Agenda Item No: 3

SMART ENERGY GRID DEMONSTRATOR PROJECT, ST IVES PARK AND RIDE – OUTLINE BUSINESS CASE

To:	**Assets and Investment Committee**
Meeting Date:	**16th September 2016**
From:	**The Chief Finance Officer and Executive Director Economy, Transport and Environment**
Electoral division(s):	**St. Ives**
Forward Plan ref:	**2016/054** *Key decision:* **Yes**
Purpose:	**To consider a proposal to build a 1 MW smart energy grid on the County Council owned Park and Ride site at St. Ives.**
Recommendation:	**The Committee is recommended to:**

a) approve the outline business case and

b) delegate the final decision to enter into a contract for the construction of a smart energy grid at the St. Ives Park and Ride site to the Chief Finance Officer in consultation with the Chairman of Assets and Investment Committee, subject to the project meeting the minimum financial returns set out in this report in paragraph 2.5 or appendix C.

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1. BACKGROUND

1.1 This project will deliver a mini Smart Energy Grid Demonstrator project on the St.Ives Park & Ride site and a business support programme to build the capacity and capability of the supply chain to deliver these types of projects. The capital project includes construction of solar renewable energy (982 kW), battery storage, electric vehicle charging (EVC), on-site energy efficient lighting, cabling to supply electricity to local consumers and smarter management and control of decentralised renewable energy. A location plan and site map is shown at **Appendix A.**

1.2 The Energy Investment Unit submitted an outline application in August 2016 to the Department of Communities and Local Government requesting European Regional Development match funding to support delivery of the project. A degree of uncertainty on ERDF funding has been introduced following the EU Referendum. Projects secured ahead of the Autumn Statement will have a better chance of success, therefore on advice from the LEP we plan to submit a full application for funding by the end of September 2016.

1.3 The mini Smart Energy Grid aims to show how combining technologies and different sectors (energy and transport) along with selling energy locally to consumers is viable in areas where grid constraints are a significant market barrier to green growth. A business support programme will use the learning from the capital project to build capability and capacity in the supply chain and develop new business partnerships that can meet the challenges of complex, integrated technological solutions across the energy and transport sectors to deliver renewable energy projects where market failures exists.

1.4 A project development budget of £100,000 from ETE Reserves was supported by Economy and Environment Committee, May 2016 and endorsed at General Purposes Committee on 26th July 2016 to facilitate the project.

1.5 A planning application has been prepared and was submitted to Huntingdonshire District Council ahead of the ERDF outline application submission. The timeframe for a decision on the application is 8 – 12 weeks.

1.6 A grid connection will not be required as the site will not be exporting energy via the grid, but supplying electricity directly to a single customer, providing on-site energy usage and powering electric vehicle charging points.

1.7 The project is using the capacity and skills (technical, financial and legal) developed in the Authority as part of the Mobilising Local Energy Investment (MLEI) project, Bouygues Energies and Services Ltd, the procured service provider under REFIT 2 Framework and Local Partnerships, contract advisors for the Re:Fit 2 Framework.

2. MAIN ISSUES

2.1 If funding is granted, the capital project would be delivered through an established Framework arrangement known as Re:fit. This is administered by the Greater London Authority and has been widely used by Government Departments and London Boroughs. Under this Framework, Local Partnerships, a body jointly set up by the

Treasury and GLA will provide support and advice to the Authority on contracting and business case development.

2.2 Our Service Provider, Bouygues Energies and Services UK Limited (Bouygues), was procured under the Re:fit 2 Framework in August 2014 as part of a mini-competition. The framework expires on 18 November 2016 and under ERDF procurement we must have a signed construction contract in place by that date. Note that we will include break clauses in that contract to mitigate any risk to CCC should we subsequently not enter into a contract with DCLG.

2.3 This project is a demonstrator project which is looking to identify solutions to market failures currently faced by renewable electricity projects and provide broader policy and business benefits to Cambridgeshire communities. Currently no decentralised energy projects can connect to the local grid in parts of Cambridgeshire due to significant market failure, which is now impacting on green growth across Cambridgeshire.

