WE ENERGIZE THE PACIFIC NORTHWEST

Transmission Value Proposition
- Operating a High Performing Grid
- Enabling Economic Growth in the Region
- Providing Access to Federal and Non-Federal Resources And Markets

Through Excellence
- Product Portfolio: Providing standardized options, value-based price profiles, drawing from integrated regional planning
- Infrastructure: Advanced situational awareness, right-sized investments in assets, value and risk-based asset management
- Long-Term Viability: Integrated and efficient processes, data-driven decision making, innovation and continuous improvement

A Dependable and Responsive Business Partner

Safety | Trustworthy Stewardship | Collaborative Relationships | Operational Excellence

Working Draft, Pre-Decisional
Version 3.0

September 2017
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Version Change Log

We included feedback from the Office of General Counsel in this version 2.5.

Summary of changes from working draft v.2.5:
Chapter 1 – No changes
Chapter 2 – No changes
Chapter 3 – No changes
Chapter 4 – No changes
Chapter 5 – Value Proposition elaborated with customer experience statements
Chapter 6 – Business Model Focus Areas added required changes
Chapter 7 – Updated with next step description
Appendix – No changes
Appendix – No changes
Letter from the Senior Vice President: The Need for Change\(^1\)

*When the final version of this document is complete, this section will be replaced with an executive summary that describes the reasoning behind the Transmission of Tomorrow, details about the change itself and key considerations for implementation.*

As I reflect on the future of Transmission, I want to pause and highlight two of the key components of Bonneville Power Administration’s Mission:

- The Bonneville Power Administration’s mission as a public service organization is to create and deliver the best value for our customers and constituents ...
- A transmission system that is adequate to the task of integrating and transmitting power from federal and non-federal generating units, providing interregional interconnections, and maintain electrical reliability and stability...

I highlight these excerpts because it serves as the guiding light for our organization. “The mission and vision of an organization is its lifeline to sustainability. They establish its purpose of being today and aspiration of tomorrow. A clear mission offers organizations a pragmatic lens for every day decision-making”\(^2\)

This is particularly important as the agency continues the Focus 2028 discussion in FY17. Focus 2028 is about facilitating a dialogue with our customers and stakeholders focused on the future and how we continue providing value to the region. It is designed to inform BPA with a longer view, beyond our standard rate period by rate period analyses, reflected in our 2-year Integrated Program Review (IPR) and Capital Investment Review (CIR) cycles, and addresses our aging infrastructure, evolving customer needs, long-term financial health and BPA’s value propositions.

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1. Transmission Quarterly Report - SVP Message - Q1 2017
2. The Importance of Mission and Vision - Craig Pladson August 29, 2011
In the summer of 2016, the Lead Team reviewed the landscape we operate in, drivers acting upon it and potential implications for BPA and its customers. We came to the following important conclusions:

- Transmission exists in an increasingly dynamic, uncertain and quickly changing environment
- We have diverse customers with complex needs, some of which may be at odds with each other under our current products and services portfolio
- We are facing capital and expense pressures and our system is aging and becoming more constrained

These conclusions demand a responsive and modern approach to the way we position ourselves commercially (create value) and how we align as a Transmission organization to deliver (deliver and capture value).

Ultimately, our objective is to remain the transmission service provider of choice, by assuring we maintain financial strength and competitiveness, while continuing to meet our multiple statutory responsibilities and delivering the public benefits that are so valuable to the region.
1. Historical Context for Transmission Services

BPA has a very rich history that is deeply rooted in statute, which include the Bonneville Project Act, the Pacific Northwest Consumer Power Preference Act, the the Pacific Northwest Electric Power Planning and Conservation Act. Since its inception, BPA has built, operated, and maintained a reliable transmission system to deliver Federal and non-Federal power to its customers.

Since 1996, BPA has offered all transmission services to its customers under generally applicable terms and conditions. In 1996, the Federal Energy Regulatory Commission (FERC) issued Orders No. 888 and 889. Under Order No. 888, FERC required public utilities, as defined by the Federal Power Act, to provide open access transmission service on a comparable basis to the transmission service they provide themselves using standard non-discriminatory, terms and conditions for transmission service. The standard terms and conditions were contained the pro forma Open Access Transmission Tariff. Every public utility that owned, controlled or operated facilities used for transmitting electric energy in interstate commerce were required to adopt and file the pro forma tariff with FERC. FERC also created “reciprocity” safe harbor status as an incentive for non-public utilities like BPA to voluntarily adopt open access and the pro forma tariff. FERC stated that if non-public utilities offered open access transmission service, public utilities must offer them open access in return.

Under Order No. 889, FERC required public utilities to adopt Standards of Conduct to separate their transmission operations and reliability functions from their wholesale marketing/merchant functions and to establish an Open Access Same-time Information System known as “OASIS” to act as a portal for public utilities to post their tariffs for customers to find.

