

Causeway Coast and Glens Borough Council

TO: Environmental Services Committee

3 November 2015

SOLAR PV IMPLEMENTATION PROGRAMME

For Decision

1.0 Report to Committee

Linkage to Corporate Strategy	
Strategic Theme	Protecting and Enhancing Our Environments and Assets
Outcomes by 2019	Our natural assets will be carefully managed to generate economic and social returns without compromising their sustainability for future generations.
Lead Officer	John Richardson
Cost: (If applicable)	Dependent Upon Available Capacity / Area

1.1 Background

Legacy Coleraine Borough Council successfully implemented a Solar PV Installation programme which was recently completed. Solar panels were installed across 6 sites with a total rating of 224Kw's at a cost of £318,200.00 +vat. The anticipated pay back for this is 5.5 years with the total revenue generated for Council projected at £681,000.00.

Solar PV generates electricity for use within Council properties, which reduces cost to Council. In addition subsidy via reduced energy costs, Government grants also fund these installations via the Renewable Obligations Certificate Scheme (ROCS) delivered and managed by DETI which makes payment to the solar PV owners for all electricity generated by their solar PV installations. The current ROCS incentive (from 1st October 2015 until 1st October 2016) for solar PV installations up to 50KW in size is 3 ROCS which is currently 12.24 pence per KW generated. From 1st October 2016 the ROCS are to reduce to 2 ROCS which would therefore be worth 8.16 pence per KW generated (based on the current ROC price). Thus, in order to avail of 3 ROC's prior to 1st Oct 2016 grant reduction, installations must be complete and registered with OFGEM by this time.

1.2 New Solar PV Installation

Based on anticipated costs and returns as can be seen in table 1, the payback period is expected to be 6.3 years, as shown in diagram 1. As ROC payments are for 20 years from the date of registration therefore providing over 13 years of profit.

In addition to income incentive for Council, Government legislation is gradually becoming more penalty driven, thereby reinforcing the need for Council to take commercial advantage of renewable energy technology incentive schemes to ensure that an Energy Management Strategy EMS can be delivered cost effectively to meet obligations, namely;

Carbon Reduction Commitment CRC– Current capture criteria set at 6000 MWhrs (electric) - Carbon Emissions (Co2) Charged at £16.00 Tonne. See figure 4.4 is an excerpt from Coleraine Borough Council EMS – highlighting the impact of the CRC.

The Strategic Energy Framework (SEF) was endorsed by the Assembly in 2010.

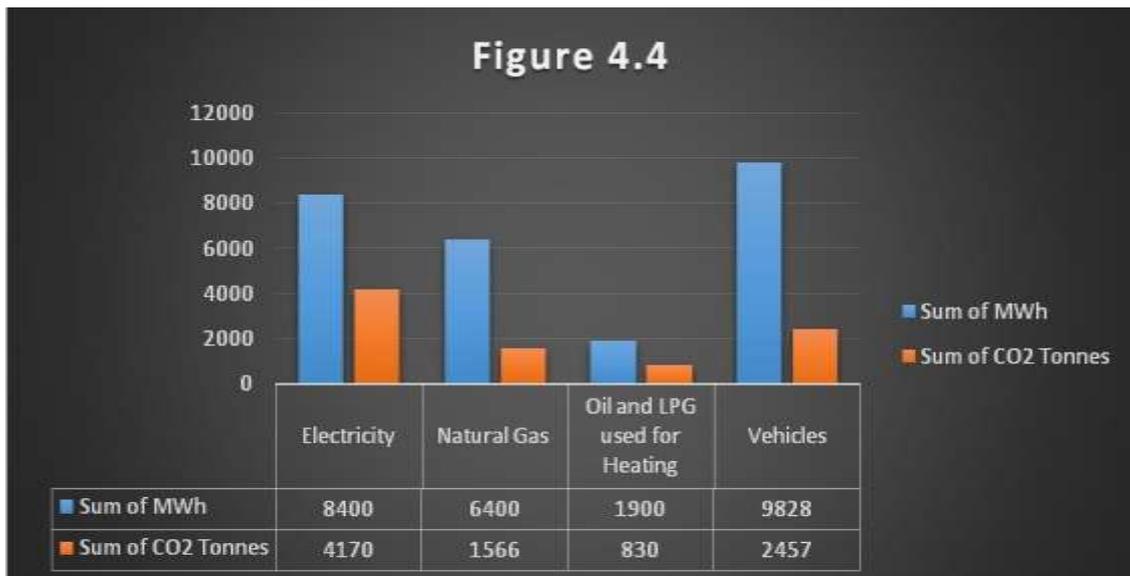
DETI set targets for 40% of Electricity and 10% of Heat Energy in N. Ireland to be provided from Renewable sources by 2020. See figure 6.4 – which demonstrates how the proposal contributes to these obligations.

