

## St. Paul Wind Diesel Project

<b>Grantees</b>	TDX Corporation (Independent Power Producer)
<b>Technology Type</b>	WIND
<b>Region</b>	Aleutians
<b>AEDG Project Code</b>	10287

### REF Grants Received

Round	App	Grant Title	Grant #	AEA Project #	Phase	Start Date	End Date	Status
3	503	St. Paul Wind Diesel Project	7030002	409023	Construction	7/1/10	12/31/17	Active

### Grant 7030002: St. Paul Wind Diesel Project

**Project Scope:** This project was fully funded. The project consists of \$1.9 Million from Round III of the Renewable Energy Fund (REF) with an additional \$200,000 in match from the grantee. The grantee has also “matched” \$1.5 million in turbines purchase (this includes \$650,000 of DOE funds). The project will tie one or two of TDX’s turbines on St. Paul into the City’s grid and make necessary upgrades to the City’s facilities and transmission system.

**Project Status:** The Power Purchase Agreement and 35% design has been accepted by AEA. A phased construction schedule was approved by AEA and the City of St. Paul. This will allow the feeder from the City grid to the TDX POSS camp to be designed and built before the overall design of the system has been completed. This was due to concerns regarding harmonics on the distribution system during wind turbine start up. Testing will be completed once the feeder has been built and the turbines connected to the grid to determine if additional equipment will be necessary to handle any harmonics. Power from the turbines will only be allowed on the grid during this testing phase and the full 65% design will be completed after the testing. The feeder 65% design has been accepted by AEA and St. Paul. The 65% design was accepted by AEA and St. Paul on November 16, 2012. The 95% design was accepted by AEA and the City on May 9, 2013. Construction at the POSS camp has been completed. Work on the City Power Plant switchgear has been halted due to the delayed installation of Generator 2 by the City.

The first wind power made it onto the City grid during testing on August 12, 2012. The City is accepting power from two wind turbines but the size of the secondary loads and diesel generators is limiting the amount of wind power being produced. The City’s newest generator, along with additional secondary loads being planned, should eliminate this bottle neck. The scope of work for this grant was expanded to include the installation of a flywheel, met tower, and additional secondary loads. The additional work is possible due to TDX finishing underbudget and considered necessary due to the City accepting power from the second turbine more quickly than anticipated. The flywheel has been installed and is undergoing testing as part of an EETF (Emerging Energy Technology Fund) grant to provide additional “diesels off” time at the TDX POSS Camp. After testing is completed the flywheel will provide ancillary services (frequency and voltage support) for the wind turbines providing power to the City Grid.

As of Nov. 30, 2013	Budget	Expenditures
Renewable Energy Funding	\$1,900,000.00	\$1,628,414.12
Other State Funding	\$0.00	\$0.00
<b>Total State</b>	<b>\$1,900,000.00</b>	<b>\$1,628,414.12</b>
Required Local Match	\$200,000.00	\$173,615.97
Federal Grant Funding	\$0.00	\$0.00
<b>Total Project Costs</b>	<b>\$2,100,000.00</b>	<b>\$1,802,030.09</b>