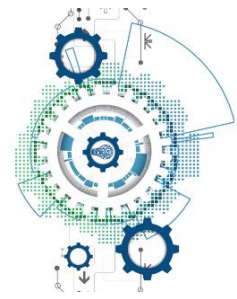


TECHNOLOGY INNOVATION 2026 RESEARCH PRIORITIES

The Technology Innovation office works with internal subject matter experts and agency executives to establish agency Research Priorities. The Research Priorities identify gaps in knowledge, practices, or technology that, if reduced, provide savings in cost, complexity, risk, or time for work performed by Bonneville Power Administration (BPA). They are used by the Technology Innovation team to guide the project selection process to ensure the portfolio ultimately creates efficiencies and aligns with business line, agency goals, Department of Energy (DOE) principles and Administration priorities. The Research Priorities are divided into three topic areas: Agency wide, Power, and Transmission.



AGENCY WIDE

Topics that provide Research Development & Deployment (RD&D) benefits to organizations across BPA.

RESEARCH PRIORITY	GOAL
Advanced Analytics & Informed Decision Support	<ul style="list-style-type: none"> Leverage data analytics and augmented intelligence opportunities to optimize business planning and operations.
Modernized Planning Reforms & Efficiencies	<ul style="list-style-type: none"> Explore reformed planning frameworks and data-driven modeling capabilities to support long-term system reliability and affordability in an evolving generation portfolio. Strengthen real-time system monitoring and forecasting capabilities to maintain situational awareness and reliability amid rapid technology adaptation and dynamic market conditions.
Safety, Security & Regulation	<ul style="list-style-type: none"> Ensure best practices in compliance, safety, and threat resilience for BPA workers and systems.

POWER

Topics that primarily provide RD&D benefits to the Power Services organization.

RESEARCH PRIORITY	GOAL
Generation Asset Management	<ul style="list-style-type: none"> Explore technologies and methodologies that enhance risk-based decision-making to maximize asset value and preserve the reliability and resilience of the assets. Standardize and modernize asset health metrics and asset management best practices.
Hydro Reliability & Life Extension	<ul style="list-style-type: none"> Extend the lifespan of FCRPS assets through advanced technologies.
Energy Conservation Emerging Technologies	<ul style="list-style-type: none"> Explore innovative high efficiency equipment and smart building design across the residential, commercial and industrial sectors.



TRANSMISSION

Topics that primarily provide RD&D benefits to the Transmission organization.

RESEARCH PRIORITY	GOAL
Transmission Asset Management	<ul style="list-style-type: none"> • Explore technologies and methodologies that enhance risk-based decision-making to maximize asset value and preserve the reliability and resilience of the assets • Standardize and modernize asset health metrics and asset management best practices.
Transmission Resiliency & Reliability	<ul style="list-style-type: none"> • Explore the use of technologies and advance digital platforms to support proactive, data informed decisions that enhance grid resilience, optimize system assets, and reinforce our commitment to reliable, affordable energy delivery.
Grid Operations	<ul style="list-style-type: none"> • Explore modeling and technologies that support reliable, efficient and cost-effective operations.

BPA RD&D AND TECHNOLOGY INNOVATION BACKGROUND

BPA's Technology Innovation Office serves as a hub of innovation and a centralized point for RD&D, responsible for reporting and program management functions for all BPA RD&D activities. TI facilitates the development and implementation of technology-based solutions to strategic challenges by maximizing the benefits of internal expertise and external collaborations. BPA RD&D activities also gather fact-based knowledge for agency decision-making.

BPA RD&D PRINCIPLES



PROJECT SELECTION AND NEXT STEPS

Technology Innovation works across BPA with subject matter experts and managers to establish a list of potential collaborations and projects. The annual project selection process starts at the beginning of the fiscal year in October. Projects are then prioritized for Technology Innovation funding based on the following:

1. Project, membership, or initiative aligns with the Technology Innovation Research Priorities
2. Project, membership, or initiative is an Executive priority



3. Project, membership, or initiative meets a BPA compliance need
4. Other BPA subject matter expert research requests

For portfolio information, more information on BPA's Technology Innovation Office or the 2026 Research Priorities, email TechnologyInnovation@bpa.gov.