The NI Greenhouse Gas Emissions Reduction Action Plan endorsed by the Assembly in Feb 2011 set a target to reduce CO2 Emissions by at least 25% below 1990 levels before 2025.

The Climate Change Act 2008 commits UK Government to Reducing Carbon Dioxide (CO2) emissions by 80% from 1990 levels before 2050*.

The EU Renewable Energy Directive 2009 (RED) set a target for 15% of all energy used across the UK to come from renewable sources by 2020**.

1.3 Current Energy Consumption & Carbon Emission



At £16.00 x 9023Tonnes of CO2 emissions produced by the Cluster Council across all the major Energy Sources (see fig 4.4 above) including Transport plus administration costs, Council would be forced to pay out a minimum of **£144,368 up front each year to the NIEA – if threshold is reduced in 2019.**

1.4 Current Obligations & Targets

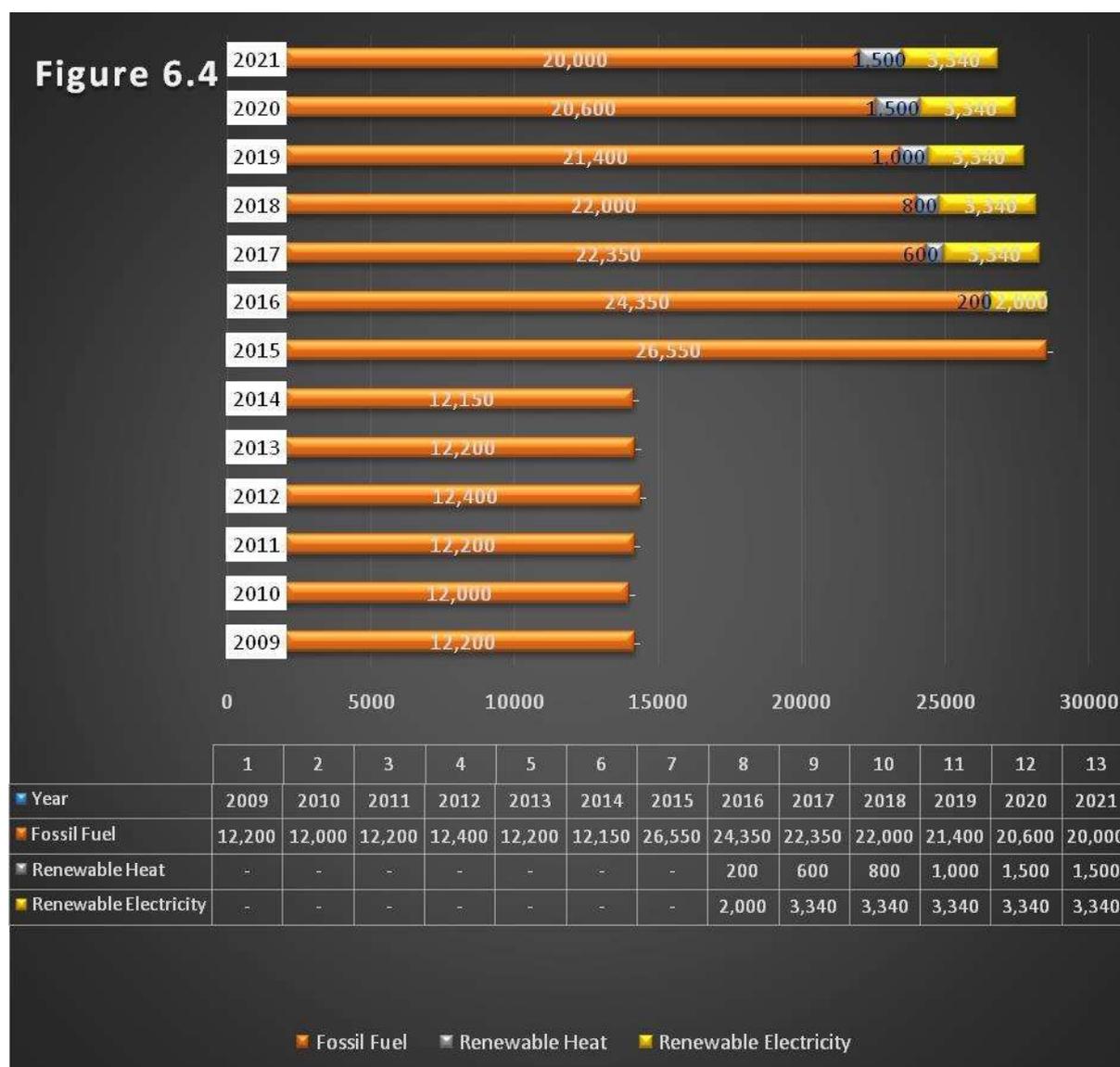


Figure 6.4 is an excerpt from Coleraine Borough Council EMS. NOTE Year 2016 - Causeway Coast and Glens Borough Council (cluster amalgamated figures) – which demonstrates current obligations of 2000 MWhr's – to be generated by renewable electricity. Proposed installation (210MWhr PA) equates to approximately 10% of this obligation - providing a significant contribution to Council targets.

1.5 Proposal

To carry out a detailed feasibility study to identify Council owned buildings within the Causeway Coast & Glens Borough estate which use a significant amount of electricity and which have adequate structures to allow solar PV to be installed over a period of 20 years.

