

Revisions to the JEDI Wind Model

June 2009

Model number W1.09.03e

Consistent with our ongoing economic development research and analysis on wind power, the JEDI analysis team recently completed a series of updates to the JEDI Wind model. The updates reflect current survey data, an extensive review of model usability, as well as feedback from users. The updates are now incorporated in a new release, version W1.08.03a. In general, the model revisions are of two types. The first reflects current wind industry construction, equipment, operating practices, and cost modifications that have occurred since the last update. The second type includes those intended to improve actual use of the model and user ability to interpret model results. These changes help to ensure the analysis and impacts are consistent with on-the-ground reported impacts.

Overall project costs and the distribution of these costs have been revised for construction and operations reflecting recent changes in component capital costs, productivity improvements, and changing industry practices. The new cost distribution reflects changes in specific aspects of project development as well as in operations and labor costs. In addition, the model now contains updated direct construction and O&M labor estimates based on current industry averages.

To facilitate ease of use, we added more information to the on-screen comments (accessed by pointing to red cell corners) and automatic "pop-ups" triggered by user inputs (designed to inform users of inconsistencies in user modifications). As well, we made additions to the questions and answers in the FAQ section.

To assist users in better understanding and interpreting modeling results, we redefined what is included in the direct and indirect impacts (jobs, earnings, and output) that result from wind power projects. For example, direct jobs during the construction and operations phases now constitute only those jobs that are performed on site, at a given wind farm. All other jobs that can be attributed to wind farm construction and operating expenditures are deemed indirect or induced. This adjustment in classification should be more intuitive for the general population than in previous JEDI Wind model releases.

In addition, the model now includes state specific tax estimates for most states. These are based on our surveys of existing wind farms and state tax policy on wind power equipment and operations. Default construction and operations period labor costs and payroll parameters (including average wage per hour) now automatically adjust in accordance with state industry job and earnings ratios. Similarly, default project construction and O&M cost factors now reflect economies of scale, accounting for increased construction and operating efficiencies observed as individual projects increase in size. Finally, consistent with previous model releases multiplier data is 2006 data from the Minnesota IMPLAN Group.

For questions regarding these updates or the JEDI Wind Model generally please contact JEDI Support at the National Renewable Energy Laboratory (jedisupport@nrel.gov).