

16th June 2011

*Torbay
Photovoltaic
Project*
Draft Financial Analysis
Report

Torbay Renewables Procurement Financial Analysis Report

Executive Summary

PwC undertook a financial analysis of sites identified as suitable in a feasibility study conducted on behalf of the Council by Ecofirst Consult Ltd.

This report shows that a significant positive contribution to the Council's wealth can be made by generating energy from photovoltaic panels. It requires the dedication of a significant amount of the Council's unsupported borrowing to this project, and that debt is repaid with interest over the project's life.

The financial analysis indicates that, based on inputs described below, the Council can generate total revenue of £4,294,147 (nominal terms).

An investment of £1,515,773 is required to cover installation costs at 45 sites. A reserve is pre-funded and utilised in year 12 to cover £224,544 of inverter replacement costs, in order to avoid drawing down more debt at that time. The amount invested is repaid on an annuity basis over the 25 year life of the project, at an interest rate of 4.45%.

After deducting these amounts, an excess cash flow totalling £1,527,147 remains. The present value of this future cash flow is £761,470, discounted at 3.5% per annum, representing a creation of wealth for the Council. These figures are summarised in table 1.

Installation Costs / Investment / Debt (£)	-1,515,773
Inverter Replacement costs (£)	-224,544
Total Revenue (nominal) (£)	4,294,147
Excess cash flow (nominal) (£)	1,527,181
IRR	9.12%
NPV (£)	761,470

Key risks to the achievement of the returns set out in this report have been analysed as alternative scenarios and sensitivities. In summary the sensitivity to certain risk factors is presented below:

- FIT level: reduction in tariffs by 20% = 60% decrease in NPV. The FIT is determined by HM Government and it is therefore out of the Council's control. It is, however possible for the Council to mitigate this risk through expedient commissioning of the project, to lock in to the highest possible tariff;
- Installation costs: increase by 25% = 45% decrease in NPV. Such costs are market determined but the Council can mitigate this risk to a degree through effective project management and cost control;
- Debt interest rate: increase by 2% = 39% decrease in NPV. With the use of prudential borrowing, this will be set centrally by the Public Works loan Board;
- School involvement: 1 year delay = 31% decrease in NPV. The Council can mitigate this risk by engaging with the appropriate school representatives, and communicating the potential benefits resulting from the scheme, thereby encouraging the schools to join the scheme promptly;
- Inflation: reduction from 2% to 1% = 19% decrease in NPV. It is very difficult to predict accurately inflation over 25 years, so prudent starting assumption is advised, such as the 2% per annum base case position ; and
- Cost of inverters: increase by 50% = 10% decrease in NPV. The cost of inverters is market driven and difficult to predict at their replacement time 12 years from the project commencement. The Council can mitigate this risk by building in contingency for the inverter costs.

Of the risks listed above, the Council has the most direct influence on the timing of school involvement. This scenario has a medium level of sensitivity and is therefore a key area for focus.

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The inputs provided for the financial analysis did not include areas of cost such as insurance, monitoring & maintenance which could have an effect on the return generated, due to a lack of complete information at the time of writing the report.

This report identifies a number of areas where greater certainty will be required. These include verification and market testing of the input assumptions provided. Accuracy in this respect is desirable, as evidenced by the sensitivity of the results to installation costs running above budget. There are upside as well as downside risks in this respect. For example, the Council could benefit from economies of scale from bulk purchasing.

Given that the installation costs are a primary driver of the financial performance of the project, and also determine the amount of borrowing required, it may be prudent to include a contingency in order to cope with cost overruns without the need for additional borrowing. We understand that the Council is considering 20% contingency which, when included, take the total capital costs to £1,818,927.60.

It should be noted that this financial analysis does not include the revenue effects of the displacement of purchased energy by that generated by the PV system or the potential revenue from the sale of energy to the entities at the panel sites. Such an analysis would require detailed information on usage and generation profiles, as well as current energy costs and an acceptable forecast of energy costs. Likewise, the financial analysis does not include revenue generated from exporting unused electricity back to the grid, as this requires the same data. Revenue enhancements from these sources should result, but have not been quantified in this report.

Finally, the financial analysis does not include any project development costs prior to awarding any contract to install PV panels on public buildings (i.e. further technical, financial and project management costs, procurement and legal costs).

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