Although not required by FERC or statute, in 1996, BPA voluntarily adopted an Open Access Transmission Tariff with certain modifications, established an OASIS, and adopted standards of conduct. These decisions were based on several directives or assumptions, including:

- BPA would separate its transmission function from its power function and become the Regional Transmission Organization or Independent System Operator in the Pacific Northwest;
• A 1995 Department of Energy memo directing power marketing administrations, including BPA, to support FERC’s effort for national open access;
• Additional assumptions stated in BPA’s 1995 business plan.
• BPA could meet its statutory obligations under the open access transmission provisions.

BPA submitted its tariff to FERC and received reciprocity safe harbor status.

In 2007, FERC revisited its open access transmission policies and issued Order No. 890 to ensure that transmission services under the *pro forma* tariff are provided on a basis that is just, reasonable, and not unduly discriminatory. Like FERC’s prior orders, BPA was not required to adopt FERC’s *pro forma* revisions to its tariff. Nevertheless, BPA attempted to do so and made several submissions to FERC requesting approval under the reciprocity safe harbor process that adopted most FERC Order 890 requirements, but included alternative proposals in certain areas. In 2013, FERC approved BPA’s tariff in part, but declined to grant BPA reciprocity safe harbor status because of BPA’s alternative proposals.

In 2014, BPA focused on critical areas where there were perceived tensions or conflicts between BPA’s obligations to its regional preference customers and its obligations under its Tariff that required greater clarity, resolution, and direction. The dialogue centered on BPA’s ability to fulfill its mission and meet its multiple statutory obligations as the industry evolves and external forces continue to affect BPA’s traditional business model (Strategic Intent).³ In the Strategic Intent Paper, BPA affirmed that its preference customers are its core constituency. BPA concluded that it would continue to offer non-discriminatory transmission service through the BPA Tariff and aspire to meet the spirit and letter of the FERC’s *pro forma* tariff by implementing a comprehensive BPA Tariff compliance program.

In 2016, BPA opened a stakeholder dialogue with respect to the future of its Tariff and indicated its intent to no longer seek reciprocity safe harbor status from FERC. BPA communicated with stakeholders that it believed the safe harbor process is no longer a tenable approach for making changes to the BPA Tariff and that BPA would instead make changes through a regional public process. BPA reaffirmed its commitment to offering transmission service under its tariff based on FERC’s *pro forma* tariff where possible. BPA would consider changes to its tariff only if the changes were prudent based on the needs of its stakeholders, the reliable and efficient operation of the FCRTS, or BPA’s statutory responsibilities to preference customers and others.

In 2017, BPA affirmed the policy direction in the Strategic Intent Paper and aligned this Transmission Business Model with that direction.

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³ Clarifying BPA Obligations Strategic Intent Paper – 1/29/15. This paper was the result of 6-9 months of meetings followed up on with this writing.
2. The Transmission Mission

Transmission Excellence is a top priority for us as a Transmission organization in delivering our mission. It is our vision for delivering the multiple objectives Transmission is accountable for: the Federal Columbia River Transmission System, supporting BPA’s Key Strategic Initiatives, delivering on the Transmission Strategies, continuing the excellent legacy of Transmission reliability and service to the region, and repaying the Federal investment. How Transmission continues to position itself to be the provider of choice in the future is central to our current BPA focus around long-term strength and viability (a.k.a. Focus 2028) – note “best value for our customers” in our Mission.

As part of the overall agency process (Focus 2028), we are defining the new business model (Transmission of Tomorrow) – how we create, deliver and capture value - for Transmission with a predominant focus on how we serve our customers’ needs. An inextricable part of this business model is the integration and deepened understanding of our tariff responsibilities across the organization. As such, it is an opportunity to think holistically about our business and its long term health and viability in the region. It will require us to anticipate, respond to and lead change that is necessary to stay focused on reliability while capturing commercial benefit for the region, consistent with statutory obligations.

In the summer of 2016, a lead team started reassessing the Transmission business model – the way we create, deliver and capture value for our customers and the region. We reviewed the landscape we operate in, drivers acting upon it and potential implications for BPA and its customers. Important conclusions of the reassessment include:

- Transmission exists in an increasingly dynamic, uncertain and quickly changing environment. In just the last five years, the industry has seen immense changes in traditional operational, marketing and planning practices. These include the emergence in the Western Interconnection of energy imbalance markets, rapidly declining costs of renewable generation resources, oversupply of energy within the region, increased amount of negative market prices, transactive energy and movement towards smart-grids, and an evolving regulatory environment responding to retail customer self-supply and distributed energy.

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• We have diverse customers with complex needs, some of which may be at odds with each other under our current products and services portfolio. Our customers and the Western Interconnection’s thirty-eight balancing areas have more individualized needs in order to respond to market opportunities/disruptions, such as new regulations, technologies, and generation supply choices.

• We are facing capital and expense pressures and our system is aging and becoming more constrained. Similar to our customers, the cost of doing business continues to increase over time, while traditional revenue growth is stagnating. In addition, the majority of our infrastructure is over 50 years old, which requires additional maintenance and/or replacement at a time when borrowing authority is constrained and debt service already makes up approximately 50% of the transmission rate.

