

BPA Policy 130-2

Functional Statement for Power Services

Power Services

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1. Power Services

Pursuant to BPA’s enabling statutes and in accordance with Power Services’ mission to be a trusted steward of the Columbia River Power system, Power Services provides power and environmental value to the people of the Pacific Northwest. With considerable customer input and public involvement, Power Services manages the production and marketing of BPA’s power products and services through the following organizations: Power Business Operations provides guidance in the areas of strategic direction and governance, and develops Power’s market price and revenue forecasts; Energy Efficiency promotes the efficient use of energy through conservation in the Pacific Northwest and administers BPA’s energy conservation contracts; Generation Asset Management develops plans, performs analysis, and interfaces with partners to manage generation resources for the production of electric power; Requirements Marketing maintains the business interface with BPA’s public utility customers as well as develops power products and services offered by Power Services as well as the associated rates; Bulk Marketing performs all surplus power marketing, and account servicing for bulk power transactions.

The Senior Vice President (SVP) provides executive-level leadership in guiding Power Services. The SVP is responsible for maintaining executive-level relationships with other BPA executives as well as executives at the helm of Power’s customers, the Corps of Engineers, the Bureau of Reclamation, and Energy Northwest. The SVP ensures Power Services’ strategy is integrated with the Agency’s strategic direction. The SVP ensures that Power Services’ efforts comply with internal agency policy, guidance, and business targets.

2. Power Business Operations

Power Business Operations is responsible for leading and coordinating strategic direction, analysis, and governance activities within Power Services. As part of these responsibilities, Power Business Operations produces the Resource Program and provides analytical services, including firm power revenue forecasting, net secondary revenue forecasting, long-term natural gas price forecasting, long-term electricity market price forecasting, market assessment analysis, and risk analysis for Power Services. Power Business Operations supports the Power Services senior leadership team by developing business and strategic plans and processes; preparing Power Services-wide strategic management reports and assessments, including those related to key targets and objectives; coordinating Power Services’ participation in and compliance with cross-agency governance initiatives, such as OMB Circular A-123; and supporting data and process management. Power Business Operations also manages the Power Services Student Intern program.

A. The Power Forecasting and Planning group is responsible for leading and coordinating strategic direction and analysis activities within Power Services. As part of these responsibilities, PBA produces the Resource Program and provides analytical services, including net revenue analysis, firm power revenue forecasting, net secondary revenue

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forecasting, long-term natural gas price forecasting, long-term electricity market price forecasting, market assessment analysis, and risk analysis for Power Services.

B. The Quality Management and Process Improvement organization supports the Power Services senior leadership team by developing and implementing business metrics, plans and processes, including those related to established business targets and objectives. This organization provides technical guidance to management and staff for process management, process performance measurement, and process improvement. This organization represents Power Services in management on committees chartered by Compliance, Audit, and Risk and also coordinates work in Power Services’ in response to cross-agency efforts directed by Compliance, Audit and Risk organizations, such as OMB Circular A-123.

3. Energy Efficiency

Energy Efficiency promotes the efficient use of energy in the Pacific Northwest. Energy Efficiency administers BPA’s conservation acquisition contracts, provides technical and administrative support for BPA’s market transformation activities, and produces and delivers energy efficiency programs, products, and services. Energy Efficiency provides leadership in conservation for the regional energy market and facilitates the development of cost-effective, direct-application renewable resources. Energy Efficiency includes four functional groups:

A. The Planning and Evaluation function provides market research, offering design, support, reporting and analysis. The team develops departmental policy as well as tracks, monitors, and evaluates programs.

