The goal of this work is to provide a model that estimates jobs and other economic effects associated with the domestic distributed wind (DW) industry. DW can be installed on residential, agricultural, commercial, industrial, and community sites of any size and can be connected on the customer side of the meter (to serve the onsite load) or directly to the local grid. The market includes wind turbines and projects of many sizes.

The Jobs and Economic Development Impacts (JEDI) Model

- JEDI is a free input-output model that estimates employment and other impacts resulting from an investment in DW installations.
- Default inputs are from installers and industry experts and are based on existing projects.
- User input can be minimal (use defaults) or very detailed for more precise results.

JEDI can help:
- Evaluate potential scenarios, current or future
- Inform stakeholders and decision-makers
- Assist businesses in:
  - Evaluating economic development impacts
  - Estimating jobs
- Assist government organizations with:
  - Planning and evaluating
  - Developing communities.

Who Cares about Wind Jobs?

Your friends and neighbors employed in the DW industry, state and federal policy-makers, local decision-makers, small wind manufacturers, installers, and salespeople care about jobs.

2003-2012 Cumulative U.S. Distributed Wind Capacity

Note: The above map shows DW installations between 2003-2012. At the end of 2012, U.S. wind turbines in distributed applications reached a 10-year cumulative installed capacity of more than 812 MW from more than 69,000 units across all 50 states, Puerto Rico, and the U.S. Virgin Islands (DOE 2013).

In 2012, the average installed cost of new small wind turbines in the United States was $6,960/kW, an 18% increase from 2011. U.S.-based manufacturers’ weighted average 2012 installed cost of $6,510 was 19% lower than non-U.S. suppliers (DOE 2013).

Inconsistent cost trends could be due to issues with individual turbines. For the purposes of this research, they are categorized by size (nameplate capacity). Preliminary model runs indicate that DW supports more jobs per megawatt than utility-based wind. These JEDI model estimates may change as the model is updated. The JEDI model provides gross (not net) jobs estimates.

How You Can Help

Please contact Suzanne Tegen at NREL.

More actual project data helps model users calculate more accurate estimates.

NREL needs data on turbines between 1 and 1,000 kW, including:
- Capital costs for DW projects, including turbines
- Installation labor costs
- Permitting costs and labor
- Operation & maintenance parts and labor costs
- Whether parts and labor are local.

Note: Individual data will never be made public but will be used to validate existing aggregated information. Cost and labor ranges may be provided instead of a dollar amount.

Photo from Forbes Park LLC, NREL 16116

Photo from MA Technology Collaborative, NREL 14872

Photo from Northern Power Systems, NREL 16730

Photo from Forbes Park LLC, NREL 16116