These observations demand a responsive and modern approach to the way we position ourselves commercially (create value) and how we align as an operationally excellent Transmission organization (deliver value).

Additionally, changing conditions and customers’ needs will require us to adapt and evolve our strategy in order to achieve our mission. This strategy includes having a clear value proposition and associated business model with a deep commitment to transparency and collaboration. In addition, Transmission’s strategy builds on the agency’s four values: Safety, Trustworthy Stewardship, Collaborative Relationships and Operational Excellence.

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5 For example, increased costs include inflationary pressures on labor, increasing compliance obligations, and additional mitigation due to increased cyber security risks.
3. Business Model Framework

BPA Transmission adopted a methodology to define the Transmission value proposition, which clearly identifies the advantages customers receive by doing business with us. Once articulated, we were able to craft the associated business model to deliver the value proposition.

There are four key elements that make up the basic system of all businesses.

An assessment of these areas conveys an understanding of a business model that describes how an organization creates, delivers, and captures value, either economically, socially or culturally. It is attentive to the needs of customers, which are what your customers value, how they might achieve it, and what stands in their way. The customers’ needs are satisfied by products and services, which are anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a want or need. They include physical objects, services, persons, places, organization and ideas. These are created and delivered by a value chain, which is a set of activities calibrated to deliver valuable products or services for the market to accomplish its business model.

A key component to a transmission provider’s business model is the administration of a tariff. When FERC created the pro forma tariff in 1996, its purpose was to standardize the terms and conditions for transmission service to ensure public utilities would offer transmission service on a comparable and not unduly discriminatory or preferential basis to other utilities.

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6 Yves Pigneur, Université de Lausanne
7 Frances X. Frei, Harvard Business School
8 Philip Kotler, Kellogg School of Management
9 Michael Porter, Harvard Business School
Although FERC’s *pro forma* tariff is not imposed on BPA, we believe that there is value (and in fact is a critical step to achieving this strategic vision) in adopting the FERC *pro forma* tariff for our transmission services to the extent possible. Through this tariff, we offer open access transmission service that is consistent with industry products, services, and standards.

The value chain below illustrates the necessary throughput of major functions, as well as the responsible lead VP, in order to run a Transmission business.

This diagram is useful for understanding the entire business system with the required primary and supporting functions. However, it does not show the integration, cross-pollination and teamwork expected and required from all staff, managers and VPs to achieve and sustain the Transmission of Tomorrow.

By applying the above framework, we have defined the Transmission value proposition and the associated business model focus areas in the next chapter.
4. Transmission Value Proposition

The Transmission of Tomorrow combines our rich legacy of talent, expertise, innovation and technology with an understanding of our customers’ changing needs. Transmission will ensure business certainty and stability for our customers by offering our product portfolio and standardized options under a comprehensive open access transmission tariff, modeled to the extent possible after FERC’s pro forma tariff. Transmission will aggressively pursue cost savings, efficiency and revenue creation opportunities. Delivering energy to load in a safe, reliable, and environmentally conscientious manner will continue to be foundational.

Transmission believes that all of these are paramount to being a dependable and responsive business partner with our customers.

The key tenets of the Transmission of Tomorrow’s value proposition and their connection to the agency key strategic priorities are:

- Operating a High Performing Grid; and
- Enabling Economic Growth in the Region; and
- Providing Access to Federal and Non-Federal Resources and Markets.

**Operating a High Performing Grid**

Transmission will maximize grid availability, utilization and reliability through best practice processes, tools and capabilities. This will enable us to market grid capabilities and flexibilities to benefit our customers and the region. We will also incentivize and partner with our customers to strategically diversify and pair resources to optimize grid utilization.

In achieving a high performing grid Transmission will also explore strategic commercial and operational partnerships to benefit our customers and the region.
Enabling Economic Growth in the Region

BPA’s transmission system is critical to enabling economic growth in the Pacific Northwest. To support the broader economic development goals of the region, BPA will provide transmission system information proactively to identify incentives and inform customer decisions regarding resource and load siting, planning, and transmission service options. BPA will make investments in its transmission system as appropriate for the resource and load service needs of its customers. BPA will also provide customers with transparent cost allocation information for system expansion needs. Transmission will work with organizations and communities in our region as they promote economic growth, including use of new programs and technologies\(^\text{10}\), to strategically build and expand access to BPA’s Transmission Services infrastructure.

Providing Access to Federal and Non-Federal Resources and Markets

Customer access to diverse resource\(^\text{11}\) options and interconnections are more important than ever.

Transmission will invest in operationally and financially beneficial solutions that provide access to resources and markets for our customers, whether non-wires or wires options. In collaboration with our customers and within our statutory bounds, we will work to strategically increase the amount, ability and ease of access to resources and markets across the region, capturing economies of scale in being the transmission “backbone” of the Pacific Northwest. This includes policy, rate and technical actions to manage congestion.