B. The Program Implementation function develops, markets, and manages energy efficiency projects, programs, products, services, and initiatives. This function develops standards, methods, and techniques for conservation acquisition programs and provides field services, which include customer service project management, system analysis, and inspections. This function provides technical field-work in support of Federal reimbursable projects and establishes protocols for measuring and verifying energy savings. The Program Implementation function comprises three subgroups:

1. The **Program Marketing** group markets Energy Efficiency programs, products, and services to customer utilities, consumers, and other stakeholders. It also provides information, education, and outreach activities that support the implementation of energy efficiency programs, mission, and vision.
2. The **Programs** group provides overall program management to meet the energy efficiency savings goals, including management of the Federal sector billable work for others. This group also administers grants with states and tribes, which support energy efficiency work in low-income households. This group performs billable work for Federal sector entities through billable agreements established between BPA and the Federal agency. The authority to meet energy conservation goals through

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billable work is the Bonneville Project Act, 16 USC 832 et seq. and the Pacific Northwest Power Planning and Conservation Act, 16 USC 839 et seq.

3. The **Engineering Services** group is comprised of two sub-teams: the customer service implementation team which provides expertise in shaping end use loads for BPA’s customers and the Energy Efficiency Emerging Technologies team (E3T) which studies and tests new energy saving technologies for their technical merit and market potential.
- C. **The Contract Administration** function oversees energy efficiency acquisition contracts with BPA’s utility customers; assists in, contract negotiations; and manages customer utilities Energy Efficiency Incentive budgets.
 - D. **The Demand Side Management (DSM) Technologies** function is responsible for advanced communications, technology research, development, and demonstration, and market development to improve transmission grid efficiency and optimize generation resources. This function implements the “energy web” vision through demonstrations, pilot programs, education, and collaboration with BPA stakeholders, customers, and constituents.

4. Generation Asset Management

Generation Asset Management is responsible for the financial and operational management of Federal Columbia River Power System (FCRPS) generating assets. The organization works with Federal and Non-Federal partners on capital and expense funding of FCRPS generating resources; the long-term, mid-term and short-term planning of generating resource capability; administration of the Slice power product; development of strategies in conjunction with the U.S. Army Corp of Engineers (USACE) and Bureau of Reclamation (Reclamation) to meet FCRPS power and non-power requirements for both the strategic and operational timeframes; and real-time implementation of FCRPS operations and power products.

- A. **Fish Operations Policy and Planning** designs and conducts the Endangered Species Act, Biological Opinion operations, and other fish and wildlife operations and consultations in cooperation with BPA’s Environment, Fish and Wildlife organization. It establishes outcomes, priorities, and strategies for the hydro system in coordination with other Federal agencies, Tribes, states, customers, and constituent groups.
- B. **Contract Generating Resource** administers BPA’s contracts for the output of generating resources BPA acquires. This includes contracts with Energy Northwest for the output generation of the Columbia Generating Station.
- C. **Federal Hydro Projects** manages the business relationship with the USACE and Reclamation through the Joint Operating Committee, and is responsible for implementing the terms and conditions of the Operations and Maintenance and Capital Direct Funding Agreements that provide funding to the 31 generating projects of the FCRPS.

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D. **Slice Operations and Management** is responsible for developing and administering the programs, systems, and processes necessary to implement the Slice product operationally and financially. In the implementation of the Slice product, this group coordinates with parties throughout the region on subjects ranging from FCRPS operations, to power policy and rates, to contract interpretation issues.

E. **Power and Operations Planning** provides loads and resource planning estimates for a variety of planning and operational purposes, ranging from long term (10 years into the future on a regional basis) to near term (Federal inventory based on current water supply and operating requirements). All groups coordinate closely with a variety of Federal and state partners.

