Key decision: Yes
Unrestricted
Ref: ECC04 (22/23)

Report to Councillor Deborah Urquhart, Cabinet Member for Environment and Climate Change

December 2022

Procurement: Solar Photovoltaic and Battery Storage Programme

Report by Assistant Director (Environment and Public Protection)

Electoral divisions: All

Summary

Following a market engagement exercise and technical and structural feasibility surveys completed by the council's multi-disciplinary contractor (MDC), Faithful + Gould (F+G), 23 corporate and 62 school sites (set out in Appendix 1 and 2) have been identified to-date as suitable for having Solar Photovoltaic (PV) and Battery Storage technology installations.

The £7.7m Solar PV & Battery Storage (SPVBS) Programme, funded from an allocation in the capital programme, will support the council's commitment to becoming carbon neutral by 2030 (as set out in the council's Climate Change Strategy 2020-2030. It will also help meet the agreed priorities in the council's recently adopted 2030 Energy Strategy by reducing grid electricity consumption, increasing renewable energy generation in the county, and reducing carbon dioxide (CO_2) emissions. In addition to electricity cost savings for the council, schools will also benefit from a reduction in electricity costs over 25 years.

This report seeks endorsement to commence the procurement of a suitable supplier to survey, design, supply, install and maintain solar PV systems and 'Behind-the-Meter' (BTM) battery storage technology in suitable corporate and school sites.

Recommendations

That the Cabinet Member for Environment and Climate Change:

(1) Endorses commencement of procurement of a single supplier to survey, design, supply and install solar photovoltaic (PV) panel systems and 'Behind-the-Meter' (BTM) battery storage technology across suitable corporate and school sites, as set out in section 2 of this report, including a 5 year Operation and Maintenance (O&M) contract; and

(2) Delegates authority to the Assistant Director (Environment and Public Protection) to award the contract.

Proposal

1. Background and context

1.1. The Council has deployed solar photovoltaic (PV) panels on corporate and school buildings over many years in order to reduce the financial costs and emissions of carbon dioxide (CO_2) resulting from electricity use in buildings. More recently the council's Climate Change Strategy 2020-2030 has set out its commitments to becoming net zero by 2030. In response to this, and to help deliver a sustainable and prosperous economy that adapts to climate change, a Solar PV and BTM Battery Storage Programme has been explored.

1.2. A number of options have been considered for funding the Programme which will deliver cost savings and income to the council and provide a share of the relevant cost savings to the schools via a Power Purchase Agreement (PPA).

1.3. In summer 2018, Innovate UK[1] ran a 'Prospering from the Energy Revolution' competition seeking bids to deliver Smart Local Energy System Demonstrator projects. The Smarthubs Programme was a 3 year Innovate UK funded Programme separated into individual work packages. Work Package 8 aimed to install solar PV and battery storage technology and Electric Vehicle (EV) charging points across councils, social housing and local business estates and properties in West Sussex.

1.4. A previous business case, approved by Cabinet Member for Economy and Corporate Resources in November 2020, approved the procurement process to enter into a concession contract for a maximum 25-year period with a suitable private third-party provider which would provide a fully funded solution to purchase, install, operate and maintain SMART energy saving technologies e.g. solar PV, battery storage and EV charging points, across the council's corporate and schools estate. Cost savings would result from the agreed pence per kilowatt hour (p/kWh) of energy purchased from the Provider being below market price. Additional revenue would result from the council entering into a PPA with schools and applying an admin charge to the p/kWh consumed.

1.5. In December 2020, Innovate UK withdrew the funding and so the decision was withdrawn. The loss of Innovate UK funding meant the business case needed to be reassessed.

2. Proposal details

2.1 Following further financial analysis it was clear that, without grant funding, the use of private finance to fund the installations would not bring additional benefits to the council and introduced constraints upon capacity to deliver. The option of the council fully funding the project is therefore considered the preferred option (see section 3 for more information on the other options considered).

