



*Hydropower Upgrades for Projects Larger than 50 Megawatts (MW)*

- **Alabama Power Company – up to \$6 million for a project in Mitchell, AL** - For a project that will increase efficiency and upgrade four units at three hydroelectric plants on the Coosa River by replacing 1940s to 1960s vintage turbines with new high-efficiency stainless steel turbines and runners that maximize each unit's ability to utilize the limited available water. Generation will increase by 36,087 MWh annually (7.3% increase).
- **Alcoa, Inc. – up to \$13 million for a project in Robbinsville, NC** - To replace four 90-year-old Francis Turbines with four new high-efficiency stainless steel turbines, generators, and transformers, providing an additional 22 MW of generating capacity at Alcoa's Tapoco Cheoah plant. Annual generation would increase by 95,000 MWh (23% increase), and the project would reduce the likelihood of an oil spill into the river with the replacement of water cooled transformers and removal of lead and asbestos from all four generating units.
- **City of Tacoma, Department of Public Utilities - up to \$4.67 million for a project in Potlatch, WA** – To add two 1.8 MW Francis Turbines to the existing 81 MW Cushman No. 2 Dam, adding 23,500 MWh of annual generation (14% increase) and 3.6 MW of capacity. In addition, the project will incorporate an upstream fish collection pool to enable reintroduction of native fish above the dam for the first time since the 1920s.

*Hydropower Upgrades for Projects Less Than or Equal to 50 MW:*

- **The City of Boulder, CO** – up to \$1.18 million for a project in Boulder, CO – To upgrade the 100-year-old Boulder Canyon Hydroelectric Project by replacing two older turbines with a single, high-efficiency unit. The new turbine would operate at a wider range of flows and higher efficiency ranges, resulting in an increase in annual generation of 11,000 MWh (30% increase). Upgrades to wiring and removal of asbestos would reduce environmental hazards and improve safety.
- **Energy Northwest - up to \$800,000 for a project in Packwood, WA** – To design, manufacture, and install a new state-of-the-art Pelton Wheel Turbine at the Packwood Lake Hydroelectric facility. The new turbine will have greater efficiency at low power operations, increasing annual generation by 5,868 MWh (6% increase), and will benefit the local fish population and create more sustainable habitat conditions downstream.
- **Incorporated County of Los Alamos, NM - up to \$4.56 million for a project in Los Alamos, NM** – To add a low flow turbine/generator to the 13.8 MW hydroelectric plant in Abiquiu, New Mexico, increasing the total plant capacity by 3 MW and allowing the dam to operate when releases are below or above the capacity of the two existing turbines. The upgrade will increase annual generation by 6,462 MWh (22% increase). The project's environmental benefits include higher dissolved oxygen content in downstream water and increased minimum flows.
- **North Little Rock Electric Department - up to \$450,000 for a project in Little Rock, AR** – To install an automated intake maintenance device at its 39 MW hydroelectric facility on the Arkansas River to clear debris currently obstructing the intake and allow the facility to operate consistently at near peak efficiency and significantly reduce the high cost of dredging. Air pollution would be reduced in a non-attainment air basin as the debris has been previously burned for removal.