

**CABINET**

<b>Date of Meeting</b>	Tuesday, 22 March 2016
<b>Report Subject</b>	Business Case for Solar Farms at Brookhill and Standard Landfill Sites
<b>Cabinet Member</b>	Deputy Leader and Cabinet Member for Environment
<b>Report Author</b>	Chief Officer (Streetscene and Transportation)
<b>Type of Report</b>	Strategic

**EXECUTIVE SUMMARY**

This is an update report on the opportunity to develop Solar farms at Brookhill and Standard Landfill sites, Buckley. A previous report (June 2015) identified the potential benefits of investing in larger scale Solar farms to the Council in terms of generating a revenue stream, and reducing the Councils carbon footprint and hence carbon taxation.

Government intervention, by way of a consultation on future renewable energy incentives, caused considerable uncertainty within the Solar industry. Shortly before Christmas 2015, the Government finally reported on the consultation, and although incentives have been reduced quite significantly, there is still a decent return on investment provided some of the generated energy can be used within our own buildings, such as Alltami depot.

The APSE framework contract is operational and the tender for the two sites was sent out on the 27th November with a return date of the 24<sup>th</sup> December.

Planning applications for the two schemes have been submitted and have been considered at the February Planning committee meeting. Although both sites have protected Great Crested newt habitats, discussions with National Resource Wales (NRW) suggest that with appropriate mitigation works, the projects could proceed within the identified timescales.

Electricity Grid connections have also been agreed, so all the practical elements required to proceed with the projects are in place, or in process, and subject only to Final Cabinet approval and Planning consent.

## RECOMMENDATIONS

1	That Cabinet consider the report, and approves the development of the two Solar farms, and the high voltage connection of Brookhill landfill site to Alltami Depot.
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## REPORT DETAILS

<b>1.00</b>	<b>BUSINESS CASE FOR SOLAR FARMS AT BROOKHILL AND STANDARD LANDFILL SITES</b>
1.01	The U.K. Government's response to its consultation on financial incentives for renewable energy systems was finally released on 17 <sup>th</sup> December 2015, revealing significant reductions to most technologies. The new rate for larger scale Photo Voltaic systems is 2.27p/KWh.
1.02	Detailed Planning Applications for the two sites were submitted on the 24 <sup>th</sup> November and were due to be considered at the February Planning Committee meeting.
1.03	When detailed designs were drawn up, the proposed installed capacity of the Photo Voltaic arrays changed slightly from the initial assessments, this is due to site constraints and topographic reasons, particularly the gradient of the sides of the landfill sites.
1.04	The planning applications will therefore be based on circa 400 KWp at Brookhill landfill site and circa 850 KWp at Standard Landfill site. Final ratings of the arrays will only be available following detailed designs and site investigations by the appointed installer, as the contract requires a performance level that can only be calculated in conjunction with the precise orientation of the arrays.
1.05	Assuming the necessary approvals are gained, it is anticipated that contracts could be signed and exchanged towards the end of March 2016, with a potential start date on site towards the end of April /early May 2016.
1.06	One particular issue when compiling the various reports for the planning applications, is the presence of Great Crested Newts at both proposed sites. However discussions with National Resource Wales (NRW) have indicated that with appropriate mitigation, and close monitoring during the installation phase, this need not delay the development process and will in the long term provide enhanced protection and habitat for the Newts.
1.07	The Association of Public Sector Excellence (APSE) Solar framework contract is fully operational and the tenders for the development works were sent out on the 27 <sup>th</sup> November and returned on the 24 <sup>th</sup> December.
1.08	Following evaluation of the tenders, Lark Energy were identified as the successful company. Lark Energy, are one of the major solar installation

