

Local Multiplier 3 (LM3) Pilot Project for RWE

Case Study: Novar 2 Wind Farm



RWE creates demand for wind farm construction products through investing in wind farm development and construction. This study by **nef consulting** seeks to understand and quantify how and where this investment is re-spent in the economy using a case study of the Novar 2 wind farm. The Novar 2 Wind Farm is located in Ross-shire, north of Inverness and comprises sixteen 2.3 megawatts (MW) turbines and has a generating capacity of up to 36.8MW. The Local Multiplier 3 (LM3) used in the study was developed by **the New Economics Foundation (NEF)** as a simple and understandable way of measuring local economic impact.

Key findings

- **For every £1 that RWE invested in civil and electrical contracts at Novar 2, 52p was subsequently re-spent in the local economy through the supply chain.**
- **Considering Scotland as a whole, each £1 of investment was shown to have resulted in a total of 71p of additional spending.**

Summary

RWE commissioned **nef consulting** to conduct a pilot project to:

- **Demonstrate the feasibility of the Local Multiplier 3 (LM3) approach within the energy construction sector.**
- **Build capacity and expertise at RWE to measure the economic impact of investment in new plants.**
- **Help RWE create a monitoring requirement and performance enhancement metric that can be integrated into contracts issued for power plant construction.**

RWE spent £7.93m on the civil and engineering works during construction of the Novar 2 Wind Farm, with two prime contractors.

The research objective was to calculate the LM3 ratio for the Novar 2 Wind Farm. It was found that it is possible to estimate the LM3 of a remote investment using a “business watershed” or “bizshed” approach. This is an innovative approach to calculating “local” economic impact on a consistent basis.

The research showed that the investment has resulted in significant local spending across the Highlands and bizshed area. For Novar 2, this roughly equates to the four local authorities of Highlands, Moray, Aberdeenshire and Aberdeen.

The approach

The geography of spending through prime contractors, RJ McLeod Contractors Ltd and Balfour Beatty Engineering Services Ltd and their sub-contractors was measured using survey methods.

RWE spent £7.93m on the civil and engineering works during construction of the Novar 2 Wind Farm, with two prime contractors (the **first** round of investment). Of this spending, £4.92m was spent in a **second round** by prime contractors on sub-contractors of which £2.83m went to local firms. £935,000 went to firms in the rest of Scotland.

A survey established a reasonable estimate of where sub-contractors spent this money in a **third round** on supplies, materials, staff and additional sub-contractors. This data revealed that a further £1.31m of spending occurred in the local economy, and an additional £560,000 in the rest of the Scottish economy.



For every £1 that RWE invested in civil and electrical contracts, an additional 52p was subsequently re-spent in the local economy through the supply chain in all three rounds. Considering Scotland as a whole, each £1 of investment resulted in a total of 71p of additional spending in all three rounds.

Calculating a bespoke multiplier ratio, excluding that part of the prime contracts retained by prime contractors, the research found that the Novar 2 investment resulted in an LM3 ratio of 1.84 for the local economy and 2.14 for Scotland as a whole.

Methodology

The calculation of local economic multipliers involved data collection from prime contractors and sub-contractors. To establish a bespoke local geographical boundary for Novar 2, data for the Scottish wind farm supply chain was acquired and collated.

Both prime contractors provided a breakdown of spending within their supply chain and staffing. Both are based in Glasgow but RJ McLeod Contractors Ltd (RJM) sourced staff and labour resources and coordinated work on Novar 2 from their Dingwall office, 13 miles from Novar.

Constraints

Calculations were based on a mix of direct reported figures and estimates made by sub-contractors within the supply chain to RJM and BBESL. Survey responses cover 85% of the value in the supply chain. The LM3 calculation has been made on the basis of this data coverage and nef consulting estimate with 95% certainty that the “true” figure lies within 10% of the reported figures.

What is a local economic multiplier?

An economic multiplier effect describes the impact that spending has in the economy, taking into consideration knock-on effects. Local Multiplier 3 (LM3) was developed by nef (the new economics foundation) as a simple and understandable way of measuring local economic impact. The measuring process starts with a source of income and follows how it is spent and re-spent within a defined geographic area. A higher proportion of money re-spent in the local economy means a higher multiplier effect because more income is generated for local people. More income retained locally, or nationally, means more jobs, higher pay and more tax revenue for government, all of which may lead to better living standards.

Defining local supply chain potential – business watershed

The LM3 study used a mapping exercise to understand the geographical spread of the supply chain. Bespoke circumferences were drawn taking in the closest 750 or 1000 relevant businesses, calculated using drive time from the site. This is the “business watershed” or “bizshed” and allows for a comparison ratio of local spending and re-spending retained “locally” on a consistent basis. In this study, “local” was defined as being the 750 closest businesses to the site that operate in wind farm supply chain industries.

3700 businesses were identified as being within the relevant sectors and their drive time distance to the Novar 2 Wind Farm calculated. The closest 1000 businesses lie within a 3 hour 44 minute drive time and represent the closest 27% of all Scottish businesses to the site. The closest 750 businesses are within a 3 hours 12 minute drive time and represent the closest 20% of all Scottish businesses. Wind farm supply chain businesses are – broadly speaking – distributed consistently across Scotland so the potential of a bizshed approach to provide a comparable monitoring and performance requirement appears to be justified.

For further information

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