2.4 This project is looking to demonstrate how projects can be developed, without the need of a local grid connection and to establish a business model that can be replicated across our park and ride and other assets should the Investment Grade Proposal stack up as expected. At this stage, the expected cost of the ERDF Project is £2.5M which includes development costs, the capital project, the business support programme and ERDF contract management and administration. The capital costs will be firmed up through the tendering stage and development of the Investment Grade Proposal.

2.5 The Assets and Investment Committee approved the recommendation at the meeting on 22 July 2016 for demonstrator projects and that larger projects could have a payback period of no more than 25 years. Assuming the ERDF match funding of 50% is in place, the expected £1.25 M investment could deliver:

Payback Period	**17.43**
Cash return expected over 25 years	£806,797

2.6 The July meeting of the Assets and Investment Committee also raised the current loan facility for energy investments to £20 million, therefore there are investment funds available for the required public match funding.

2.7 The Council's delivery partner, Bouygues have prepared an outline business case of the project for Assets and Investment Committee approval (see **Appendix B** and confidential **Appendix C**). This business case has been subject to rigorous challenge from CCC officers and Local Partnerships including the technical modelling that supports the business case.

2.8 Subject to approval of the outline business case, a fully costed and guaranteed Investment Grade Proposal (IGP) will be developed and according to the terms of the Re:fit Framework will provide an equal if not better financial position. Local Partnerships will support this process ensuring that the contracting arrangements are compliant with the Re:fit 2 framework terms and conditions.

2.9 The IGP will be completed on 31 October and, if acceptable, this will enable secure contracts to be signed by 18 November 2016 to satisfy Re:fit timescales. This allows no

room for slippage.

2.10 Given that the final fully costed IGP cannot be produced until after approval is granted at the September A&I meeting and the tight timelines would preclude us from returning to A&I to seek agreement, it is requested that the final decision to agree a construction contract is delegated to the County's Chief Finance Officer and the Chairman of A&I. This delegation, however, shall be subject to the IGP having a payback period no longer than that shown in the outline business case.

3. ALIGNMENT WITH CORPORATE PRIORITIES

3.1 Developing the local economy for the benefit of all

In many parts of Cambridgeshire, decentralised energy cannot connect to the local grid as it has reached capacity; also fault levels on existing networks are in danger of being breached. Without significant investment in Super Grid Transformers (approximately £10million) and localised network upgrades, decentralised energy projects cannot connect to the grid. This will be a significant market barrier for cleantech companies. New thinking and business models must be developed to overcome this challenge and to bring forward investment. The St Ives smart grid demonstrator project will work with local businesses to share the learning and knowledge developed on the project including the technical and financial modelling to help support businesses to find new ways of working, better integration of low carbon technologies and new business models. In addition, the investment returns over the medium to long term will input finance to support services.

Locally generated electricity also improves our energy security by reducing our reliance on imported energy.

3.2 Helping people live healthy and independent lives

The project will provide clean renewable energy to power the site usage, and local customers either directly or via electric vehicle charging, thereby reducing the Council's and Cambridgeshire's carbon footprint and mitigating climate change.

3.3 Supporting and protecting vulnerable people

There are no significant implications for this priority.

4. SIGNIFICANT IMPLICATIONS

4.1 Resource Implications

There are a number of challenges facing this project (detailed in this report) which will impact on the final decision of whether to proceed to contract. However, at this stage it is proposed to continue the process to develop the Investment Grade Proposal (IGP) for the smart energy grid, and only proceed to contract dependent on the outcome. The full

expected costs of carrying out the project are £2.5M and the Authority is seeking 50% funding towards this from ERDF. The remaining £1.25M investment by the Authority would be recovered by income from the project.

The only cost that the Authority would be committed to by continuing to IGP would be £100k for the cost of producing the IGP, submitting the planning application and some costs from Local Partnerships. If the project proceeds this cost would be recovered as part of the overall project costs, but if the Authority chose not to proceed this cost would still need to be paid. These funds were approved as part of a £100k development budget described in paragraph 1.4 above.

During the IGP stage Bouygues would tender out the works as part of assuring Value for Money. The project would be developed under an Energy Performance Contracting model in which the energy generation is guaranteed, reducing the risk to the Authority. This model is available to us by virtue of using the Re:fit Framework.

