower since they can store or conserve their fuel while they receive hydropower.

However, due to differing economic considerations, the roughly 3,000 megawatts of wind power projects located in BPA's Balancing Authority Area did not respond to the availability of free Federal hydropower. Wind power projects cannot store their fuel and are generally eligible to receive Federal Production Tax Credits (PTC) and/or state Renewable Energy Credits (REC). Wind power output ranged from zero to nearly full output, depending on wind conditions.

To help ensure BPA could meet its environmental obligations, BPA reduced dec balancing reserve capacity because water storage capacity was at its maximum, and spilling additional amounts of water would have exacerbated TDG levels. With reduced dec balancing reserves, wind generators that are generating more than scheduled are more likely to be required to reduce generation in order to stay closer to the scheduled amount of generation. Even with this reduction in dec balancing reserves, BPA delivered all wind power that was scheduled and produced and operated consistent with its environmental responsibilities. As the amount of wind generation in BPA's Balancing Authority Area continues to grow, however, the steps taken by BPA to reduce spill in 2010 will likely be insufficient to continue to produce such results.

Unlike thermal operators, wind operators have an economic incentive to operate as much as possible, regardless of system conditions. The PTC is currently \$21 per megawatt-hour ("MWh") and state RECs are generally in the \$8 to \$20 per MWh range, so this incentive is significant. While all wind power projects are eligible to receive RECs for production, most new wind power projects have opted not to take the PTC and instead opted for the Investment Tax Credit ("ITC") or other grants that provide up-front financial benefits tied to the cost of the project and not actual production. Wind power projects that opt for the ITC or other grants receive the full financial benefit of these incentives regardless of project output.

## **E. Negative Prices**

Up until now, BPA anticipated that it could meet, and has met, its various statutory objectives under an open access transmission regime. Under current circumstances, BPA believes it can continue to meet these various objectives by providing no-cost BPA hydropower when necessary to displace non-Federal generation in order to satisfy BPA's environmental obligations, while at the same time ensuring load service. However, BPA believes that its statutory responsibilities and the objectives of the Northwest Power Act would be frustrated if BPA were required to pay negative prices in order to ensure compliance with BPA's environmental responsibilities.

Payment of negative prices to sell Federal hydropower is inconsistent with BPA's obligations under the Northwest Power Act. The Northwest Power Act provides that transmission access and services are to be provided subject to any existing legal obligations and without substantial interference with the Administrator's power marketing program.<sup>30</sup> While one purpose of the Northwest Power Act is to encourage the development of renewable power in the Pacific Northwest through BPA's acquisition authority, that is one purpose among many that BPA must meet, including assuring the Northwest has an economical power supply, providing environmental quality, continuing to repay the U.S. Treasury on a current basis, and protecting, mitigating and enhancing fish and wildlife of the Columbia River and its tributaries.<sup>31</sup> In that last regard, the Northwest Power Act directs that,

[t]he Administrator shall use the [BPA] Fund and the authorities available to the Administrator . . . to protect, mitigate, and enhance fish and wildlife to the extent affected by the development and operation of any hydroelectric project of the Columbia River and its tributaries in a manner consistent with [the Council's power plan and fish and wildlife program], and the purposes of th[e] [Northwest Power Act].<sup>32</sup>

In addition, paying negative prices to displace renewable generation to ensure BPA's environmental responsibilities are met is neither socially optimal nor consistent with traditional principles of cost causation. BPA's statutory preference customers would end up paying the costs of displacing renewable generation that is currently almost entirely serving the loads of utilities outside of the BPA Balancing Authority Area. The costs of Federal and state production incentives should be borne by a broad group of taxpayers and ratepayers receiving the wind power, not concentrated on smaller subsets of consumers with limited economic interest or benefits from the renewable generation.

## **F. Additional Mitigation Measures**

BPA continues to work with the region to identify additional steps it could take in future years when similar overgeneration events occur. After receiving input at public

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<sup>30</sup> 16 U.S.C. § 839f(d)(2) & (i)(3).

<sup>31</sup> 16 U.S.C. § 839.

<sup>32</sup> 16 U.S.C. § 839b(h)(10)(A).

workshops on October 12 and December 3, 2010, BPA is actively exploring the following additional tools that could assist managing TDG levels during overgeneration events:

- BPA is working actively with multiple counterparties to ensure that the thermal displacement market is as active and liquid as possible. BPA is committed to trying to maximize displacement of the region's thermal resources prior to implementing Environmental Redispatch.
- Discussions are taking place with multiple utilities for possible 2011 implementation of time-shifted irrigation pump load. While this likely will start small, the hope is that the concept can be grown in future years.
- BPA initiated conversations with the Bureau of Reclamation and Idaho Department of Water Resources to increase diversions to replenish irrigation aquifers. While there is very little potential for 2011 implementation due to limited infrastructure, the longer-term potential may be on the order of 5 kcfs.
- Through an effort known as the Transmission Utilization Group (TUG), BPA has been working with Northwest and California utilities to explore and mitigate potential barriers to maximizing utilization of the interties to California. A draft report of this group is expected to be released sometime this spring.
- BPA may reduce inc reserves as well as dec reserves as a step to manage TDG levels. Reducing inc reserves allows for the potential to increase on-peak FCRPS generation, which decreases the need for additional spill in off-peak hours.

BPA has assigned teams of subject matter experts to actively pursue these options and will continue efforts to find solutions to avoid overgeneration events. However, with as much as 3,000 MW of additional wind generation expected to come on line in the next few years, these steps may be insufficient to ensure consistency with BPA's environmental and statutory responsibilities. The use of traditional market mechanisms involving the sale of zero price hydropower does not appear to be a viable strategy for displacing renewable generation that faces the loss of Federal and state production incentives when not producing power.

As a result, given its statutory obligations and legal authorities, BPA will implement Environmental Redispatch on an interim basis this spring and provide no-cost Federal hydropower as necessary to displace non-Federal generation in BPA's Balancing Authority Area under the conditions described in this Final ROD. BPA will continue to explore alternative solutions with stakeholders before deciding whether to continue these policies in the future. These conditions and additional details of the rationale for BPA's Environmental Redispatch and Negative Pricing Policies are discussed in more detail below.

### **III. ENVIRONMENTAL REDISPATCH**

Under Environmental Redispatch, BPA will temporarily substitute renewable, carbon-free hydropower for other generation when necessary to ensure FCRPS operations are consistent with BPA's environmental, statutory, and reliability responsibilities. During an Environmental Redispatch, utilities and consumers who purchase wind power or other energy would continue to receive the full energy deliveries associated with their transmission schedules, but the energy would originate from the FCRPS instead of other resources.

As explained in the previous section, during times of high flows, all reasonably practicable actions must be taken to operate the FCRPS consistent with BPA's environmental responsibilities. During the June 2010 events, in order to match this generation with load, BPA offered free hydropower to generators within BPA's Balancing Authority Area, resulting in most of the thermal generators in the Northwest shutting down. With another 3,000 MW of wind generation expected to interconnect to the BPA transmission system over the next few years, and with the potential for even higher flows than those experienced in June 2010, the proposed Environmental Redispatch protocol is now necessary to ensure consistency with BPA's environmental, statutory, and reliability responsibilities.

BPA would perform Environmental Redispatch only as a last resort to avoid harm to listed salmon and other aquatic species during high water periods that result in overgeneration in the BPA Balancing Authority Area and dangerous TDG levels in the Columbia River system, and to provide options to reduce generation in BPA's Balancing Authority Area in order to maintain system reliability, while meeting its environmental and statutory responsibilities.

#### **A. Conditions for Environmental Redispatch**

Before implementing Environmental Redispatch, BPA will take all reasonable actions to reduce excess spill, including:

- Sales through bilateral marketing, including offering to sell at zero cost;
- Cutting prescheduled Pacific Northwest Coordination Agreement storage;
- Deferring scheduled generation maintenance activities;
- Deferring scheduled transmission maintenance activities;
- Increased pumping into Banks Lake at Grand Coulee;
- Seeking flow reductions with BC Hydro;
- Seeking additional load under hourly coordination with Mid-Columbia Hydro Projects;
- Seeking access to additional reservoir storage space at Federal Projects;
- Generation Reductions at Columbia Generating Station;
- Requesting adjustments to mutually agreeable transactions;

- Operating hydro projects inefficiently and at speed-no-load, within BiOp parameters;
- Implementing additional spill at FCRPS projects per the Corps' spill priority list within prevailing water quality standards; and
- Reducing available balancing reserves to maximize turbine flows.

This is a list of known actions that are typically available and effective to relieve excess spill conditions. BPA is continually evaluating additional measures to add to this list.

In the event that BPA determines that these actions collectively will be insufficient to manage spill past unloaded turbines, BPA will implement Environmental Redispatch if: (1) high flow conditions at hydroelectric projects risk spill in excess of spill required for fish passage set in the BiOp resulting in TDG levels above prevailing water quality standards; (2) there is unloaded turbine capacity at those projects to potentially relieve spill; and (3) there is online generation that can be displaced with Federal power without compromising system reliability.

## **B. Environmental Redispatch Implementation**

### **1. Environmental Redispatch Priority**

BPA will first redispatch thermal generators, who can avoid fuel costs and do not receive economic incentives such as RECs and PTCs. BPA will redispatch thermal generators to as low of a generating level as possible without threatening reliability.<sup>33</sup> Most thermal generation, however, will likely have accepted low-cost or free FCRPS generation and should already be offline. Second, if BPA determines that additional generation relief is needed after redispatching thermal generators that do not have reliability requirements, BPA will redispatch variable energy resources (“VERs”),<sup>34</sup> such as wind generation, on a pro rata basis. VERs will include all generators that are characterized by an energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator. This includes, for example, wind, solar thermal and photovoltaic, and hydrokinetic generating facilities. This does not include, for example, hydroelectric, biomass, or process steam generating facilities. VERs will be redispatched to achieve the necessary relief, which may result in such generators being moved completely offline.

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<sup>33</sup> The reduction in output of some thermal generators may have negative impacts to system reliability. Examples include generation that supports the reactive stability of the transmission system, minimum generation to provide capacity for ancillary service obligations, or minimum generation to meet future peak load.

<sup>34</sup> In the future, VERs other than wind, such as solar energy, may be developed within BPA's Balancing Authority Area.

## **2. Environmental Redispatch Protocols**

BPA has developed and received comments on the Environmental Redispatch Business Practices (“Business Practices”) BPA will use to implement Environmental Redispatch for this year.<sup>35</sup> The Business Practices detail the generators that will be subject to Environmental Redispatch and the communication mechanisms for notification that an Environmental Redispatch event is imminent, when an event is declared, and when an event is over. The Business Practices also detail how generation limits for redispatched generators will be communicated and the procedures for thermal and non-federal hydro generators to set minimum generation levels which they cannot be redispatched below for reliability reasons. Further, the Business Practices address how BPA will treat Generation and Energy Imbalance accounting to avoid adverse economic impacts to customers from Environmental Redispatch.

## **3. Expected Duration of Environmental Redispatch**

The conditions that lead to an Environmental Redispatch are of greatest likelihood during spring runoff periods. During spring runoff periods, Environmental Redispatch is more likely to be triggered in nighttime and shoulder periods, as regional loads are lower and unloaded turbine spill is more prevalent. During peak daytime hours, turbines are more likely to be loaded to full capacity, which reduces the likelihood for Environmental Redispatch. BPA will match the period of redispatch with the expected duration of the conditions necessitating Environmental Redispatch. Depending on the conditions, Environmental Redispatch could last anywhere from a minimum of several hours up to several weeks. BPA has also released peer-reviewed analysis that identifies scenarios that illustrate the potential range in magnitude, duration and potential financial implications of Environmental Redispatch events. These materials are available on BPA’s website.<sup>36</sup>

## **4. Contractual Authority and Amendments**

All generators interconnected to the FCRTS or within BPA’s Balancing Authority Area have the obligation to reduce generation when ordered to do so by BPA. All generators with an interconnection agreement with BPA, such as Large Generator Interconnection Agreements (“LGIAs”), Small Generator Interconnection Agreements, Balancing Authority Service Agreements, and other generation interconnection agreements, must follow BPA’s Dispatch Orders. These interconnection agreements specifically provide that generators are required to follow all Dispatch Orders issued by BPA, such as an order to reduce generation during an Environmental Redispatch.<sup>37</sup> BPA’s Dispatch Orders must be followed to maintain system reliability.

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<sup>35</sup> See [http://transmission.bpa.gov/ts\\_business\\_practices/](http://transmission.bpa.gov/ts_business_practices/) at Comments and Redline, Comments and Redline Postings, Environmental Redispatch, V1.

<sup>36</sup> <http://www.bpa.gov/corporate/AgencyTopics/ColumbiaRiverHighWaterMgmt/>.

<sup>37</sup> Failure to follow a dispatch order will subject the generator to a Failure to Comply Penalty Charge, as specified in BPA’s Transmission Rate Schedules.

Specifically with respect to LGIAs, Article 9.7.2 gives BPA the specific authority to interrupt interconnection service for reliability reasons. The LGIA also conditions interconnection service on BPA's compliance with Applicable Laws and Regulations, such as the legal responsibilities described in this document.<sup>38</sup> Further, BPA believes that situations such as those described in this document qualify as Force Majeure events under all interconnection agreements, since the need to comply with BPA's environmental responsibilities constitutes an "order, regulation or restriction imposed by governmental ... authorities[.]"<sup>39</sup>

For the sake of clarity, however, BPA will be unilaterally amending Appendix C of LGIAs to specifically reference Environmental Redispatch.<sup>40</sup> Because this Final ROD is being issued on an interim basis, these amendments will terminate on March 30, 2012, concurrent with the expiration of this Final ROD.

## **5. OATT Amendments**

Environmental Redispatch does not affect a Transmission Customer's transmission rights, as all energy deliveries will be made. However, BPA will continue to explore in a separate process whether to amend its OATT to more specifically delineate the effect of BPA's environmental and related statutory obligations on Transmission Service in order to be absolutely clear regarding the terms and conditions of Transmission Service.

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<sup>38</sup> See BPA OATT, Attachment L, Article 4.3 of the Standard Large Generator Interconnection Agreement; BPA OATT Attachment N, Article 1.5.2 of the Small Generator Interconnection Agreement.

<sup>39</sup> See BPA OATT, Attachment L, Article 1 of the Standard Large Generator Interconnection Agreement.

<sup>40</sup> The Commission has ruled that Transmission Providers have the unilateral right to amend LGIAs to include operational requirements. See Bonneville Power Administration, 112 FERC ¶ 61,195, P20 (2005).

#### IV. NEGATIVE PRICING POLICY

The Northwest energy market is a bilateral market, with most of the trading done at the Mid-Columbia trading hub and the California Oregon border. Under certain conditions, typically when electricity loads are light and there is an over-abundance of generation, the Northwest electricity market can be susceptible to negative prices. Generally, the magnitude and duration of negative prices is influenced by a number of factors, which include:

- transmission constraints,
- volatile stream flows,
- the region's growing number of VERs that can operate economically at negative prices due to PTCs and REC's,
- reliability-driven must-run thermal generators, and
- maintaining operations consistent with environmental laws.

These factors make generation forecasts difficult, limit exports, and inundate the region's resource stack with must-run generators and power that is profitable at negative prices for those generators that receive Federal and state production incentives.

##### A. Negative Pricing Policy During Overgeneration Events

BPA will not pay negative prices during times when BPA needs to generate in order to comply with its environmental responsibilities. The payment of negative prices could result in opportunities to distort the market and presents an unreasonable cost shift from those generators that can operate profitably during times of negative prices to BPA's fish and wildlife program and/or to BPA ratepayers, and jeopardizes BPA's ability to comply with its statutory responsibilities, including cost recovery. To date, BPA has not been required to pay negative prices during these situations. Similarly, when purchasing energy, BPA will accept zero-priced energy rather than negatively-priced energy from a generator that is required to generate energy due to operational constraints, such as compliance with environmental laws. The only exception to this policy is when BPA is bidding into auction markets at zero or positive prices and is awarded energy at negative prices as a result of the auction.

As indicated earlier, BPA must act in a fashion that reasonably balances and accommodates the multiple purposes of the Northwest Power Act.<sup>41</sup> Currently, BPA's fish and wildlife budget exceeds \$750 million each year (over \$440 million in direct expenditures and over \$300 million in foregone revenues). The difficulties BPA has in balancing FCRPS generation to protect, mitigate, and enhance fish and wildlife and

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<sup>41</sup> Section 4(h)(10)(A) of the Northwest Power Act obligates the Administrator to use his authorities to "protect, mitigate, and enhance fish and wildlife to the extent affected by . . . any hydroelectric project of the Columbia River and its tributaries," consistent with the Council's Power Plan, the purposes of the Northwest Power Act, and other provisions of law. See, e.g., Cal. Energy Comm'n v. Bonneville Power Admin., 909 F.2d 1298, 1315 (9th Cir. 1990)

maintaining an economical power supply are captured well in BPA's ROD adopting the 2008 BiOp.<sup>42</sup> BPA is already absorbing significant financial impact and risk by providing free power during overgeneration events through Environmental Redispatch. Payment of negative prices in order to protect fish and wildlife and to assure that the value of a wind generators' PTCs and/or RECs are not impacted could impose an additional and unnecessary burden on BPA's fish and wildlife program costs and compromise BPA's cost recovery objectives and the need to maintain an economical power supply. Environmental compliance is a fundamental part of BPA's operations and a major cost of doing business. Just like BPA's customers, all generators interconnecting to BPA's system must take the system as it is, complete with environmental responsibilities. Negative pricing would place a new financial burden on BPA's fish and wildlife program and BPA's preference customers in order to ensure VERs are kept whole, even though BPA's preference customers are not purchasing or receiving benefits from the VER generation.

Some parties may well argue that negative prices should not be viewed as a fish and wildlife cost, occasioned by environmental limits, but as a transmission cost, since the cause of the payment would be BPA's open access transmission regime, *i.e.*, but for open transmission access, BPA would not be paying negative prices to meet its environmental responsibilities. Were that the case, we would again be shifting the costs to BPA ratepayers, albeit transmission ratepayers, and creating the risk of unreasonably high transmission rates, a large percentage of which are paid by BPA's preference customers.

Moreover, if BPA's policy was to pay negative prices to meet its environmental responsibilities, marketers and non-Federal generators would be presented with opportunities to refuse BPA offers of low-priced or free power and wait until BPA was forced to offer its power at negative prices in order to comply with its environmental responsibilities. The fact that there is a large amount of publicly available hydro generation, stream flow, and water storage data makes the region aware of those times when hydro flexibility is tight and the potential of negative prices exists. If the region knew that BPA was approaching conditions where it needs to generate in order to meet its environmental responsibilities and BPA was willing to pay negative prices, there would be less incentive for resources to back down economically in isolation and a higher incentive to delay target purchases until prices went negative and approached the last dispatchable resource in the region – renewable generation receiving Federal and state production incentives. As a result, the marketplace is not an effective solution, as BPA would be forced to accept the demands of the buyer. This would not only create undue pressures on BPA's budget and significant economic risk to BPA and its ratepayers, but also reduce the ability to manage TDG levels in the river.

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<sup>42</sup> Bonneville Power Administration Record of Decision Following the May 2008, NOAA Fisheries FCRPS Biological Opinion on Operation of the Federal Columbia River Power System, 11 U.S. Bureau of Reclamation Projects in the Columbia Basin and ESA Section 10 Permit for Juvenile Fish Transportation Program, at 33-36 (Aug. 12, 2008), available at [http://www.bpa.gov/corporate/pubs/rods/2008/BPA\\_ROD\\_to\\_Implement\\_2008\\_FCRPS\\_BiOp\\_RPA.pdf](http://www.bpa.gov/corporate/pubs/rods/2008/BPA_ROD_to_Implement_2008_FCRPS_BiOp_RPA.pdf).

BPA must plan the operation of FCRPS generation to keep the interconnected system of projects within operational requirements, such as meeting load and ancillary service obligations, maintaining reliability, and meeting environmental obligations. Meeting BPA long-term preference customer load obligations forms the base of this operation, and BPA purchases or sells power in the marketplace to reshape the net load to meet operational requirements. These purchases and sales are made in differing timeframes based on available information and the need to maintain reliability. If non-Federal generators and marketers withheld offers to purchase FCRPS power until the market turned negative, BPA could be presented with excessive uncertainty in market depth that could result in additional spill due to the magnitude of sales exposure.

In addition, the sale of power at negative prices inappropriately shifts the cost burdens associated with the PTC and RECs to BPA ratepayers. The PTC and RECs were intended to facilitate carbon-free renewable energy production and are paid for by Federal taxpayers and consumers of the renewable generation. BPA marketing activities associated with balancing the system and meeting non-power constraints directly impact the rates of BPA's preference customers; thus, paying negative prices would be reflected in these customers' rates through future rate proceedings that would shift the cost burden of the PTC and RECs to BPA's preference customers. This represents an unnecessary transfer of value between two carbon free generation resources.

While VERs would be kept whole financially if the costs of paying negative prices were shifted to BPA's preference customers, this outcome could have a detrimental effect on the development of renewable resources in BPA's Balancing Authority Area. Because of the cost shifts presented by the payment of negative prices, strong opposition to efforts to further develop and integrate VERs in BPA's Balancing Authority Area could result.

Based on the peer-reviewed analysis conducted by BPA, the cost of paying the value of lost PTCs and RECs alone could cost up to \$50 million during 2012, if it proved to be a year of high water and heavy wind conditions.<sup>43</sup> But these may not be the only costs that a wind generator will consider, and that figure could be much higher in certain conditions.<sup>44</sup> In addition, this study does not consider the potential for thermal generators to seek negative-priced payments that they have not received before, creating a new revenue stream for these generators. The payment of negative prices would shift the cost burdens associated with the PTC and REC to BPA's customers, jeopardize BPA's cost recovery objectives, and also hinder the ability of BPA to manage TDG levels. BPA, however, has the statutory requirements to carry out its marketing obligations, including keeping rates as low as possible consistent with sound business principles, recovering its costs, and protecting fish and wildlife affected by operation of the FCRPS.<sup>45</sup> Such outcomes would be inconsistent with these statutory principles. The twin goals of

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<sup>43</sup> Northwest Overgeneration: An Assessment of Potential Magnitude and Cost, at 13 (available at [http://www.bpa.gov/corporate/AgencyTopics/ColumbiaRiverHighWaterMgmt/BPA\\_Overgeneration\\_Analysis.pdf](http://www.bpa.gov/corporate/AgencyTopics/ColumbiaRiverHighWaterMgmt/BPA_Overgeneration_Analysis.pdf)).