\(^{10}\) E.g., DER, electric vehicles, storage, etc.

\(^{11}\) For example, new solar and wind generating resources.
**Enhanced Customer Experience**

Delivering this value proposition ensures that customers have a consistent experience of BPA being a dependable and responsive business partner. Specifically, we define success when customers’ say the following:

I trust BPA’s agility to partner with me in an innovative manner to respond to a changing environment.

I know that BPA will design clear and standard products that are developed with customers’ needs in mind.

I experience meaningful engagement when Bonneville makes changes to its products, services and its tariff.

I can count on BPA to help me navigate through their processes so that I can achieve my business need.

I receive accurate and timely information, including operations, contracts, and bills. When I have concerns or questions, BPA will respond and resolve in a timely manner.

I have visibility into the availability of inventory and incentives to participate and partner with BPA.

I have a clear understanding up front of the expectations from BPA including securing Generation Interconnection or Transmission Service Requests.

I understand BPA’s approach towards operations, asset management and maintenance through BPA’s business processes and metrics for: reliability, cost, risk, compliance, safety, etc.

...I absolutely consider BPA to be a dependable and responsive business partner.
5. Business Model Focus Areas

The Transmission Value Proposition will be delivered through three business model focus areas: **product portfolio**, infrastructure and long term viability.

A central requirement to delivering the envisioned value of the Transmission of Tomorrow is a portfolio of standardized Transmission products and services that address customers’ needs. BPA will offer those products and services at various levels of cost and benefit.

### Providing Standardized Options

**Transmission Direction**

Transmission serves a broad collection of customers with diverse, sometimes competing needs. These needs include differentiation around flexibility, level of service and certainty of schedule.

To avoid costly customizations and provide consistency for our customers, by 2022, Transmission will offer a revised portfolio of standardized products. This portfolio will recognize that some customer needs can be met with low cost, basic services, while other customers have enhanced needs. We will meet customer needs through standardized products and services that are comparable and not unduly discriminatory or preferential through the BPA tariff. BPA’s products will be more strictly modeled on FERC’s *pro forma* tariff and products. This includes adjusting our current portfolio of products to be consistent with either the *pro forma* tariff or industry best practices.

Transmission’s tariff will only differ from the *pro forma* tariff if the differences are based on the needs of our customers and other stakeholders, the reliable and efficient operation of the FCRTS, or BPA’s statutory obligations.

Transmission will standardize internal processes and methodologies to increase the efficiency of processing queues for Transmission Service Requests and Generation Interconnection Requests. Processes relating to other parts of our tariff will also be standardized with industry implementation of *pro forma* tariff provisions where possible.

To the extent BPA modifies its current tariff or business practices, BPA will work with customers to manage the transition of changes to Transmission’s new products and services.
Required Changes:
- Modernize BPA’s commercial operations, including aligning BPA’s tariff with FERC and Industry Standards. Manage the Transmission Business Model through a disciplined approach to prioritize, sequence, and integrate initiatives.
- Articulate a clear value proposition for each product.
- Adopt a predictable and transparent change process that smoothly transitions away from the current portfolio to the future state.

Examples of Success:
- Eliminate Hourly Firm product.
- Standardize NT Service.
- Standardize Conditional Firm product.
- Industry standard treatment of transmission losses.
Value-Based Price Profiles

Transmission Direction
Value-based price profiles are imperative to the BPA’s ability to manage costs, and deliver certainty and quality under the Transmission of Tomorrow. Value based price profiles will facilitate feedback loops, including benchmarking of our products and services in the industry. (See Appendix 2)

By 202X, Transmission will distinctly price products that intersect value and cost at defined levels of service and engagement, delivering across basic and enhanced customer needs. BPA intends to use the full range of product options available in our current tariff, consistent with FERC pro forma and industry best practices. We will also appropriately balance and allocate the level of risk with the value and price of the product.

Appropriate cost allocation is foundational to offering a portfolio of products at rates with corresponding value. The effect of creating and offering this portfolio will drive changes to how BPA invests internally.

Required Changes:
- Define value and attributes of each product and update cost allocation approach to ensure products are priced and segmented appropriately.
- Develop a standard product menu, considering metrics for competitiveness and economic value of different parts of the transmission system.

Examples of Success:
- Price differentiation between Firm and Non-Firm.
Transmission Direction
Transmission will conduct detailed transmission planning through proactive, collaborative, repeatable and documented processes. This will allow us to standardize and support the distinct attributes of our portfolio of products.12

By 202X, we will partner with the region to increase visibility of forecasted loads, resources and customers’ needs, and share planning information to facilitate customer load and resource siting decisions. Accordingly, we believe there is merit in the creation of one regional planning organization in the Pacific Northwest to promote an efficient ‘one utility’ plan of service perspective that will enhance regional planning, identify infrastructure benefits, and inform investments.

Required Changes:
- Develop and implement policies and procedures for regional planning that incentivizes grid optimization.
- Enhance regional planning that incorporates innovative approaches within defined bands of reliability.
- Develop innovative plans of service that embrace modern technology and solutions.