The project will be built on one of our property assets to generate revenue streams without disturbing its original use. The project will reduce existing site mains usage starting at £3,300 per year and increasing annually. There are no implications for Information and Communications Technologies or data ownership.

Impact on human resources. The costs for CCC staff involvement to deliver the project are included in the business case.

Sustainable Resources. The project's goal is to generate low-carbon electricity, reduce electricity usage on-site and provide solutions to the grid capacity problems experienced across Cambridgeshire.

4.2 Statutory, Legal and Risk Implications

There are no statutory or legal implications.

Key risks include:

- As a result of the EU Referendum, there is some uncertainty with the length of the ERDF programme, however the project is not viable without match funding. Other funding streams have been scoped as alternatives to ERDF if needed.
- We need to secure the title to the St Ives site in time for the full application submission, which if not forthcoming from the previous land owner, will impact the project approval.
- The inability to secure a customer for the onsite electricity would threaten the project's financial viability. The commercial package is being assembled to secure commitment from local companies in parallel with business case development.
- Timescales for contracting within the REFIT 2 Framework timeline are short but essential to allow the existing framework contract with Bouygues under ERDF eligibility criteria.

Health and safety implications. The canopies could provide some potential cover for crime, therefore the CCTV cameras on site will be repositioned for better coverage.

4.3 Equality and Diversity Implications

There are no significant implications.

The electric vehicle charge points will be available to the entire community.

4.4 Engagement and Consultation

There are no significant implications.

The project has been discussed with relevant members of the Guided Busway and Park and Ride teams, at St Ives Town Council, potential customers for the electricity generated, RSPB, and with a planning officer at Huntingdonshire District Council. Overall there has been solid support with a few expressing concerns over construction noise, environmental impact and the potential for canopies to provide cover for crime. All of these are being explored and mitigation strategies put in place. Further public consultation events are planned for September.

An outline planning application has been submitted and two meetings arranged to discuss the planning application with the local community.

If funded by ERDF, a dedicated Communication Strategy will be developed.

4.5 Localism and Local Member Involvement

There are no significant implications.

As indicated in 4.4 above, the project was presented at a meeting of the St Ives Town Council on 8 June 2016. The Local Members, Cllrs Paul Bullen and Kevin Reynolds were notified of the project prior to the Town Council meeting. If the project goes ahead, the team will continue to update and consult local members.

