ARGYLL AND BUTE COUNCIL **Policy and Resources Committee**

Development and Infrastructure Services **15 December 2016**

CARBON MANAGEMENT: WIND TURBINE AT GLENGORM LANDFILL SITE UPDATE

1.0 EXECUTIVE SUMMARY

1.1 At its meeting on 21 March 2013, the Council approved a budget to progress the development of business cases for biomass and renewables sourcing. One of the projects to assist in the reduction of the Council's carbon footprint which was agreed at the Council Meeting on 21 January 2016 was the installation of a wind turbine on the Glengorm Landfill Site on the Isle of Mull. This report provides an update on that project.

1.2 Following the report to Council in January, we have completed the procurement for the turbine an order was placed in May 2016. Work commenced on site in June 2016 with the foundation works completed in July and the turbine arriving on site in early August. Over the course of a week the turbine was successfully erected and on 12 August 2016 the turbine was commissioned. This commissioning date was more than 6 weeks before the deadline set by the Feed in Tariff pre-accreditation and 2 weeks before the contractual deadline. It has been generating electricity for use on the landfill site and export to the grid since this date. Confirmation has now been received from Ofgem that the project has been accredited for Feed in Tariff, a subsidy available to small scale renewables, from this date.

1.3 Community benefits associated with the contract have included a visit of pupils from Tobermory High School and a Name the Turbine competition.

1.4 The Committee is asked to note the progress made in successfully commissioning the turbine and securing accreditation under the Feed in Tariff.

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2.0 INTRODUCTION

2.1 At its meeting on 21 March 2013, the Council approved a budget to progress the development of business cases for biomass and renewables sourcing. The background for this expenditure was the Council's Carbon Management Plan which identified a target of a 20% reduction (8,943 tonnes CO2) in the Council's carbon footprint by March 2014. At the time of the 2013 report, over 4,000 tonnes of CO2 had been reduced however additional projects, including renewables projects identified through the Renewable Sourcing Strategy, were required to further reduce CO2. In addition to the carbon savings, the projects offered the opportunity to reduce energy costs and in some instances generate income.

2.2 One of the projects to assist in the reduction of the Council's carbon footprint which was agreed at the Council Meeting on 21 January 2016 was the installation of a wind turbine on the Glengorm Landfill Site on the Isle of Mull. This report provides an update on that project.

3.0 RECOMMENDATIONS

3.1 The Committee is asked to note the progress made in successfully commissioning the turbine and securing accreditation under the Feed in Tariff.

4.0 DETAIL

4.1 Following the report to Council in January, the procurement of the turbine has been successfully completed and following approval from the Council Leader, Depute Leader, Leader of the Opposition, Director of Customer Services and Director of Development and Infrastructure Services an order was placed in May 2016 for the wind turbine, associated civil works and a maintenance agreement. Below is a summary of the expected electricity generation, payback periods and carbon savings.

Electricity generated	163,171 kwh/annum*
Net Annual Saving	£30,183.17**
Simple payback of total project costs	16 years

Simple payback of additional project costs incurred after Council approval	14.5 years***
Working life of major plant	20 years
Expected surplus over lifetime of turbine	Circa £120,000
Annual Carbon Savings	75.4 Tonnes
Lifetime Carbon Savings	1,508 Tonnes

* An estimate based on a wind speed of 5.2m/s with the turbine capped at 50kw (the maximum export to the grid), actual wind speeds and generation will vary dependent upon weather conditions
** Average annual saving over lifetime of turbine assuming some onsite energy use, Feed in Tariff and export payments are received and allowing for annual maintenance, service, insurance and metering costs
***Excluding costs incurred through planning and procurement stages

4.2 Work commenced on site in June 2016 with the foundation works completed in July and the turbine arriving on site in early August. Over the course of a week the turbine was erected and on 12 August 2016 the turbine was commissioned. This commissioning date was more than 6 weeks before the deadline set by the Feed in Tariff (FIT) pre-accreditation and 2 weeks before the contractual deadline. The turbine has been generating electricity for use on the landfill site and export to the grid since this date.

4.3 Teams from across the Council, particularly Property Services and Waste Management, supported the delivery of this project. Their support was an important part of the successful delivery of this project. Confirmation has now been received from Ofgem that the project has been accredited for Feed in Tariff (FIT), a subsidy available to small scale renewables, from 12 August 2016. Meeting the pre-accreditation deadline was critical to secure the FIT upon which the payback projections were calculated. Whilst the final parts of the contract are still being completed, we expect that the project will be delivered within the approved budget and we therefore expect that the turbine will generate the surplus of up to £120,000 over its lifetime, although this will of course depend upon the wind speeds on site.

4.4 As part of the contract, community benefits have been provided by the Council's contractor. On 29 August 2016, a visit of pupils from Tobermory High School was undertaken. The pupils completed a walkthrough of the site including looking inside the turbine. A questions and answer session followed covered the installation, wind turbines in general, other renewable technologies and pros and cons of them.

4.5 A Name the Turbine competition has also been held for pupils across the Mull and Iona primary schools. Suggested names were received from more than 70 school pupils across Mull and the winning name was Miss Hoolie, a suggestion received from Cailen MacLean from Tobermory Primary School. A naming ceremony will be planned and Tobermory Primary School will receive a prize for suggesting the winning name.

5.0 CONCLUSION

5.1 The project to develop the Council's first wind turbine was agreed by Council on 21 January 2016. Since this approval and with the support of teams across the Council, particularly Property Services and Waste Management, the project has been successfully procured and constructed and the turbine is now operational on time and within budget. The turbine is expected to save around 75 tonnes of carbon annually as well as providing a reduction in onsite electricity costs.

6.0 IMPLICATIONS

6.1 Policy – the project will help to deliver the Carbon Management Plan saving around 75 tonnes of carbon per annum.

6.2 Financial – the project is expected to generate average annual savings in the region of £30,183.17, initially this will be used to pay back the prudential borrowing required to finance the project. The project is expected to be delivered within the agreed budget.

6.3 Legal – None.

6.4 HR – None.

6.5 Equalities – None.

6.6 Risk – whilst a number of the risks associated with the project have reduced since the completion of the works there remains uncertainty regarding the actual generation of the turbine as well as the safe operation.

6.7 Customer Service – None.

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24 November 2016

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