Examples of Success:
- Establish a consistent, timely and repeatable queue management process.
- Replace Long-Term Available Transfer Capability (ATC) posting with more accurate system availability information.

12 i.e., Network, Point-to-Point, Ancillary Services, Telecommunications Products, etc.
The Transmission Value Proposition will be delivered through three business model focus areas: product portfolio, **infrastructure** and long term viability.

The Transmission Value Proposition informs strategic investments in our assets.

The Transmission of Tomorrow will focus on the tight management of costs and the optimal performance of our assets.

**Advanced Situational Awareness**

**Transmission Direction**

Transmission will integrate tools and analysis of system capabilities to maximize the reliable and efficient use of the transmission system. This will be accomplished by enhancing tools in three major ways: automation, accuracy and visibility.

Automation of processes minimizes the potential for human error, and makes more efficient use of resources. By 202X, BPA will accomplish greater accuracy through incorporation of real-time data and analysis into the calculation of system limitations, thereby releasing excess capacity while maintaining reliability. Enhanced visibility and control of loads, resources and flows (including market flows) will allow more accurate, effective, and reliable management of the transmission system.

**Required Changes:**

- Incorporate appropriate risk thresholds and improve the accuracy of identified system limitations.
- Create better visibility of system conditions and limitations.
- Implement tools and processes to prevent and mitigate adverse system conditions.
- Adopt an enterprise architecture approach to align related processes and systems.

**Examples of Success:**

- Automate study processes for operational planning analyses and ATC calculations.
- Evaluate Paths and Flowgates for appropriate risk thresholds and operational practices.
- Develop improved generation and load forecasts.
- Implement advanced applications such as voltage stability analysis.
- Advance synchro phasor technology.
- Improve dispatcher displays.
- Implement NT redispatch capabilities.
- Automate Remedial Action Schemes (RAS).
- Implement the Coordinated Transmission Agreement with CAISO.
- Aligned planning and operational network models.
Right-Sized Investments in Assets

Transmission Direction
Transmission will base physical and technology asset investment objectives on achieving the Transmission Value Proposition. In order to share and optimize asset investments, Transmission will actively look for utility and private organization partnerships opportunities. Risk, return on investment and scalability will be incorporated in these decisions.

Transmission will continue to be accountable for the efficient deployment of expense and capital as well as the delivery and realization of intended benefits.

Required Changes:
- Proactively steer and facilitate earlier engagement with customers to integrate new technology and economic development strategies.
- Develop a repeatable, consistent study “follow-through” process with a more extensive focus on resources and streamlining internal processes to facilitate a timelier response to customers. Follow through on requests no slower than industry best practice.
- Develop more tools than “build”. More tools than “build” are low-impact upgrades to existing transmission circuits/equipment and Non-Wires alternatives (N-W). N-W include, but are not limited to, energy storage and flow control devices, demand response or other commercial products.

Examples of Success:
- Replace posting of LT ATC with the ability to identify and communicate areas where there is available capacity and the time and cost for interconnections is lower, on average.
- Implement re-bids on capacity.
- Eliminate the remainder policy.
- Revise the rollover policy.
- Require more granular POR/POD.
- Implement long-term South of Allston solution.
Value and Risk-Based Asset Management

Transmission Direction
Transmission will optimize asset lifecycle and maintenance processes to meet both risk and value based objectives, including safety, reliability, availability and economic value for the region. This is achieved by adopting utility best practices and driving operational excellence, by 202X.

Required Changes:
- Define economic value, including the methodologies and specific metrics. This includes the identification of metric owners and corresponding governance structures and resultant policies.
- Improve and grow analytical skills. A key milestone towards creating or aligning with utility best practices is the ability to target, manage and use better data: financial, operational, asset, customer information.
- Define critical parts of the transmission system, integrate these needs into asset management, and define enabling processes.
- Establish organizational and program risk thresholds and tolerances.
- Align models and assumptions.

Examples of Success:
- The complete and successful deployment of the Maintenance and Analysis Capabilities Improvement Team (MACIT) recommendations will ensure that maintenance is prioritized considering compliance requirements, predictability of failure, and risk with the overarching goal of maximizing system reliability at a responsible cost. The complete and successful deployment of the One-BPA Outage project will ensure that outage needs are coordinated as far in advance as possible and are managed to specific criteria to allow them to proceed with continual assessment and communication of probability/likelihood.
- Align planning and operational network models.
The Transmission Value Proposition will be delivered through three business model focus areas: product portfolio, infrastructure and long-term viability.

Transmission will commit to a culture of innovation and continuous improvement by enhancing analytics and processes to sustain the Transmission Value Proposition. People are the foundation of Transmission’s ability to deliver on the Transmission Value Proposition, and it is vital to our long-term viability that we embed enhanced critical thinking into the skillset across the organization.

Transmission recognizes that resources and staff capacity are not limitless. It is essential that we prioritize to enable us to achieving the Transmission of Tomorrow, focusing our current and future work around our strategic direction.

