

APPROVAL FOR GRID CONNECTION DOWN PAYMENTS FOR ENERGY INVESTMENT PROJECTS

To: **Commercial and Investment**

Meeting Date: **18 October 2019**

From: **Executive Director, Place and Economy**

Electoral division(s): **Soham South & Haddenham, Sawston & Shelford and Queen Edith's**

Forward Plan ref: **2019/060** *Key decision:* **Yes**

Purpose: **To propose moving a proportion of the funds allocated for the grid connections for three key projects, from the implementation phase to the development phase, to secure electricity export connections via UK Power Networks distribution network.**

Recommendation: **Committee is being asked to approve:**

- a) £722,000 for the down payments for grid connections for Babraham Park & Ride, North Angle Solar Farm and Stanground Closed Landfill site.**
- b) New total development budgets for the above projects as set out in Table 2.**

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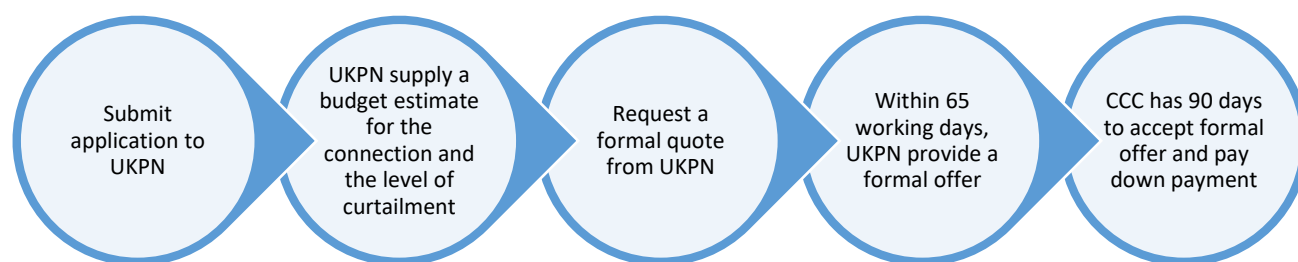
1. BACKGROUND

- 1.1 Development budgets for energy projects at Babraham Park and Ride, Stanground Closed Landfill site and North Angle Solar Farm were previously approved by Commercial and Investment (C&I) Committee on 25 May 2018, 14 September 2018 and 18 January 2019 respectively. These approved development budgets cover internal staff time, planning application fees and consultancy fees. Updates on each of these three projects were presented to C&I on 21 June 2019 and 12 July 2019 where approval for further drawdown of budget was granted.
- 1.2 These previous papers have frequently highlighted the challenge of connecting distributed generation projects to the grid in the Cambridgeshire area due to large pressures on available capacity. To mitigate this risk and understand the capacity and cost constraints for projects to understand the impact on project returns and viability, applications for grid connections are made as part of the development process ahead of planning applications.
- 1.3 The grid capacity challenge is a strategic challenge to growth and there are a range of initiatives underway to help unlock this challenge. For example, the EIU and Greater Cambridge Partnership (GCP) reviewed the capacity of the electricity network and its ability to facilitate growth. As a result, GCP with the support of the EIU commissioned an engineering feasibility study for upgrading the 132kV substation at Fulbourn to unlock grid capacity in Cambridge Southern Fringe. The results of this feasibility study are due by October 2019. Detailed designs could be progressed over the subsequent 18 months with construction planned to install the grid reinforcement by 2022-23. The Babraham Park and Ride development could come under this arrangement and consideration may be needed as to how to phase the Babraham project delivery to benefit from these upgrades. Another example of a strategic intervention is an application was submitted by the EIU to Innovate UK in August 2019 to compete for funding to identify the capacity requirements for clean growth to 2030 and the investment plans to facilitate new electricity infrastructure.

2. MAIN ISSUES

- 2.1 The approved development budgets for the three projects did not include provision for the upfront grid connection costs. Instead, this was included in each of the business cases within the construction costs. Recently, the requirement for up-front deposits has been clarified by UK Power Networks (UKPN) and these need payment during the initial development phase rather than during the construction phase.
- 2.2 The three projects identified in paragraph 1.1 are now in the process of applying to UKPN for a grid connection. The process for applying for a connection is as follows in Figure 1.