<sup>44</sup> See Comments of enXco at 8; Comments of Horizon at 8.

<sup>45</sup> See 16 U.S.C. § 839f(i)(1)(B); 16 U.S.C. § 839f(i)(3); 16 U.S.C. § 839b(h)(10)(A); 16 U.S.C. § 839e(a)(1).

protecting, mitigating, and enhancing fish and wildlife affected by the development, operation, and management of hydropower facilities while assuring the Pacific Northwest an adequate, efficient, economical, and reliable power supply will be put at an unreasonable risk if BPA is forced to pay negative prices as a consequence of providing transmission to VERs.<sup>46</sup>

## **B. Economic Impacts**

Environmental Redispatch seeks to ensure generators are able to meet their power delivery obligations. Different resources, however, will face different secondary impacts from displacement under Environmental Redispatch. Thermal resources may face reduced efficiency due to a change in operating level. This will likely be compensated for by the fuel savings associated with the displacement, which explains why thermal resources have traditionally accepted offers of low-priced hydro power during past overgeneration events. As a result, there is expected to be only a very small amount of thermal generation subject to Environmental Redispatch.

Depending on their financing arrangements and age, some VER resources may face the loss of PTCs if they are displaced by FCRPS generation. VERs may also face the loss of state-authorized RECs, which are assets that are marketable to meet some state Renewable Portfolio Standards (“RPS”). BPA understands that these losses may fall to the generation owners or to investors, depending on the contractual arrangements. Consequently, BPA will only redispatch VERs to the extent necessary after thermal generators are redispatched.

## **C. Proposed Legislative Approaches to Mitigate for Environmental Redispatch**

Because the economic impacts on VERs stem from the loss of RECs and PTCs, BPA has proposed to explore with VERs and other regional stakeholders legislative solutions that would allow those generators to remain eligible for PTCs and RECs when an Environmental Redispatch occurs. Legislative solutions would mitigate the potential economic impacts that Environmental Redispatch poses for VERs.

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<sup>46</sup> These principles were reaffirmed in BPA’s ROD adopting the 2010 Supplemental BiOp. In evaluating the different approaches proposed by the various parties, the ROD stated: “To the extent that these alternative operations would further reduce the generation of the hydrosystem or restrict its flexibility in meeting load, they would escalate the costs and intensify the challenges of maintaining an adequate, effective, economical and reliable power supply.” Bonneville Power Administration Record of Decision Following the May 20, 2010, NOAA Fisheries Supplemental Biological Opinion to the May 2008 FCRPS Biological Opinion for Operation of the Federal Columbia River Power System, 11 U.S. Bureau of Reclamation Projects in the Columbia Basin and ESA Section 10 Permit for Juvenile Fish Transportation Program, at 20 (June 11, 2010), available at <http://www.bpa.gov/corporate/pubs/RODS/2010/>.

## V. RESPONSE TO PUBLIC COMMENTS

BPA received 41 comments on the Draft ROD, both supporting and in opposition to the proposals in the Draft ROD. This Final ROD incorporates changes based on public comments, and below is BPA's response to the specific issues raised by the public comments.

### A. Statutory Authority

#### A1. Issue: Whether BPA's decision not to pay negative prices constitutes market manipulation prohibited under Section 222 of the Federal Power Act.<sup>47</sup>

##### Commenters' Positions:

BPA received multiple comments expressing concern that BPA's Negative Pricing Policy may constitute market manipulation prohibited under Section 222 of the Federal Power Act. Iberdrola Renewables, Inc. ("Iberdrola") commented that BPA's proposal "introduces a market distortion that can improperly influence prices in the Northwest" and that BPA "must consider the risk that its proposal might be found to be inconsistent with the Commission's market manipulation rules" pursuant to Section 222 of the Federal Power Act.<sup>48</sup> Similarly, Puget Sound Energy, Inc. ("PSE") states that "the Draft ROD fails to explain how the proposed Environmental Redispatch Protocol and Negative Pricing Policies complies with the spirit, if not the letter, of section 222 of the Federal Power Act" and that "BPA should explain how its proposed Environmental Redispatch Protocol and Negative Pricing Policy is consistent with [the] statutory prohibition" against market manipulation.<sup>49</sup> Portland General Electric Company ("PGE") also commented that it "is concerned that BPA's proposed policy consists of the employment of a device or artifice to manipulate market prices and will therefore cause BPA and its customers to violate [the Commission's] anti-market manipulation rules. PGE requests that BPA address this issue before approving the Draft ROD."<sup>50</sup> Finally, PacifiCorp commented that "BPA fails to show compliance with section 222 of the Federal Power Act," that "BPA has not shown how the proposed policies are consistent with the market manipulation prohibition," and that, consequently, BPA's proposed policy "contravene[s] multiple federal laws."<sup>51</sup>

##### Evaluation of Positions:

BPA disagrees that its decision not to pay negative prices implicates Section 222 of the Federal Power Act. None of the comments submitted specifically explain how BPA's decision implicates Section 222, but simply cite the statute. Section 222 of the Federal Power Act prohibits any entity engaged in a transaction that is subject to the FERC

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<sup>47</sup> 16 USC § 824v(a).

<sup>48</sup> Comments of Iberdrola at 12-13.

<sup>49</sup> Comments of PSE at 16.

<sup>50</sup> Comments of PGE at 4.

<sup>51</sup> Comments of PacifiCorp at 9.

jurisdiction, from the use of “any manipulative or deceptive device or contrivance.” Section 222 provides:

It shall be unlawful for any entity . . . , directly or indirectly, to use or employ, in connection with the purchase or sale of electric energy or the purchase or sale of transmission services subject to the jurisdiction of the Commission, any manipulative or deceptive device or contrivance . . . , in contravention of such rules and regulations as the Commission may prescribe as necessary or appropriate in the public interest or for the protection of electric ratepayers.

The parties’ comments are misplaced and fail to recognize the application of section 222 to prevent manipulation of the market. In Order 670, the Commission adopted regulations for implementing Section 222.<sup>52</sup> FERC’s regulations provide:

(a) It shall be unlawful for any entity, directly or indirectly, in connection with the purchase of or sale of transmission services subject to the jurisdiction of the Commission,

(1) To use or employ any device, scheme or artifice *to defraud*,

(2) To *make any untrue statement of a material fact or to omit to state a material fact* necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, or

(3) To engage in any act, practice, or course of business that operates or would *operate as a fraud or deceit* upon any entity.<sup>53</sup>

In Blumenthal v. ISO New England, Inc., et al, the Commission defined “fraud” as “any action, transaction, or conspiracy for the purpose of impairing, obstructing or defeating a well-functioning market.”<sup>54</sup> The Commission further qualified the term “fraud” as requiring that the “actual facts . . . must have been purposefully concealed.”<sup>55</sup> None of BPA’s actions rise to the level of the required element of fraud or deception. BPA has been open and transparent with respect to what actions it will be taking and the reasons for those actions. BPA has held multiple public meetings to discuss its policy decision, and has allowed for stakeholders to submit written comments. Thus, BPA has no intent to conceal any information in order to manipulate the market.

Further, as part of its authority granted by statute, BPA has the discretion to “exercise control over the marketing of electricity generated in the Pacific Northwest” in order to meet its statutory obligations.<sup>56</sup> The Ninth Circuit Court of Appeals has upheld BPA’s

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<sup>52</sup> 18 C.F.R. § 1c.2.

<sup>53</sup> Id. (emphasis added).

<sup>54</sup> 132 FERC ¶ 63,017 at P90 (2010) (quoting Order 670 at P50).

<sup>55</sup> Id.

<sup>56</sup> See, e.g., Dep’t of Water and Power v. BPA, 759 F.2d 684, 685 (9<sup>th</sup> Cir. 1985) (upholding BPA’s Intertie Access Policy).

policies favoring BPA's access to the Pacific Northwest-Pacific Southwest Intertie in order to avoid wasteful spilling of water at FCRPS projects due to a lack of market in the Northwest that would jeopardize BPA's ability to recover its costs.<sup>57</sup> In this case, not only are BPA's Environmental Redispatch and Negative Pricing Policies required to protect BPA's ability to recover its costs and to keep rates low consistent with sound business principles, but BPA must also avoid spill to operate consistent with environmental laws. Further, under Environmental Redispatch, BPA will be providing FCRPS power at zero cost to non-federal generators to meet the scheduled power delivery. BPA has been mindful of the effects of its proposed policy on competition and has sought to ensure that any arguable effects were warranted by BPA's other statutory obligations. In this situation, where BPA is providing Federal hydropower at no cost to displaced generators in order to operate consistent with its environmental and statutory responsibilities, BPA is exercising its responsibilities reasonably.

**Decision:**

*BPA's decision not to pay negative prices does not constitute market manipulation prohibited under Section 222 of the Federal Power Act.*

**A2. Issue: Whether Environmental Redispatch violates Section 6 of the Preference Act.**

**Commenters' Positions:**

Iberdrola believes that BPA will “take” non-Federal transmission for Federal needs, and that it intended to use the firm transmission rights of existing wind generators to displace wind energy deliveries and instead deliver Federal hydropower to such generators’ power purchasers under the Environmental Redispatch protocol.”<sup>58</sup> Iberdrola argues that Environmental Redispatch “is inconsistent with Section 6 of the [Preference Act],” because “Section 6 of the Preference Act makes it clear that firm contracts for transmission of non-Federal energy shall not be affected by ‘any increase, subsequent to the execution of such contract, in the requirements for transmission of Federal energy.’”<sup>59</sup>

**Evaluation of Positions:**

BPA disagrees that Environmental Redispatch violates Section 6 of the Preference Act. Section 6 of the Preference Act provides:

Any capacity in Federal transmission lines connecting, either by themselves or with non-Federal lines, a generating plant in the Pacific Northwest or Canada with the other area or with any other area outside the Pacific Northwest, which is not required for the transmission of Federal energy . . . shall be made available as a carrier for transmission of other electric energy between such areas. The transmission of other electric

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<sup>57</sup> *Id.* at 687.

<sup>58</sup> Comments of Iberdrola at 5.

<sup>59</sup> *Id.* at 5-6.

energy shall be at equitable rates[.] No contract for the transmission of non-Federal energy on a firm basis shall be affected by any increase, subsequent to the execution of such contract, in the requirements for transmission of Federal energy[.]

Section 6 of the Preference Act establishes that BPA must use Federal transmission capacity first to serve BPA's needs, and second, to the extent transmission capacity is not required to serve BPA's needs, Federal transmission is to be made available to non-Federal users. Section 6 also establishes that, once BPA has sold Federal transmission capacity, it may not subsequently breach those contracts if BPA later determines it may need that transmission capacity.

Iberdrola's argument that Environmental Redispatch violates Section 6 of the Preference Act is based on the premise that BPA is taking back transmission capacity that it has already sold in breach of its transmission contracts.<sup>60</sup> Iberdrola's assertion is unpersuasive because Environmental Redispatch does not affect a customer's transmission contracts; rather, Environmental Redispatch is a limitation on the use of a generation interconnection contract. Environmental Redispatch is a tool that will help manage overgeneration and reliability in BPA's Balancing Authority Area and TDG levels in the river by limiting the amount of non-federal generation. This is a *limit on generation*, and is not a limitation on the use of a customer's transmission contract. Due to the limitation on a generator that may be associated with the transmission contract, BPA will be ensuring that the delivery of power is completed using FCRPS generation.

This action is not an infringement of transmission customers' rights under their respective transmission contracts.<sup>61</sup> Generation interconnection contracts and transmission contracts are separate and distinct contracts. BPA's OATT makes this clear. For example, Article 4.4 of BPA's standard LGIA provides that "execution of this LGIA does not constitute a request for, nor the provision of, any transmission delivery service under Transmission Provider's Tariff, and does not convey any right to deliver electricity to any specific customer or Point of Delivery." Therefore, a limitation contained in a generator's interconnection agreement does not mean that transmission service from that generator is also affected. BPA has the obligation as the Balancing Authority to ensure that generation and load are balanced to maintain reliability. Environmental Redispatch will ensure that firm transmission rights are maintained by delivering the quantity of energy scheduled using those transmission rights and that BPA's Balancing Authority Area stays reliable.

Moreover, Environmental Redispatch is consistent with how the Federal transmission system is currently operated. Environmental Redispatch is similar to the provision of imbalance energy, which no party has ever stated is an infringement of transmission contract rights. BPA provides imbalance energy when a generator in BPA's Balancing

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<sup>60</sup> Id.

<sup>61</sup> Even if the contract at issue were the generation interconnection contracts and not the transmission contract, Section 6 of the Preference Act would still not be implicated because, as explained in this Final ROD, BPA is not in breach of those contracts. Infra at §§ V.B.1-4.

Authority Area, for whatever reason, cannot meet the generation levels committed to in the associated transmission schedule. BPA makes up the difference between the generation levels and the transmission schedule by increasing generation on the FCRPS. During Environmental Redispatch, non-Federal generators in BPA's Balancing Authority Area have their ability to generate limited, and BPA will make up the difference by meeting the scheduled amount with FCRPS energy.

**Decision:**

*Environmental Redispatch does not violate Section 6 of the Preference Act.*

**A3. Issue: Whether BPA's Environmental Redispatch and Negative Pricing Policies conflict with BPA's statutory obligation to encourage the development of renewable resources.**

**Commenters' Positions:**

Iberdrola argues that, by "targeting wind resources with its ... Environmental Redispatch protocol, [BPA] violates one of the fundamental purposes of the Northwest Power Act," namely "encouraging renewable resource development."<sup>62</sup> Iberdrola believes, therefore, that the "Draft ROD proposals discourage the development of renewable resources in contravention to [BPA's] Northwest Power Act directives."<sup>63</sup> The Public Power Council ("PPC") generally supports BPA's statutory authority to implement the Environmental Redispatch and Negative Pricing policies, as does the Western Public Agencies Group ("WPAG") and Pacific Northwest Generating Cooperative ("PNGC").

**Evaluation of Positions:**

BPA disagrees that BPA's policies adopted in this Final ROD conflicts with Section 2 of the Northwest Power Act. First, BPA's Environmental Redispatch proposal does not only apply to wind resources. Rather, BPA has made a commitment to take all steps reasonably available to avoid Environmental Redispatch, and when Environmental Redispatch is triggered, BPA will first attempt to solve the overgeneration issue by redispatching thermal resources. As a result, BPA's Environmental Redispatch policy goes to great lengths to ensure wind generation is not affected.

Second, encouraging the development of renewable resources cannot be viewed in isolation as the sole purpose of the Northwest Power Act.<sup>64</sup> Section 2 of the Northwest Power Act specifies the Congressional Declaration of Purpose of the Northwest Power Act. While "encouraging" the development of renewable resources is one listed purpose, Section 2 of the Northwest Power Act also provides that the Northwest Power Act was intended to "assure the Pacific Northwest of an adequate, efficient, economical and reliable power supply."<sup>65</sup> Moreover, Section 2 of the Northwest Power Act requires that

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<sup>62</sup> Comments of Iberdrola at 8.

<sup>63</sup> Id.

<sup>64</sup> See Dep't of Water and Power v. BPA, 759 F.2d. at 685 (BPA's policy decisions "involve[] a complex web of four federal statutes and a complex factual background.")

<sup>65</sup> 16 USC § 839(2) (emphasis added).

the purposes be “construed in a manner consistent with applicable environmental laws.” Therefore, the language in Section 2 of the Northwest Power Act should be read as putting compliance with environmental laws and assuring an adequate, efficient, economical and reliable power supply as affirmative purposes of the Northwest Power Act, while encouraging renewable resources should be read as a goal.

Third, the Northwest Power Act and BPA’s other governing statutes require it to establish “the lowest possible rates to consumers consistent with sound business principles,”<sup>66</sup> to provide “equitable treatment for [] fish and wildlife . . . ,”<sup>67</sup> and to recover its costs.<sup>68</sup> BPA believes that its Environmental Redispatch and Negative Pricing Policies strike the appropriate balance between these competing statutory obligations. The payment of negative prices when BPA is forced to generate energy in order to reduce spill would have enormous financial consequences for BPA, and may threaten BPA’s ability to recover its costs.<sup>69</sup> As earlier stated, BPA embarked on its open access transmission regime with a view that Federal needs could be met. The policy here assures that this continues to be the case. Payment of negative prices does not. Further, BPA’s decision not to pay negative prices keeps power and transmission rates low consistent with sound business principles, and BPA’s decision to implement Environmental Redispatch gives BPA the tools necessary to continue the development of wind in the Pacific Northwest while ensuring the protection of fish and wildlife.

Further, it is unclear whether the payment of negative prices would actually encourage the development of renewable resources, as the parties suggest. Paying negative prices and shifting those costs to BPA’s preference customers could draw significant opposition to the development of any more renewable resources in the Pacific Northwest, as further development of renewable resources would lead to increased overgeneration events and increased costs to BPA’s preference customers. BPA’s preference customers would likely oppose any further integration of VERs.

As a result, BPA does not view Environmental Redispatch as unduly discouraging the development of renewable resources. As explained previously, BPA’s decision to adopt an OATT and related policies have encouraged the development of wind generation in the Pacific Northwest. Specifically, wind generators have interconnected in BPA’s Balancing Authority Area far beyond the expectations and targets contemplated in regional power plans promulgated by the Council. For example, in the Council’s 2005 Fifth Power Plan, it forecast up to 6,000 MW of installed wind capacity in the Pacific Northwest during the next 20 years.<sup>70</sup> The Pacific Northwest has already reached 6,000 MW of installed wind capacity, with over 3,000 MW in BPA’s Balancing Authority Area. BPA cannot, however, allow the unfettered development of wind within its

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<sup>66</sup> 16 USC § 838g.

<sup>67</sup> 16 USC § 839b(h)(11)(A)(i).

<sup>68</sup> 16 USC § 838g.

<sup>69</sup> Supra § IV.A.

<sup>70</sup> Fifth Northwest Electric Power and Conservation Plan at 50 (available at <http://www.nwcouncil.org/energy/powerplan/5/>).

Balancing Authority Area if to do so would hinder BPA's ability to comply with its environmental, statutory, and reliability responsibilities.

**Decision:**

*BPA's Environmental Redispatch and Negative Pricing Policies do not discourage the development of renewable resources, but are necessary to continue to interconnect more wind resources in the region.*

**A4. Issue: Whether BPA's policy not to pay negative prices ensures the lowest possible rates to consumers as required by the Northwest Power Act and Transmission System Act.**

**Commenters' Positions:**

PSE argues that BPA's Environmental Redispatch and Negative Pricing Policies will keep rates lower for power customers but increase costs for transmission customers. PSE states that the Northwest Power Act and Transmission System Act mandates that BPA's policies establish "the lowest possible rates for consumers," and that such mandate applies both to Power and Transmission rates.<sup>71</sup> PSE also implies that BPA has no obligation to protect Power rates, as preference customers do not have a "preference to price."<sup>72</sup> PPC supports BPA's proposal to not pay negative prices, stating it "protects powers customers from unreasonable costs," as well as "unreasonable costs to its fish and wildlife program and its cost recovery obligations." In addition, PPC commented that BPA should not "guarantee [generators'] receipt of state and federal payments" for RECs and PTCs.<sup>73</sup> PNGC also supports BPA's decision not to pay negative prices in order to keep electricity costs "reasonable and affordable."

**Evaluation of Positions:**

The fact that some VERs receive additional financial benefits from PTCs and RECs that may be affected by BPA's policies does not mean that BPA's actions do not ensure the lowest possible rates for all consumers. PSE's argument suggests that BPA's Environmental Redispatch policy will impact the rates paid by BPA's transmission customers. This is simply not the case. The decision to not pay negative prices when selling FCRPS power to any entity during a high water event may impact the ability of some parties to receive RECs and PTCs, but this does not implicate transmission rates. BPA's Environmental Redispatch and Negative Pricing Policies are simply not ratemaking and thus do not affect rates, as these policies do "not impose any charge at all or define any formula for computing charges."<sup>74</sup> As PPC and PNGC point out, the payment of negative prices when selling FCRPS power under the situations described in this Final ROD would result in unreasonable costs to BPA, and, ultimately, result in increased rates to BPA's customers. As indicated earlier, BPA would expect arguments to be made that the payments are caused by TDG limits to protect fish and should be borne by Power customers, while others would argue that they are necessitated by BPA's

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<sup>71</sup> Comments of PSE at 10.

<sup>72</sup> *Id.*

<sup>73</sup> Comments of PPC at 3.

<sup>74</sup> Cal. Energy Res. Conservation and Dev. Comm'n v. BPA, 831 F.2d 1467, 1472 (9<sup>th</sup> Cir. 1987).

open access transmission policies and should therefore be allocated to Transmission customers. In either case, rates would be needlessly burdened. Thus, the policies in this Final ROD do ensure the lowest possible rates for both Power and Transmission customers.

