|  |  |
| --- | --- |
| **Project name:** | White Paper on DOE-Norway Environmental Decision Tools for Hydropower Development |
| **Project leader and partners:** | Esther Parish (Oak Ridge National Laboratory)Partners: US Department of Energy Water Power Technologies Office; Norwegian Institute for Nature Research (NINA); Norwegian Institute of Technology (SINTEF) |
| **Finalization year:** | 2021 |
| **Type of project/ main topic:** | DOE direct laboratory funding and DOE-Norway MOU Environmental Outcomes Topic Area Collaboration. Oak Ridge project title: *Environmental Decision Support: Science-Based Tools for Hydropower Stakeholder Collaboration*.  |
| **Main relevance DOE-Norway MOU:** | Joint preparation of a white paper will allow researchers from the US and Norway to explore the potential complementarities of environmental decision support tools currently under development. Improved understanding of this broader suite of tools and methods will enable ORNL and DOE to ready its River Function Indicator (RFI) Questionnaire for incorporation into a broader US hydropower toolkit. |
| **Short project description:**Hydropower faces similar challenges and opportunities in the United States and Norway, and both countries are committed to enabling hydropower to support their respective electricity systems. Addressing environmental impacts while balancing multiple uses for water has been a longstanding challenge for hydropower, particularly when there is lack of access to information necessary to support decision-making. Through development of a common language and a consistent method of pointing users toward key river functions of concern, the DOE Environmental Decision Support (EDS) project, led by Oak Ridge National Laboratory (ORNL), has been working to reduce the time and cost of hydropower licensing negotiations and promote greater certainty in federal authorization processes for hydropower development and relicensing. During Fiscal Year 2021, the EDS project will leverage the DOE-Norway MOU and the experience of Norwegian hydropower researchers in creating hydropower decision support tools to improve US hydropower environmental decision support tools, including the River Function Indicator (RFI) Questionnaire. Improvements will include clarification of decision support tool scope, potential use cases, barriers to uptake, and status of tools currently under development. Collaborative discssions and literature review will be used to develop a white paper summarizing potential applications of hydropower environmental decision support tools and providing recommendations for future R&D.**Results from the project:**The final white paper and an executive summary will be provided to the US DOE and Norway’s Ministry of Petroleum and Energy by September 2021. This information will also be made available to other potential users of hydropower decision tools and should benefit decision-makers who see the benefits of increasing transparency of information during hydropower licensing. |
| **Other comments:** |
| **Available resources:** |