



## The Completion of the Huslia LED Lighting Retrofit Project Marks the Start of Energy Savings

*The replacement of all bulbs with LEDs is expected to reduce the village lighting load by 65%—145,500 kilowatt-hours per year—and will save the village over \$30,000 per year based on the current PCE rate.*

In May 2015, the U.S. Department of Energy (DOE) Office of Indian Energy announced its selection of five Alaska Native villages to receive technical assistance to accelerate clean energy projects and initiatives through the Alaska Strategic Technical Assistance Response Team (START) Program. The Native Village of Huslia (Huslia) was one of the villages selected.

When applying for START, the Native Village of Huslia, located in Interior Alaska, had a working draft of its community energy vision, which was “to reduce imported diesel 50% by the year 2030 in order to help reduce costs and decrease the effects of climate change” on the community. As a result of Huslia’s selection for the START Program, the National Renewable Energy Laboratory (NREL) modeled Huslia’s energy system and conducted a detailed energy options analysis to provide a least-cost strategy for getting to 50% fuel reduction. The analysis showed that energy efficiency would be the most cost-effective option for reducing the use of imported diesel. The community had never undertaken an energy efficiency project but after seeing the results from the energy analysis, the Tribal Council was excited about pursuing a village-wide lighting retrofit as a first-step energy efficiency project that could save the community both money and energy.

NREL worked with local energy advocate Edwin Bifelt, Zane Hills Capital, to conduct surveys, collect data, and engage stakeholders. Once the initial assessments were completed, the START team worked with the Tanana Chiefs Conference—the 42-village tribal consortium of which Huslia is part—to get the lighting retrofit funded and implemented.

In total, more than 2,500 light bulbs from more than 1,200 light fixtures located in tribal buildings, commercial buildings, and homes were retrofitted with light-emitting diode (LED) bulbs. NREL estimates that the LED lighting will reduce the Village lighting load by 65%, or 145,761 kWh a year, and will pay for itself between .5 and 1.5 years, depending on the number of hours per day the lights are on.

The success of the Huslia START LED retrofit project was a result of the development of a Village energy plan—assessing all available options and making informed decisions on what energy projects to pursue, investigating and pursuing funding opportunities, and collaborating closely with project partners. The Huslia LED project is one that can be applied across Alaska Native villages, and, given the high cost of energy in rural Villages, lighting retrofit projects are likely to be cost-effective even without START assistance.



*From left to right: 1) Some of the new led bulbs that were shipped to Huslia and are ready for installation. 2) Old T12 fluorescent bulbs being replaced with LEDs. 3) A Village home’s bulbs being replaced with LEDs.*