Figure 1. Grid connection application process



- 2.3 Further stage payments will be required ahead of UKPN incurring further costs, e.g. for design work, ordering equipment with long lead times and prior to UKPN performing works on site.
- 2.4 The three sites are located in Flexible Distributed Generation (FDG) areas, which are subject to curtailment incidents once connected. This can result in a reduction in electricity exported to the grid at times of stress on the distribution network. This is done on a last-in, first out (LIFO) basis, i.e. customers that have secured a grid connection early are less likely to have their generation curtailed than those that have connected later.
- 2.5 Securing a grid connection at this stage guarantees our position in the LIFO stack. It is also a means to mitigate one of the largest risks for these energy investment projects, which is obtaining a cost-effective grid connection.
- 2.6 Should the formal offer not be accepted within the 90 day timeframe, the application will be voided and a new application for connection would be required. The impact of not accepting the formal offer and making a down payment is that the projects lose the opportunity to connect at the offered cost and the projects would be pushed down the LIFO stack, increasing the rate at which the project will likely be curtailed.
- 2.7 The costs to connect to the grid fall into two categories, contestable and non-contestable. The non-contestable cost is for works that must be conducted by UKPN on their section of the network, whereas the contestable costs may be tendered by Bouygues E&S to Independent Connections Providers (ICPs). **Table 1** below shows the budget estimate for both portions and the range of the expected down payment should we contract UKPN for just the non-contestable cost or both costs. This paper is requesting that Committee approve the maximum of those fees be added to the project's development budgets.

Table 1. Grid connection cost estimates

	Amount budgeted in High Level Assessments for grid connection (Bouygues)*	Budget estimate for grid connection (UKPN) (£ excl. VAT)		Formal offer (UKPN) (£ excl. VAT)	Initial payment required upon acceptance of quote	Total Project Capital Value
		Non-contestable	Contestable			
Babraham Park and Ride	£1,469,208	£170,000	£1,290,000	Requested	£17,000 - £146,000 (estimated)	£4,719,355
Stanground Closed Landfill	£1,582,224	£253,001	£473,966	Not yet requested	£25,300 - £76,000 (estimated)	£8,887,728
North Angle Solar Farm**	£1,900,000	£1,323,513	£5,217,314	£1,679,665 (non-contestable) £6,137,544 (contestable)	£500,000 by 5pm 18 November 2019	£28,856,444
TOTAL		£8,727,794			£722,000	

*These amounts were included in the total capital costs reported in earlier Committee papers.

**It should be noted that the formal quote received from UKPN is still provisional and therefore subject to change. This is apt to be true for all three projects.

- 2.8 A mitigation strategy is to have Bouygues tender the contestable work. A benefit of this approach is it delays spending on that portion of the work until the project enters into a construction contract, thereby limiting risk. For instance, the down payment made to UKPN for Babraham would be 10% of the non-contestable cost, or £17,000, rather than £146,000 should we wish UKPN to complete both contestable and non-contestable areas of work. Bouygues E&S is engaging with ICPs with a view to obtaining competitive quotes for the contestable works.
- 2.9 To manage the financial risk, UKPN has agreed that they will not use any of the initial payment to conduct works or order long lead time items without the written consent of Cambridgeshire County Council. Should no works be done on the project and the project is cancelled, the initial payment will be refundable less the assessment and design fee (about £10k per project). It should be noted that for Triangle Farm, the initial grid connection payment was paid well in advance of receiving planning permission. In that case, our agent Savills agreed several conditions with UKPN which made the payment refundable.
- 2.10 **Table 2** describes the changes to the development budgets from bringing forward the investment from the construction phase to the development phase.

Table 2. Resultant increase in development budgets

	Approved Development Budget	Request for initial payment for grid connection moved from construction phase	New total development budget
Babraham Park and Ride	£459,000 ¹	£146,000	£605,000
Stanground Closed Landfill	£456,300 ²	£76,000	£532,300
North Angle Solar Farm	£600,000	£500,000	£1,100,000

- 2.11 The spending for the three projects has been reprofiled to incorporate the down payment proposal and other changes. The change to the expected spend in FY 19/20 is shown in Table 3 below.