2.2 In December 2020, a market engagement exercise was undertaken and between February 2021 and February 2022 the council instructed Faithful+Gould (F+G) –

[1] Innovate UK is part of UK Research and Innovation, a non-departmental public body funded by a grant-in-aid from the UK government. For more information, visit the UK Research and Innovation website.

the council's multi-disciplinary consultant (MDC) - to undertake technical and structural surveys. F+G identified 23 corporate sites and 62 school sites as suitable for solar PV and battery storage technology. Appendix 1 and 2 show the list of surveyed corporate and school sites and their suitability for solar PV and battery storage.

2.3 The key objectives of the Programme are as follows:

- To install (including all associated works), own, operate and maintain SMART technologies (solar PV and BTM battery storage) across the council's corporate and school estate including, where the necessary legal agreements have been signed, non-WSCC owned schools (i.e. diocesan, academies) to deliver significant energy cost savings to the council's utilities budget and income generation.
- Provide financial benefit to school budgets from reduced energy costs.
- Carbon dioxide (CO2) reduction through increased onsite renewable energy use.
- Early adoption of SMART grid technology – solar PV and batteries are part of the solution to the changing nature of the UK energy grid system
- Public sector leader in energy innovation – the council will be one of only a handful of authorities installing these innovation technologies at this scale.

2.4 Following consultation with colleagues in the Legal and Procurement teams, it was agreed that the programme would be procured via an open procedure for a single supplier, utilising one form of contract containing three phases:

- NEC4 Term Services Contract for the survey and design element
- NEC4 Engineering and Construction short form contract for the installation works, this can include any remedial works that WSCC have agreed to pay for
- NEC4 Term Services Contract for the ongoing maintenance.

2.5 The form of contract will be in three phases and the first two phases will be managed by F+G the third phase for ongoing maintenance will be managed by WSCC.

2.6 F+G's involvement with the project will end on the expiry of the defects period for the works.

2.7 The maximum potential contract value will be set at £23 million. This will enable further phases of the SPVBS programme to be delivered on suitable corporate sites and the 135 remaining schools not on the current shortlist, without the need to go back out to procure a supplier. If further sites are found suitable and require additional capital funding above the £7.7million currently being approved, a separate business case will be taken through capital governance for a further allocation of the Energy team's remaining overall pipeline allocation (£30.202m – noted in table 5.3).

2.8 60% quality, 40% price is suggested as evaluation scoring weighting and 10% of the overall weighted scoring should be allocated to social value.

2.9 Upon conclusion of the procurement process, the Assistant Director (Environment and Public Protection) will be asked to approve the award of the contract, which will be the subject of a further key decision report.

3. Other options considered (and reasons for not proposing)

3.1 The following table shows the options considered:

Option No	Description	Economic cost/benefit	Non-financial benefits	Risks and Issues	Conclusion
Do nothing	No solar PV and or battery storage projects delivered	No capital expenditure, no financial returns.	WSCC retains opportunity to develop scheme at a later point in time.	The council is subject to existing high energy prices and future price rises. Missed PR & promotional opportunity to be the Leading authority in energy technology innovation and SMART grids.	Low risk, although council subject to rising energy costs. Unable to promote WSCC as one of the leading authorities in energy technology innovation and SMART grids.
Option 1	The council invests in installation, ownership, operation, and maintenance of technologies in corporate and school sites	High capital expenditure £7.7million (assuming all surveyed sites included), potential for high financial returns over the life of the technology (25 years). Opportunity for additional income from Power Purchase Agreements with schools over the life of the technology (25-years). Grid service payments through Demand Side Response (DSR)	Fewer lease agreements would be required which would reduce legal costs and reduce resource requirements on the Estates team. Good PR opportunity and promoting a measured and evidence-based approach. Leading authority in energy technology innovation and SMART grids. More flexibility over contract term and arrangements.	Low risk as sites identified for inclusion in the programme will be assessed for long term future, financial viability will be assessed and based on detailed technical, financial, and commercial appraisals. Low repayment risk due to existing relationship with schools Risk of capital expenditure not getting approval. Risk schools do not sign up to 25-year PPA term.	Low risk – both financially and reputationally Simplified phased approach.

