

Economic Development Impacts of Community Wind Projects: A Review and Empirical Evaluation

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Executive Summary

Community wind projects have long been touted (both anecdotally and in the literature) to increase the economic development impacts of wind projects, but most analyses of community wind have been based on expected results from hypothetical projects. This report provides a review of previous economic development analyses of community wind projects and compares these projected results with empirical impacts from projects currently in operation.

A review of existing literature reveals two primary conclusions. First, construction-period impacts are often thought to be comparable for both community- and absentee-owned facilities.¹ Second, operations-period economic impacts are observed to be greater for community-owned projects. The majority of studies indicate that the range of increased operations-period impact is on the order of 1.5 to 3.4 times.²

New retrospective analysis of operating community wind projects finds that total employment impacts from completed community wind projects are estimated to be on the order of four to six 1-year jobs per-MW during construction and 0.3 to 0.6 long-term jobs per-MW during operations. In addition, when comparing retrospective results of community wind to hypothetical average absentee projects, construction-period employment impacts are 1.1 to 1.3 times higher and operations-period impacts are 1.1 to 2.8 times higher for community wind. Comparing the average of the completed community wind projects studied here with retrospective analysis of the first 1,000 MW of wind in Colorado and Iowa indicates that construction-period impacts are as much as 3.1 times higher for community wind, and operations-period impacts are as much as 1.8 times higher.

Ultimately, wind projects are a source of jobs and economic development, and community wind projects are shown to have increased impact both during the construction and operations-period of a wind power plant. The extent of increased impact is primarily a function of local ownership and return on investment.³ As such, policies that prioritize higher levels of local ownership are likely to result in increased economic development impacts. Furthermore, the increased economic development impact of community wind shown here should not be undervalued. As the wind industry grows and approaches penetrations in the U.S. electricity market of 20%, social opposition to new wind power projects may increase. Community wind could provide a valuable strategy for building community support of wind power - especially in communities that are new to wind power.

Summary provided by Eric Lantz, co-author of the study. Eric Lantz is a member of the Markets and Policy Analysis group at the National Renewable Energy Laboratory. He works primarily with issues of state policy and expanding markets for renewable energy. In addition, he concentrates on evaluating the economic development impacts of wind power and other energy generation technologies. Eric holds a master's degree in Environmental Studies with a focus on Renewable Energy Policy from the University of Colorado. The full study can be downloaded at: http://www.windpoweringamerica.gov/pdfs/economic_development/2009/community_wind_projects.pdf

¹ The thought process here is that it is the size and skill set of the local labor pool that is the limiting factor in determining whether local labor and materials support a specific wind project. While this is true in theory, it appears that the on the ground reality does support this.

² One study (DanMar & Associates 1996) noted that operations period impacts could be more than six times that of a similar absentee project.

³ Use of local labor and materials during operations is also important but less so than local ownership.