

The local economic impact of an island renewable energy project: a SAM-based analysis of the importance of ownership/ revenue sharing.

Grant Allan, Peter McGregor, Kim Swales and Karen Turner

Abstract

For renewable energy projects, conventional cost-benefit analysis (e.g. Moran and Sherrington, *Energy Policy*, 2007) considers the market and non-market impacts of a new development. The possibility that this would have an impact on local economic development is typically omitted from such an analysis. At the national level, such developments may have zero impact (though this view is itself controversial), but this will not be true at the local/ community level. Quantification of the potential impacts at the local level may be important in influencing the community's response to renewable energy proposals, and also for the design of the renewable energy project itself. 'Community Benefit' payments, i.e. a (generally) fixed annual goodwill donation from the developer to the affected local community, are the most common way in which the local community benefits from renewable energy development. Increasingly, however, developers and communities are exploring alternative structures for renewable energy projects, in which the community takes a greater role in the project, through a shared ownership scheme, for example.

This paper proposes a methodology for assessing the impacts of renewable energy projects on a local community. The local level considered is an island group off the Scottish coast, where there are substantial renewable energy resources and an appropriate economic database is available. The approach is, in principle, applicable to any peripheral community. Using island-level Input-Output and Social Accounting Matrices, we show the quantitative importance of alternative degrees of community participation and ownership in renewable energy projects. The significance of assumptions about alternative uses of the community revenues are also explored through sensitivity analysis.