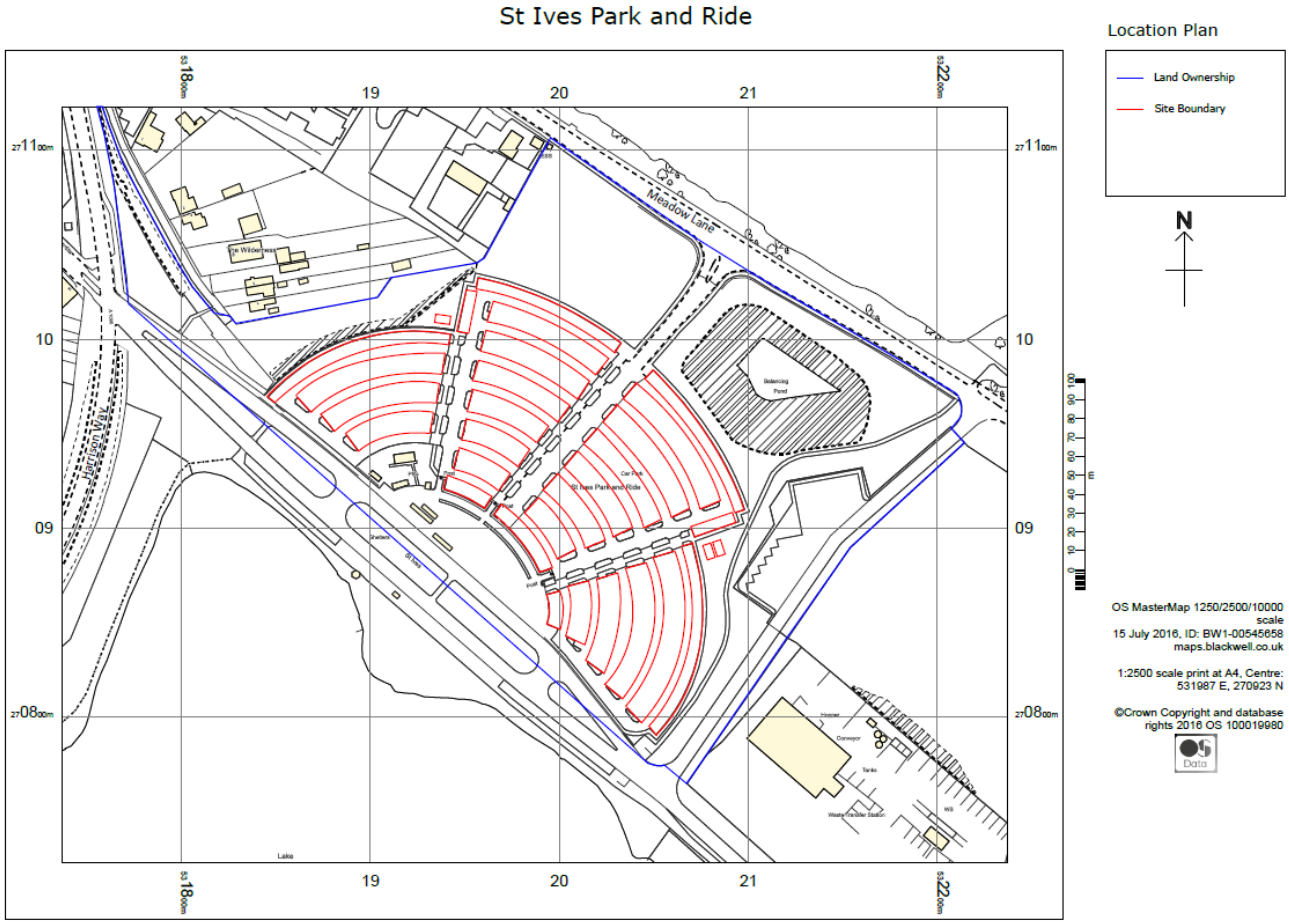
4.6 Public Health

Emissions from cars is associated with poorer air quality and the introduction of electric charging points for cars could therefore contribute to lower emissions and therefore result in positive health benefits through improved air quality. The Transport and Health JSNA 2015 states that new low emission vehicles are either fully electric with no emissions at the point of use or hybrid vehicles which have significantly reduced emissions for periods of the drive cycle and may be capable of some zero emission running. Therefore, with new low emission vehicle technology there is the potential for substantial real world cuts in emissions.

Implications	Officer Clearance
Have the resource implications been cleared by Finance?	Yes Name of Financial Officer: Sarah Heywood
Has the impact on Statutory, Legal and Risk implications been cleared by LGSS Law?	Shared with Quentin Baker on Monday 15th August
Are there any Equality and Diversity implications?	Clearance - Yes 22/08/16 Name of Officer: Emma Middleton There are no significant implications within this category.
Have any engagement and communication implications been cleared by Communications?	Clearance – Yes Name of officer: Mark Miller
Are there any Localism and Local Member involvement issues?	Clearance – Yes 22/08/2016 Name of Officer: Paul Tadd
Have any Public Health implications been cleared by Public Health	Yes Name of Officer: Tess Campbell

Source Documents	Location
1. Assets and Investment Committee – 22 July 2016 2. Outline Business Case, St Ives Park and Ride, Smart Energy Grid, July 2016	1. https://cmis.cambridgeshire.gov.uk/ccc_live/Meetings/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/464/Committee/31/SelectedTab/Documents/Default.aspx 2. Energy Investment Unit

Appendix A: Site Map



Appendix B: Outline Business Case summary

Category	
PV Capacity (kW)	982
Electricity Generated annually (MWh)	836.8
Costs - Expected	£2.5M [a]
Revenue (first year) - Via Power Purchase Agreement - Electric vehicle charging	£88,093 £1,906 [b]
Savings - Site mains electricity (annual)	£3,078
Payback period (years)	17.43[c]

a. *The costs will be confirmed as part of the IGP with a maximum of £2.9M*
b. *This revenue source is predicted to increase over time as the percent of electric vehicles increases.*
c. *Assumes estimated generation and costs, average DECC prices.*