Moreover, BPA's obligation to establish the lowest possible rates to consumers must be consistent with "sound business principles."<sup>75</sup> As stated in this Final ROD, peer-reviewed studies conducted by BPA estimate the possible cost of paying negative pricing to be up to \$50 million, based on an estimated combined value of RECs and PTCs of \$38 MWh. As pointed out by enXco and Horizon Wind, however, the cost could potentially be up to \$121 MWh, making it possible that the payment of negative prices may be much more costly to BPA.<sup>76</sup> Further, the peer-reviewed study did not account for the potential for thermal generators to also hold out for negative-priced power because BPA needs to generate at any cost to meet its environmental responsibilities. Because of the potential financial impact the payment of negative prices could have on BPA's rates and BPA's ability to recover its costs, and the unreasonableness of shifting the costs of RECs and PTCs to BPA's power customers, BPA does not believe that paying negative prices in order for BPA to meet its environmental obligations is consistent with sound business principles.<sup>77</sup>

Finally, BPA must consider the overall regional impacts. As parties have noted, the Pacific Northwest has always experienced periodic episodes of overgeneration. The addition of significant quantities of generation that is non-responsive to overgeneration events will cause such events to be more frequent and increase the risk that FCRPS operations will be inconsistent with BPA's environmental obligations. Shifting the costs that arise from this situation away from the parties that are causing the incremental impact would not only inappropriately transfer costs, but also ignore the operational realities of the Pacific Northwest load/resource dynamics in the development of new resources.

**Decision:**

*BPA's policy not to pay negative prices does not violate BPA's statutory directive under the NWPA and Transmission System Act to establish the lowest possible rates for customers.*

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<sup>75</sup> 16 USC 838g.

<sup>76</sup> Comments of EnXco at 7-8; Comments of Horizon Wind at 7-8,

<sup>77</sup> See Public Power Council v. BPA, 442 F.3d 1204, 1210-11 (9<sup>th</sup> Cir. 2006) (deferring to BPA's determination that it is acting according to "sound business principles" where "the agency is responding to unprecedented changes in the market." (quoting Ass'n of Pub. Agency Customers v. BPA, 126 F.3d 1158, 1171 (9<sup>th</sup> Cir. 1997)).

**A5. Issue: Whether BPA’s Environmental Redispatch and Negative Pricing policies violate Section 7(g) of the Northwest Power Act.**

**Commenters’ Positions:**

Iberdrola asserts that any “costs associated with payment of negative prices should be treated like other fish and wildlife costs and allocated to power rates pursuant to Northwest Power Act Section 7(g),” because “these costs . . . are caused by the fish and wildlife requirements of the generating facilities whose output [BPA] markets.”<sup>78</sup>

**Evaluation of Positions:**

Section 7(g) of the Northwest Power Act provides, in part:

[T]he Administrator shall equitably allocate to power rates, in accordance with generally accepted ratemaking principles and the provisions of this chapter, all costs and benefits not otherwise allocated under this section, including, but not limited to, conservation, fish and wildlife measures, uncontrollable events, reserves . . . and the sale of or inability to sell excess electric power.<sup>79</sup>

Iberdrola characterizes BPA’s Environmental Redispatch and Negative Pricing Policies as implicating only fish and wildlife concerns, and thus arguing that the costs should be allocated to power rates. As explained above, however, BPA’s decision not to pay negative prices aims to balance multiple statutory obligations, including protecting fish and wildlife, keeping rates low consistent with sound business principles, and ensuring cost recovery. In addition, reasonable arguments might well be raised that but for BPA’s provision of open access transmission, negative prices would not be paid and, as such, they should be viewed as a transmission cost, not a fish and wildlife cost. The payment of negative prices to guarantee the profits of wind generators is an unreasonable cost that should not be borne by BPA’s customers. The costs of lost RECs and PTCs should be borne by the consumers of such energy and federal taxpayers, and not by BPA’s customers.

Further, under Environmental Redispatch, BPA provides free FCRPS generation to meet the energy obligations of all generators within BPA’s Balancing Authority Area. The cost of foregone power revenues incurred by spilling water and providing free power in order to comply with environmental obligations will already be reflected in power rates, absent rate case arguments leading to a different result. While BPA’s policy may have an economic impact on some VERs, such impacts are not common to all generators and are due to policies beyond BPA’s control, such as RPS and the PTC. Compensating generators for these lost profits would inappropriately shift the burden of these costs to BPA customers, and should be borne by the consumers and taxpayers that benefit from the renewable generation and the generator itself, since the generator contributes to the overgeneration problem.

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<sup>78</sup> Comments of Iberdrola at 8-9.

<sup>79</sup> 16 U.S.C. § 839e(g).

**Decision:**

*BPA's Environmental Redispatch and Negative Pricing policies do not violate Section 7(g) of the Northwest Power Act.*

**A6. Issue: Whether Environmental Redispatch violates Section 6 of the Transmission System Act.**

**Commenters' Positions:**

Iberdrola and PSE argue that Environmental Redispatch would violate Section 6 of the Transmission System Act because of perceived discrimination in the allocation of transmission capacity. Iberdrola asserts that Section 6 of the Transmission System Act obligates BPA to “make available on a fair and nondiscriminatory basis, any capacity in the Federal transmission system which [is] in excess of the capacity required to transmit electric power generated or acquired by [BPA].”<sup>80</sup> PSE argues that “the proposal would require BPA’s transmission customers to bear costs of generation compliance with environmental restrictions,” resulting in a shifting of costs to non-Federal transmission customers from power customers, which is “unduly discriminatory and preferential and is not fair and nondiscriminatory.”<sup>81</sup>

**Evaluation of Positions:**

Iberdrola’s argument appears to be based on the premise that BPA is discriminating against wind generation by taking back firm transmission rights. However, Environmental Redispatch is intended to solve an overgeneration issue by limiting a generator’s ability to generate. Generation interconnection agreements and transmission contracts are separate and distinct. Restrictions on a generator under a generation interconnection agreement do not affect a transmission customer’s transmission rights. Under Environmental Redispatch, BPA is ensuring that the energy delivery associated with transmission rights is being fulfilled. Thus, there is no discrimination with respect to the allocation of transmission capacity.

In addition, BPA disagrees that Environmental Redispatch unfairly shifts costs to non-federal generators, as PSE asserts. BPA is ensuring that all energy deliveries are met at no cost to the generator or transmission customer. The fact that some generators, such as wind generators, receive other economic benefits for the production of energy beyond BPA’s control does not constitute an unfair or discriminatory cost shift. BPA should not be the guarantor of economic benefits beyond the physical delivery of energy.

Finally, as noted earlier, the Administrator is obligated to use all his authorities, power and transmission, to assure equitable treatment of fish and wildlife. At the same time, the ESA applies to BPA, not just its Power function. In this situation, where the provision of open access contributes to the problem we are addressing here, it is unreasonable to expect that BPA should do even more than it has proposed here, which is the offering of

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<sup>80</sup> Comments of Iberdrola at 10; 16 USC § 838d.

<sup>81</sup> Id.

free Federal hydropower as a temporary substitute for other generation when necessary to avoid exceeding TDG limits.

**Decision:**

*Environmental Redispatch does not violate Section 6 of the Transmission System Act.*

**A7. Issue: Whether Environmental Redispatch violates Section 2 of the Preference Act.**

**Commenters' Positions:**

Charles Pace, PhD, comments that all energy generated from the FCRPS that is “delivered for sale/use outside the region . . . including power provided for peaking or for purposes of “balancing” wind generation, must be limited to surplus peaking capacity and surplus energy as required by 16 U.S.C. § 837a.”<sup>82</sup> Mr. Pace also asserts that “30 days prior to executing any contract for the sale, delivery or exchange of such energy,”<sup>83</sup> BPA must give customers “written notice that such contracts are pending and make them available upon request.”<sup>84</sup>

**Evaluation of Positions:**

According to Mr. Pace, because the vast majority of the wind power developed in recent years moves over BPA’s high-voltage transmission system, and is delivered for sale/use outside the region, any energy that is generated at federal hydroelectric plants, including power provided for peaking or for purposes of balancing wind generation, must be limited to surplus peaking capacity and surplus energy pursuant to 16 U.S.C. § 837a. Mr. Pace also asserts that “section 837a requires at least 30 days prior to executing any contract for the sale, delivery or exchange of such energy with extra-regional entities, the Administrator must provide Bonneville’s existing customers written notice that such contracts are pending and make them available upon request.”<sup>85</sup>

Mr. Pace’s comments focus on BPA’s provision of balancing services to wind generators, rather than BPA’s Environmental Redispatch proposal. This Final ROD, however, is narrowly focused on a solution to the overgeneration issues in the Pacific Northwest. Issues regarding the provision of balancing reserve capacity for wind balancing services are beyond the scope of this Final ROD. BPA also respectfully disagrees with Mr. Pace to the extent he implies that the replacement of non-federal energy with federal hydro-based energy during an Environmental Redispatch event constitutes a sale of surplus energy or surplus peaking capacity.

With regard to sales of surplus energy and surplus peaking capacity, section 837a of the Pacific Northwest Power Preference Act (“Preference Act”) states:

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<sup>82</sup> Comments of Charles Pace at 2.

<sup>83</sup> Id.

<sup>84</sup> Id.

<sup>85</sup> Id. at 2.

Subject to the provisions of this chapter, the sale, delivery, and exchange of electric energy generated at, and peaking capacity of, Federal hydroelectric plants in the Pacific Northwest for use outside the Pacific Northwest shall be limited to surplus energy and surplus peaking capacity. At least 30 days prior to the *execution of any contract* for the sale, delivery, or exchange of surplus energy or surplus peaking capacity for use outside the Pacific Northwest, the Secretary shall give the then customers of the Bonneville Power Administration written notice that negotiations for such a contract are pending, and thereafter, at any customer's request, make available for its inspection current drafts of the *proposed contract*.<sup>86</sup>

Section 837a of the Preference Act is clear that a contract is necessary to trigger the notice requirements for sale, delivery, or exchange of electric energy generated at the Federal hydroelectric plants in the Pacific Northwest. Environmental Redispatch, however, does not involve a contract for sale, delivery or exchange of energy from BPA; therefore, the requirements of the Preference Act are not triggered. It occurs only when BPA has not found additional buyers of Federal power and must instead displace other generation to avoid excessive TDG levels. If BPA replaces non-federal generation with federal hydro generation during an Environmental Redispatch event, BPA is providing free renewable hydropower to redispatch non-federal generators in the Pacific Northwest. Furthermore, the act of redispatching non-federal generators with federal hydropower is not a sale or exchange of surplus energy for use outside the region within the meaning of the Preference Act. Simply stated, BPA is not selling surplus energy or peaking capacity during an Environmental Redispatch event.

Mr. Pace also discusses 16 U.S.C. § 837b in relation to BPA's provision of balancing services to wind generators. As discussed above, BPA's decision to provide balancing reserve capacity for general wind balancing service is beyond the scope of this Final ROD. Nevertheless, section 837b(a) also relates to a "contract for the sale or exchange of surplus energy for use outside the Pacific Northwest, or as replacement, directly or indirectly, within the Pacific Northwest for hydroelectric energy delivered for use outside that region by a non-Federal utility . . ."<sup>87</sup> Since BPA is not engaging in a contract for the sale or exchange of surplus energy or peaking capacity for use outside the Pacific Northwest or replacement of energy delivered for use outside the region by a non-Federal utility, section 837b of the Preference Act simply does not apply to the issues at hand.

### **Decision**

*BPA's Environmental Redispatch policy is consistent with sections 837a and 837b of the Preference Act.*

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<sup>86</sup> 16 U.S.C. § 837a (emphasis added).

<sup>87</sup> 16 U.S.C. § 837b(a).

## **B. Interconnection Contracts**

### **B1. Issue: Whether Article 4.3 of the LGIA gives BPA the authority to implement Environmental Redispatch.**

#### **Commenters' Positions:**

BPA received numerous comments disputing BPA's ability to implement Environmental Redispatch. PSE argues that the "Draft ROD erroneously asserts that BPA currently has the contractual right to implement the proposed Environmental Redispatch Protocol" pursuant to Article 4.3 of existing LGIAs because "[n]o law or regulation requires BPA to unilaterally replace scheduled generation in BPA's Balancing Authority Area with federal hydropower to comply with CWA and ESA obligations," and "to the extent that negative power prices are available to BPA to achieve such compliance, the Applicable Law provisions do not authorize the proposed Environmental Redispatch Protocol."<sup>88</sup>

PGE states that "no law or regulation requires BPA to unilaterally replace scheduled generation in BPA's Balancing Authority Area with federal hydropower to comply with [CWA] and [ESA] obligations" and that "to the extent that negative power prices are available to BPA to achieve such compliance, the Applicable Law provisions do not authorize the proposed Environmental Redispatch policy."<sup>89</sup>

PacifiCorp argues that "nothing in the [LGIAs and SGIAs] suggests that BPA is entitled to redispatch scheduled generation and replace it with Federal hydropower in order to comply with the CWA or ESA."<sup>90</sup> PacifiCorp states that "BPA may still comply with both the CWA and ESA without invoking any sort of redispatch, and BPA still has the option of paying negative power prices to comply with both the CWA and the ESA."<sup>91</sup>

Horizon Wind Energy, LLC ("Horizon") and enXco Development Corporation ("enXco") argue that BPA's reliance on compliance with "Applicable Laws and Regulations" in Article 4.3 of the LGIA is a "red herring," as BPA "can comply with the CWA and ESA whether or not this policy is adopted."<sup>92</sup> Horizon and enXco state that the purpose of BPA's proposed policy "is to limit [BPA's] costs in disposing of excess federal energy."<sup>93</sup>

Iberdrola argues that BPA has not "provided support for the argument that [BPA] is *required* to implement the Environmental Redispatch protocol in order to comply with its environmental compliance requirements."<sup>94</sup> To the extent that BPA can pay negative prices (or use other options proposed by Iberdrola), Iberdrola believes that "Article 4.3 does not authorize implementation of the proposed Environmental Redispatch

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<sup>88</sup> Comments of PSE at 11.

<sup>89</sup> Comments of PGE at 3.

<sup>90</sup> Comments of PacifiCorp at 6.

<sup>91</sup> Id.

<sup>92</sup> Comments of Horizon at 5; Comments of enXco at 5.

<sup>93</sup> Id.

<sup>94</sup> Comments of Iberdrola at 14-15 (emphasis in original).

protocol.”<sup>95</sup> Iberdrola also states that Article 4.3 “does not state – or even imply – that the provisions of the LGIA can be modified unilaterally under the auspices of compliance with statutory requirements.”<sup>96</sup> In addition, Iberdrola believes that “the Draft ROD makes it clear that economics are driving the proposed protocol, not reliability or statutory compliance.”<sup>97</sup>

**Evaluation of Positions:**

All generators with an LGIA are required by Appendix C of the LGIA to follow all BPA Dispatch Orders, such as the redispatch of generation under Environmental Redispatch. Thus, Environmental Redispatch is not a breach of the LGIA, as generators are required to follow Dispatch Orders. However, assuming for the sake of argument that Environmental Redispatch orders are not proper Dispatch Orders under Appendix C of the LGIA, BPA would still not be in breach under Article 4.3 of the LGIA.

Article 4.3 of the LGIA provides that a “Party shall not be deemed to be in Breach of this LGIA” if it is “required or prevented or limited in taking any action” by Applicable Laws and Regulations. Article 1 of the LGIA defines “Applicable Laws and Regulations” as “all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.” Both BPA’s responsibilities under environmental laws and its statutes fall within the scope of this definition. As a result, if BPA is prevented from continuing to provide interconnection service to a generator in order to meet its environmental and statutory responsibilities, Article 4.3 provides that such actions are not a breach of the LGIA.

In order to operate consistent with its environmental responsibilities, flows need to be run through the turbines at the Federal hydro projects and electricity must be generated. When BPA is in such a must-run condition, parties know that BPA is in a situation where it must dispose of the energy.<sup>98</sup> If BPA were to pay any price to dispose of the energy, it would provide opportunities for parties to hold BPA hostage by holding out until the price reached levels that would allow parties to reap a significant profit. As explained in this Final ROD, such a result would threaten BPA’s ability to keep rates low consistent with sound business principles and to recover its costs, as mandated under BPA’s authorizing legislation. Thus, the payment of negative prices so that generators will voluntarily reduce generation is not an option that BPA can take to meet its environmental responsibilities. As a result, when BPA is in a must-run situation due to environmental laws, BPA cannot allow non-federal generators to continue to generate in order to balance loads and resources. Thus, BPA must limit the ability of generators within BPA’s Balancing Authority Area to operate in order to be able to comply with “Applicable Laws and Regulations,” as specified in Article 4.3 of the LGIA. BPA is not unilaterally amending the LGIA under Article 4.3 to allow for Environmental Redispatch, as Iberdrola asserts. Rather, Article 4.3 deems actions taken that are necessary to comply

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<sup>95</sup> Id. at 15.

<sup>96</sup> Id.

<sup>97</sup> Id.

<sup>98</sup> Supra at § IV.A.

with Applicable Laws and Regulations are not a breach of the LGIA. As will be discussed later, BPA will unilaterally amend LGIAs pursuant to Article 9.3.<sup>99</sup>

**Decision:**

*Article 4.3 of the LGIA gives BPA the authority to implement Environmental Redispatch.*

**B2. Issue: Whether Environmental Redispatch constitutes a Force Majeure event under Article 16.1.1. of the LGIA.**

**Commenters' Positions:**

PSE states that “to the extent that the proposed Environmental Redispatch Protocol reflects a BPA response to the costs of complying with environmental laws, the Force Majeure provisions of the LGIA do not authorize such policies,” because “compliance with environmental obligations does not require BPA to utilize Environmental Redispatch, and the ability of BPA to comply with its CWA and ESA obligations is wholly within its control.”<sup>100</sup>

PGE states that “to the extent that the proposed Environmental Redispatch policy reflects a BPA response to the costs of complying with environmental laws, the Force Majeure provisions of the LGIA do not authorize such policies” because “Section 16.1.1 of the LGIA specifically provides that ‘[e]conomic hardship is not considered a Force Majeure event.’”<sup>101</sup>

PacifiCorp argues that “BPA incorrectly determines that the Force Majeure provisions can be invoked to allow for establishing the Environmental Redispatch Protocol or the Negative Pricing Policy.”<sup>102</sup> PacifiCorp states that “[s]ince BPA is attempting to implement the proposed protocol and policy to alleviate the high cost of complying with its environmental obligations” and the LGIA states that “[e]conomic hardship is not considered a Force Majeure event,” it follows that “the Force Majeure clause cannot be used as support for unilaterally implementing Environmental Redispatch or avoiding Negative Pricing.”<sup>103</sup>

Horizon and enXco argue that “under the circumstances under which [BPA] would assert” its rationale for the proposed policies, “it would be ‘economic force majeure,’ which is not permitted under [BPA’s] LGIA,” because BPA’s “policy decision is based on cost-avoidance and [BPA] has not stated that compliance with the CWA or ESA are outside of [BPA’s] control, absent this policy.”<sup>104</sup>

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<sup>99</sup> Infra § V.B.3.

<sup>100</sup> Comments of PSE at 11-12.

<sup>101</sup> Comments of PGE at 3.

<sup>102</sup> Comments of PacifiCorp at 6.

<sup>103</sup> Id.

<sup>104</sup> Comments of Horizon at 5; Comments of enXco at 5.

Iberdrola asserts that “the issue of whether compliance with environmental requirements qualifies as a Force Majeure event under the LGIA and SGIA is irrelevant here, as [BPA’s] proposed Environmental Redispatch protocol is not in fact required by statute or regulation, but rather driven by economics.”<sup>105</sup> In addition, Iberdrola argues that since Section 16.1.1 excludes economic hardship from the definition of Force Majeure and BPA’s proposed approach “reflects [BPA’s] response to the costs of complying with environmental laws, the Force Majeure provisions of the LGIA do not authorize such policies.”<sup>106</sup>

TransAlta states that “BPA has not explained how [CWA and ESA] environmental requirements compel BPA to displace non-Federal generation without compensation for the economic and operational impacts arising from such displacement.”<sup>107</sup> TransAlta states that, while it “might be a Force Majeure event” if “BPA has no alternative but unilateral displacement of non-Federal generation,” this is not the case because “the Draft ROD identifies, but rejects, a market solution that would avoid unilateral displacement.”<sup>108</sup>

**Evaluation of Positions:**

Under Article 16.1.1 of the LGIA, neither party to the LGIA will be considered to be in Default of the LGIA due to a Force Majeure event. Force Majeure is defined as “any order, regulation or restriction imposed by governmental . . . authorities, or any other cause beyond a party’s control.” BPA’s statutory and environmental responsibilities fall within the scope of this language. In addition, the trigger for Environmental Redispatch is a combination of high flows and high winds, acts of nature that are beyond BPA’s control.

As explained in the previous section, Environmental Redispatch is not merely an economic choice. The payment of negative prices is not an option for BPA to meet its environmental responsibilities, as to do so would present a conflict between BPA’s competing statutory obligations. As a result, in order for BPA to operate the FCRPS consistent with its environmental and statutory responsibilities, BPA must implement Environmental Redispatch.

**Decision:**

*Environmental Redispatch constitutes a Force Majeure event under Article 16.1.1. of the LGIA.*

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<sup>105</sup> Comments of Iberdrola at 15.

<sup>106</sup> Id. at 15-16.

<sup>107</sup> Comments of TransAlta at 7.

<sup>108</sup> Id.