**Integrated and Efficient Processes**

**Transmission Direction**
Transmission will integrate and align key activities across the organization and BPA through defined and streamlined processes and governance that enable efficiency, responsiveness and certainty of schedule.

Transmission will mature and integrate our business process management across all primary activities in the Transmission value chain.

**Required Changes:**
- Establish policy, organizational and manager accountabilities, process mapping, benchmarking of industry best-practices and performance metrics by 202X.
- Establish a Business Process Management Council that will define process management standards and a maturity roadmap. The focus will be on clear and consistent processes and decision making, especially cross-organizational.
- Evaluate the touchpoints into the customer relationships. Specifically target and manage to the customer experiences described earlier.

**Examples of Success:**
- Develop a framework for process integration, accommodating customer inputs as appropriate, as well as monitoring and measurement controls.
**Data-Driven Decision Making**

**Transmission Direction**
Business decisions will be driven by strong analytics, defined metrics and risk assessments/mitigation measures.

These metrics will measure progress in achieving the performance in operational efficiency, customer satisfaction, financial health and competitiveness of the Transmission of Tomorrow.

**Required Changes:**
- Formalize and mature business process management capabilities across the organization, as it is fundamental to consistently providing accurate and actionable data to support timely and effective decisions.
- Own, quantify and manage customer and organizational benefits, and their resultant metrics must have targets and goals.
- Establish data governance and stewardship.

**Examples of Success:**
- Establish and operationalize a management framework to routinely review and take action on metrics, thresholds and results that measure progress and risk against tolerances. Adopt a disciplined approach (i.e. single source of truth) to the use of data with clear and consistent decision-making processes.
Innovation and Continuous Improvement

Transmission Direction
Transmission will promote a culture of leadership in innovation and continuous improvement, emphasizing both strategic agility and focused execution to ensure long-term competitiveness. As a team, Transmission will demonstrate the courage to change, commit to always give our best and have the grit and persistence to capture success. Transmission will encourage Innovation and continuous improvement skillsets within every team member.

Transmission will continuously focus on and increase value to the region by fusing innovation and continuous improvement. We will stop doing things that do not add value, we will start doing things that add value, and we will improve efficiency of things that need to continue.

Required Changes:
- Develop and implement a transmission grid continuous-improvement program so that BPA has a central way to analyze what happened and to set milestones to mitigate the outcome of the event with root-cause analysis as necessary.
- Focus on safety and emergency preparedness for investments in both innovation and continuous improvement. Additionally, there are many day to day improvements that can be made across the agency, creating an improvement culture that works both top down as well as bottom up will be key.
- Establish and operationalize a framework to monitor and analyze the changing industry and competitiveness factors that could drive future Transmission strategic direction. (See Appendix 2)

Examples of Success:
- Create a process for event-analysis, lessons learned, and corrective-action plans across Transmission with the goal that whenever there is a significant issue on the system.
- sRevamp process for clearance and permitting for energized access.
- Operational redundancy of proficiencies between control centers.
6. Conclusion

When the final version of this document is complete, this section will be replaced with closing remarks.

What’s Next

This draft Transmission Business Model version 3.0 represents another significant milestone — the delivery of an updated proposal from the Transmission organization to support the Focus 2028 activities in 2017. However, this will not be the end; finalizing the Transmission of Tomorrow will continue in the broader agency strategic planning process.

We expect one more process step to integrate our proposal with the agency strategy by end of calendar year 2017.

This is a living document. A new document, the Transmission Business Model Implementation Guide, is being created to organize and direct the changes and investments necessary to realize and manage the vision described herein.
### 7. Appendix 1 – Strategic Intent Crosswalk

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8. **Appendix 2 – Historical Context for Transmission Services**

BPA has a very rich history that is deeply rooted in statute.

In 1937, the Bonneville Project Act created BPA and directed it to market federally produced hydroelectric power to customers, giving preference and priority in power sales to public bodies and cooperatives. The Act authorized BPA to construct, own and operate transmission facilities to deliver federal power at cost. BPA’s marketing and delivery of federal power was bundled, with cost-based rates recovering both the costs of the federal power and the federal transmission system used to deliver the power to customers. For three decades, BPA and its customers benefited from hydro and transmission systems that had surplus energy and capacity.

In 1964, as a condition to building inter-regional interties, Congress passed the Pacific Northwest Consumer Power Preference Act. The Preference Act guaranteed consumers in the Pacific Northwest first call on electric energy and capacity. Section 6 of the Act provides that capacity in Federal transmission lines “which is not required for the transmission of Federal energy” shall be made available as a carrier for transmission of other electric energy between the Pacific Northwest, Canada or any other area outside the Pacific Northwest. Section 6 also specifies that 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 or other electric energy.

By the late 1960s, BPA anticipated limits to the Federal Columbia River Power System and issued Notices of Insufficiency to investor-owned utilities in 1967, then to preference customers in 1977. To respond to the need for additional power (energy and capacity), the region’s utilities began to plan to add new generation, mainly nuclear plants. Transmission investment was also needed to serve the needs of the region.

