

**AGENDA ITEM No.7 (a)****DERBYSHIRE COUNTY COUNCIL****CABINET****3 March 2015****Report of the Chief Executive****Sustainable Energy – Ground Mounted Solar PV****(Strategic Policy, Economic Development and Budget)****1. Purpose of Report**

To provide an update to Cabinet on the progress made in identifying suitable Council owned sites for ground mounted solar PV and seek approval to carry out public consultation in respect of those sites.

**2. Information and Analysis****2.1 Background**

During 2013/14, the Improvement and Scrutiny Committee – Resources, undertook a review to investigate the work the Council is currently actively involved with in respect of sustainable energy projects. Additionally the review also sought to ascertain the viability of future projects on County Council owned land and property, further exploring the opportunities to reduce energy costs and generate income from sustainable energy projects at a time of significant budget reductions. The Scrutiny Review looked in detail at ground-mounted solar PV and concluded that opportunities existed for the Council to consider and develop such projects. Its recommendations to establish a cross-departmental officer team to investigate and progress large scale sustainable energy projects on Council owned land were approved by Cabinet on 17 June 2014 (Minute No 216/14 refers).

To assist in this work, the Council has become a member of APSE Energy, a not for profit local government body, which aims to form an effective collaboration between local authorities enabling and facilitating the municipalisation of energy services, including local energy generation, distribution networks and delivery of energy efficiency works. As a member of APSE Energy, the Council has access to a network of local authorities to share ideas and best practice and also benefit from technical, legal and finance consultancy.

Ground-mounted solar photo-voltaic (PV) installations, often referred to as solar farms, are installations used to generate renewable energy by absorbing light and converting it to electricity. These installations result in a local zero carbon energy source.

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There are several ways in which the Council could generate an income from the generated electricity, which are briefly detailed below:

- **Feed in Tariff (FiT)** – the Council would receive a FiT payment for each unit of generated electricity. In addition, if the electricity is exported to the national grid, an additional FiT payment would be received.
- **Private wire** – a private wire network is a privately owned and operated localised electricity network with the power produced being traded independently of the licensed transmission and distribution networks and sold through a Power Purchase Agreement (PPA).
- **Sleeve into energy contract** – Sleaving involves working with the Council's existing electricity suppliers, to gauge potential for the Council to use the generated electricity as part of the electricity supply contract (known as sleeve). In this instance, as the Council would be the generator, the energy could be used free of charge, with payment for only the distribution and transmission costs.

**2.2 Site selection**

Commercially viable sites for ground mounted solar PV are generally over 2 hectares. Council owned land of this size or above was initially identified and then considered on the basis of departmental usage; whether the site is in vacant possession or tenanted; flood risk; and its shape and topography. This process resulted in the identification of 30 sites, which were considered on a pre-planning basis against national and local planning policy set out in adopted and emerging Local Plans. The sites were also assessed by the Distribution Network Operator, Western Power, to ascertain local grid connection capacity and estimate grid connection costs. This process resulted in 11 sites being identified as having the most potential to accommodate ground mounted solar PV, with each requiring further detailed feasibility work and business case development.

Following a procurement process, under protocol 7 of the Council's Financial Regulations, APSE Energy has been contracted to undertake this work, which commenced with visits to the 11 sites. These initial site visits concluded that 6 sites, detailed below, have the most potential to accommodate ground mounted solar PV.

Site Ref	Site Name
0021-01	Westthorpe Hills (Westthorpe Colliery), Killamarsh
1801-01	Pye Bridge Recreation Area, Alfreton
2699-01	Former Swanwick Colliery Reclamation Land, Swanwick
2924-01	Agricultural Land at Swathwick Lane, Wingerworth
4269-01	Land at Mansfield Road, Temple Normanton
4273-01	Former Williamthorpe Colliery Land, Holmewood

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Of these 6 identified sites highlighted above, 3 initially appear to have the capacity to accommodate between 3MW and 5MW of solar PV. It is recommended that these sites be prioritised with a view to them being built and commissioned before 31<sup>st</sup> March 2016, when the current Feed in Tariff (FiT) regime for large scale solar PV installations changes. This would ensure that the maximum rates of return on any potential investment are obtained. Although changes to the FiT post 31<sup>st</sup> March 2016 are currently unknown, they may not change considerably for the remaining 3 sites where capacity is estimated to be around 500kW. It is therefore proposed that these smaller sites could be developed in a second phase.

It is proposed to undertake a six week public consultation exercise commencing on 9 March 2015 with a further report on the outcome of the consultation. The consultation will include:

- Six public consultation events near the localities of the proposed sites.
- Online website based public survey.
- Information leaflets distributed in the localities of the proposed sites.
- Formal press release.
- Literature on the proposals provided in local libraries and public buildings.

**3. Financial Considerations.**

Business cases for each of the 6 proposed sites are to be finalised, detailing investment and return potential. However, information gathered from other ground mounted solar PV developments, including civic projects, has indicated that costs are in the region of £800,000 - £900,000 per MW installed with annual Operating and Maintenance costs at around £10,000 per MW installed. The Internal Rate of Return (IRR) is estimated to be in the region of 8%.

In addition to the capital finance as set out above, there will be a requirement for revenue expenditure for specialist consultants, public consultation costs and planning fees. These costs, of approximately £100,000, will be met from existing energy efficiency and carbon reduction, invest to save, budgets.

**4. Environmental Considerations.**

This proposal directly supports the objectives set within the Council Plan and Climate Change Charter to invest in renewable energy technologies to help mitigate against climate change and provide local, green sources of energy.

**5. Other Considerations.**

In preparing this report the relevance of the following factors has been considered; legal, prevention of crime and disorder, equality of opportunity; health, human resources, property and transport considerations.

**6. Background Papers.**

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Report of the Chief Executive, Cabinet, 2 December 2014, Derbyshire Climate Change Charter.

Report of the Vice Chair of the Improvement and Scrutiny Committee – Resources, Cabinet, 17 June 2014; Review of Sustainable Energy Potential.

**7. Key Decision No.****8. Officer Recommendations That Cabinet:**

- 8.1 Notes the progress made towards identifying suitable Council owned sites for the installation of ground mounted solar PV.
- 8.2 Approves proposals to carry out public consultation on the 6 sites identified in the report.
- 8.3 Notes that a further report will be submitted to Cabinet in May 2015 on the responses to the consultation exercise.

**Ian Stephenson**  
**Chief Executive**