**B3. Issue: Whether BPA has the unilateral right to amend Appendix C of the LGIA to include Environmental Redispatch.**

**Commenters' Positions:**

BPA received several comments disagreeing with BPA's position that it has the unilateral right to amend Appendix C of the LGIA to specifically reference Environmental Redispatch. PGE disagrees with the BPA's interpretation of the Commission order cited as evidencing BPA's right to unilaterally amend Appendix C of the LGIA. PGE states that "[t]he Order cited merely indicates that the 'Transmission Provider has the responsibility for establishing the Interconnection Customer's operating instructions and operating protocols and procedures'" and that "[n]othing in the Order provides BPA with the right to unilaterally amend an existing LGIA."<sup>109</sup>

PacifiCorp argues that the "order does not provide BPA with the unilateral ability to amend Appendix C for reasons that do not involve reliability criteria or operating instructions, protocols or procedures" and that, therefore, "BPA does not have the authority to unilaterally amend Appendix C of the LGIA in order to adopt Environmental Redispatch or the Negative Pricing Policy."<sup>110</sup>

PSE states that the "Draft ROD erroneously asserts that transmission providers have 'the unilateral right to amend interconnection agreements to include control area requirements.'"<sup>111</sup> PSE argues that nothing in the cited part of the order "provides to BPA a right to amend Appendix C to the LGIA unilaterally, particularly when an amendment to implement the proposed Environmental Redispatch Protocol would not concern either operating instructions or operating protocols or procedures."<sup>112</sup>

Iberdrola argues that BPA "drastically overstates the application of this order and ignores both the well-settled Commission policy against making retroactive changes to LGIAs or SGIAs already in effect and the language of the LGIA itself, which requires mutual consent to modify terms."<sup>113</sup> Iberdrola believes that "nothing in the [order] grants any party the right to amend Appendix C to the LGIA unilaterally."<sup>114</sup>

**Evaluation of Positions:**

BPA disagrees with the commenters' position that the Commission's order does not interpret Article 9.3 of the LGIA as giving the Transmission Provider the unilateral right to amend Appendix C to include control area requirements.<sup>115</sup> On February 4, 2005, BPA filed with the Commission for approval certain changes to the *pro forma* LGIA. Included in those changes was specific language in Article 9.3 that clarified that BPA has the unilateral right to modify Appendix C in order to avoid arguments with the Interconnection Customer that agreement must be obtained in order to change Control

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<sup>109</sup> Comments of PGE at 4.

<sup>110</sup> Comments of PacifiCorp at 7.

<sup>111</sup> Comments of PSE at 12.

<sup>112</sup> *Id.* at 13.

<sup>113</sup> Comments of Iberdrola at 18.

<sup>114</sup> *Id.* at 19.

<sup>115</sup> Bonneville Power Admin., 112 FERC ¶ 61,195, P 20 (2005).

Area reliability requirements.<sup>116</sup> While rejecting BPA’s proposed change to Article 9.3, the Commission stated:

While the Interconnection Customer does have the right to agree to modifications to the agreement, the LGIA should be read as granting the Transmission Provider the right to determine the applicable reliability criteria. Moreover, under LGIA article 9.3 (Transmission Provider Obligations), the *Transmission Provider has the responsibility for establishing the Interconnection Customer’s operating instructions and operating protocols and procedures*. Because these instructions, protocols, and procedures will include reliability requirements, *article 9.3 already gives the Transmission Provider responsibility for modifications to Appendix C*. The same provision gives the Interconnection Customer the right to propose changes for the Transmission Provider to consider, but not the right to make unilateral changes. *In light of this provision, we conclude that BPA’s proposed change is unnecessary . . . .*<sup>117</sup>

The Commission’s order is clear and unambiguous. If BPA were required to obtain mutual agreement to update Appendix C to include operational requirements, as some commenters suggest, a customer could pick and choose which requirements it wishes to follow by simply refusing to amend Appendix C. This would make the provisions of Article 9.3 meaningless and could potentially jeopardize reliability, which is contrary to the Commission’s policies.

While Article 30.10 does provide that mutual agreement is required to amend the Appendices to the LGIA, as the Commission recognized, the Commission has specifically ruled that Article 9.3 gives BPA the right to unilaterally amend Appendix C to specify operational requirements. Not only was the Commission clear on this point, it is a general canon of contract interpretation that specific terms control over general terms.<sup>118</sup> Thus, the specific terms of Article 9.4 that allow BPA to unilaterally amend Appendix C control over the terms of Article 30.10.

Comments were also submitted stating that, even if BPA does have the unilateral right to amend Appendix C, Environmental Redispatch is not within the scope of that right.<sup>119</sup> These comments are misplaced, as Environmental Redispatch is intended to maintain reliability and ensure BPA’s environmental and statutory responsibilities are met. First, there is no question Environmental Redispatch is an operational protocol. Environmental Redispatch limits a generator’s operation when the FCRPS hydro projects need to generate due to environmental constraints and other generation in BPA’s Balancing Authority Area must be limited in order to maintain balance between loads and resources.

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<sup>116</sup> *Id.* at P19.

<sup>117</sup> *Id.* at P20 (emphasis added).

<sup>118</sup> See *Hills Materials Co. v. Rice*, 982 F.2d 514, 517 (1992) (“Where specific and general terms in a contract are in conflict, those which relate to a particular matter control over the more general language.”)

<sup>119</sup> Comments of PSE at 13.

Second, Article 9.3 contemplates statutory requirements that may affect operations. Article 9, in general, is intended to address operational issues. Article 9.1, titled “General,” provides:

Each Party shall comply with the Applicable Reliability Council requirements. Each Party shall provide to the other Party *all information that may reasonably be required by the other party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.*<sup>120</sup>

Read together with Article 9.3, the correct conclusion is that Article 9.3 was intended to address any issues that may affect operations, such as reliability and compliance with Applicable Laws and Regulations.

Further, Appendix C in most of the LGIAs already contains a contractual commitment from the interconnection customer to follow all Dispatch Orders, such as orders to reduce generation pursuant to Environmental Redispatch, so that BPA can maintain load resource balance and reliable operations. The purpose of unilateral changes to Appendix C to specifically reference Environmental Redispatch is to make absolutely clear to the interconnection customer that it must follow BPA’s Environmental Redispatch orders.

**Decision:**

*BPA has the unilateral right to amend Appendix C of the LGIA to include Environmental Redispatch.*

**B4. Issue: Whether Article 9.7.2 allows BPA to interrupt interconnection service for environmental reasons.**

**Commenters’ Positions:**

PSE cites to the LGIA Article 9.7.2, which addresses interruption of service to an Interconnection Customer, and states that, “[t]o the extent that the proposed Environmental [Red]ispatch Protocol would allow BPA to interrupt or reduce service for only non-federal generators for purposes other than to maintain the reliability of BPA’s transmission system and a system directly or indirectly interconnected with such system, the proposal would directly conflict with the requirement in that interruptions be ‘necessary to safely and reliably operate and maintain the Transmission System.’”<sup>121</sup>

PacifiCorp cites to LGIA Article 9.7.2 and argues that “BPA’s proposed policies fail to address Good Utility Practice in the LGIA (LGIA section 9.7.2.1)” and that “BPA should also discuss the time periods for interruption and the standard used to evaluate if the interruptions are necessary.”<sup>122</sup>

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<sup>120</sup> Emphasis added.

<sup>121</sup> Comments of PSE at 14.

<sup>122</sup> Comments of PacifiCorp at 7.

Iberdrola cites to Article 9.7.2 and argues that BPA’s “Environmental Redispatch protocol would violate ... LGIA curtailment and interruption provisions, because ... interconnection service would be interrupted in a discriminatory manner (only for wind generators) and for reasons unrelated to reliability.”<sup>123</sup>

**Evaluation of Positions:**

Environmental Redispatch is consistent with Article 9.7.2 of the LGIA. As many parties point out, under Article 9.7.2, BPA may interrupt interconnection service if such service could “adversely affect Transmission Provider’s ability to perform such activities as are necessary to safely and reliably operate and maintain the Transmission System.” Environmental Redispatch is implemented in order to avoid effects on reliability, as excess generation in relation to loads and exports creates high frequency, which, if unmitigated, could negatively impact reliability. Because the FCRPS needs to generate electricity for environmental reasons, BPA must turn off other generation in its Balancing Authority Area in order to maintain balance between loads and resources. This is BPA’s duty as a Balancing Authority. As a result, Article 9.7.2 gives BPA the authority to implement Environmental Redispatch.

PacifiCorp comments that Environmental Redispatch fails to comply with Good Utility Practice, as required by Article 9.7.2. Article 1 of the LGIA defines Good Utility Practice as:

[A]ny of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

PacifiCorp does not specify how Environmental Redispatch fails to meet the definition of Good Utility Practice. The definition of Good Utility Practice is broad, and it is hard to make a case that Environmental Redispatch does not meet this standard, as it is designed to allow BPA to comply with both its statutory and environmental responsibilities. Further, Environmental Redispatch is necessary to maintain system reliability, while not violating environmental and statutory responsibilities, and without unfairly shifting the cost of renewable energy and open transmission access to BPA’s power customers. Thus, BPA does not agree that Environmental Redispatch does not meet the standard of Good Utility Practice.

PacifiCorp also asserts that BPA does not discuss the time periods required for Environmental Redispatch and the standard for triggering Environmental Redispatch.

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<sup>123</sup> Comments of Iberdrola at 22.

BPA cannot specify the time periods that will be required for Environmental Redispatch, as water conditions and the amount of wind generation will determine if and how long an Environmental Redispatch will be triggered. The development of the associated Business Practice addresses the specific details around notifications and their timelines. Also, this Final ROD specifically discusses the circumstances under which Environmental Redispatch will be triggered. BPA will take all reasonable actions to avoid triggering Environmental Redispatch, including marketing power at no cost.<sup>124</sup> Despite such actions, if BPA is still in danger of exceeding TDG levels at FCRPS projects, BPA will implement Environmental Redispatch in order to meet its environmental and statutory responsibilities and to provide the needed option to maintain system load resource balance. If it would be helpful, BPA will work with customers to quantify the limited circumstances under which Environmental Redispatch will apply.

Iberdrola's assertion that Environmental Redispatch is inconsistent with Article 9.7.2 because it only targets wind generators is unfounded. Environmental Redispatch applies to all non-federal generators, and, in fact, BPA will redispatch thermal generators first to try and avoid the need to redispatch wind generators. Thus, Environmental Redispatch does not unfairly target wind generation.

**Decision:**

*BPA has authority under Article 9.7.2 to interrupt interconnection service under Environmental Redispatch to maintain system reliability.*

**C. OATT Issues**

**C1. Issue: Whether Environmental Redispatch is an improper curtailment under the OATT.**

**Commenters' Positions:**

PSE argues that "BPA's proposal is inconsistent with its [OATT]", which defines "the specific parameters within which BPA can deviate from its service obligations, and the proposed Environmental Redispatch Protocol exceeds these defined parameters in seeking to broaden BPA's authority to curtail transmission ... for non-federal generation to comply with ESA and CWA obligations."<sup>125</sup>

PacifiCorp states that BPA's OATT "outline[s] instances where BPA can curtail service" and that "[c]ompliance with the CWA and ESA by instituting Environmental Redispatch Protocol and the Negative Pricing Policy does not qualify as one of those instances."<sup>126</sup>

Iberdrola argues that BPA's "Environmental Redispatch protocol would violate [OATT curtailment provisions], because transmission ... service would be interrupted in a

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<sup>124</sup> *Supra*, Section III.A.

<sup>125</sup> Comments of PSE at 13.

<sup>126</sup> Comments of PacifiCorp at 7.

discriminatory manner (only for wind generators) and for reasons unrelated to reliability.”<sup>127</sup>

**Evaluation of Positions:**

BPA disagrees that Environmental Redispatch violates BPA’s OATT. All the parties’ arguments on this point rely on the assertion that BPA is curtailing transmission service under the OATT. As explained previously, Environmental Redispatch is not a curtailment of transmission service. Environmental Redispatch is a limitation on the ability of a generator interconnected to the FCRTS to generate, and does not affect a transmission customer’s transmission rights. If BPA curtailed transmission service, the transmission customer would not receive the energy that was curtailed. For example, if a 100 MW transmission schedule were curtailed to 50 MW, the load to which the transmission schedule is sinking would be 50 MW short of its needs and would be required to find another 50 MW of energy elsewhere. Under Environmental Redispatch, BPA is not curtailing a transmission schedule. BPA is substituting Federal hydropower to ensure that all transmission schedules are met.

Environmental Redispatch is no different than if a generator was forced to shutdown or generated less than its full transmission schedule; the full transmission schedule would be met by available reserves from the FCRPS. These situations do not constitute curtailments under the OATT.

**Decision:**

*Environmental Redispatch is not a curtailment under the OATT.*

**C2. Issue: Whether BPA is in violation of its OATT obligations by granting interconnection and transmission service requests despite a lack of sufficient transmission capacity.**

**Commenters’ Positions:**

Iberdrola argues that BPA “is obligated to properly plan and expand its transmission system to appropriately integrate generation,” and if BPA “has violated its OATT obligations and granted interconnection and transmission service requests despite a lack of sufficient transmission capacity, [BPA] cannot engage in blatantly discriminatory practices by simply forcing the resulting costs incurred during overgeneration events upon the last generators to interconnect ..., the last transmission customers to request service ..., [or] upon wind generators as a class.”<sup>128</sup>

**Evaluation of Positions:**

Environmental Redispatch is intended to solve an overgeneration problem, not designed to solve a transmission capacity issue. When the FCRPS needs to generate due to environmental reasons, other generators must be limited in order to maintain system reliability.

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<sup>127</sup> Comments of Iberdrola at 22.

<sup>128</sup> Comments of Iberdrola at 16-17.

If anything, the overgeneration problem is attributable to the continued development of generating resources irrespective of load needs, not due to a lack of transmission capacity. Wind generation in BPA's Balancing Authority Area provides clean, renewable energy to the Pacific Northwest and California and should be encouraged. However, unfettered development of generation without consideration for whether more generation is needed to meet load and where it should be located, will inevitably lead to such overgeneration events. To maintain system reliability, generation will need to be turned off. In most overgeneration circumstances, FCRPS generation is being limited to maintain system balance. But when the FCRPS needs to generate due to environmental conditions, other generation in BPA's Balancing Authority Area must take its turn to ensure system reliability.

**Decision:**

*BPA has not violated its OATT obligations, because Environmental Redispatch is not needed to address a transmission capacity issue.*

**C3. Issue: Whether BPA is unlawfully taking customers' transmission service without just compensation.**

**Commenters' Positions:**

Iberdrola asserts that BPA's "proposal constitutes an unauthorized taking of customers' firm transmission rights without just compensation."<sup>129</sup>

**Evaluation of Positions:**

As explained previously, Environmental Redispatch does not affect a transmission customer's transmission rights. Environmental Redispatch limits a generators' ability to generate due to overgeneration in BPA's Balancing Authority Area. All transmission schedules will continue to be met with FCRPS energy, so all transmission customers will receive full energy deliveries.

**Decision:**

*BPA is not taking customers' firm transmission rights.*

**C4. Issue: Whether Environmental Redispatch is consistent with Attachment M of the OATT.**

**Commenters' Positions:**

PSE commented that "BPA has not explained how its proposed Environmental Redispatch Protocol would be consistent with Attachment M to the OATT."<sup>130</sup>

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<sup>129</sup> Comments of Iberdrola at 24.

<sup>130</sup> Comments of PSE at 14.

PacifiCorp states that “BPA’s proposed policies ... fail to address ... parameters for redispatch of Federal hydropower in Attachment M of the OATT” and that “BPA should discuss how the proposed Environmental Redispatch Protocol is consistent with Attachment M.”<sup>131</sup>

**Evaluation of Positions:**

Attachment M of the OATT is not implicated by Environmental Redispatch. Attachment M of the OATT provides for redispatch of the FCRPS to maintain reliability due to transmission congestion and avoid the curtailment of transmission schedules.

Environmental Redispatch is not within the scope of Attachment M, as Environmental Redispatch is not intended to solve a transmission congestion issue or to avoid transmission curtailments. Rather, Environmental Redispatch is intended to allow BPA to operate the FCRPS consistent with its environmental obligations and to maintain system reliability. As a result, Attachment M of the OATT is not applicable to the issues that Environmental Redispatch is intended to address.

**Decision:**

*Environmental Redispatch is not within the scope of Attachment M of BPA’s OATT.*

**C5. Issue: Whether Environmental Redispatch is inconsistent with FERC’s open access policies, including Section 211A of the FPA.**

**Commenters’ Positions:**

PSE states that “BPA has not shown that the proposed Environmental Redispatch Protocol and Negative Pricing Policy is consistent with the policies underlying section 211A of the [FPA] and the policies articulated in Order 888, Order 890, and related orders of the [Commission].”<sup>132</sup> PSE argues that “the proposed Environmental Redispatch Protocol would allow BPA to provide transmission services to itself on terms and conditions that are not comparable to those under which BPA provides service to its transmission customers” and that it would create a cost shift benefiting BPA power customers that “is unduly discriminatory and preferential and is not fair and nondiscriminatory.”<sup>133</sup>

**Evaluation of Positions:**

BPA has adopted an OATT to provide for non-discriminatory access to transmission services.<sup>134</sup> Further, Section 211A of the Federal Power Act grants FERC the authority to order unregulated transmitting utilities to provide transmission services at rates, terms, and conditions comparable to those which the unregulated transmitting utility provides to itself.<sup>135</sup> PSE’s assertions are unfounded, because during an Environmental Redispatch event, BPA is ensuring energy deliveries related to transmission schedules are being met.

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<sup>131</sup> Comments of PacifiCorp at 7-8.

<sup>132</sup> Comments of PSE at 15.

<sup>133</sup> Id.

<sup>134</sup> See Final ROD at 5-6.

<sup>135</sup> 16 USC § 824j-1.

As explained previously, Environmental Redispatch does not affect a customer's transmission rights, but places operational limits on generators interconnected to the FCRTS so that BPA may operate the FCRPS in accordance with its environmental and statutory responsibilities, and maintain system reliability. Through Environmental Redispatch, BPA is ensuring that energy deliveries associated with transmission schedules are being served. Thus, BPA is not favoring its merchant function over other transmission customers, as the purpose of transmission service is being met in all cases. In addition, Section 211A does not repeal BPA's other statutory responsibilities, environmental or otherwise. BPA's proposal here is a reasonably balanced response to its myriad responsibilities.

**Decision:**

*Environmental Redispatch is consistent with FERC's open access policies, including Section 211A of the Federal Power Act.*

**D. Negative Pricing**

**D1. Issue: Whether BPA should pay negative prices and allocate the costs according to cost causation principles.**

**Commenters' Positions:**

Tacoma Power would prefer "for BPA to pay the market price and assign the costs of any negative prices, using cost causation principles, to the entities with the financial incentives that are supporting the negative price markets."<sup>136</sup> PPC and WPAG support BPA's policy to not pay negative prices.<sup>137</sup>

**Evaluation of Positions:**

Tacoma's comments recognize that the negative price problem arises during high water events because of the lack of generation response by some VERs during periods of regional overgeneration and this is caused by "perverse financial incentives for VERs to continue to operate even when the electricity produced exacerbates an excess supply of electricity."<sup>138</sup> Tacoma then recommends that BPA pay negative prices, and assign the costs to the entities that are causing the negative prices. Tacoma qualifies its recommend approach, however, with the phrase "if it is easily implemented."<sup>139</sup> One problem with Tacoma's recommendation is the uncertainty of the exposure to negative prices. If BPA is willing to pay VERs negative prices to shut down generation, there is no reason to assume that other generators, such as thermals, that know a high water event is imminent would not wait to shut down until BPA pays negative prices to dispose of excess Federal power, even if the economics of their generator indicated that they should respond to a low price or a price of zero. The marketplace is not an effective solution under high

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<sup>136</sup> Comments of Tacoma at 2.

<sup>137</sup> Comments of PPC at 3; Comments of WPAG at 5.

<sup>138</sup> Comments of Tacoma at 2.

<sup>139</sup> Id.

water situations, as BPA does not have the option of not paying due to environmental constraints, and must accept demands from the buyer. WPAG recognized in its comments that paying negative prices in these circumstances may lead to market distortion.<sup>140</sup>

Another uncertainty of Tacoma's proposal is the outcome of the BPA rate case process that would be necessary to assign negative price costs to the generators causing the negative prices. Attempting to forecast the amount of negative prices would be very difficult and wind generators would strongly oppose the inclusion of these costs in a wind balancing rate. There would be significant debate whether the payments should be allocated to power or transmission for reasons previously stated. While many, like Tacoma, may believe BPA's equitable allocation ratemaking standard would permit allocation of negative pricing payments to transmission, that is an issue likely to generate substantial controversy. Only when FERC has reviewed the issue and judicial review has been exhausted can we be certain of the outcome. Given the significant amounts that would potentially be incurred were negative prices to be paid, the absence of a full factual and legal rate case record on the issues and our need to prudently balance our multiple competing statutory directives, BPA believes at this time it should not pay negative prices based on an untested legal assumption.

As explained previously, BPA's decision not to pay negative prices in order to meet its immediate environmental responsibilities represents a reasonable balance of BPA's statutory responsibilities. BPA should not be the guarantor of economic incentives received by only a subset of generators within BPA's Balancing Authority Area. This approach will eliminate the uncertainty that is inherent in Tacoma's preferred approach. Furthermore, BPA sees no efficiency gains or monetary benefits in aggregating the costs of paying negative prices only to disaggregate those costs later through rate proceedings.

**Decision:**

*Rather than incur the cost of negative prices on the uncertain assumption that we can assign those costs to those who are charging us the negative prices, BPA will not pay negative prices. This best assures its environmental and statutory responsibilities are met.*

**D2: Issue: Whether negative pricing is an intended outcome of state and Federal policies.**

**Commenters' Positions:**

PSE comments that the policies behind RECs and PTCs intentionally reduce the operating cost of variable energy resources to negative levels. PSE states that these policies are actually intended to encourage investment in such resources and BPA's Environmental Redispatch and not paying negative prices policies would distort price

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<sup>140</sup> Comments of WPAG at 5; See also comments of PPC at 3.

signals, generated, in part, by Federal and state policies and could hinder the development of VERs in the Pacific Northwest and West Coast.<sup>141</sup>

### **Evaluation of Positions:**

PSE rationalizes that the intent of providing PTCs and RECs to incentivize the development of renewable resources should be reflected in the markets in which those resources participate. BPA disagrees with PSE's assertions. BPA is unaware of any legislative history indicating that lawmakers considered negative pricing and the operational difficulties when adopting these policies, especially with respect to the effects such policies would have on a system that is dependent on hydro resources. As PSE acknowledges, RPS and PTCs were intended to incentivize the development of renewable resources. But these policies should not also be construed as guaranteeing profits for these generators under any conditions.

As PSE points out, the fuel for wind generation is free, so wind generation is already a very low cost resource to operate. From a pure marketing perspective generators should be expected to stop operations when the market price is equal to their operating cost. Thus if PTCs and RECs are taken out of the equation, having wind generation shut down when prices reach zero is the appropriate market signal.