In 1974, Congress passed the Federal Columbia River Transmission System Act that required BPA to be self-financing and vested the administrator with broad authority to construct transmission and integrate and transmit both federal and non-federal power. The impetus for the Act was to support the development of the Hydro Thermal Power Program whereby regional utilities would invest in the development and construction of non-federal thermal generation and BPA would construct the transmission system to interconnect such resources. By being free of the congressional appropriation process, the expectation was BPA would be able to construct transmission on a more efficient and expedient basis to integrate and transmit electric power from existing or additional Federal or non-Federal generating units, meet the
service needs of its customers, provide interregional facilities, or maintain the electrical stability and electrical reliability of the Federal system, among other things. The Transmission System Act also required BPA to make surplus transmission capacity (capacity not needed to transmit electric power generated or acquired by the United States) available to all utilities on a fair and non-discriminatory basis.

In 1980, Congress passed the Pacific Northwest Electric Power Planning and Conservation Act. Under that Act, BPA was authorized to acquire resources on a long-term basis to meet the net load requirements of regional utilities (if requested), mitigate impacts to fish and wildlife, implement the Residential Exchange Program, and acquire energy conservation as a resource to meet load, among other things. BPA was also directed to offer long-term power sales contracts to its regional customers. Congress also reaffirmed the preference and priority to public bodies and cooperatives at all times in the marketing or disposition of federal power.

In the 1990s, the energy regulatory landscape in the nation began to change dramatically. In 1992, Congress passed the Energy Policy Act to create open access transmission and prevent undue discrimination. This Act gave the Federal Energy Regulatory Commission (FERC) the authority to order non-public transmitting utilities like BPA to provide transmission or interconnection service under certain limited circumstances.

In 1996, FERC restructured the electric industry by issuing Order Nos. 888 and 889. Under Order No. 888, FERC required public utilities (i.e., FERC jurisdictional utilities) to provide open access transmission service on a comparable basis to the transmission service they provide themselves. FERC did this by creating the pro forma Open Access Transmission Tariff as the standard non-discriminatory, terms and conditions for transmission service. FERC required that every public utility that owns, controls or operates facilities used for transmitting electric energy in interstate commerce to adopt and file the pro forma tariff with FERC.

Under the pro forma Tariff, FERC required public utilities:

1. To award transmission capacity on a first-come, first-served basis; and
2. To offer two types of transmission service: (1) Point-to-point, or “PTP,” which is transmission sold from point A to point B; and (2) Network, or “NT,” service, which is designed to be comparable to a transmission provider’s use of its own transmission network to serve its native load and requires the transmission provider to include the NT customer’s resource and load forecasts (projected over a minimum ten-year period) in its long-term planning horizon.

Under Order No. 889, FERC required public utilities to adopt Standards of Conduct to separate their transmission operations and reliability functions from their wholesale marketing/merchant functions and to establish an Open Access Same-time Information System known as “OASIS” to act as a portal for public utilities to post their tariffs for customers to find.
BPA is not a public utility that is subject to FERC’s jurisdiction under sections 205 and 206 of the Federal Power Act. Accordingly, BPA is not legally required to comply with FERC’s Order No. 888 or 889. However, in Order No. 888, FERC created an incentive for non-public utilities like BPA to voluntarily adopt open access and the pro forma tariff. FERC stated that if non-public utilities offer open access transmission service, public utilities must offer them access in return. This concept is known as reciprocity. Although not required by FERC, BPA decided to adopt an Open Access Transmission Tariff with certain modifications in 1996. BPA also established an OASIS, adopted standards of conduct and “opened” its system general terms and conditions with others in the industry. These decisions were based on several directives or assumptions, including:

- BPA would separate its transmission function from its power function and become the Regional Transmission Organization or Independent System Operator in the Pacific Northwest;
- A 1995 Department of Energy memo supporting FERC’s effort for national open access that directed power marketing administrations, including BPA, to support it;
- BPA could meet its statutory obligations under the open access transmission provisions; and
- Additional assumptions stated in BPA’s 1995 business plan.
- Power Services would compete on a “level playing field” with other customers for transmission service.

In 1996, BPA functionally separated into distinct power and transmission business lines and physically separated both businesses. However, this split was driven by assumptions about the industry’s future that did not come to fruition: The region did not establish a Regional Transmission Organization or Independent System Operator. The split thus resulted in unnecessary redundancies in administrative systems and processes that did not involve Standards of Conduct restricted transmission information and merchant function employees.

In response to sentiments aimed at anti-manipulation of gas prices, heightened fears about grid reliability, and a desire for compliance with FERC regulations, Congress passed the Energy Policy Act of 2005. This Act expanded FERC jurisdiction under the Federal Power Act with respect to mandatory reliability standards and the provision of open access transmission service by unregulated transmitting utilities such as BPA, among other things. Specifically, it added
section 215 regarding mandatory transmission reliability standards that apply to BPA and other utilities and section 211A, which gave FERC the authority to require, by rule or order, an unregulated transmitting utilities such as BPA to provide transmission service at rates comparable to those the utility charges itself, and on terms and conditions (not relating to rates) that are comparable to those it offers itself and that are not unduly discriminatory or preferential.

