

Procurement of technical consultancy to support revenue optimisation

To: Commercial and Investment Committee

Meeting Date: 18 December 2020

From: Steve Cox, Executive Director, Place and Economy

Electoral division(s): All

Forward Plan ref: 2020/035

Key decision: Yes

Outcome: To improve income from selling electricity and and battery storage services from the Council's investments into clean energy projects.

Recommendation: Members are asked to:

- a) Approve the initiation of the procurement process for Optimisation/Aggregator Services for the Energy Investment Programme portfolio
- b) Note the timescales of the procurement process; and
- c) Delegate authority to Executive Director, Place and Economy in consultation with the Chair and Vice-Chair of Committee to approve going out to market with an Invitation to Tender for services.

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1 Background

- 1.1 The Energy Investment Unit (EIU) team has been developing a portfolio of large-scale (>1MW) solar and battery storage projects on Council assets and is exploring options to maximise the projected revenues from the portfolio.
- 1.2 The internal know-how, skills, technology, resource, and tools to develop a route to market for the projects within the EIU's project pipeline are currently not available within Cambridgeshire County Council. Since in the modern electricity market, trading is possible many years ahead of physical delivery, selling the electricity generated from a renewable energy project has become very competitive and complex. Moreover, several different markets have been developed over time, including forward markets, Short Term Operating Reserve (STOR), Day-Ahead, Intraday and Balancing Mechanism, to name some of them. Specific trading and market expertise in the forward and short term energy markets are required to forecast future prices or to choose the right mechanism and framework under which the energy generated will be sold.
- 1.3 Furthermore, an expert trading and market broker will be able to track the market and transact instantly, sell our solar power when the right market opportunities arise through multiple transactions, capitalise on revenue opportunities by responding to market spikes and ultimately, to hedge our short-term price risks and uncertainties. This expertise and capabilities are not currently within the EIU team.
- 1.4 In addition to the capabilities described in points 1.2 and 1.3, companies that operate in the renewable energy market are subject and liable to:
 - The wholesale electricity market involves real-time trading in order to meet real-time demand.
 - Ensuring supply meets their contracted levels with an imbalance price penalty payment when it does not.
 - Operating in the electricity generation and supply market requires large teams of staff with expertise in electricity trading both for real-time balancing and taking forward positions.
 - Aggregators and brokers, as a minimum, provide a route to market for smaller generators, bringing the capacity and expertise for real-time and forward position trading. In addition, they bring the expertise gained from full-time engagement in electricity markets in order to maximise revenues for smaller generators.
- 1.5 While Bouygues E&S Solutions as our design and build contractor and the internal Commercial Team know how to optimise commercial opportunities they do not have the level of expertise required and are not in a position to provide these services.
- 1.6 As such, the EIU team has concluded that we require speciality broker services to guide the team on the best methods of optimising the operation of the projects. The options to be explored with the broker may include selling electricity via Power Purchase Agreements and/or entering into auctions to provide flexibility services to support the distribution network.

1.7 Furthermore, the EIU team undertook a soft market test in October 2020 and invited companies with experience in these areas to provide information on their services and approaches.

1.8 Four companies expressed their interest and three of them were invited to present their services:

- SmartEnergy on 14th October 2020,
- Brook Green on 22nd October 2020, and,
- Centrica on 04th November 2020.

The presentations were attended by the EIU's extended teams, including team members from Bouygues, and other internal teams within CCC (Commercial and Finance teams).

1.9 The EIU team gathered useful insights from these presentations and wish to build its intelligence in this area by securing a contract for these services early next year. The projects that potentially will benefit from these services are:

- Swaffham Prior Community Heat Network;
- North Angle Solar Farm;
- Babraham Park and Ride Smart Energy Grid Project;
- Stanground Closed Landfill Battery Storage and Solar Project;
- St. Ives Smart Energy Grid; and
- New projects, that could be developed, under the recent procurement exercise e.g. Fordham Renewable Energy Network Demonstrator.

1.10 Other local authorities, like West Sussex County Council (WSSC), have also started to develop a similar portfolio of [renewable energy projects](#). In August 2020, the project team met the Daire Casey, the Energy Services Manager of WSSC to understand their approach. WSSC has developed two solar farms and they also had contracted similar aggregator services (Cornwall Insight and Laser Energy) to optimise the revenues from their projects.