BPA understands that Environmental Redispatch may affect a utility's ability to meet RPS requirements, as RECs will not be produced during an Environmental Redispatch. RPS policies, however, were likely not intended to guarantee the production of RECs under any and all circumstances. Further, it is not BPA's responsibility to guarantee the region that all RPS requirements are met under any circumstances. It is the utility's responsibility to ensure that it has the ability to comply with RPS requirements.

In addition, the PTC was developed to provide assistance in financing renewable resource projects. While the operating costs of renewable resources are typically low, the capital costs are often very high. The earliest programs were grants, but the PTC was later adopted to encourage ongoing O&M in the projects. Currently, new projects can either receive ITCs or PTCs.

BPA's concern with negative pricing is that such a policy would encourage a willful ignorance of the operational realities of the electric grid. Negative pricing due to RECs, PTCs or other externalities ignores the need to maintain balance of loads and resources and pushes the system into a condition where both electric reliability and environmental compliance are threatened. BPA's Environmental Redispatch and Negative Pricing policies are intended to mitigate this situation, and BPA does not find credible claims that existing incentives are insufficient for the continued development of renewable resources. Further, the payment of negative prices to keep VERs whole financially and the shift of those costs to BPA's preference customers would likely lead to opposition of any further development of VERs in BPA's Balancing Authority Area. There is no compelling evidence that Environmental Redispatch will have any greater impact on the development of renewable resources than would the payment of negative prices.

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<sup>141</sup> Comments of PSE at 6.

**Decision:**

*There is no evidence that negative prices during overgeneration events are an intended outcome of state REC and Federal PTC policies.*

**E. Effects to Thermals**

**E1. Issue: Whether BPA’s Environmental Redispatch policy properly considers minimum generation levels of generators.**

**Commenters’ Positions:**

TransAlta expresses concern about “dispatching non-Federal generators below minimum stable generation and related market power problems.”<sup>142</sup>

PGE states that “BPA’s proposal does not ensure that minimum generation levels on each of the non-federal generators will be maintained.”<sup>143</sup>

**Evaluation of Positions:**

TransAlta asserts that BPA has not considered the minimum stable generation or minimum generating requirements of non-federal thermal generating resources.<sup>144</sup>

According to TransAlta, BPA must choose between two options: (1) guarantee that non-federal generation will not be dispatched below minimum stable generation, like the Columbia Generating Station, or (2) account for and provide to displaced generators the true costs of restarting, including replacement power for the entire period during which a generator is returning to full service, as well as restart costs.<sup>145</sup>

Similarly, PGE argues that BPA’s Environmental Redispatch proposal does not ensure minimum generation levels for non-federal generators.<sup>146</sup> PGE states that BPA’s position could force generators in the region to either run their generators in a non-efficient manner or endure unacceptable generation disruption without regard to economics or environmental impacts.<sup>147</sup>

BPA agrees with TransAlta and PGE that the Environmental Redispatch policy should not impact the minimum generation levels of non-Federal generators. BPA will allow each non-federal thermal generator within the BPA balancing authority area to specify its minimum generation level (*i.e.*, minimum stable generation level). A non-federal generator’s minimum generation level must be based on the specific reliability requirements of the generator, as opposed to economic or discretionary reasons. During an Environmental Redispatch event, BPA will not redispatch a non-federal generator below its stated minimum generation level. If a non-federal generator does not submit a

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<sup>142</sup> Comments of TransAlta at 2.

<sup>143</sup> Comments of PGE at 2-3.

<sup>144</sup> Comments of TransAlta at 2.

<sup>145</sup> Id.

<sup>146</sup> Comments of PGE at 2-3.

<sup>147</sup> Id. at 3.

minimum generation level to BPA, BPA will assume the minimum generation level to be zero. The process for a non-federal generator to specify its minimum generation level will be addressed in the Business Practices.

Accordingly, since BPA will take the minimum generation levels of non-federal generation into account during an Environmental Redispatch event, TransAlta's and PGE's broad concerns associated with the operation of a generator below its minimum generation level should now be moot.

**Decision:**

*BPA will modify its Environmental Redispatch Business Practice to allow each non-federal generator in BPA's Balancing Authority Area to specify its minimum generation level based on the specific reliability requirements of the generator. BPA's Environmental Redispatch policy will not redispatch a non-federal generator below its stated minimum generation level.*

**E2. Issue: Whether thermal generators will hold out of the forward market to obtain free power for displacement.**

**Commenter's Position:**

The Public Power Council (PPC) indicated they are concerned "for the potential of thermal generation to hold out of the forward market in order to obtain free power for displacement, rather than at a price greater than zero that is still below its avoided costs."<sup>148</sup> PPC goes on to suggest that this problem may become more prevalent as more VER generation is added and some thermal generators are required to continue operating to maintain reserves and meet peak loads. PPC suggests that BPA maintain a registry in which thermal generators can indicate their status for displacement.

**Evaluation of Positions:**

Thermal generators will continue to be able to make displacement decisions in a west coast market. Prior to an Environmental Redispatch event, BPA will be actively working to capture much of the available thermal generation at low prices. From the perspective of non-Federal thermal generators, as BPA approaches a high water event there will most likely be little certainty as to whether BPA will implement an Environmental Redispatch, and if so, the duration of the event. Some thermal generators may decide to gamble on the possibility of an Environmental Redispatch with zero priced displacement power. In most cases the thermal generators will be served better by the certainty of shutting down and accepting Federal power at a price at or slightly below their operating costs for a known duration of time.

As to PPC's additional comments regarding the increased need for some thermal generators to continue to run due to reserve and peaking obligations, these issues are addressed in the Business Practices and may be refined as BPA gains more experience with Environmental Redispatch.

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<sup>148</sup> Comments of PPC at 3.

**Decision:**

*While there is a risk that thermal generators will hold out until they receive zero priced power, that is a risk we already face; BPA's Environmental Redispatch policy does not increase the risk. Market forces along with the uncertainty regarding whether BPA will implement an Environmental Redispatch and its duration will hopefully keep thermal generators from anticipating receiving zero priced power from BPA.*

**E3. Issue: Whether cogeneration facilities that are tied to production operations should be excluded from Environmental Redispatch or have the lowest redispatch priority.****Commenter's Position:**

Weyerhaeuser states that its cogeneration facilities are not "dispatchable" in the traditional sense because its production system is tied to steam output and generation, and any reduction in generation must be made in a slow, planned process.<sup>149</sup> Weyerhaeuser agrees with prioritizing redispatch on a least-cost basis, but maintains that BPA does not appear to have considered the specific economic issues associated with thermal cogeneration facilities.

**Evaluation of Positions:**

BPA appreciates the unique operational issues presented by generators with cogeneration facilities that are tied to production operations. Weyerhaeuser points out that redispatch of its cogeneration facilities could create risk of safety incidents or environmental concerns. BPA does not want Environmental Redispatch and Negative Pricing Policies to create the risk of those types of incidents or concerns for generators. As specified in the Business Practices, BPA is asking generators to specify minimum generation levels and ramp rate limitations associated with particular facilities. BPA urges Weyerhaeuser and all other generators to provide information in that process that will ensure safety and environmental compliance are not at risk.

Weyerhaeuser cites "lower avoided costs" and "green fuel sources" as the specific economic circumstances of thermal cogeneration facilities that BPA should account for in establishing Environmental Redispatch priority. Weyerhaeuser does not expand on these comments or provide information to demonstrate the specific issues it asks BPA to consider. Without additional information regarding Weyerhaeuser's comments, BPA is not in a position to establish a redispatch priority that distinguishes thermal cogeneration facilities for other thermal facilities. As described in this Final ROD, BPA is adopting an Environmental Redispatch priority under which thermal generators will be asked to reduce generation and take free FCRPS generation before wind generators. BPA is not further distinguishing specific types of facilities within those categories based on an individual generator's (or types of generators) particular characteristics. BPA expects to have more regional discussions regarding long-term solutions for overgeneration events in the future, and BPA encourages Weyerhaeuser and other cogeneration operators to

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<sup>149</sup> Comments of Weyerhaeuser at 1.

provide information to evaluate the specific circumstances of individual facilities as part of those discussions.

**Decision:**

*BPA’s Environmental Redispatch policy will not recognize priority distinctions within the thermal class of generators. However, the Environmental Redispatch Business Practice provides cogeneration facilities with the opportunity to establish their minimum generation levels and associated ramp rates consistent with the particular operating characteristics of these generators.*

**F. Discrimination**

**F1. Issue: Whether BPA should distinguish between VERs based on whether the generator output qualifies for PTCs.**

**Commenters’ Positions:**

Multiple commenters indicated that BPA’s proposal to establish the Environmental Redispatch priority for VERs based on whether the VER output qualifies for PTCs is inequitable, and certain commenters suggested that BPA should redispatch VERs on a pro-rata basis.<sup>150</sup> Cowlitz PUD specifically supported redispatching generators that do not receive PTCs first to “minimize economic harm to the group as a whole.”<sup>151</sup>

**Evaluation of Positions:**

As specified in the Business Practices, BPA will redispatch VERs on a pro-rata basis rather than distinguishing between VERs based on whether particular resources are receiving PTCs. BPA received many comments expressing concern that some wind facilities would be redispatched more than others under BPA’s proposal and that there are economic considerations other than PTCs and RECs that the proposal did not consider.<sup>152</sup> Because the Environmental Redispatch policy is an interim policy, BPA will redispatch VERs on a pro-rata basis and may revisit this redispatch priority in the future should BPA continue with Environmental Redispatch in the future.

**Decision:**

*BPA will not distinguish between VERs that receive PTCs or RECs and those that do not for purposes of Environmental Redispatch priority. BPA is open to gathering additional information on this issue and potentially making changes in the future.*

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<sup>150</sup> Comments of Tacoma at 3, Comments of PSE at 19, Comments of Snohomish at 2, Comments of WPAG at 4.

<sup>151</sup> Comments of Cowlitz PUD at 1.

<sup>152</sup> Comments of enXco at 8; Comments of Horizon at 8.

**F2. Issue: Whether BPA should explore making a distinction between VERs receiving PTCs where the output is being used to serve load within BPA's Balancing Authority Area rather than marketed outside of the Balancing Authority Area.**

**Commenter's Position:**

NRU recommends that BPA explore making a distinction between VERs with PTCs serving load in the BPA Balancing Authority Area and VERs exporting power out of the BPA Balancing Authority Area for purposes of implementing an Environmental Redispatch.<sup>153</sup> NRU goes on to state that they see a difference between NRU members that are developing their own resources to serve load and huge wind farms being built in BPA's Balancing Authority Area for export to the Southwest. However NRU realizes these details may not be implemented before spring runoff.

**Evaluation of Position:**

The majority of the VERs interconnected to BPA's transmission system are currently exported to serve load in other balancing authority areas. However, there is a sizable amount of VER resources serving preference customer loads in the BPA Balancing Authority Area and BPA anticipates that these types of arrangements will continue to grow as preference customers develop or purchase more non-Federal resources.

In the Draft ROD, BPA requested input on the issue of whether BPA should distinguish between VERs with PTCs and VERs without PTCs when an Environmental Redispatch is implemented.<sup>154</sup> As discussed previously, BPA will not be making a distinction between VERs with or without PTCs and plans to redispatch VERs on a pro rata basis up to the amount needed.<sup>155</sup>

Even if BPA was planning on distinguishing between VERs based on their PTC status, it would not make sense to treat VERs that are exported differently from VERs serving load in the BPA Balancing Authority Area, because the need for Environmental Redispatch is driven by the overgeneration conditions that exist at the time and the redispatch should apply to any resources that can be redispatched without causing a reliability problem. The amount of VERs that is not being exported is large enough to help relieve the problem and the inclusion of more resources in the pool that can be called upon during an Environmental Redispatch event means that the amount of generation reduction per individual generator will be less.

**Decision:**

*BPA will not distinguish between VER resources during an Environmental Redispatch event based on whether they are exporting power or serving load in the BPA Balancing Authority Area.*

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<sup>153</sup> Comments of NRU at 3-4.

<sup>154</sup> Draft ROD at 22-23.

<sup>155</sup> See *infra* § F6.

**F3. Issue: Whether BPA excludes Federal generation from Environmental Redispatch.**

**Commenters' Positions:**

PSE states that BPA has not demonstrated that non-Federal generators in BPA's Balancing Authority Area are the cause of overgeneration.<sup>156</sup> PSE also states that the Environmental Redispatch policy excludes Federal generation, shifting the costs of compliance with environmental laws to non-Federal generators in BPA's balancing authority area and forcing only those generators to forgo generation and revenue.<sup>157</sup>

**Evaluation of Positions:**

BPA disagrees that it has not demonstrated that non-Federal generators in its Balancing Authority Area are the primary cause of the overgeneration events that the Environmental Redispatch policy is intended to address. The June 2010 events are an example of the type of circumstances that BPA seeks to address. During those events, BPA reduced Federal generation and made other operational adjustments to limit Federal generation at projects that were not facing TDG issues. BPA also offered the remaining Federal generation at no cost to encourage non-Federal generators to reduce generation to minimum operating levels, and most non-Federal thermal generators responded. Although these types of actions historically had been sufficient to address many overgeneration events in BPA's Balancing Authority Area, excess generation conditions persisted during the June 2010 events primarily due to non-federal VER generation. Non-Federal VER generators continued to generate up to full output during the June 2010 events, depending on wind conditions. As the Final ROD explains, economic policies beyond BPA's control create incentives for VERs to generate regardless of system conditions. The Environmental Redispatch policy is intended to address excess generation by non-Federal generators in these circumstances.

BPA also disagrees that Federal generation is excluded from the Environmental Redispatch policy. The policy specifically contemplates that BPA will take all reasonable actions, including measures that affect Federal generation, before redispatching any non-Federal generator in BPA's Balancing Authority Area. These actions include reducing Columbia Generating Station generation to minimum levels and spilling Federal hydro generation across the system in excess of any required spill for fish wherever feasible. Although the reductions in Federal generation associated with actions that BPA takes before redispatching non-federal generators will vary based on system configuration and operating conditions at the time, BPA estimates that such actions could result in a maximum reduction of Federal generation of approximately 3,000 – 4,000 MWs.

**Decision:**

*Evidence demonstrates that non-Federal generators contribute to the overgeneration events that the Environmental Redispatch policy addresses, and the policy includes*

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<sup>156</sup> Comments of PSE at 7.

<sup>157</sup> Id.

*limitations and operational adjustments to Federal generation during overgeneration events prior to implementing any Environmental Redispatch of non-Federal generation.*

**F4. Issue: Whether all generating entities are properly notified of Environmental Redispatch events.**

**Commenters' Positions:**

Snohomish suggests that “BPA notify all transmission customers when an Environmental Redispatch event is imminent and when an event begins and ends.”<sup>158</sup>

**Evaluation of Positions:**

BPA’s Business Practices will specify the procedures for notices regarding Environmental Redispatch. Initially, BPA intends to post notices to inform all customers, including transmission customers, that an Environmental Redispatch is imminent. The notice procedures primarily focus on the information and instructions provided to generators that are subject to Environmental Redispatch. Should BPA continue its Environmental Redispatch policy beyond the interim period, BPA anticipates that it will continue to make improvements as necessary.

**Decision:**

*BPA will post notice that an Environmental Redispatch event is imminent but BPA will not otherwise provide specific notices to transmission customers regarding the beginning and end of such events.*

**F5: Issue: Whether BPA should notify all generators of Environmental Redispatch events via telephone.**

**Commenters' Positions:**

PSE argues that all generators should be notified via telephone of Environmental Redispatch events to ensure adequate notice.<sup>159</sup>

**Evaluation of Positions:**

Due to the interim nature of the Environmental Redispatch policy, BPA intends to utilize telephone instructions for thermal projects, primarily because BPA currently lacks the ability to communicate with these generators via electronic signal. BPA does not believe, however, that telephone notification is the most efficient or effective method to inform thermal generators of Environmental Redispatch events on an ongoing basis. BPA will explore the development of systems to notify thermal generators via electronic signal should BPA continue its Environmental Redispatch policy past the interim period.

BPA currently has the ability to communicate electronically with wind generators. BPA believes that this system of electronic signals has proven effective at providing

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<sup>158</sup> Comments of Snohomish at 3.

<sup>159</sup> Comments of PSE at 22.

notifications to wind generators and providing operational instructions, but since BPA does not currently have the infrastructure or systems in place to notify thermal generators via electronic signal, BPA will notify thermal generators of Environmental Redispatch events via telephone and will notify VER generators via electronic signal. BPA will explore systems to provide the ability to notify all generators via electronic signal in the future.

**Decision:**

*BPA will notify thermal generators of Environmental Redispatch events by telephone, but BPA will explore establishing systems to provide electronic notifications to all generators if Environmental Redispatch is extended beyond the interim period.*

**F6. Issue: Whether Environmental Redispatch should be resource agnostic.**

**Commenters' Positions:**

Springfield Utility Board states that Environmental Redispatch should be resource agnostic and that there is too much focus on taking steps to not curtail wind.<sup>160</sup>

**Evaluation of Positions:**

BPA continues to be interested in implementing Environmental Redispatch in a manner that is least cost to the Region. However, due to the lack of consensus on the appropriate way to measure cost and the additional complexity entailed for this initial implementation, BPA will implement Environmental Redispatch in two groups. Thermal resources that must be redispatched manually will be dispatched first and resources with automated communications equipment in place will be redispatched second, such as VERs. The automated redispatches will be allocated on a pro rata basis. Not only is this the only technologically feasible way to conduct Environmental Redispatch for this year, but it will help to ensure the least cost redispatch to the region.

**Decision:**

*Implementation of Environmental Redispatch will be prioritized between thermal and VER resources.*

**G. Environmental Responsibilities**

**G1. Issue: Whether BPA should refrain from implementing Environmental Redispatch because TDG levels are likely to change and allow additional spill.**

**Commenters' Positions:**

Multiple commenters believe that BPA should address TDG constraints directly, as allowing additional spill (and higher TDG levels) would be beneficial for ESA listed fish and further BPA's obligations to meet its environmental responsibilities. They also

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<sup>160</sup> Comments of Springfield Utility Board at 2.

believe it is unwise to rely upon TDG water quality standards that are likely to change due to ongoing litigation.<sup>161</sup>

**Evaluation of Positions:**

Under the CWA, the states of Oregon and Washington established state water quality standards to protect the waters within their borders, and the U. S. Environmental Protection Agency reviewed and approved those standards. It is BPA’s responsibility to operate consistent with existing state water quality standards for TDG. BPA, however, does not support any change that increases the risk to endangered species. In any event, this Environmental Redispatch proposal is not the proper forum to resolve the ongoing TDG water quality debate. BPA’s Environmental Redispatch proposal is not dependent on any particular TDG criteria and could be adapted to account for any revised TDG standard or waiver, should they be changed due to ongoing litigation.

**Decision:**

*The Environmental Redispatch proposal is not dependent on particular TDG criteria and can be adjusted for different spill levels if TDG criteria change.*

**G2: Issue: Whether BPA should adopt an Environmental Redispatch trigger based on metrics such as TDG related to ESA and CWA constraints, not negative prices.**

**Commenters’ Positions:**

PSE argues that “if BPA proceeds with Environmental Redispatch Protocol based on BPA’s need to comply with ESA and CWA requirements, such a protocol should be triggered based on metrics such as TDG related to ESA and CWA constraints...”<sup>162</sup>

**Evaluation of Positions:**

Environmental Redispatch is not triggered by negative prices, as PSE suggests, but rather is triggered by a combination of factors, such as expected runoff, weather forecast, energy forecast, fish migration patterns, and TDG levels. Environmental Redispatch will only be triggered when all other reasonable actions outlined in this Final ROD have been taken to reduce excess spill in the FCRPS power system. Once all reasonable actions have been taken, Environmental Redispatch will be implemented if: 1) high flow conditions at hydroelectric projects risk excessive spill and TDG levels; 2) there is unloaded turbine capacity at those projects to potentially relieve spill; and 3) there is online generation that can be displaced with Federal power without compromising system reliability. These actions constitute operational responses and are not triggered by negative prices, and Environmental Redispatch achieves the goal of lowering TDG.

**Decision:**

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<sup>161</sup> Comments of Northwest Energy Coalition at 7, Comments of Save Our Wild Salmon at 3, Comments of Renewable Northwest Project at 2-3.

<sup>162</sup> Comments of PSE at 19.

*The Environmental Redispatch protocol is not triggered by negative prices but by TDG levels. The displacement of non-Federal generation is one additional step in the protocol that is implemented after the protocol initially triggers and all other available remedies are exhausted.*

**G3: Issue: Whether BPA is clear on how it intends to meet its environmental obligations through Environmental Redispatch.**

**Commenters' Positions:**

Angus Duncan indicates that the ROD does not clarify how BPA intends to fulfill its legal obligations, including its legal obligations to meet its CWA, ESA, and river operations requirements outlined in the BiOp. The proposal should describe and set priorities for specific terms and conditions of implementation of Environmental Redispatch to see if it will actually accomplish the environmental objectives and improve conditions for ESA listed fish populations.<sup>163</sup>

**Evaluation of Positions:**

As far as addressing how BPA intends to meet the river operations in the BiOp, that issue, like TDG, has been the subject of an ongoing debate for years and, as pointed out in several comment letters, is the subject of ongoing litigation. While we agree the BiOp is an extremely important issue to the region, we do not believe that this is the proper forum to resolve those issues. As far as describing the terms and conditions for implementation of the Environmental Redispatch, BPA's Business Practice describes how we are setting our priorities, and explains the steps BPA will take to implement Environmental Redispatch. Responding to how Environmental Redispatch would address whether the environmental objectives are achieved, BPA believes, as evidenced by BPA's analysis of the June 2010 spill event, that there is already substantial monitoring and modeling capabilities currently available to undertake a reasonable analysis of biological effectiveness. BPA would anticipate that the current level of monitoring and modeling would continue.

Further, the problems detailed in this Final ROD amount to an excess of clean, renewable energy. BPA will continue to explore solutions to maximize the use of this energy, without threatening BPA's environmental and statutory responsibilities.