In 2007, FERC revisited its open access transmission policies and issued Order No. 890 to ensure that transmission services under the pro forma tariff are provided on a basis that is just, reasonable, and not unduly discriminatory. Like FERC’s prior orders, BPA was not required to adopt FERC’s pro forma revisions to its tariff. Nevertheless, BPA attempted to do so and made a submission to FERC requesting approval under the safe harbor process that included alternative proposals in certain areas, but adopting most FERC Order No. 890 requirements. FERC did not approve and, after several more attempts to obtain safe harbor status, in 2013, FERC approved BPA’s tariff in part, but declined to grant BPA safe harbor status because of BPA’s alternative proposals.

In 2014, BPA focused on critical areas where there were perceived tensions or conflicts between BPA’s obligations to its regional preference customers and its obligations under its open access transmission tariff that required greater clarity, resolution, and direction. The dialogue centered on BPA’s ability to fulfill its mission and meet its multiple statutory obligations as the industry evolves and external forces continue to affect BPA’s traditional business model (Strategic Intent). BPA affirmed that its preference customers are its core constituency. BPA concluded that it would continue to offer non-discriminatory transmission service through the BPA Tariff. BPA also concluded that it will aspire to meet the spirit and letter of the FERC’s pro forma tariff by implementing a comprehensive BPA Tariff compliance program.

In 2016, BPA opened a stakeholder dialogue with respect to the future of its Open Access Transmission Tariff and indicated its intent to no longer seek reciprocity safe harbor status from FERC. BPA communicated with stakeholders that it believed the safe harbor process is no longer a tenable approach for making changes to the BPA Tariff and that BPA would instead make changes through a regional public process. In addition, BPA is committed to offering transmission service under its tariff based on FERC’s pro forma tariff where possible. BPA will consider changes to its tariff only if the changes are prudent based on the needs of our stakeholders, the reliable and efficient operation of the FCRTS, or BPA’s statutory responsibilities to preference customers and others.

In 2017, BPA affirmed the policy direction the Strategic Intent Paper and will further elaborate on that direction in this Transmission of Tomorrow document.

13 Clarifying BPA Obligations Strategic Intent Paper – 1/29/15. This paper was the result of 6-9 months of meetings followed up on with this writing.
9. Appendix 3 – Competitiveness Framework

**Competitive Analysis: Rivalry**

**Competitive Context**
As the Transmission of Tomorrow matures, an understanding of the competitive situation will be required in the design of its business model. Rather than a one-off project, competitive analysis is an enduring capability of the enterprise, to be operated routinely, informing value propositions, products, and financial performance.

**Industry Rivalry**
Value Propositions and products appeal to customer needs. To remain competitive, know who else may seek to satisfy these needs, and how.

- **Business Model**
  - How an organization creates, delivers, and captures value.

- **Value Chain**
  - A set of activities calibrated to deliver products or services.

- **Products and Services**
  - Anything offered for sale or trade that might satisfy a want or need.

- **Needs of Customers**
  - What a customer values, how they get it, and what stands in their way.

**Substitutes**
May Also be Met By

**Alternatives**
Offered By

**Existing Rivals and New Entrants**
Some of Whom Face

**Barriers to Entry**
Capital investment requirements, economies of scale, switching costs, network effects, size independent advantages and government policy.

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Competitive Analysis: Industry Structure

Industry Structure
An understanding of industry structure will make clear which participants are capturing the most economic benefit, and who exerts the most power. The analysis begins with an understanding of your customers and suppliers. It is then important to continue this analysis to the suppliers of your suppliers; the customers of your customers, so on. Ultimately determining where the margins are most favorable and sources of power most concentrated.

Value Chain: Enterprise
A set of activities calibrated to deliver products or services

Value Chain: Industry
The entire process of transforming raw materials to final consumption and disposal by the end consumer

Supplier
A value chain for the enterprise is composed of three key elements: Primary Activities, Support Activities and the Target Value, usually expressed as the remaining margin after costs are netted from revenue
- Primary Activities: directly contribute to the creation, sale and support of a product
- Support Activities: provide necessary support to the primary activities, but do not directly relate to products

Customer
A supplier is best understood as a source of costs, external to the enterprise. In this analysis you are not as interested in all of your inputs, but primarily in your purchased inputs
- Bargaining Power: will regularly increase prices and insist on more favorable terms
- Forward Integration: suppliers may develop the capability to serve your customers directly

Supplier
Customers, also called buyers, are those entities that directly provide revenue to you for your products and services. They can be both intermediary or retail customers
- Price Sensitivity: over time, customers will demand more value at current/lower prices
- Backward Integration: technology and financial imperatives enable/force customers to insource or replace you