

## Kotzebue High Penetration Wind-Battery-Diesel Hybrid

<b>Grantees</b>	Kotzebue Electric Association (Utility-Private)
<b>Technology Type</b>	WIND
<b>Region</b>	Northwest Arctic
<b>AEDG Project Code</b>	10085

### REF Grants Received

Round	App	Grant Title	Grant #	AEA Project #	Phase	Start Date	End Date	Status
1	85	Kotzebue Wind Farm Expansion Construction	2195427	409022	Construction	8/20/08	12/31/12	Active
3	518	High Penetration Wind-Battery-Diesel Hybrid	7030015	409022	Construction	7/1/10	10/31/15	Active

### Grant 2195427: Kotzebue Wind Farm Expansion Construction

**Project Scope:** This project expands the installed wind capacity in Kotzebue from 1.14 MW to 2.95 MW with the addition of two 900 kW turbines. Secondary loads will be installed at locations within the community to provide heat during times of excess power. An energy storage device will be installed to provide grid stability and time shift electrical generation.

**Project Status:** This grant has been closed out and the project is being finished under Grant #7030015.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	\$4,000,000.00	\$4,000,000.00
Other State Funding	\$0.00	\$0.00
<b>Total State</b>	<b>\$4,000,000.00</b>	<b>\$4,000,000.00</b>
Required Local Match	\$1,404,460.00	\$1,404,460.00
Federal Grant Funding	\$0.00	\$0.00
<b>Total Project Costs</b>	<b>\$5,404,460.00</b>	<b>\$5,404,460.00</b>

### Grant 7030015: High Penetration Wind-Battery-Diesel Hybrid

**Project Scope:** This project expands the installed wind capacity in Kotzebue from 1.14 MW to 2.95 MW with the addition of two 900 kW turbines. Secondary loads will be installed at locations within the community to provide heat during times of excess power. An energy storage device will be installed to provide grid stability and time shift electrical generation.

**Project Status:** The turbines have been installed and commissioned and Kodiak Electric Association (KEA) is working on the final construction punch list for the wind farm and transmission line. Contracts for the thermal secondary loads are being negotiated. Premium Power shipped their flow battery out of Kotzebue after it was determined a major re-design was required. The decision not to continue with the Premium Power battery and Request for Information was sent out in late 2013 to identify an energy storage solution. Responses to a Request for Proposals were received in late 2014. KEA selected the lithium-ion Intensium Max 1000kWh/500kW battery from Saft and the battery was installed in the fall of 2015.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	\$4,000,000.00	\$2,681,052.00
Other State Funding	\$0.00	\$0.00
<b>Total State</b>	<b>\$4,000,000.00</b>	<b>\$2,681,052.00</b>
Required Local Match	\$1,404,459.00	\$948,993.00
Federal Grant Funding	\$0.00	\$0.00
<b>Total Project Costs</b>	<b>\$5,404,459.00</b>	<b>\$3,630,045.00</b>