1. **Regional Coordination** leads all activities under the Columbia River Treaty for preparation of the Assured Operating Plan, Determination of Downstream Power Benefits, the Detailed Operating Plan, the Treaty Storage Regulation studies, and special studies. Supports the Treaty Operating Committee and the U.S. Entity through the Secretary of the U.S. Entity. Supports studies and planning activities under the Columbia River Treaty. Leads and supports all planning activities under the Pacific Northwest Coordination Agreement. Also performs special studies such as climate change. Planning horizon: 1 year to 6 years and planning post-2024.
2. **Operations Planning** provides short- to mid-term inventory forecasts, operational coordination, hydraulic analyses of reservoir operations, weekly treaty planning, energy and capacity analyses, economic analyses to maximize the system while meeting regional non-power requirements including Endangered Species Act requirements, power supply reliability, potential firm energy/capacity load, and surplus power marketing strategies. Works with BC Hydro, USACE, Reclamation, National Marine Fisheries Service, Technical Management Team, and state and tribal fishery agencies. Internal customers include the Trading Floor, Risk, Rates, Scheduling, and Slice Groups. Also performs special studies such as climate change. Planning Horizon: 1 week to 18 months.
3. **Long Term Power Planning** provides long-term inventory forecasts, including the White Book, resource adequacy, needs assessment and support for the resource program, loss of load probability development and studies. Provides system planning and analyses (hydro regulation studies) for rate development, Biological Opinion modeling, long-term changes in non-power requirements and regional reliability. Leads development of LORA for long-term planning needs. Coordinates with NERC/WECC on activities for long-term adequacy assessments and reporting. Coordination with outside groups includes Pacific Northwest Utilities Conference Committee and PNW Electric Power and Conservation Planning Council. Also performs special studies, such as climate change. Planning Horizon: 1 year to 10 years.
4. **Weather and Streamflow Forecasting** provides state-of-the-science weather, streamflow, and water supply forecasts for optimizing load forecasting, power

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marketing, hydroelectric system operations, and system reliability on time scales ranging from hours to months. Provides weather and streamflow forecasts, probabilistic analysis, and climatological assessment for other decision-support functions in BPA. Leads the historical modified flows analysis project for the agency. Leads climate change research activities relating to meteorological and hydrologic states of the Columbia River Basin. Supports agency integration of wind energy, and the future integration of other weather, and streamflow, dependent renewable energy sources. Contributes to the broader scientific community to improve the accuracy of weather and streamflow forecasts. Planning Horizon: 1 hour to 18 months.

F. **Generation Scheduling** develops and administers programs, systems, and processes related to real-time generation operations, short-term hydro system and nuclear plant planning. Also develops and implements policy, systems and processes to provide generation-related services to Bonneville’s transmission functions and coordinates operations plans with transmission operations short-term planning functions.

1. **Duty Scheduling** provides 24-hour coverage of the real-time scheduling and hydraulic operations of the FCRPS meeting generation reliability and Biological Opinion objectives as well as ensuring the multipurpose use of the river. This includes interpreting and operating within polices related to system operations. The shift staff provides real-time implementation of the Slice Contract. Day staff coordinates on cross agency or intra-agency projects that impact the real-time operation of the FCRPS and technical tool development.
2. **Short-Term Planning** is responsible for developing and administering programs, systems, and processes related to short-term planning of the FCRPS. Short-Term Planning coordinates and prepares prudent operational plans for the FCRPS; coordinates with relevant Federal agencies on risk mitigation for complex or conflicting operational requirements; performs analysis which assesses flexibility for power marketing while meeting operational objectives; communicates any available additional operational flexibility to BPA energy traders and real-time operators. In addition, Short-Term Planning coordinates Non-Treaty Storage Agreement Operations, implements procedures required for the Pacific Northwest Coordination Agreement, and develops scheduling procedures for transmission system limitations.
3. **Policy and Technical Support** provides expertise in matters related to within-hour services provided by the FCRPS, assesses operational impacts for sales of surplus firm power, rates, policy development, and investigations. Team members provide representation in long-term contract decisions and in establishment of rates and requirements for generation inputs used for control area services and ancillary services, coordinate regulatory compliance for Generation Asset Management, support for real-time schedulers in the Generation Scheduling Duty Scheduling group, and participate in and develop analysis for issues related to wind integration.

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Provides policy development and internal and external coordination for the implementation of the Mid-Columbia Hourly Coordination Agreement.