	companies in the Country, and therefore have significant experience of installing Solar systems at a diverse range of sites.
1.09	The combined costs of both the proposed Solar Farms and the High Voltage connection to Alltami Depot are £1.30M with projected returns of £3.04M (first scenario) or £3.92M (second scenario) over a twenty year period.
1.10	Assessing the future inflation rate for energy costs is always difficult because they can be affected by so many factors, both domestic and international. The average inflation rate for electricity over the past 6 years has been 6.8% per annum, and although there is currently downward pressure on the energy element of the pricing makeup, other factors are still pushing delivered energy prices up.
1.11	The business case spreadsheets attached, therefore show two scenarios. The first assumes an annual inflation rate for electricity of 2.5%. This is considered a low estimate within the energy industry, as there are a number of issues that are likely to impact on prices from pressures both National and International, following the Climate Change agreement in Paris. This is despite the current downward movement in oil and gas prices. The second scenario is a 5% increase or Mid case estimate. The “high case” scenario suggests the potential for between 9% and 12 % annual increase, but has not been considered in this report.
1.12	All Welsh Local Authorities purchase their energy on the wholesale market and have already benefitted from the fall in wholesale energy prices, however electricity prices are composed of the actual cost of the energy generated (typically 51% of the delivered cost) plus a variety of “pass through” charges, such as the costs associated with distributing and transmitting the energy from the power station to site. There are also costs relating to balancing generation with demand, payment of renewable energy incentives, Climate Change Levy and other charges to be introduced such as the Capacity Mechanism, all of which are forecast to rise as the National Grid attempt to keep the “Lights on” with a very tight generation tolerance of just 5%.
1.13	Additional and significant additional savings could also be realised by a programme to change existing Council operated petrol and diesel powered vehicles to electric and hydrogen powered ones. Electric vehicles being charged directly using our own green energy, and the larger vehicles powered by hydrogen made by electrolysis, again from our own green energy. More details regarding the electric and hydrogen vehicle options will be provided in a future report.
1.14	Quotations have been received from Scottish Power Energy Networks (SPEN) for the connection and witnessing of the Solar farms to the National Grid. The quotations of £875 plus VAT per site, have been accepted.
1.15	Local Partnerships have been acting as a critical friend during the development of these proposals and are comfortable with the contents of both the report and the attached business case.

<b>2.00</b>	<b>RESOURCE IMPLICATIONS</b>
2.01	There are no staff resource issues as a result of this report.
2.02	Financial : The Cabinet report of the 15 <sup>th</sup> June 2015 resolved to support the development of the two Solar farms at Brookhill and Standard landfill sites, subject to feasibility and a final business case report to Cabinet. A provisional sum of £1.45M from Capital reserves was identified for this purpose.
2.03	The attached spreadsheet details the business case, include a number of assumptions and calculations, which are detailed in the “explanations” tab of the spreadsheets.

<b>3.00</b>	<b>CONSULTATIONS REQUIRED / CARRIED OUT</b>
3.01	APSE, Walker Morris, Steven Cirell (Energy consultant, APSE), Welsh Government, Internal Planning advice, Procurement advice. Corporate finance. Ecology Officer and Contaminated Land Officer.
3.02	Local Members have been provided with a briefing on the proposals.

<b>4.00</b>	<b>RISK MANAGEMENT</b>
4.01	Should the proposals be approved, the projects will commence as soon as contracts have been signed and exchanged, with an anticipated start date on site around the end of April, early May 2016. Assuming planning permission is granted, applications to “pre accredited” the two sites will be submitted to Ofgem, and subject to their acceptance, will give 6 months to complete both Solar projects which should be more than adequate. The electrical connection between Brookhill and Alltami depot may take a little longer to complete as it will require witnessing and final approval from Scottish Power Energy Networks. However, much of this work can be done by Street Scene operatives, so with close monitoring, and management of the projects, this will minimise the risk of project over run.
4.02	There is a small risk that our pre accreditation submissions will not be accepted for projects during the first quarter of 2016 (April to June), due to a cap the U.K Government has applied to limit the number and scale of Solar farms. The pre accreditation window opens on the 8 <sup>th</sup> February, but an accepted Grid supply Offer and Planning approval are required prior to any submission.
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<b>5.00</b>	<b>APPENDICES</b>
5.01	Appendix 1 – Business Case

<b>6.00</b>	<b>LIST OF ACCESSIBLE BACKGROUND DOCUMENTS</b>
6.01	<b>Contact Officer: Will Pierce</b> <b>Telephone: 01352 703137</b> <b>E-mail: <a href="mailto:Will.Pierce@flintshire.gov.uk">Will.Pierce@flintshire.gov.uk</a></b>

<b>7.00</b>	<b>GLOSSARY OF TERMS</b>
7.01	<p><b>Financial Year:</b> the period of 12 months commencing on 1 April.</p> <p><b>Revenue:</b> a term used to describe the day to day costs of running Council services and income deriving from those services. It also includes charges for the repayment of debt, including interest, and may include direct financing of capital expenditure.</p> <p><b>Budget:</b> a statement expressing the Council's policies and service levels in financial terms for a particular financial year. In its broadest sense it includes both the revenue budget and capital programme and any authorised amendments to them.</p> <p><b>Local Partnerships:</b> a Public Sector body whose function “is to work with Local Authorities, on behalf of Welsh Government, to help accelerate and de-risk the delivery of energy efficiency and renewable energy generation projects.”</p>