Option 2	Enter into an agreement with a 3rd party provider (installer) to deliver energy savings to the council and generate an additional income from schools	No upfront capital cost to council. Higher costs due to 3rd party funder requiring return on investment. Individual lease agreements for each site would increase legal costs and put additional strain on Estates Team resource.	Good PR opportunity and promoting a measured and evidence-based approach. Leading authority in energy technology innovation and SMART grids.	Less flexibility due to 3rd party funder involvement, more difficult to manage relationships, especially with schools Council would not own SMART tech, meaning lack of control/ownership of equipment funded through concession contract.	Higher risk – reputationally High Risk- concession contract will need to be treated as a business-critical contract and require intense level of monitoring to ensure we get our revenue

4. Consultation, engagement and advice

4.1 The Asset & Investment Hub, Capital & Asset Board, Procurement Board and Commercial Panel have been consulted on the proposal as part of the County Council's internal governance and the procurement process will be undertaken in accordance with the Standing Orders for procurement and contracts.

4.2 The Cabinet Member for Finance and Property has been consulted.

4.3 Technical advice has been supplied by internal colleagues in Finance, Legal Services, Procurement, Education Capital Programme, Valuation & Estates, Facilities Management, Planning and IT consultancy.

4.4 Schools in West Sussex have been engaged with using a number of channels including the initial Expression of Interest (EOI) letters that were sent at the start of the Programme, through regular email updates and the more recent information webinars.

4.5 Other external school related stakeholders including the Department for Education (DfE), Chichester Diocese, Arundel & Brighton Diocese and relevant Academy Trusts have been engaged with to ensure they have advanced notice of any applications for formal agreements and consents that may be required.

4.6 The Distribution Network Operators (DNO) UKPN and SSEN have been consulted to ensure the DNO grid application process runs smoothly.

5 Finance

5.1 The Council anticipates it would receive the following financial benefits:

5.1.1 The estimated programme cost of £7.7m will generate the council a net income, after repayment of the capital and interest, in the region of £9.7m

over 25 years and will also generate savings of £5m to the schools involved (see Appendix 3).

5.1.2 Energy savings are calculated against current energy prices in Year 1. These prices are then indexed in line with market information for the first nine years of the project period and then inflated in line with CPI for the remainder of the project. The generation also allows for degradation of performance within the solar PV and battery systems.

5.1.3 The savings that arise from the Corporate Estate work are retained entirely by the County Council whilst the savings arising from the work at school sites is shared between the Council and the School, with the school receiving 20% of the saving available.

5.2 Funding for the project is allocated within the approved Capital Programme. Your Energy Sussex, Solar Farms and Battery Storage allocation within the pipeline of the capital programme currently has £30.202m remaining therefore the project can be afforded.

5.3 The following table shows the budget for the current programme:

	2022/23 £m	**2023/24 £m**	**2024/25 £m**	**2025/26 £m**	**2026/27 £m**	**Total £m**
Energy Services overall pipeline - Approved capital budget	0.000	3.076	10.000	10.000	7.126	30.202
SPVBS programme - Budget to be approved	0.000	-3.076	-4.624	0.000	0.000	-7.700
Energy Services overall pipeline - Remaining capital budget	£0.000	£0.00	5.376	10.000	7.126	22.502

5.4 The effect of the proposal:

(a) **Human Resources, IT and Assets Impact**

The Council will support investment in low carbon energy generation on its assets. Experience from previous programmes has shown that there will need to be additional capacity within the Energy Services team to manage the contract and deliver the systems.

It was agreed by CAB that £150,000 of the approved £7.7m capital allocation would be used to monetise a Building Services Engineer and Project Officer to support the

delivery of the Programme on a full-time. These will be recruited to on an 18-month temporary contract. The rates used per kWh to arrive at the capital costs assume that this cost will be capitalised during the programme.