5. Northwest Requirements Marketing

Northwest Requirements Marketing develops products, services, and rates. This function creates and maintains the business interface with BPA customers. It is responsible for meeting or exceeding established targets for sales and revenue, customer satisfaction, and costs. NW Requirements Marketing includes five functional groups:

The Vice President provides executive leadership and strategic guidance for the marketing, selling, and servicing accounts processes including process improvements. Also, the Vice President provides resources to support the Requirements Marketing servicing functions.

- A. **Power Rates** develops, in conjunction with rate case parties and participants, rate schedules and rate provisions for standardized power products; ensures proper rate implementation; supports the development and implementation of products; and provides rate impact analyses for BPA financial decision-making. Power Rates developed and manages the Tiered Rate Methodology. It provides analytical support for other groups including finance, billing, and Account Executives.
- B. **The Residential Exchange Program** group administers BPA’s Residential Exchange Program (REP) specified in section 5(c) of the Pacific Northwest Electric Power Planning and Conservation Act of 1980. Program staff determine exchanging utilities’ Average System Costs, consistent with the 2008 ASC Methodology. It also determines and quantifies effects of BPA power-related program and policy changes on REP benefits; manages and implements the Program’s budget; and approves REP payments. The Residential Exchange Program provides joint implementation and oversight, with the Requirements Marketing group, of the Residential Purchase and Sale Agreements and Residential Exchange Program Settlement Implementation Agreements.
- C. **Customer Account Executives (AEs)** serve as BPA’s primary point-of-contact for the needs and overall business relationship with BPA’s public power and investor-owned utility customers in the Northwest. The AEs negotiate and execute Power Sales Agreements and execute energy efficiency agreements and Residential Exchange Program agreements. They resolve issues raised by customers and are responsible for ensuring a high level of customer satisfaction. The AEs also lead customer account teams (CAT) comprised of staff experts from within Requirements Marketing and other BPA organizations. The CATs support the AEs to ensure that customer needs and issues are effectively addressed.
- D. **Power Account Services** provides contract development, policy development support, technical analysis, and negotiation support for the AEs and BPA decision makers. The support provided by Power Account Services helps ensure that customer satisfaction and other targets are met.

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- E. **Transfer Account Services** acquires transmission services from non-Federal parties for delivery of power and energy to preference customers. In cooperation with, and support of, Account Executives, Scheduling Coordination and Bulk Marketing staff members develop strategies and protocols for managing transfer services, determining expense budget estimates, estimating seasonal and annual capacity requirements, and coordinating utility system expansion with transmission providers. Transfer Account Services monitors transmission provider tariff and business practices proposals, participates in planning activities, and conducts special studies and analyses.

6. Bulk Marketing

The Bulk Marketing organization is responsible for long- and short-term marketing of surplus power including reserve services marketing, transmission acquisition, resource acquisition and scheduling coordination. These are supported by Bulk Marketing’s pricing and analysis, contract administration, after-the-fact, and information management functions.

Bulk Marketing conducts all BPA non-requirements power marketing functions, including sales, purchases, and account servicing in the bulk power, reserves, transmission, and financial futures markets. Areas of responsibility include Pacific Northwest (PNW) wholesale marketers; utilities outside the PNW; and all active wholesale marketers and brokers in the Western Systems Coordinating Council (WSCC), both inside and outside the PNW, including Canadian and California markets. Bulk Marketing purchases transmission to support its marketing activities and manages transmission inventory. It represents Power Services in transmission policy forums and acts as Power Services’ liaison with Transmission Services, the California Independent System Operator (CAISO), and other WSCC transmission parties. Bulk Marketing is responsible for all Power Services resource acquisitions and for managing BPA’s renewable resource program. The Bulk Marketing organization includes the following five groups:

A. Trading Floor

1. **The Trading Floor** focuses on short-term marketing of surplus power (generally 24 months or less in duration), system balancing purchases, and reserve services. Working closely with Generation Asset Management, the Trading Floor attempts to optimize the value of the FCRPS for the PNW by marketing short-term surplus energy to regional and extra regional entities. Products marketed by the Trading Floor include forward, balance-of-month, within-month, and daily power transactions, as well as financial futures. The organization also manages existing transmission inventory, including short-term redirects, purchases, and the resale of excess trading floor transmission.
2. **Real Time** executes the hourly and daily marketing functions associated with the sale and purchase of power, transmission and reserve services. This function also performs the loads and transmission scheduling functions required to (a) receive, verify, and validate scheduling data; (b) create schedules (including “book outs” and

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“path outs”); (c) acquire and assign transmission; (d) create E-tags and link E-tags to schedules; (e) submit schedules to Transmission Services; and (f) end-of-day check-out with Transmission Services.

B. Long-Term Sales and Purchases executes long-term surplus sales, purchases, and exchanges (generally greater than 18 months in duration). Such sales include energy, capacity, reserve services, and renewable resources. Long-Term Sales and Purchases also manages the environmental attributes program. Long-Term Sales and Purchases acquires long-term transmission to support Bulk Marketing sales and purchases; develops long-term marketing strategy for its assigned areas of responsibility and sales of generation inputs to Transmission Services; negotiates and develops contracts for long-term surplus marketing activity and resource acquisitions; and serves as Power Services’ primary point-of-contact for all extra-regional customers, independent power producers (IPPs), marketers, and the Direct Service Industrial customers.

C. Scheduling Coordination is responsible for establishing, implementing, and accounting for energy schedules and necessary transmission arrangements with utilities, other customers, and transmission providers.

1. **Power Scheduling Pre-schedule** is a five-day per week operation. Major areas of responsibility include (a) receiving, verifying, and validating scheduling data; (b) creating schedules (including "book outs" and "path outs"); (c) acquiring and assigning transmission; (d) creating E-tags and linking E-tags to schedules; (e) submitting schedules to Transmission Services; and (f) end-of-day check-out with Transmission Services.

2. **Transfer Scheduling and After-the-Fact** is primarily responsible for two major functions: (a) pre-scheduling BPA transfer customer loads located outside the BPA balancing authority area; and (b) reconciling power scheduled in accordance with provisions of (1) surplus sales and purchase contracts and (2) long-term agreements, including Canadian Entitlement, exchange contracts, wind generation contracts, Slice, Transfer Service Agreements, peaking contracts, and ancillary services. After-the-Fact provides reconciliation/verification reports to Billing and Finance.

D. Bulk Marketing Contract Support performs back office functions in support of the Trading Floor and Long-Term Sales and Purchases. Trading Floor contract administration functions include processing trades, managing the confirmation process, and end-of-day checkout; maintaining TMS customer data; and producing inventory and strategy reports. California settlement functions include validating and reconciling CAISO transaction data, invoice processing, reporting, and dispute resolution. Long-term contract administration functions include developing and tracking contract implementation plans and administering renewable resource contracts. Information management functions include performing querying and reporting services for internal and external parties. Other duties include contracting officer’s technical representative functions, Bulk Marketing support functions, and project sponsorship and team representation.

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E. **Market Analysis and Pricing** performs market analysis, product pricing, transaction and strategy analysis, and inventory tracking in support of the Trading Floor and Long-Term Sales and Purchases. Market analysis encompasses West coast wholesale power markets and natural gas fundamentals. Pricing includes surplus energy and capacity products, reserve services, and other market price-based power products.

7. Review

BPA Functional Statements are reviewed and updated as required due to changes in delegations of authority, statutory changes, or organizational changes.

8. Revision History

Version	Issue Date	Description of Change
2	2 June 2014	Reformatted into new policy template.
3	2 March 2015	Updated with current Power Services functions.
4	27 June 2016	Updated with current Power Business Operations functions
5	22 December 2016	Update Trading Floor and Real Time functions per Anne Draper

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