**Decision:**

*The Environmental Redispatch protocol's ability to achieve environmental objectives will be monitored and modeled within the much larger context of BPA's environmental obligations, which are properly addressed in other forums. In addition, BPA will continue to explore solutions to maximize the use of the clean, renewable energy available in the Pacific Northwest.*

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<sup>163</sup> Comments of Angus Duncan at 1.

**G4. Issue: Whether extreme ramping rates, particularly at Bonneville dam, resulted in serious impacts on spawning chum salmon.**

**Commenters' Positions:**

Charles Pace submitted comments expressing concerns about the impact of extremely high flows on spawning lower chum salmon.

**Evaluation of Position:**

As addressed below, we view the proposed Environmental Redispatch as an approach to better comply with our environmental responsibilities, and we believe that, by initiating this proposal, we are avoiding adverse impacts to listed species. BPA believes that Environmental Redispatch is consistent with the BiOp, and within the limitations of our proposed action and operating requirements.

**Decision:**

*There is no decision to make regarding this comment.*

**G5. Issue: Whether BPA's marketing and transmission activities, including the integration of wind power, trigger a responsibility to initiate consultation with the National Oceanic and Atmospheric Administration ("NOAA") under section 7 of the ESA.**

**Commenters' Positions:**

Charles Pace stated that BPA's "marketing and transmission activities, including but not limited to the integration of wind power, adversely impacts other survival/recovery and the designated critical habitat of several threatened and endangered species of Pacific salmonids, as well as numerous other listed species of plants and animals. Section 1536(a)(2) of Title 16, Chapter 35, United States Code, requires that Bonneville, [...] to insure that all of the actions the agency authorizes, funds, or carries out—including though not limited to Bonneville's proposed environmental redispatch and negative pricing policy are unlikely to jeopardize the continued existence of any species of plants or animals listed as threatened or endangered or result in the destruction or adverse modification of such species' habitat(s), which have been determined by the Secretaries, to be critical."<sup>164</sup>

**Evaluation of Positions:**

BPA believes Mr. Pace is misconstruing the factual context for the Environmental Redispatch and Negative Pricing Policies. Contrary to Mr. Pace's account of BPA's legal obligations, BPA is acting proactively to take a discretionary action that ensures that if future conditions of overgeneration and high flows do arise, BPA will be in a position to take an action to redispatch non-FCRPS generating sources and replace them with FCRPS generation, as one part of BPA's efforts to protect listed species and water quality. As such, Environmental Redispatch is consistent with our current environmental responsibilities.

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<sup>164</sup> Comments of Charles Pace at 6.

**Decision:**

*Environmental Redispatch will not result in any additional impacts that have not been previously considered; therefore, consultation with NOAA is not necessary.*

**G6. Issue: Whether BPA must comply with the new guidelines proposed by the EPA and Army Corps of Engineers that may expand the reach of Federal jurisdiction over wetlands and other “isolated” waters.**

**Commenters’ Positions:**

Mr. Pace asserts in his comments that “selective compliance on the part of Bonneville with the CWA provisions that limit spill while ignoring the full range of protections that the CWA provides for navigable waters, interstate water, adjacent wetlands, non-navigable tributaries that are subject to seasonal flows, and wetlands that abut non-navigable wetlands, is not in accord with law. Bonneville ...must comply fully with the statute. With respect to the implementation of such [CWA] regulations, I want to bring to your attention new guidelines that have been drafted by the Environmental Protection Agency (“EPA”) and the Army Corps of Engineers, which may significantly expand the reach of Federal jurisdiction over wetlands and other ‘isolated’ waters. My understanding is that EPA and the Army Corps provided these new guidelines sometime during the last month to the Office of Management and Budget (“OMB”) for its review and consideration.”<sup>165</sup>

**Evaluation of Positions:**

In the first part of the quoted comment, Mr. Pace states that BPA must comply fully with the CWA. However, he does not describe any specific incidents or events of non-compliance. Without such specific examples, BPA cannot respond to this aspect of his comments. As to the issue of having to comply with the new CWA guidance, BPA notes that the new guidance is only Draft Guidance and does not have the force of law. As the Guidance goes through the review process, it is likely to be modified, and may even be withdrawn. If the guidance is codified and becomes a final rule, to the extent that it is applicable to BPA activities, BPA will comply with its requirements.

**Decision:**

*There is no need to make a decision regarding the Draft Guidance at this time.*

**H. Relation to Balancing Reserves**

**H1. Issue: Whether BPA should relax generation imbalance and deviation charges coming out of an Environmental Redispatch event.**

**Commenters’ Positions:**

PSE states that recent output plays a significant component in the forecasting practices of VERs and suggests that, because such data is not available during an Environmental

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<sup>165</sup> Comments of Charles Pace at 8-9.

Redispatch event, generation “[i]mbalance and deviation charges and penalties should be relaxed when a wind generator is resuming generation” after an Environmental Redispatch event.<sup>166</sup>

**Evaluation of Positions:**

Generation imbalance and persistent deviation penalties will not be applied while an Environmental Redispatch event is in place, but VERs that are subject to an Environmental Redispatch event will be expected to continue to submit reasonably accurate schedules during the event. Thus VER operators or scheduling coordinators should continue to monitor current and expected wind speeds and weather forecasts at the generators. The schedules submitted during the Environmental Redispatch event should track what actual output would have been at the generators and wind schedulers should be able to combine these schedules with the actual wind speed information from the previous hour to determine an accurate schedule regardless of whether the generator is shut down or limited by an Environmental Redispatch event.

BPA will be managing Environmental Redispatch events to the shortest duration required to operate consistent with BPA’s environmental responsibilities. After the end of an Environmental Redispatch event, the Federal projects will likely be operating at full capacity, less amounts required to support contingency reserves and balancing reserves required for system reliability. Under these conditions, it will be even more important than usual that parties submit schedules that are as accurate as possible to avoid reductions in balancing reserve quantities or the implementation of another Environmental Redispatch event. Relaxation of charges and penalties after an Environmental Redispatch event would not encourage that accuracy. At the same time, BPA will remain open to discussions whether the Environmental Redispatch is somehow causing unanticipated problems when a wind generator resumes generation.

**Decision:**

*BPA will not waive generation imbalance charges and persistent deviation penalties directly following an Environmental Redispatch event due to the increased need for scheduling accuracy and the VER schedulers’ ability to continue to provide reasonable schedules during and after an event. In the event, however, that it can be shown that the Environmental Redispatch event is causing an inability to provide reasonable schedules, we will discuss waiving the otherwise resulting generation imbalance charges.*

**H2. Issue: Whether BPA will ensure that VERs do not submit inflated schedules during an Environmental Redispatch event.**

**Commenters’ Positions:**

Tacoma raised a technical concern. Since BPA is offering to replace the redispatched resources’ schedules with free BPA power, there will be an incentive for the resources owners/operators to over schedule the future hourly production in order to take advantage of accessing the free hydro and selling a higher volume at the contracts’ sales price to

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<sup>166</sup> Comments of PSE at 9.

parties buying the resource output. Tacoma asks that BPA adopt procedures to prevent this outcome.<sup>167</sup>

**Evaluation of Positions:**

During an Environmental Redispatch event generators that are redispatched will continue to submit hourly schedules. Tacoma is correct that there may be an opportunity for generators with certain types of power purchase agreements (“PPAs”) to inflate their schedules to take more zero cost Federal power to loads than their own generators would have produced. However, BPA expects generators to continue to provide reasonable schedules, because the Business Practices will implement Environmental Redispatch on an hour-by-hour basis, and thus, when the event ends, the generator will be expected to return to normal operation in the next hour. Generators could be subject to all charges and penalties associated with schedule error in the first hour after the Environmental Redispatch event, although stated previously, BPA will be evaluating the ability of generators to meet their next-hour schedules after Environmental Redispatch ends. Not knowing when the event will end should incentivize generators to schedule accurately during the event. As such, BPA believes that its approach appropriately considers Tacoma’s concern.

**Decision:**

*Existing scheduling incentives that will be applied to the hour following an Environmental Redispatch event should provide the necessary incentive to prevent generators from submitting inflated schedules during the event.*

**I. Impact to VERs**

**II. Issue: Whether BPA’s Environmental Redispatch policy will discourage the development of renewable energy in the Pacific Northwest.**

**Commenters’ Positions:**

Several parties argue that BPA’s proposed Environmental Redispatch policy will discourage the development of renewable resources in the Pacific Northwest.<sup>168</sup> In general, these parties also argue that Environmental Redispatch will make it difficult for developers to secure financing, which will lead to a decrease in new renewable energy projects and economic development in rural communities.

**Evaluation of Positions:**

Community Renewable Energy Association (“CREA”), Renewable Northwest Project, Horizon, PGE, and Iberdrola argue that Environmental Redispatch will have significant and negative consequences for the future development and investment in renewable resources in the Pacific Northwest. These parties also argue that Environmental

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<sup>167</sup> Comments of Tacoma at 4.

<sup>168</sup> Comments of Community Renewable Energy Association at 1; Comments of Renewable Northwest Project at 3; Comments of Horizon at 3-4; Comments of PGE at 3; Comments of Iberdrola at 12.

Redispatch would make it difficult, if not impossible, to obtain new financing for new wind and solar energy projects.<sup>169</sup>

While BPA acknowledges that Environmental Redispatch will have economic impacts on certain VER projects, BPA is not convinced that Environmental Redispatch will discourage the development of new wind and solar projects in the Pacific Northwest. BPA believes that Environmental Redispatch strikes a middle ground that enables the continued development of VERs in the Pacific Northwest, while preserving load and resource balance and compliance with environmental and statutory responsibilities. Without such policies in place, the risks associated with overgeneration events during high run-offs would create a substantial roadblock to the development of any new resources in the BPA Balancing Authority Area. Further, it is unclear whether Environmental Redispatch will have any greater effect on the development of renewable resources than paying negative prices, as the costs shifts created by paying negative prices would likely garner strong public opposition to the further development of VERs in the Pacific Northwest.

In addition, as stated throughout this Final ROD, BPA must balance its environmental, statutory, and reliability responsibilities with its policies supporting the development of renewable resources in the BPA Balancing Authority Area. Several parties argue that Environmental Redispatch will jeopardize renewable energy project financing. BPA does not presume to know the details of a wind or solar developer's financing arrangements, and therefore, cannot opine on the specific reasons that may inform an investor's tolerance for risk. BPA acknowledges that Environmental Redispatch will have an economic impact on VERs. However, to date, BPA has not observed any evidence to support the parties' claims that investment in renewable energy will stall as a result of BPA's efforts to maintain load and resource balance and compliance with its environmental and statutory responsibilities. Indeed, despite experiencing the worst financial downturn in decades, wind developers have continued to receive financing for their projects, as evidenced by the continued growth of wind development in the BPA Balancing Authority Area. This demonstrates that the wind industry has the ability to manage a variety of market conditions and risks. As discussed in this Final ROD, the rapid and sustained success in variable energy resource development is heavily influenced by state RPS and Federal tax incentives. These incentives are expected to continue to drive investment in and development of renewable resources in the region.

In addition, there appears to be situations in other parts of the country where wind generation is curtailed to protect endangered species. For example, Iberdrola has implemented, on a voluntary basis, an Avian and Bat Protection Plan that considers limitations on its wind generators if high avian or bat mortality is experienced.<sup>170</sup> In addition, Iberdrola has installed an avian radar system on some of its projects located in Texas for the purpose of shutting down the wind turbines when major bird migration

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<sup>169</sup> Horizon Comments at 4; RNP Comments at 3.

<sup>170</sup> Avian and Bat Protection Plan at § 4.1 (Dec. 2008), available at [http://www.iberdrolarenewables.us/pdf/Signed\\_ABPP\\_10-28-08.pdf](http://www.iberdrolarenewables.us/pdf/Signed_ABPP_10-28-08.pdf).

activity is detected.<sup>171</sup> Under these circumstances, these wind projects will also likely not receive PTCs or RECs when shut down for bird migration. It does not appear, however, that such conditions will threaten the development of renewable energy.

Further, BPA has a proven track record of supporting VER integration and is undertaking a variety of initiatives to facilitate the integration of new wind and solar resources into the BPA transmission system. As of April 2011, there was 3,522 MW of wind power in operation, with the number forecasted to reach 6,492 MW by the end of 2013. BPA continues to invest significant resources in transmission infrastructure and system upgrades to accommodate this growth. Thus, when combining BPA's efforts with state and Federal policies and incentives, BPA believes that Environmental Redispatch will not significantly affect the demand for renewable energy projects in the Pacific Northwest.

**Decision:**

*Environmental Redispatch is a solution to an overgeneration event that arises for a limited amount of time in some years. During this event there is a surplus of carbon free electricity, including wind that receives PTCs and RECs from generating. In this situation, it has been proposed by commenters that BPA either pay wind operators to reduce output or curtail wind operations without providing payment beyond the provision to them of free Federal hydropower. Either policy results in a cost being borne by different customers, as well as some negative impact on future renewable resource investment. If BPA pays wind operators to reduce output, that will result in a cost to BPA that must be allocated to and borne by either BPA's power or transmission customers. That would raise BPA's rates to customers who for the most part are not currently buying much of the wind operating on BPA's system. This will ultimately make it more difficult to accomplish the siting of new wind resources and transmission lines needed to integrate renewable resources within BPA's Balancing Authority Area. Alternatively, if BPA temporarily reduces wind generation and does not pay them for the reduction, that could result in a negative economic impact due to the loss of PTCs and RECs. There is no way to know definitively which approach will have the bigger impact on future renewable resource investment. BPA has concluded that reducing wind generation without payment is more consistent with our environmental and statutory responsibilities and provides system reliability.*

**I2. Issue: Whether Environmental Redispatch will adversely affect the ability of entities to meet their RPS requirements.**

**Commenters' Positions:**

PSE states that the "proposed Environmental Redispatch Protocol would jeopardize existing strategies for meeting RPS requirements and could impede the ability of affected utilities to satisfy their RPS obligations."<sup>172</sup>

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<sup>171</sup> "Newest Texas Wind Farm Cause for Community Celebration, Brings Energy Industry Leaders Kenedy County on the Gulf Coast" (April 17, 2009), available at [http://www.iberdrolarenewables.us/rel\\_09.04.17.html](http://www.iberdrolarenewables.us/rel_09.04.17.html).

<sup>172</sup> Comments of PSE at 9.

PacifiCorp states that implementing BPA’s proposed policy “denies PacifiCorp retail customers the rightful benefit of the value of [PTCs] and [RECs] they would otherwise have received, as well as puts at risk PacifiCorp’s and other Northwest renewable resource owners’ ability to comply with the law in meeting [RPS].”<sup>173</sup>

Seattle City Light commented that it “does not believe its ability to comply with the State of Washington’s [RPS] will be materially impacted” by BPA’s proposed policies.<sup>174</sup>

**Evaluation of Positions:**

As indicated earlier, the substantial growth of wind power in the Pacific Northwest and more specifically in BPA’s Balancing Authority Area is evidence of BPA’s commitment to supporting RPS in both Northwest states and California. BPA has and will continue to look for opportunities to work with states, utilities and the wind community to develop protocols and RPS accounting practices that would enable the wind that could have been generated, if not for Environmental Redispatch, to continue to qualify as contributing to RPS requirements. However, BPA’s primary responsibility is to ensure that BPA is able to meet its environmental and statutory responsibilities, not to ensure that the region is able to meet state RPS policies that are beyond BPA’s control. BPA will be taking all reasonable actions to avoid having to implement Environmental Redispatch. In addition, when Environmental Redispatch is implemented, resources that receive RECs needed for state RPS compliance will be the last resources to be redispatched. Thus, BPA is taking all reasonable steps to ensure that RECs and PTCs are protected.

Further, it is not clear that the payment of negative prices will have a different outcome. Because of the cost shift to BPA’s preference customers that is created by the payment of negative prices, there may be significant opposition to the development of new VERs within BPA’s Balancing Authority Area. Should the payment of negative prices hinder the development of VERs, utilities may also find it difficult to meet state RPS requirements.

**Decision:**

*BPA will work to minimize the impact of Environmental Redispatch on entities’ abilities to meet RPS requirements; however, BPA’s priority is meeting its statutory and environmental obligations.*

**I3. Issue: Whether BPA provides a clear definition of VERs in this ROD.**

**Commenters’ Positions:**

Snohomish included the definition of VER from the FERC NOPR and questioned whether BPA was relying on this definition as one was not provided in the Draft ROD.<sup>175</sup> Additionally, Snohomish questioned whether BPA would “seek to re-dispatch all types of

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<sup>173</sup> Comments of PacifiCorp at 1-2.

<sup>174</sup> Comments of Seattle City Light at 2.

<sup>175</sup> Comments of Snohomish at 1-2.

resources – both thermal and non-thermal – throughout its Balancing area” and if “resources that are located behind a customer’s meter” would also be subject to redispatch.<sup>176</sup>

**Evaluation of Positions:**

The Commission’s recent VER NOPR defines a VER as an electric generating facility that is characterized by an energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.<sup>177</sup> BPA will generally use this definition to determine what resources are considered VERs in determining Environmental Redispatch priority. To be more specific, BPA will consider as VERs wind, solar thermal and photovoltaic, and hydrokinetic generating facilities. The definition of VERs does not include, however, hydroelectric, biomass, or process steam generating facilities.

**Decision:**

*BPA will generally adopt FERC’s definition of VERs.*

**I4. Issue: Whether BPA’s analysis underestimates the true economic impact of the proposed policy.**

**Commenters Positions:**

EnXco and Horizon comment that BPA has understated the economic impact of Environmental Redispatch. BPA’s study estimated up to a \$50,000,000 annual impact based on the projected value of RECs and PTCs. EnXco and Horizon state, however, that BPA’s study “does not consider that wind energy producers may not be paid for energy under their PPAs if [BPA] substitutes federal excess energy for wind energy.”<sup>178</sup> In addition, enXco and Horizon state that “the wind energy producer could also potentially be exposed to liquidated damages or even contract default, depending on the terms of the particular PPA[,]” and may also may be exposed to “potential costs or fines to which a utility may be subject if it fails to meet RPS targets.”

Iberdrola raises the same concerns, stating that “not only would Bonneville’s ‘replacement policy’ impact revenues associated with RECs and any generation-based tax credits, the entire power purchase price would arguably be forfeited.”<sup>179</sup>

**Evaluation of Positions:**

BPA understands that Environmental Redispatch may have potential economic consequences for wind generators. As stated previously, however, BPA should not be the guarantor of a generator’s profits due to circumstances beyond its control, such as state RPS policies and PPAs. Even if there are other costs beyond just the value of RECs and PTCs, these costs should still not be shifted to BPA’s Preference Customers. Further, the fact that the estimated costs could be greater means that the payment of negative prices

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<sup>176</sup> *Id.* at 2.

<sup>177</sup> *Integration of Variable Energy Resources*, 133 FERC ¶ 61,149, at P 64 (2010).

<sup>178</sup> Comments of enXco at 8; Comments of Horizon at 8.

<sup>179</sup> Comments of Iberdrola at 23.

would have an even greater impact on BPA's preference customers and BPA's ability to recover its costs.

There are numerous forms of PPAs and different RPS for different states. BPA is not a party to these agreements, and has no control over these agreements or state RPS policies. BPA cannot ensure that all contractual arrangements or state policies are met. Even Iberdrola acknowledges that it "has many forms of [PPAs.]" BPA has received differing comments about the effect that Environmental Redispatch will have on PPAs and RPS requirements. For example, Tacoma Power comments that revenues are tied to the delivery of power under most PPAs, and the substitution of FCRPS energy "could potentially increase the revenues [VERs] receive from their buyer(s) by overstating their scheduled output."<sup>180</sup> This appears at odds with enXco, Horizon, and Iberdrola's position that they will not be paid for the delivery of energy if it is not wind energy. In addition, SCL has stated that it "does not believe that its ability to comply with the state of Washington's [RPS] will be materially impacted by BPA's potential actions[.]"

**Decision:**

*BPA understands that its Environmental Redispatch and Negative Pricing Policies will have economic impacts on some generators, but BPA cannot ensure that the terms of contracts and policies that are beyond its control are met.*

**15. Issue: Whether the mismatch between the source listed on the e-Tag and the actual source may create REC accounting compliance issues.**

**Commenters' Positions:**

PSE states that "the potential mismatch between the source listed on the e-Tag and the actual source of the generation may also create compliance problems with REC accounting policies and standards in place for compliance with RPS obligations and Western Renewable Energy Generation Information System [WREGIS] reporting requirements."<sup>181</sup>

Seattle City Light indicated they "do not believe its ability to comply with the state of Washington's Renewable Portfolio Standard will be materially impacted by BPA's potential actions..."<sup>182</sup>

**Evaluation of Positions:**

PSE provides insufficient information for BPA to evaluate its concern. BPA understands that REC accounting is at the meter, not based on the e-Tag. For example, the WREGIS Operating Rules specifically provide that "[f]or each renewable energy resource, total MWhs of generation shall be measured at the point of interconnection to the transmission

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<sup>180</sup> Comments of Tacoma Power at 4.

<sup>181</sup> Comments of PSE at 22.

<sup>182</sup> Comments of Seattle at 2.

or distribution company's system . . . ."<sup>183</sup> Thus, based on WREGIS rules, it does not appear that the e-Tag will have any impact on REC accounting or reporting requirements.

Further, currently, at any time, a wind generator receives FCRPS energy through generation imbalance when the generator is not able to meet the scheduled amount specified in the e-Tag. BPA has never received feedback on this situation creating REC accounting difficulties. Seattle City Light, who is subject to the same RPS as PSE, states that its ability to comply will not be materially affected by Environmental Redispatch.