Table 3. Change in capital spending for FY19/20

	Previously approved FY 19/20 capital spending	Revised FY 19/20 capital spending
	(£000s)	(£000s)
Babraham Park and Ride	383	350
Stanground Closed Landfill	397	298
North Angle Solar Farm	672	908
Note: while the down payments are expected to be paid in this financial year, other costs have shifted into later years.		

- 2.12 Planning applications are being prepared for each site for submittal in the next few months. The outcome of those applications will not be known before the required down payment must be made to UKPN, therefore there is a risk that planning could be denied. Should that happen, refunds on the down payments will be requested.
- 2.13 Preplanning advice was sought for each project, a summary of that advice is provided in **Appendix A**.

¹ The 21 June 2019 C&I Committee paper on the IGP phase 1 update for Babraham Park and Ride, paragraph 2.20 provides a breakdown on costs. The paper is available here: <https://tinyurl.com/y2ml34y4>.

² The 21 June 2019 C&I Committee paper on the IGP phase 1 update for Stanground, paragraph 2.12 provides a breakdown. The paper is available here: <https://tinyurl.com/yywsjt48>.

Babraham Park and Ride alternative option

- 2.14 Currently there are two options being explored for Babraham Park and Ride. The conventional route of a network connection and a separate route which is a private wire to a customer. To keep options open, an FDG application has been submitted for the Babraham project whilst further discussions develop with a customer. If the customer signs up to a power purchase agreement the network connection route will be cancelled. That could result in the sunk cost of about £10k in application fees to UKPN but this is manageable for the project if a customer signs up to a PPA. The benefit of securing a direct customer for the electricity is the benefit of selling at the retail as opposed to wholesale price.
- 2.15 The costs to lay cabling to the customer would be incurred only once in a construction contract with Bouygues. The duration of the PPA would need to be sufficient to cover project costs including those of private wire connection and the PPA customer would need to be of good financial standing with long term business viability and commitment to the site.
- 2.16 Negotiations with the customer have progressed well to date. A Memorandum of Understanding has been signed between both parties and a letter provided granting the Council the authority to apply for a grid connection on their behalf.

3. ALIGNMENT WITH CORPORATE PRIORITIES

3.1 A good quality of life for everyone

While there are no significant implications for this priority, the ability to secure grid connection is essential to the expansion of renewable energy to reduce the carbon footprint of the Authority and improve air quality through the expansion of electric vehicle charge points.

3.2 Thriving places for people to live

While there are no significant implications for this priority, should the projects above proceed, there are opportunities to benefit the local economy through the use of local businesses or sale of clean electricity.

3.3 The best start for Cambridgeshire's children

While there are no significant implications for this priority, the renewable energy projects described above are essential to reducing the Authority's carbon footprint and improving the environment for future generations.

4. SIGNIFICANT IMPLICATIONS

4.1 Resource Implications

Table 2 of the report sets out the resource implications. There is no impact on internal resources from this proposal.

4.2 Procurement/Contractual/Council Contract Procedure Rules Implications

The team will present revised business cases to the Capital Programme Board for Stanground and Babraham in October on the shift in the timing of spending and make recommendations to committee.

4.3 Statutory, Legal and Risk Implications

There are no significant implications within this category.

4.4 Equality and Diversity Implications

There are no significant implications within this category.

4.5 Engagement and Communications Implications

There are no significant implications within this category.

4.6 Localism and Local Member Involvement

The Energy Investment Programme Member Working Group were consulted in September 2019 on this topic and their feedback integrated into this paper. This body was also informed of the changes in the overall grid connection cost for North Angle Solar Farm and the impact on the business case. In addition, the EIU reports to the Commercial and Investment Committee quarterly on all project progress.

4.7 Public Health Implications

There are no significant implications within this category.

Implications	Officer Clearance
Have the resource implications been cleared by Finance?	Yes Name of Financial Officer: Sarah Heywood
Have the procurement/contractual/ Council Contract Procedure Rules implications been cleared by the LGSS Head of Procurement?	Yes Name of Officer: Gus DeSilva
Has the impact on statutory, legal and risk implications been cleared by 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: Joanna Shilton
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