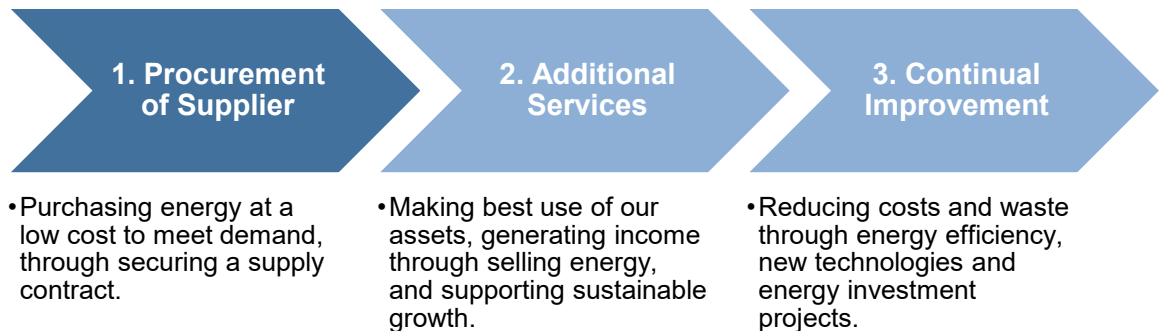
1.11 The contract term will be limited to three years with an option to renew to allow the EIU team to assess their performance. Moreover, information gathered from the soft market test indicated that there are a number of ways to contract these services depending on the duration of the contract e.g. long versus short-term and the nature of the relationship. In general, the companies invited to present offered flexibility to adopt a contract that meets our needs and demands e.g. fix, floating, floors price for specific services and some companies even expressed that they are keen to become long-term partners and therefore these services potentially could be paid as a share of the profits, therefore no capital outlay other than internal project management would be required.

- 1.12 However, the most convenient way to contract these services, and therefore to define a pricing model, will become clearer once the tenders from the different aggregators/brokers are analysed holistically against our programme portfolio, when their proposals will be scrutinised and benchmarked. Independently of what pricing model is decided upon, whether that be some kind of profit share arrangement or a charge to CCC which is then net off against the income generated, the cost will ultimately be paid out of the income generated by the schemes and therefore will need to be factored into future iterations of business cases once the details are more understood.
- 1.13 The intended outcome of this report is to obtain approval to initiate the procurement process that will bring the technical services from a broker or aggregator. This will support the team to maximise the projected revenues from its solar and battery storage projects.

2 Main Issues

- 2.1 *Duration and complexity of the procurement process.* The CCC Procurement team advised that a bespoke procurement process will be required to procure these types of services, which are more complex and require more analysis of the services required. Moreover, the procurement process required could potentially take around 6 months to be completed.
- 2.2 *Timing of projects.* Whilst the development of the projects progress accordingly, the optimisation and aggregators' services, ideally should be brought on time to support the projects during the Investment Grade Proposal (IGP) development, Construction and Operation phases. Currently, three projects have received planning permissions: Babraham Park and Ride Smart Energy Project, Swaffham Prior Community Heat Network and North Angle Solar Farm; and the fourth project is in the process of awaiting a determination on the planning application: Stanground Closed Landfill Battery Storage and Solar Project.
- 2.3 There is urgency to progress on the procurement as the projects are quickly approaching the stages where key decisions that will have an impact on their viability and the predicted revenues are required to be made.
- 2.4 *Process for approval.* Having these aggregator and optimisation services under contract in time to support those key decisions by Committee will provide assurance that the EIU's projects have a solid business case, are viable and have pursued alternative options which will offer greater returns. Therefore, so as not to delay projects, it will be necessary to have the initiation of the bespoke procurement process approved as soon as possible.
- 2.5 *Do Nothing Scenario.* The aggregator services are considered to be a key mitigating strategy to de-risk the Energy Investment Programme portfolio. In the event this procurement process is not approved or delayed, this will negatively impact the projects listed under Section 1.9 but especially those that are in the latest stage of the IGP or near to the commencement of construction. Moreover, there will be missing learning and upskilling opportunities for the whole team.

2.6 *Managing Risks.* In line with our Corporate Energy Strategy, we are aiming to build up a wide portfolio of renewable and resilient energy supplies whilst maximising commercial benefit for the Council. Procuring an energy supply contract is one part of that. This is illustrated in the diagram below. The support provided by an aggregator or broker will help to protect against risks relating to specific aspects of the EIU portfolio.