**Decision:**

*BPA does not believe that Environmental Redispatch will impact REC accounting standards.*

**J. Contractual Impacts**

**J1. Issue: Whether BPA's proposed Environmental Redispatch policy compromises wind owners' ability to satisfy forward contracts for the purchase or sale of RECs.**

**Commenters' Positions:**

PSE states that the "proposed Environmental Redispatch Protocol would improperly displace generation from resources in BPA's Balancing Authority Area that generate RECs. The proposed Environmental Redispatch protocol would jeopardize existing strategies for meeting Renewable Portfolio Standard requirements and could impede the ability of affected utilities to satisfy Renewable Portfolio Standard obligations."<sup>184</sup> PSE goes on to state that "the proposed Environmental Redispatch Protocol could compromise the utilities' ability to satisfy obligations entered into under forward contracts for the purchase or sale of RECs."<sup>185</sup>

**Evaluation of Positions:**

The issue of overgeneration supply of combined wind and hydro resources in the BPA Balancing Authority Area during spring high water run-off periods is an issue that BPA has discussed with Pacific Northwest market participants since late 2008. All parties buying and selling power in the Pacific Northwest understand that Pacific Northwest hydro resources alone have periodically overwhelmed the amount of load and intertie export capability in the region. So it should be no surprise that when a substantial amount of new wind resources were added over the past five years, these non-dispatchable VERs would only add to this problem. The way that thermal resources respond to this issue is through rational economic displacement of their energy with lower cost surplus power. Due to production subsidies and RECs tied to specific resource production, VERs do not respond similarly.

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<sup>183</sup> WREGIS Operating Rules at Section 9.3 (Dec. 2010) (available at <http://www.wregis.org/uploads/files/854/WREGIS%20Operating%20Rules%20v%2012%209%2010.pdf>).

<sup>184</sup> Comments of PSE at 9.

<sup>185</sup> Id.

BPA understands that VERs will not produce RECs during an Environmental Redispatch event. In order to minimize this risk, BPA will first redispatch thermal generation, and only redispatch VERs if additional relief is needed. Further, BPA is willing to work with Pacific Northwest VERs, REC purchasers, and surrounding States to enact legislation that would allow the continued ability to “count” or credit VERs’ planned production when it is displaced by a host balancing authority attempting to operate consistent with environmental standards such as the CWA or ESA. BPA’s proposed approach allows REC value and RPS standards to be unaffected while also allowing the balancing authority to meet applicable environmental criteria.

If legislative changes are not supported, then VERs interconnected with the BPA Balancing Authority will need to recognize and share some of the burden of interconnecting to an environmentally constrained run-of-the river hydro system. BPA cannot be the guarantor of state and Federal subsidies and contractual arrangements that are beyond BPA’s control. Utilities that must meet RPS standards will have to evaluate the risk of potential shortfalls caused by BPA’s Environmental Redispatch policy and hedge their REC strategy accordingly. As indicated previously, we will continue to work with parties in an effort to better quantify the likelihood of Environmental Redispatch.

**Decision:**

*BPA will take all reasonable actions to avoid redispatching VERs, and will continue to support efforts at legislative changes.*

**J2: Issue: Whether existing PPAs do not allow for substitution of energy.**

**Commenters’ Positions:**

Iberdrola states that BPA’s Environmental Redispatch policy is inconsistent with its PPAs that require “a time-based true-up of metered energy at a specific wind generator versus the delivered energy to the customer.”<sup>186</sup> According to Iberdrola, purchasers under its contracts, including contracts between BPA and Iberdrola, pay for wind generation as measured at the generator’s meter, and BPA’s proposal to “replace” the energy from Iberdrola facilities will create “a disconnect between deliveries and metered output.”<sup>187</sup> Iberdrola maintains that “not only would Bonneville’s ‘replacement policy’ impact revenues associated with RECs and generation-based tax credits, the entire power purchase price arguably would be forfeited.”<sup>188</sup>

Horizon states that “[m]ost renewable energy PPAs are facility-specific and do not allow sellers to substitute energy from a different resource. Federal hydropower likely would not be an acceptable substitute for PPA offtakers because the power would not come

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<sup>186</sup> Comments of Iberdrola at 22.

<sup>187</sup> *Id.* at 23.

<sup>188</sup> *Id.*

from the same facility, and federal hydropower does not meet the requirements of applicable state [RPS].”<sup>189</sup> EnXco makes the same statement.<sup>190</sup>

### **Evaluation of Positions:**

BPA is offering free energy to redispatched resources during Environmental Redispatch events to allow those resources to meet their commercial delivery obligations. BPA has no control over the specific contractual arrangements of generators in its Balancing Authority Area, and BPA is not the guarantor of those contractual arrangements. Nevertheless, the replacement of wind generators’ scheduled energy with power from the FCRPS occurs frequently through generation imbalance when a wind generator cannot produce the amount of energy scheduled, and those generators have not made BPA aware that this replacement of energy required a seller to forfeit the “entire power purchase price” of an agreement.

Although BPA generally has no knowledge of the terms of the Iberdrola PPAs to which BPA is not a party, Iberdrola states that BPA purchases power from Iberdrola under agreements that provide for payment for wind generation as measured at the generator’s meter. BPA understands that Environmental Redispatch may affect these contracts, but BPA cannot guarantee that the revenues from all contracts can be met at all times.

Finally, we would observe that Force Majeure provisions are standard in commercial contracts. Typically as well, just as with our interconnection and transmission contracts, they excuse performance on account of an order or restriction imposed by the government. BPA is part of the government and its orders resulting from this policy are to protect fish. Under the circumstances, we would surmise that curtailed generators may have a good basis to avoid contractual penalties or the like for nonperformance.

### **Decision:**

*BPA cannot comment on the terms of PPAs of which it has no knowledge or guarantee the results under those agreements. BPA has decided to apply Environmental Redispatch on a pro rata basis across all generators.*

## **K. Reliability Issues**

### **K1. Issue: Whether Environmental Redispatch complies with Western Electricity Coordinating Council (“WECC”) and NERC e-tagging requirements.**

#### **Commenter’s’ Positions:**

PSE comments that “BPA should modify e-Tags to identify accurately the generation source and contract path of the energy delivered during the environmental redispatch.”<sup>191</sup> PSE lists five NERC Reliability Standards that it believes may be violated by

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<sup>189</sup> Comments of Horizon at 8.

<sup>190</sup> Comments of enXco at 8.

<sup>191</sup> Comments of PSE at 20.

Environmental Redispatch: 1) INT-006-3, R1.2; 2) INT-001-WECC-CRT-2; 3) INT-003-2; 4) INT-004-2; and 5) INT-005-3. PSE believes that “[t]he potential mismatch between the source listed on the e-Tag and the actual source of the generation may create compliance problems with certain [NERC] and [WECC] reliability standards” and requests that BPA explain how Environmental Redispatch complies with these standards, without explaining itself how Environmental Redispatch would violate these standards.<sup>192</sup>

Powerex also raises issues with e-tagging requirements, stating that it “believes e-tags must be adjusted to appropriately show the source generation, consistent with NERC/WECC e-tagging requirements.”<sup>193</sup>

### **Evaluation of Positions:**

As will be specified in BPA’s Business Practices, Environmental Redispatch will be an hour to hour evaluation, and Environmental Redispatch will only be triggered within the hour. All generators in BPA’s Balancing Authority Area must submit schedules for next hour operations, as the conditions triggering Environmental Redispatch may be alleviated for the next hour and the generator will be required to meet its transmission schedules. Environmental Redispatch will be conducted similar to any other redispatch on BPA’s system. Currently, under BPA’s Redispatch and Curtailment Procedures Business Practice, BPA specifies that “Redispatch will not result in changes to the original e-Tags.” BPA is unaware of any other practice that requires tags to be modified within the operating hour in order to redispatch generating resources to preserve reliability. In fact, to do so would be infeasible, as BPA is not the tag author and does not have the time or capability to modify the generating source. If BPA were required to modify all e-tags when redispatching generating resources, it would not have the ability to react in time to preserve the reliability of the system. All generation displaced before the next operating hour will be appropriately tagged and specify the FCRPS as the source.

Environmental Redispatch will comply with the NERC Reliability Standards cited by PSE. All of the standards cited by PSE involve transactions that involve one or more balancing authorities, generally referred to as an Interchange Transaction.<sup>194</sup> Generally, transactions between balancing authorities only need ensure that reliability is maintained and that flows between balancing authorities accurately reflect the transmission schedules, and do not concern the source of the generation. For example, an “Interchange Schedule” only requires specification of “[t]ransaction size (megawatts), start and end time, beginning and ending ramp times and rates, and type required for delivery and receipt of power and energy between the source and sink Balancing Authorities involved in the transaction.”<sup>195</sup>

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<sup>192</sup> Id. at 20-21.

<sup>193</sup> Comments of Powerex at 2.

<sup>194</sup> The NERC Glossary defines an “Interchange Transaction” as an “agreement to transfer energy from a seller to a buyer that crosses one or more Balancing Authority Area boundaries.” NERC Glossary at 23.

<sup>195</sup> NERC Glossary at 23.

The first standard cited by PSE is INT-006-3, R1.2. This standard requires that each Transmission Service Provider “confirm that the transmission service arrangements associated with the Arranged Interchange have adjacent Transmission Service Provider connectivity, are valid and prevailing transmission system limits will not be violated.” The purpose of INT-006-3 is to “ensure that each Arranged Interchange is checked for reliability before it is implemented.”<sup>196</sup> The standard requires “review of [of] proposed interchange transactions to ensure that transmission service is available and that system limits are not violated[.]”<sup>197</sup> When the tags are initially submitted by the generator, BPA ensures that transmission service is available and that system limits will not be violated. When Environmental Redispatch is triggered and BPA completes the interchange transaction with FCRPS energy, BPA is not reducing use of the underlying transmission service, but only limiting the generator associated with the transmission service. If Environmental Redispatch creates congestion issues within the hour, BPA will take all actions available to it to ensure that system limits will not be violated.

PSE next cites INT-001-WECC-CRT-2, which requires Transmission Providers to use e-Tags as the primary tool to communicate curtailments. BPA understands PSE as implying BPA is not alerting other parties to a curtailment because it is leaving the original e-Tag in place during Environmental Redispatch. Environmental Redispatch complies with this standard, however, because, again, BPA is not curtailing transmission service. BPA is ensuring that the transmission schedule is met by FCRPS energy.

Third, PSE cites to INT-003-2. The purpose of this standard is to “ensure Balancing Authorities confirm Interchange Schedules with Adjacent Balancing Authorities prior to implementing the schedules in their Area Control Area (ACE) equations.” BPA reads PSE’s concern as to whether the Interchange Schedule must properly reflect the source of the power. However, the definition of “Interchange Schedule,” cited to above, makes no mention of source of the generation. Environmental Redispatch will not affect any other attributes of the schedule. For example, the substitution of FCPRS energy will ensure that the transaction size will remain the same.

Fourth, PSE cites to INT-004-2. This Reliability Standard requires that Dynamic Transfers be adequately tagged to determine their reliability impacts. Environmental Redispatch does not implicate this Reliability Standard. There are two requirements to this Standard. Requirement 1 concerns curtailments and reloading of dynamic schedules. As explained previously, Environmental Redispatch does not involve curtailments, so Requirement 1 is not applicable. Requirement 2 is a requirement for the Purchasing-Selling Entity to ensure tag accuracy. Since Environmental Redispatch will be an hour to hour assessment, BPA expects all entities to correctly tag their Dynamic Interchange Schedules according to this standard for the “next available scheduling hour and future hours[.]”

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<sup>196</sup> “Arranged Interchange” is defined by the NERC Glossary as “[t]he state where the Interchange Authority has received the interchange information (initial or revised).” NERC Glossary at 5.

<sup>197</sup> Revised Reliability Standards for Interchange Scheduling and Coordination, 129 FERC ¶ 61,223, P 17 (2009).

Finally, PSE cites to INT-005-3. The purpose statement of this Reliability Standard provides that “the implementation of Interchange between Source and Sink Balancing Authorities is distributed by an Interchange Authority such that Interchange information is available for reliability assessments.” INT-005-3 applies only to Interchange Authorities. BPA is not an Interchange Authority, so BPA has no obligation to distribute Interchange information under this Reliability Standard.

**Decision:**

*BPA will comply with the applicable NERC and WECC standards.*

**K2. Issue: Whether Environmental Redispatch would exacerbate voltage and stability.**

**Commenters’ Positions:**

PSE asserts that BPA’s proposal creates system reliability issues in that the resulting “dramatic swings in generation (and the accompanying changes in points of delivery and receipt) could threaten the reliability of the transmission system and the ability to meet load.”<sup>198</sup> Further, PSE questions “how dramatic swings in generation due to the proposed Environmental Redispatch Protocol and Negative Pricing Policy would exacerbate voltage and stability conditions on BPA’s system and lead to further complications with ATC and DTC issues.”<sup>199</sup>

PacifiCorp generally asserts that “BPA has not provided evidence that Environmental [R]edispatch will not adversely affect the reliability of the transmission system.”<sup>200</sup>

**Evaluation of Positions:**

The magnitude of the change in generation patterns created by Environmental Redispatch is nothing new for BPA. BPA has experienced and accommodated ramps in the positive direction of wind in the magnitudes of 1580MW in 60 minutes, 1120MW in 30 minutes, 756MW in 10 minutes, and 492MW in 5 minutes. BPA has experienced and accommodated negative ramps of the wind in the magnitudes of -1161MW in 60 minutes, -937MW in 30 minutes, -734MW in 10 minutes, and -724MW in 5 minutes. BPA has routine morning pick-up ramps that exceed 2000MW. BPA has not experienced any reliability concerns with these variations in the wind and BPA’s generation. Environmental Redispatch is expected to be near these levels, and BPA has the infrastructure to accommodate these changes in generation patterns.

In addition, BPA’s Dispatchers will be constantly monitoring the Environmental Redispatch process. If a determination is made that Environmental Redispatch is creating safety or system reliability issues, BPA Dispatch has the authority and is required by Reliability Standards to take necessary actions to ensure system reliability. Environmental Redispatch does not supplement the requirement to maintain a safe and

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<sup>198</sup> Comments of PSE at 8.

<sup>199</sup> Id.

<sup>200</sup> Comments of PacifiCorp at 4.

reliable power system. Dispatch will not require plant operators to make sudden changes which could impact the integrity of the project. The project operators will be allowed to move the generation output to required levels using plant ramping capabilities as determined by the plant operator. BPA will be proactive in identifying environmental concerns in advance to minimize any in-hour Environmental Redispatch needs. BPA's Automatic Generation Control system will automatically balance generation to load thus maintaining reliable Interconnection Frequency. For voltage collapse concerns, BPA Dispatchers continuously monitor voltage levels and reactive reserve requirements. BPA will work with neighboring Transmission Operators if voltage concerns are experienced. System reliability is paramount and BPA will not enact Environmental Redispatch if a determination is made that there will be negative impacts to reliability.

**Decision:**

*Environmental Redispatch is not expected to create reliability issues. BPA will monitor the effects on the system of Environmental Redispatch actions and will modify or terminate the proposed protocol if there are negative impacts to system reliability.*

**K3. Issue: Whether Environmental Redispatch will create transmission congestion.**

**Commenters' Positions:**

Snohomish County PUD is concerned that "transmission congestion could be created as generating patterns change when Environmental Re-Dispatch is implemented."<sup>201</sup>

PGE asserts that "transmission curtailments are also likely if the use of replacement generation causes energy to flow over constrained paths."<sup>202</sup>

Powerex made similar comments, stating that "large scale redispatch may cause congestion and result in the inappropriate curtailment of schedules flowing through BPA's [Balancing Authority Area]."<sup>203</sup>

**Evaluation of Positions:**

As stated previously, the magnitude of the changes in generation patterns that could be created by Environmental Redispatch is nothing new for BPA. BPA has experienced such changes in generation patterns in the past, and has not run into significant issues with transmission congestion.

Further, BPA's Dispatchers will be constantly monitoring the Environmental Redispatch process. In a declared Environmental Redispatch event, BPA dispatchers will monitor any increased transmission congestion to paths/flowgates internal and external to the FCRTS. If Environmental Redispatch will create transmission path congestion, BPA will take all necessary actions to ensure system reliability, including excluding certain generators, whether thermal, hydro, or VER, from Environmental Redispatch because of

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<sup>201</sup> Comments of Snohomish at 2.

<sup>202</sup> Comments of PGE at 1.

<sup>203</sup> Comments of Powerex at 2.

the location of the generator. Reduction in the output of generators in real time could cause a violation of System Operating Limits (“SOL”) or create system stability issues, such as voltage collapse, because the reduction in output could lead to increased flows in the negative direction of the path or flowgate based on the generator’s location, regardless of generation type. In addition, if transmission path congestion occurs that leads to a SOL exceedance, BPA will take all necessary actions to reduce generation affecting the path, Federal or non-federal, in order to ensure flows are within SOLs.

**Decision:**

*Environmental Redispatch is not expected to create transmission congestion issues. If Environmental Redispatch actions create or could create transmission congestion issues, BPA will use established processes and modify or suspend the Environmental Redispatch protocol to address these issues.*

**L. National Environmental Policy Act (“NEPA”) Issues**

**L1. Issue: Whether BPA’s Environmental Redispatch policy and the accompanying Business Practices trigger the need to complete an environmental impact statement or environmental assessment to comply with NEPA.**

**Commenters’ Positions:**

Charles Pace, Ph.d, appears to suggest that integrating wind projects into the grid and Environmental Redispatch make “irreversible and irretrievable commitments of its power marketing and transmission assets.”<sup>204</sup> He also claims that “excessive generation and spill in November and December of 2010 was devastating for [listed chum salmon] spawning downstream from the Bonneville Project.” Mr. Pace’s last concern was that those operations affected other species “includ[ing] listed species of Pacific salmonids and white sturgeon.”<sup>205</sup> Overall, Mr. Pace believes that BPA’s proposal constitutes a major federal action and requires preparation of an Environmental Impact Statement (“EIS”). Iberdrola notes that it “considers the Draft ROD to be a cost issue, and not an environmental issue,” and that “if Bonneville does in fact believe its proposal is an environmental issue, it should conduct the required NEPA review.”<sup>206</sup>

**Evaluation of Positions:**

In implementing the policy and business principles, BPA will manage the FCRPS within existing operating constraints. The following documents explain those parameters:

- NOAA Fisheries’ 2008 FCRPS BiOp<sup>207</sup> and its 2010 supplemental BiOp<sup>208</sup>

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<sup>204</sup> Comments of Charles Pace at 7.

<sup>205</sup> *Id.* at 6 note 6.

<sup>206</sup> Comments of Iberdrola at 24.

<sup>207</sup> [https://pcts.nmfs.noaa.gov/pls/pcts-pub/pcts\\_upload.summary\\_list\\_biop?p\\_id=27149](https://pcts.nmfs.noaa.gov/pls/pcts-pub/pcts_upload.summary_list_biop?p_id=27149)

- BPA’s RODs adopting the 2008 BiOp<sup>209</sup> and 2010 supplemental BiOp<sup>210</sup>
- Columbia River System Operations EIS (Nov. 1995) and Record of Decision (Feb. 21, 1997)

In the NEPA discussion contained in this Final ROD and the Categorical Exclusion attached to it, BPA has shown that the redispatch policy would not change current status quo hydrosystem operations within existing constraints and in compliance with existing NEPA records of decision, ESA biological opinions, and CWA water quality standards.<sup>211</sup>

BPA has examined the environmental effects of integrating wind projects into the transmission grid in the following NEPA documents:

- Whistling Ridge Environmental Impact Statement<sup>212</sup>
- Leaning Juniper II - Jones Canyon Substation Expansion Wind Interconnection Project Record of Decision<sup>213</sup>
- Electrical Interconnection of the Golden Hills Wind Project Record of Decision<sup>214</sup>
- Electrical Interconnection of the Kittitas Valley Wind Farm Record of Decision<sup>215</sup>
- Lower Snake River Wind Energy Project Record of Decision<sup>216</sup>
- Juniper Canyon I Wind Project Record of Decision<sup>217</sup>

These NEPA documents have already discussed the reasonably foreseeable high wind/high water effects on fish and water quality, as well as measures—such as instructing wind projects to reduce their generation to specified levels for ESA and CWA compliance—that BPA is taking to reduce or avoid the cumulative impact of wind project overgeneration on hydrosystem operations for fish. When the potential for high water/high wind events was understood, BPA considered and reconsidered the site

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<sup>208</sup> [https://pcts.nmfs.noaa.gov/pls/pcts-pub/sxn7.pcts\\_upload.download?p\\_file=F25013/201002096\\_FCRPS\\_Supplemental\\_2010\\_05-20.pdf](https://pcts.nmfs.noaa.gov/pls/pcts-pub/sxn7.pcts_upload.download?p_file=F25013/201002096_FCRPS_Supplemental_2010_05-20.pdf) BPA also has coverage in the Adaptive Management Implementation Plan that was incorporated into the supplemental BiOp.

[http://www.salmonrecovery.gov/Files/BiologicalOpinions/AMIP\\_09%2010%2009.pdf](http://www.salmonrecovery.gov/Files/BiologicalOpinions/AMIP_09%2010%2009.pdf)

<sup>209</sup> [http://www.bpa.gov/corporate/pubs/RODS/2008/BPA\\_ROD\\_to\\_Implement\\_2008\\_FCRPS\\_BiOp\\_RPA.pdf](http://www.bpa.gov/corporate/pubs/RODS/2008/BPA_ROD_to_Implement_2008_FCRPS_BiOp_RPA.pdf)

<sup>210</sup> <http://www.salmonrecovery.gov/Files/2010%20BPA%20ROD%20following%20the%202010%20Supplemental%20BIOp.pdf>

<sup>211</sup> *Infra* at § VI.