Source Documents	Location
<ol style="list-style-type: none"> 1. Outline Business Case for Smart Energy Grids for Trumpington and Babraham Park and Ride Sites, 25 May 2018 Commercial and Investment Committee meeting 2. Outline Business Cases for Clean Energy Projects at Woodston and Stanground closed landfill sites, 14 September 2018 Commercial and Investment Committee meeting 3. Outline Business Case for Solar Farm on Rural Estate land at Mere Farm, 18 January 2019 Commercial and Investment Committee meeting 4. Babraham Smart Energy Grid - Investment Grade Proposal Stage 1 Update, 21 June 2019 Commercial and Investment Committee meeting 5. Stanground Solar PV and Battery Storage Project – Investment Grade Proposal Stage 1 Update, 21 June 2019 Commercial and Investment Committee meeting 6. Investment Grade Proposal (IGP) Stage 1 update on the development of the North Angle Solar Farm, 12 July 2019 Commercial and Investment Committee meeting 	<ol style="list-style-type: none"> 1. https://tinyurl.com/y63mpb2k 2. https://tinyurl.com/yyqvpcwz 3. https://tinyurl.com/y64yk828 4. https://tinyurl.com/y2ml34y4 5. https://tinyurl.com/yywsjt48 6. https://tinyurl.com/y2ncl6k5

Appendix A – Summary of pre-planning advice received

Babraham P&R	<p>The County Council is the planning authority for this project under Regulation 3 of the Town and Country Planning General Regulations 1992. In November 2018, pre-planning advice was received and the following issues identified:</p> <p>The site is within the greenbelt and sits within both Cambridge City and South Cambridgeshire boundaries which means the policies from both Councils will need to be considered. Both Local Plans have policies with a presumption in favour of renewable and low carbon energy generation. In addition, there is a local nature reserve nearby and sites of special scientific interest. Due to the size of the development, an Environmental Screening Request will be submitted ahead of the full planning application to help inform the submission documents. Given the broad policy support, the planning application is expected to receive an officer recommendation for approval, subject to formal consultation.</p>
North Angle Solar Farm	<p>The County Council is the planning authority for this project under Regulation 3 of the Town and Country Planning General Regulations 1992. In August 2019, pre-planning advice was received and the following issues identified:</p> <p>Situated within East Cambridgeshire, the planned solar farm borders the Council's existing solar farm in Soham. Legal advice is required to ensure that the capacity of the proposed solar farm will not breach the threshold of a Nationally Significant Infrastructure Project (NSIP), and that the two projects will be seen as separate entities. There are a number of solar farm projects coming forward in close proximity to the North Angle site, and cumulative impact arguably poses the biggest risk to the planning application. In addition, Historic England has identified the site as an area of high potential archaeological importance, and as such additional survey work will be required. North Angle will be an Environmental Impact Assessment (EIA) development.</p> <p>It is considered that the principle of renewable energy generation is generally supported in the area (East Cambridgeshire District Council details their support for renewables within their Local Plan) and therefore the planning application would be expected to receive an officer recommendation for approval subject to the potential archaeological impacts being assessed and the cumulative effects of other schemes being brought forward in the area can be mitigated through the development process.</p>
Stanground Closed Landfill	<p>As this site falls outside of Cambridgeshire, Peterborough City Council (PCC) is the planning authority for this project under Regulation 3 of the Town and Country Planning General Regulations 1992. Pre-</p>

	<p>planning discussions have taken place with PCC (the determining authority) and written advice was received on 16th April 2019.</p> <p>Pre-planning advice provided constructive guidance on the scope of ecology works, planting for screening, site boundary treatment and preferred construction access routes. The nature of the site as a closed landfill requires specific consideration of any disturbance or risk of penetration of the capping layer. This will be managed by use of a non-penetrative mounting system, secured by ballast, for the solar panels and a shallow concrete pad foundation, located outside the landfilled area, for the battery storage containers. Details of these designs are being prepared for inclusion in the planning application. An Environmental Impact Assessment (EIA) is also likely to be required in view of the site being a closed landfill. Scoping advice is being sought from PCC to inform the preparation of the EIA.</p> <p>The location of the site adjacent to Great Crested Newt (GCN) ponds to the north and west requires specific consideration in the planning documentation. However, PCC's ecology officer has advised that existing GCN survey data is sufficient to inform a suitable mitigation strategy e.g. suitable construction methods, planting etc to enable development of the site.</p> <p>No major planning concerns have been raised with the proposals. Subject to preparation and submission of the necessary documentary evidence base the proposal should be capable of receiving officer support.</p>
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