3 Scope of services

3.1 The potential services a broker or aggregator will be brought on to are listed below:

- **Coordinate entering CCC assets into various flexibility services auctions** - for example, provide access to the day-ahead and intraday markets via flexible PPA and also via integrated and competitive supply contracts.
- **Lead on negotiating on the price the EIU will be paid for participation** – For example, wholesale price elements depends on multiple factors:
 - Length of the PPA
 - Risk appetite and financing
 - Technology type

Whereas, fixed wholesale prices could be agreed for 1 to 3 years and the variable floating price will be indexed against the day-ahead price.

- **Design a programme of how to operate CCC assets so as to maintain compliance with warranties and protect asset life** – a broker can bring together a range of technologies to deliver unrivalled, fully integrated energy solutions across CCC assets.
- **Frequently revisit the strategy as the industry shifts and changes** - The services sought will also keep abreast of market developments, enabling CCC to be early adopters of future markets and representing CCC in shaping future developments. For example, some of the aggregators are currently looking to trial Firm Frequency Response (FFR) delivery through solar PV control.
- **Advise on the best approach for Power Purchase Agreements, including corporate or virtual PPAs** - Corporates PPAs are companies with relatively large energy consumption. They buy energy from renewable assets to achieve their ambition of reducing their carbon footprint. Whereas, virtual PPAs allow a company to buy renewable energy virtually. There is no need to own the title of physical energy. This enables companies to focus on their “green impact”, such as corporates, to receive renewable attributes without owning the asset.

- A key challenge for development of further business cases such as Power Purchase Agreements or Demand Side Response services is ensuring good energy data to inform the profile of how and when we use electricity and how this maps against our generating assets.
- **Energy storage optimisation** – Using patented pooling mechanism within a Virtual Power Plant, brokers can offer additional revenues from Frequency Services for Energy Storage.

3.2 Aware of the complexities of the services the EIU team is intending to procure, the team is keen to discuss the details of the proposed procurement and the progress achieved with the Energy Investment Programme Member Working Group.

4 Alignment with corporate priorities

4.1 A good quality of life for everyone

- There are no significant and direct implications for this priority. However, a reduction in the carbon footprint for Cambridgeshire through the optimisation of the EIU's project has benefits to the quality of life of our residents.

4.2 Thriving places for people to live

- There are no significant implications for this priority.

4.3 The best start for Cambridgeshire's children

- There are no significant implications for this priority.

4.4 Net-zero carbon emissions for Cambridgeshire by 2050

- The optimisation of the EIU's projects supported by the services intended to be procured, as set out in paragraph 2.1 of this document, will help the Council to meet its ambitions in relation to this priority.

5 Significant Implications

5.1 Resource Implications

- The services intended to be procured will support and provide external skills and tools that currently are not available within Cambridgeshire County Council. By procuring these services, it will also give CCC staff the opportunity to upskill. Furthermore, any costs incurred will be funded by the income generated by the schemes.

5.2 Procurement/Contractual/Council Contract Procedure Rules Implications

- The report above sets out details of significant implications in paragraphs 2.1 – 2.4.
- The procurement will be conducted under the CCC Procurement Guidelines.

5.3 Statutory, Legal and Risk Implications

- Whilst there are no significant implications in this category at this stage, legal advice will need to be sought in the future on any new procurement arrangements especially where we plan to use our generating assets and Demand Side Response assets for greater commercial gain. Moreover, in the event, the aggregators/brokers

are not able to provide the right advice and the returns are not as good as their promises.

5.4 Equality and Diversity Implications

- There are no significant implications within this category.

5.5 Engagement and Communications Implications

- There are no significant implications within this category.

5.6 Localism and Local Member Involvement

- There are no significant implications within this category.

5.7 Public Health Implications

- There are no significant implications within this category.

Have the resource implications been cleared by Finance? Yes

Name of Financial Officer: Ellie Tod

Have the procurement/contractual/ Council Contract Procedure Rules implications been cleared by the LGSS Head of Procurement? Yes

Name of Officer: Gus de Silva

Has the impact on statutory, legal and risk implications been cleared by the Council's Monitoring Officer or LGSS Law? Yes

Name of Legal Officer: Fiona McMillan

Have the equality and diversity implications been cleared by your Service Contact? Yes

Name of Officer: Elsa Evans

Have any engagement and communication implications been cleared by Communications? Yes

Name of Officer: Eleanor Bell

Have any localism and Local Member involvement issues been cleared by your Service Contact? Yes

Name of Officer: Emma Fitch

Have any Public Health implications been cleared by Public Health? Yes

Name of Officer: Iain Green

6 Source documents

6.1 Documents

- Corporate Energy Strategy

6.2 Location

- [Corporate Energy Strategy - MLEI](#)
- Energy Investment Unit