<sup>212</sup> [http://efw.bpa.gov/environmental\\_services/Document\\_Library/Whistling\\_Ridge/WR\\_DEIS\\_Chapter3.pdf](http://efw.bpa.gov/environmental_services/Document_Library/Whistling_Ridge/WR_DEIS_Chapter3.pdf) at pages 3-276 to 3-278 (2008)

<sup>213</sup> [http://efw.bpa.gov/environmental\\_services/Document\\_Library/Leaning\\_Juniper/FinalLeaningJuniperITIEROD2.pdf](http://efw.bpa.gov/environmental_services/Document_Library/Leaning_Juniper/FinalLeaningJuniperITIEROD2.pdf) at 24-26 (April 9, 2009)

<sup>214</sup> [http://www.bpa.gov/corporate/pubs/RODS/2009/Golden\\_Hills\\_Wind\\_ROD.pdf](http://www.bpa.gov/corporate/pubs/RODS/2009/Golden_Hills_Wind_ROD.pdf) at 21-23 (Aug. 13, 2009)

<sup>215</sup> <http://www.bpa.gov/corporate/pubs/RODS/2009/KittitasValleyWindFinalROD090409.pdf> at 24-26 (Sept. 4, 2009)

<sup>216</sup> [http://efw.bpa.gov/environmental\\_services/Document\\_Library/Central\\_Ferry\\_Substation\\_Project/CFS\\_LowerSnakeRiverWindEnergyROD.pdf](http://efw.bpa.gov/environmental_services/Document_Library/Central_Ferry_Substation_Project/CFS_LowerSnakeRiverWindEnergyROD.pdf) at 26-28 (January 28, 2010)

<sup>217</sup> [http://www.bpa.gov/corporate/pubs/RODS/2010/JuniperCanyon\\_I\\_WindEnergyROD-5-10-2010.pdf](http://www.bpa.gov/corporate/pubs/RODS/2010/JuniperCanyon_I_WindEnergyROD-5-10-2010.pdf) at 20-22 (May 10, 2010)

specific and cumulative effects of wind integration and the system operations needed to integrate the new generators. Consistent with this NEPA analysis, Environmental Redispatch is now necessary to ensure compliance with BPA's environmental responsibilities.

Regarding Mr. Pace's comments about the effects of high water on fish, NOAA Fisheries' chum salmon spawning survey crews did not report any damage to chum redds or other fish or fish habitat during high water events in late 2010.<sup>218</sup> A BPA fish biologist who accompanied the survey team noted that "there were no unusual impacts. Flows were only in the 200 kcfs range in a stretch of the river that probably needs 800 kcfs or greater to see any bed movement."<sup>219</sup> Beyond his observations on chum salmon, the statements that Mr. Pace made about adverse effects to other kinds of fish lacked enough detail to evaluate. These facts neither substantiate Mr. Pace's personal observations regarding potential new information or changed circumstances nor his conclusions concerning the effects of high water and hydrosystem operations on Columbia River salmon.

Turning to Iberdrola's statement about the nature of BPA's decision, this policy and Business Practices simply explain how BPA will operate the FCRPS within existing FCRPS operating parameters to protect fish. This policy and Business Practices do not propose operational changes that may adversely effect the environment, and so Iberdrola appears correct insofar as it argues that the economic effects of BPA's decision do not trigger the need for further NEPA review.

Finally, a review of the actions to be taken under BPA's Environmental Redispatch policy and practices shows that they either do not trigger NEPA compliance or have already been reviewed in previous NEPA documents. The policy and business practices have three main components.

- An operational component—to protect fish by complying with the BiOp and current CWA water quality standards and ramping down wind as a last resort.
- A financial component—the decision to not pay negative pricing.
- A contractual component—the decision to unilaterally amend the LGIAs to clarify BPA's authority to implement environmental redispatch.

The first component and its potential cumulative fish impacts have been addressed in NEPA documents for previous wind interconnections, as discussed above. The second component identifies an administrative action related to finances that does not have environmental effects, and thus does not require NEPA compliance. The third component

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<sup>218</sup> Columbia River Regional Forum Technical Management Team, conference call notes (Dec. 22, 2010) ("A December 17 survey documented the effects of higher flows and runoff below Bonneville. In response to unexpected precipitation and high flows, there was a decision to maintain an around-the-clock operation of 18.5 feet for 48 hours or longer, while acknowledging the risk that chum might spawn at higher elevations during that time. The December 17 survey, however, found no evidence that spawning occurred at high elevations.") [http://www.nwd-wc.usace.army.mil/tmt/agendas/2010/1222\\_Minutes.pdf](http://www.nwd-wc.usace.army.mil/tmt/agendas/2010/1222_Minutes.pdf)

<sup>219</sup> Email from Scott Bettin, BPA biologist, to Philip Key, BPA attorney (Apr. 5, 2011) on file at BPA.

is an administrative, contractual clarification action that does not by itself have any environmental effects; and to the extent that this action suggests cumulative fish impacts, BPA considered those already.

**Decision:**

*None of the comments received identified a single potentially significant environmental effect from the proposal. BPA believes that this proposal fits within one of the classes of actions that are categorically excluded from further NEPA compliance.<sup>220</sup> BPA has documented this consideration in a Categorical Exclusion under NEPA that accompanies this decision. Adopting the Environmental Redispatch Policy and Business Practices does not trigger the need for an environmental assessment or EIS.*

**L2. Issue: Whether BPA’s Environmental Redispatch Policy decision increases hydrosystem operations that expose Native American gravesites, funerary objects, and other sacred objects.**

**Commenter’s Position:**

Donald Kieffer notes that Grand Coulee is a wind balancing resource and those operations expose gravesites, funerary objects, sacred objects, etc.<sup>221</sup> He states that wind integration has severe impacts on Native Americans in and around Grand Coulee and adverse effects on fish, water quality, and shoreline vegetation. Therefore, he requests consultation regarding the proper disposition of human remains, and other materials, as appropriate.

**Evaluation of Positions:**

Under the policy BPA would continue managing the FCRPS with the Bureau of Reclamation and the Army Corps of Engineers within existing operating constraints which have been examined for environmental effects to Native Americans already.<sup>222</sup> BPA will continue to comply with the System Operation Review EIS and ROD, including funding and participating in the FCRPS Cultural Resources Program to properly address human remains and artifacts as provided in federal statutes.

**Decision:**

*BPA will continue to fund the Spokane Tribe, the Confederated Colville Tribes, as well as many others to help implement the FCRPS Cultural Resource program and Columbia River Fish and Wildlife Program to appropriately address these important tribal resources.*

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<sup>220</sup>10 CFR 1021.410, Appendix B to Subpart D, B4.1.

<sup>221</sup> Comments of Donald G. Kieffer at 1.

<sup>222</sup> See generally, Columbia River System Operations EIS (Nov. 1995), Appendix D Cultural Resources, and Record of Decision (Feb. 21, 1997).

## **M. Public Process**

### **M1. Issue: Whether BPA should establish an on-going process for reviewing Overgeneration occurrences and current and past practices, and maintaining regional coordination.**

#### **Commenters' Position:**

WPAG indicates that BPA should include “a commitment to a yearly meeting with its customers to discuss the environmental redispatch policy and associated protocols.”<sup>223</sup>

#### **Evaluation of Positions:**

BPA agrees that regional coordination is needed on an on-going basis as overgeneration conditions and possible Environmental Redispatch issues are being confronted. BPA is in the process of developing a regular series of meetings to review recent system conditions including loads, export capability, and the full spectrum of resource types operating in the region.

#### **Decision:**

*BPA will host a regional forum for reviewing potential and actual Overgeneration and Environmental Redispatch events. Additional meetings will be held on an as-needed basis.*

### **M2. Issue: Whether BPA should postpone issuing the currently proposed policy and convene a regional forum.**

#### **Commenters' Position:**

Save Our Wild Salmon “urges BPA to withdraw this misguided proposal and focus on real solutions to the problem.”<sup>224</sup>

Community Renewable Energy Association urges “BPA to abandon their proposed discriminatory policy and convene a series of regional workshops to reach a conclusion where all generators in the Northwest share proportional reductions...”<sup>225</sup>

Nextera Energy and Vestas Americas “encourage[] the BPA to postpone finalizing the ROD...”<sup>226</sup>

EnXco states that “[g]iven the large number of practical and cost-effective alternatives to Bonneville’s proposal, enXco believes that Bonneville must do more to work with the region to develop an equitable and durable framework...”<sup>227</sup>

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<sup>223</sup> Comments of WPAG at 6.

<sup>224</sup> Comments of Save Our Wild Salmon at 4.

<sup>225</sup> Comments of Community Renewable Energy Association at 1.

<sup>226</sup> Comments of NextEra Energy at 1; Comments of Vestas Americas at 1.

<sup>227</sup> Comments of enXco at 12.

The Northwest Energy Coalition “urges BPA to abandon formal adoption of the Draft ROD and instead seek clarity by committing to a cooperative regional effort...”<sup>228</sup>

**Evaluation of Positions:**

BPA agrees that it will be necessary to continue to work with regional stakeholders on long-term solutions to overgeneration events in the Pacific Northwest, but BPA believes that an Environmental Redispatch Policy is necessary at this time to establish protocols to deal with overgeneration events that may occur this spring. BPA intends to initiate regional discussions on issues related to the Environmental Redispatch Policy, and BPA looks forward to working with stakeholders in that forum.

**Decision:**

*BPA is moving forward with the Environmental Redispatch and Negative Pricing Policies in this Final ROD on an interim basis, but BPA agrees that an ongoing regional forum is needed and will be defining and implementing that process immediately.*

**N. Actions Taken Prior to Triggering Environmental Redispatch**

**N1. Issue: Whether BPA should defer some “reasonable actions” and go straight to Environmental Redispatch to avoid the costs of actions taken to avoid Environmental Redispatch.**

**Commenters’ Position:**

PPC states that that BPA should pursue the options for avoiding Environmental Redispatch “as time and conditions allow but ‘reasonable’ actions should balance effectiveness and cost in taking an option.”<sup>229</sup>

WPAG proposes that BPA should assess the costs or losses associated with BPA actions to forestall or eliminate the need for Environmental Redispatch within the next twelve months and balance the costs of BPA preemptive actions against any financial exposure to non-federal generation that is redispatched in accordance with the Environmental Redispatch policy.<sup>230</sup>

**Evaluation of Positions:**

Although WPAG and PPC do not define the cost or losses relative to BPA actions addressed in their comments, BPA does not expect that actions taken to avoid Environmental Redispatch will result in unreasonable net costs to the Agency. WPAG’s primary concern appears to be the financial impacts on Agency revenues from more frequent conditions where the value of energy is low or zero.

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<sup>228</sup> Comments of the Northwest Energy Coalition at 2.

<sup>229</sup> Comments of PPC at 2.

<sup>230</sup> Comments of WPAG at 3.

In the marketplace there are various resource types, each with their own operational characteristics and variable operating costs. As long as resources have the flexibility to operate or not operate they can be willing buyers and sellers of energy and that may result in a lower market price for energy or FCRPS spill consistent with BPA non-power operations. BPA's Environmental Redispatch and Negative Pricing Policies are directed more narrowly at periods when FCRPS generation does not have the flexibility to cease generating electricity. Under those conditions, the marketplace is not an effective solution because BPA would be compelled to accept the demands of the buyer since BPA cannot reliably generate in excess of load. However, when there is available load that could be served with FCRPS generation, BPA is expected to operate consistent with its environmental responsibilities.

**Decision:**

*BPA does not believe that its actions to avoid Environmental Redispatch expose the agency to unreasonable costs and will only take those actions that are reasonable under the specific circumstances.*

**N2. Issue: Whether BPA should consider the facts and conditions known at the time to determine the reasonable actions to take prior to implementing Environmental Redispatch.**

**Commenters' Position:**

WPAG suggests that BPA should evaluate the actions that it would take to avoid Environmental Redispatch based on the conditions at the time and only implement those actions that are reasonable for the conditions.<sup>231</sup> Springfield Utility Board also offers that the actions BPA proposes to avoid Environmental Redispatch should be non-exclusive and non-prescriptive.<sup>232</sup> PPC states that options to manage TDG prior to Environmental Redispatch should be pursued as time and conditions allow, but effectiveness should be considered.<sup>233</sup>

**Evaluation of Positions:**

BPA's objective with respect to the actions it proposes to take before implementing Environmental Redispatch is to manage TDG levels consistent with the Clean Water Act when those actions can be reasonably implemented. BPA takes this objective seriously, and this objective existed prior to the policies in this ROD. BPA agrees that it should consider conditions at the time when implementing actions to avoid Environmental Redispatch. BPA may encounter conditions that make certain actions ineffective or even counterproductive to achieving the objective described above. There are often considerable uncertainties in the operation of the FCRPS where an action can be helpful under one potential outcome and harmful under another. BPA must often make decisions based on a large range of potential outcomes and attempt to balance multiple risks to the operation. Certain actions could conflict with electric reliability or non-power objectives

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<sup>231</sup> Comments of WPAG at 3.

<sup>232</sup> Comments of the Springfield Utility Board at 5.

<sup>233</sup> Comments of PPC at 2.

unrelated to TDG management under certain circumstances. BPA must evaluate all these risks in implementing an action. BPA does not view the actions it proposes to take prior to implementing Environmental Redispatch as mandatory.

**Decision:**

*BPA will consider the facts and conditions known at the time when implementing actions prior to implementing Environmental Redispatch.*

**O. Miscellaneous Issues**

**O1. Issue: Does the Environmental Redispatch policy have unintended consequences on the long-term Regional Dialogue contracts?**

**Commenters' Position:**

PPC states that "BPA should ensure there are no unintended consequences to requirements customers from the interaction between this policy and long-term Regional Dialogue contracts."<sup>234</sup>

**Evaluation of Position:**

Under the Regional Dialogue contracts between BPA and its preference customers, the customers may choose to procure power either from BPA or procure the power from non-federal resources to serve load growth. It is probable that some of the non-Federal generation resources that preference customers choose to develop or contract with will be impacted by Environmental Redispatch. This should have no effect on the requirements and obligations in the Regional Dialogue contract. During the Environmental Redispatch the preference customer's non-Federal resource will be replaced by zero cost Federal power and for purposes of the Regional Dialogue contract the power will be treated as if it were generated by the preference customer's non-Federal resource.

**Decision:**

*BPA does not believe the Environmental Redispatch and Negative Pricing ROD will have any impact on BPA's Long-Term Regional Dialogue contracts.*

**O2. Issue: How BPA should document the reasons for and the steps taken prior to an Environmental Redispatch event.**

**Commenter's Position:**

PNGC suggests that BPA should explain in detail the list of steps it will take before each Environmental Redispatch, and carefully document the reasons for and the steps taken prior to each individual Environmental Redispatch event. PNGC believes these steps will better protect the agency from after-the-fact challenges from third party generators or from others following an Environmental Redispatch event.<sup>235</sup>

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<sup>234</sup> Comments of PPC at 2.

<sup>235</sup> Comments of PNGC at 5; See also Comments of NRU at 3.

**Evaluation of Position:**

In the policy section of this Final ROD, BPA has described the conditions that would lead to an Environmental Redispatch event and steps that BPA will take prior to implementing Environmental Redispatch.<sup>236</sup> In the Business Practices, BPA has detailed the process for implementing an Environmental Redispatch.<sup>237</sup>

Following the June 2010 high water event, BPA developed a comprehensive report on the conditions that BPA faced and the steps that were taken by BPA during the event.<sup>238</sup>

This report was used to kick off the process that led to this ROD. Based on the experience of last June and the development of the comprehensive report associated with that event, BPA anticipates that it will carefully document the conditions and steps taken prior to and during an Environmental Redispatch event.

**Decision:**

*BPA expects to document the conditions and operational steps prior to and during an Environmental Redispatch event. BPA agrees with PNGC's comment.*

**O3. Issue: Whether BPA should consider Sea Breeze's Juan de Fuca project as a solution for an overgeneration events.****Commenters' Position:**

Sea Breeze Pacific Regional Transmission Systems Inc. ("Sea Breeze") suggests that BPA's final ROD include "efforts to increase intertie capacity to Canada, also, for the reasons that it is the least costly near-term solution and British Columbia is in an overall energy supply deficit situation..."<sup>239</sup>

**Evaluation of Position:**

Transmission infrastructure improvements, like those suggested by Sea Breeze, are likely to have significant costs and lead times. As a result, such improvements are unlikely to resolve the overgeneration issues that BPA must confront in the short-term.

Nevertheless, BPA will continue to consider such long-term opportunities to address or prevent occurrences of overgeneration.

**Decision**

*BPA will continue to consider long-term solutions to overgeneration situations in BPA's Balancing Authority Area.*

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<sup>236</sup> *Supra*, Section III.A.

<sup>237</sup> Environmental Redispatch Business Practice, Version 1 (Mar. 18, 2011) (available at [http://transmission.bpa.gov/ts\\_business\\_practices/Content/PDF\\_files/Env\\_Redispatch\\_V1\\_4.pdf](http://transmission.bpa.gov/ts_business_practices/Content/PDF_files/Env_Redispatch_V1_4.pdf)).

<sup>238</sup> Columbia River High Water Operations [June 1-14, 2010] (Sept. 2010) (available at <http://www.bpa.gov/corporate/pubs/final-report-columbia-river-high-water-operations.pdf>).

<sup>239</sup> Comments of Sea Breeze at 2.

#### **O4. Issue: Whether energy storage capacity can address overgeneration issues.**

##### **Commenters' Positions:**

Wild River Consulting/Symbiotics proposed “an alternative strategy for incorporating renewable energy when it exceeds the capacity of the current system.” They indicate they are “in the licensing process for two large closed-loop pumped storage (CLPS) hydroelectric projects... with the potential to aid wind integration in the [western interconnection], support BPA, and reduce curtailment.”<sup>240</sup>

David Galle, a Mason County PUD #1 customer, states that “our real issue is not overgeneration, but instead the lack of capability to store energy.”<sup>241</sup>

Mark Crossler supported the use of a “battery back-up system” to absorb excess power.<sup>242</sup>

##### **Evaluation of Positions:**

Energy storage is outside the scope of this policy; however, it is a technology that BPA and others in the region are evaluating. As the region continues to adjust the resource mix to meet future needs and accommodate policy objectives storage may be necessary to address overgeneration and to provide the dispatch flexibility necessary to respond to increased operational uncertainty. Some of these technologies are available today and some are at the demonstration stage. However, they are not options for addressing overgeneration at this time given the necessary lead time for these technologies and the cost of development and implementation.

##### **Decision:**

*Energy storage is outside the scope of this policy; however, BPA will continue to explore new solutions to this problem.*

#### **O5. Issue: Whether BPA will apply penalties for failure to comply with Environmental Redispatch orders.**

##### **Commenters' Positions:**

Springfield Utility Board comments that “BPA must impose a financial penalty for those resource operators that fail to curtail during an Environmental Redispatch directive from BPA.”<sup>243</sup>

##### **Evaluation of Positions:**

As specified in the Business Practices, an order to reduce generation under Environmental Redispatch will be a Dispatch Order that is subject to BPA’s Failure to Comply Penalty Charge (FTC) under Section II.B of BPA’s Transmission Services

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<sup>240</sup> Comments of Symbiotics at 1.

<sup>241</sup> Comments of Galle at 1.

<sup>242</sup> Comments of Crossler at 1.

<sup>243</sup> Comments of SUB at 6.

General Rate Schedule Provisions. Under the FTC, the “[f]ailure of a generator in the BPA [Balancing Authority Area] or which directly interconnects to the FCRTS to change or limit generation levels” will be subject to the FTC. Currently, the FTC is 1000 mills per kilowatthour (\$1000 MWh), and is calculated based on the amount of kilowatthours that were not redispatched pursuant to the Dispatch Order.

**Decision:**

*BPA will apply the FTC to generators that fail to comply with BPA’s Dispatch Orders to limit generation for Environmental Redispatch.*

## VI. ENVIRONMENTAL EFFECTS

BPA is proposing to implement an interim policy and Business Practice focusing on Environmental Redispatch and Negative Pricing. The proposal describes the methods that the agency will use during times of high water to protect natural resources and comply with the CWA and the ESA while meeting BPA's fiscal, statutory, and contractual obligations. As described elsewhere in this Final ROD, the contractual amendments that BPA will be implementing simply clarify existing contractual rights, the operational procedures to be implemented are intended to avoid environmental effects, and the decision to not pay negative energy prices is primarily a financial and administrative decision. After closely examining these and other aspects of the proposal, BPA has determined that there are no direct environmental effects associated with the proposal; to the extent that any potential indirect environmental effects arguably can be traced to the proposal, these effects have already been previously considered by BPA.<sup>244</sup> Furthermore, the proposal falls within a class of actions categorically excluded from further NEPA review pursuant to applicable NEPA regulations. Accordingly, BPA has prepared an Environmental Clearance Memorandum for the interim policy and Business Practice that considers environmental implications of the proposal and documents the categorical exclusion of the proposal from further NEPA review.<sup>245</sup>

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<sup>244</sup> BPA has observed that during periods of high water and excess generation there is a risk that total dissolved gases may exceed allowable levels safe for fish listed under the Endangered Species Act. BPA has previously discussed the environmental impacts of these conditions – conditions which have existed prior to the implementation of the policies in this ROD. See, for example, [Record of Decision for the Electrical Interconnection of the Juniper Canyon I Wind Project](#), May 2010, p. 20 (and other RODs related to the interconnection of wind projects).

<sup>245</sup> This memorandum is at [http://efw.bpa.gov/environmental\\_services/categorical\\_exclusions.aspx](http://efw.bpa.gov/environmental_services/categorical_exclusions.aspx). BPA has addressed NEPA-related and other environmental issues related to this proposal that were raised during the public comment period in its response to comments on the draft policy and principles.

## VII. CONCLUSION

After consideration of all public comments, BPA will adopt the Environmental Redispatch and Negative Pricing Policies described in this Final ROD on an interim basis in order to meet BPA's environmental and legal responsibilities, and to provide needed options to maintain system reliability. This Final ROD will take effect upon execution by the Administrator and remain in effect until March 30, 2012. BPA has multiple competing environmental, statutory, and reliability responsibilities, and the Final ROD strikes a reasonable balance between those responsibilities while BPA explores alternative solutions to this problem.

Issued in Portland, Oregon.

/s/ Stephen J. Wright  
Stephen J. Wright  
Bonneville Power Administration  
Administrator and Chief  
Executive Officer

May 13, 2011  
Date