The following premises have initially been identified as possibilities for inclusion within a rollout scheme. The size of the expected solar panel system for each premises is also noted:

- Joey Dunlop Leisure centre, Ballymoney: 50Kw
- Ballymoney Town Hall: 9Kw
- Drumaheglis Marina, Ballymoney: 10Kw
- Riada House, Ballymoney: 15Kw

Sheskburn House, Ballycastle: 50Kw
 Roe Valley Leisure Centre, Limavady: 50Kw
 Limavady Council Offices: 50Kw
 Benone Tourist Complex, Benone: 12Kw
 Limavady Town Hall: 20Kw

*subject to detailed site survey with regards to structural capability and safe access for installation and maintenance.

The total expected rating of the above is: 266Kw (210 MWhr PA) generating an income of £809,661.00 for Council (£372,400 + vat installation cost)

1.6 Recommendation

It is recommended that Council approve this proposal and proceed to stage 2 of the procurement process, to produce the final business case and tender report for approval.

Table 1.

Size of Solar PV Array/s	Installation Cost	Estimated ROCs payments over 20 years	Estimated savings on electricity bills over 20 years	Total estimated profitability over 20 years
50KW	£70,000.00	£106,729.99	£115,462.10	£152,192.09
100KW	£140,000.00	£213,459.98	£230,924.20	£304,384.18
150KW	£210,000.00	£320,189.97	£346,386.30	£456,576.27
200KW	£280,000.00	£426,919.96	£461,848.40	£608,768.36
250KW	£350,000.00	£533,649.95	£577,310.50	£760,960.45
300KW	£420,000.00	£640,379.94	£692,772.60	£913,152.54

Diagram 1 below shows the estimated figures from table 1 above in a chart format.

