DOE F 1325.8 e Electronic Form Approved by CGIR - 01/20/95
(8-89)

United States Government **Department of Energy**

Bonneville Power Administration

memorandum

DATE: August 28, 2014

REPLY TO ATTN OF: KEC-4

SUBJECT: Environmental Clearance Memorandum

TO: Sheila Adel
Technology Innovation Portfolio Manager, Technology Innovation – ST-3

Proposed Action: Fiscal Year 2015 Technology Innovation Portfolio

Categorical Exclusion Applied (from Subpart D, 10 C.F.R. Part 1021): B5.1 Actions to conserve energy or water; B3.6 Small-scale research and development, laboratory operations, and pilot projects

Location: Portland, Oregon

Proposed by: Bonneville Power Administration (BPA)

Description of the Proposed Action: BPA proposes to fund or partially fund federal research laboratories, utilities, universities, companies, and a research institute to conduct research and develop pilot projects that promote energy efficiency and conservation in transmission infrastructure and power grid operations through BPA's Fiscal Year 2015 Technology Innovation (TI) Portfolio. These projects would primarily involve energy efficiency and demand response applications, transmission equipment testing, computer modeling, and software development.

BPA also proposes to continue funding for ongoing projects that were proposed in previous portfolios. Individual projects proposed in a TI Portfolio typically span 1–3 fiscal years.

A review of BPA's Fiscal Year 2015 TI Portfolio reveals research and demonstration project proposals that would be located inside existing buildings or within previously disturbed areas. All testing and laboratory operations would occur within existing operating parameters. If site-specific impacts are identified during initial project design phases, these impacts would be addressed in a separate National Environmental Policy Act (NEPA) analysis that would be completed prior to the demonstration phase when such impacts could be expected to occur.

Findings: BPA has determined that the proposed action complies with Section 1021.410 and Appendix B of Subpart D of the Department of Energy's (DOE) NEPA Regulations (57 FR 15144, Apr. 24, 1992, as amended at 61 FR 36221-36243, July 9, 1996; 61 FR 64608, Dec. 6, 1996, 76 FR 63764, Nov. 14, 2011). The proposed action does not present any extraordinary circumstances that may affect the significance of the environmental effects of the proposal. The proposal is not connected [40 C.F.R. 1508.25(a)(1)] to other actions with potentially significant impacts, has not been segmented to meet the definition of a categorical exclusion, is not related to other proposed actions with cumulatively significant impacts

[40 C.F.R. 1508.25(a)(2)], and is not precluded by 40 C.F.R. 1506.1 or 10 C.F.R. 1021.211. Moreover, the proposed action would not (i) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, (ii) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities, (iii) disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response, Compensation and Liability Act-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases, (iv) have the potential to cause significant impacts on environmentally sensitive resources, or (v) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements.

We therefore determine that the proposed action may be categorically excluded from further NEPA review and documentation.

/s/ Jeffrey J. Maslow
Jeffrey J. Maslow
Environmental Protection Specialist

Concur:

/s/ Katherine S. Pierce Date: *August 28, 2014*
Katherine S. Pierce
NEPA Compliance Officer

Attachments:
Environmental Checklist for Categorical Exclusions
FY 2015 Technology Innovation Portfolio Project List

Fiscal Year 2015 Technology Innovation Portfolio

The portfolio includes both new and ongoing projects during the 2015 Fiscal Year. New project proposals for the 2015 Fiscal Year are listed below with Technology Innovation Project (TIP) numbers, lead organizations, and project titles:

TIP 312: Electric Power Research Institute (EPRI) – Standalone or Hand-Held Thunderstorm/Lightning Detectors (Evaluation of Program 35)

TIP 313: BPA – Power-Frequency Control

TIP 314: BPA – Load Research: End-Use Model Development

TIP 315: BPA – Develop Self-Monitoring Substation Protection and Control System

TIP 316: BPA – Combined Horizontal and Vertical Seismic Isolation System for Transformers

TIP 317: BPA – Anchorage Strength for Seismic Hardening of Transformers

TIP 318: National Renewable Energy Laboratory – Enhanced Residential Efficiency Analysis Tools for the Pacific Northwest

TIP 319: Washington State University Vancouver – Multidimensional Learning on PMU Data for Event Detection, Characterization and Prediction

TIP 321: GE Global Research – Real-Time Estimation of of Generator Dynamic States and Damping Torque Using PMU Data

TIP 322: Rensselaer Polytechnic Institute – Development of Predictive Reliability Test Method for Solid-State Luminaries, Light Engines, and Integral Lamps

TIP 323: Pacific Northwest National Laboratory – Affordable Hybrid Heat Pump Clothers Dryer for the U.S. Residential Market

TIP 324: Pacific Northwest National Laboratory – Faster Than Real Time State Estimation with Forecast for Multiple Contingency Analysis

TIP 325: V&R Energy Systems Research, Inc. – Real-Time System Operating Limits (SOL) Computation and Visualization for BPA

TIP 326: Washington State University – Combined Space and Water CO2 Heat Pump System Performance Research

TIP 327: Pacific Northwest National Laboratory – NLM Accuracy Test Standard Development and Measurement Improvement

TIP 328: Oregon State University – Real-Time Load Composition Estimation

TIP 329: Rensselaer Polytechnic Institute – Demonstration of Outdoor Lighting for Maximizing Perception of Safety and Security

TIP 330: Iow State University – Cooptimization and Anticipative Planning Methods for Bulk Transmission and Resource Planning Under Long-Run Uncertainties

TIP 331: Public Utility District No. 1 of Snohomish County – Using Distribution-Level Energy Assets to Help Optimize Regional Transmission Systems

TIP 332: Portland State University – Open Source Platform for Accelerating Synchrophasor Analysis

TIP 333: Cascade Energy, Inc. – Strategic Energy Management of Industrial Subsystems Using Emerging Hardware and Software Platforms

TIP 334: EPRI – Secure Remote Substation Access Solutions

Environmental Checklist for Categorical Exclusions

Name of Proposed Project: Fiscal Year 2015 Technology Innovation Portfolio

Work Order #: 00003863

This project does not have the potential to cause significant impacts on the following environmentally sensitive resources. See 10 CFR 1021, Subpart D, Appendix B for complete descriptions of the resources. This checklist is to be used as a summary – further discussion may be included in the Categorical Exclusion Memorandum.

Environmental Resources	No Potential for Significance	No Potential, with Conditions (describe)
1. Historic Properties and Cultural Resources	X	
2. T & E Species, or their habitat(s)	X	
3. Floodplains or wetlands	X	
4. Areas of special designation	X	
5. Health & safety	X	
6. Prime or unique farmlands	X	
7. Special sources of water	X	
8. Other (describe)		

Signed: */s/ Jeffery J. Maslow* Date: *August 28, 2014*