6. Risk implications and mitigations

	Programme Risks	Impact	Mitigating Action
1	**Number of installations not met**	Following detailed surveys and further financial analysis, the number of suitable properties to achieve economies of scale is not met.	Analysis will be completed before installations commence. The procurement allows for further sites identified as suitable for the technology to be onboarded should any sites on the original list not be progressed.
2	**Reduced capacity/capability of WSCC Property Teams causes delays**	Delivery of the project will be subject to delays and potentially increased costs.	Energy Services are working closely with Estates to provide existing resource (including from the Energy Project Support Officer) to support the non-technical elements of the legal aspects work including recruiting a Project Officer who can offer support to the V&E team. Keep relevant colleagues informed. Recruit additional resource as part of the Programme
3	**Long lead-in times in the supply chain for key components owing to economic circumstances**	Rising equipment costs (component production materials mining and manufacture (polysilicon, lithium, aluminium) labour shortages.	Agreed process set-up for securing key component items via vesting agreements as and when required.
4	**Inability for contractors to offer quotations for standard periods owing to market uncertainty.**	Programme delay Fewer assets delivered.	Proposals received for the project will be of sufficient value so as to be able to approve the budget quickly, award contracts and secure assets. Procurement route proposed will require that bidders stand by costs for a minimum period
5	**Significant capital cost increase limiting number of**	Fewer systems delivered	Adequate contingency. Tolerance within financial model

	systems that can delivered		
6	**School rejects the terms of the PPA or attempts to negotiate the terms**	delay the works and absorb staff time which could derail the timetable for the project as well as increasing WSCC's costs.	The terms should be presented to the Schools as soon as possible in the process. WSCC should impress on the Schools that the terms are not open to negotiation and will only be amended to correct manifest error.
7	**3rd party consents not granted (DfE for academies, Dioceses for church schools and potential planning consents)**	Delay to timetable and potential increased costs.	Engagement with the DfE and Dioceses has been undertaken. Engage with the relevant planning authorities and assist schools with their applications.
	Financial Risks	**Impacts**	**Mitigating Action**
8	**Reduced occupancy and electricity consumption in school estate**	The council will be responsible for any financial impact relating to a reduction in the amount of electricity being consumed on site which may be due to changes in occupancy (e.g. change in occupancy, refurbishment, property sale and closure).	Due diligence is being undertaken to ensure the sites being put forward are not subject to any significant change in the foreseeable future and are not part of any rationalisation Programme. Regular meetings will be held with Valuation & Estates and Education Capital Programme Team to identify any significant changes to the sites and appropriate action can be agreed on
9	**Restricted capacity of the local grid network and/or high connection costs from Distribution Network Operator**	This will reduce the financial benefit of the technologies and could reduce the viability of the project.	Regular contact with the DNO. Spread the project over a wide geographic area. Produce long list of sites over a wide geographic area so most attractive grid connection costs can be identified.
10	**Accessibility to 'Time of Use' Tariffs**	The financial value of battery storage is realised through variable pricing of electricity throughout the day.	Energy & Data Manager will be on the project team to ensure the correct tariffs are applied to the participating sites.
11	**Income generation opportunity not realised**	The PPA applied to the electricity price for schools is limited due	Ensure that through the procurement route the most competitively priced option is

		to the small margin between the p/kWh price and market rate	procured Phased install approach – at the end of each phase carry out lessons learned and risk assessment to ensure pricing issues resolved before entering next phase.
12	**Technology not optimised**	e.g. battery type, PV system size not optimal for maximum benefits	Specify the most suitable and cost-effective technologies are procured by the provider and ensure technical issues resolved before entering next phase
13	**Existing onsite electrical infrastructure not compatible**	The council or school will be required to invest in upgrading infrastructure	Suitable sites surveyed and upgrade work costs fully understood so that sites that require less investment can be identified and prioritised.
14	**Roof repairs/upgrade works required**	Cost increase.	roof condition surveys and consulting WSCC area surveyors knowledge of site roofs. Work with FM to align project with roof works under capital maintenance Programme.
15	**School withdraws from the programme**	Impact on programme cost and viability.	regular contact with schools to quickly resolve any issues. Schools will need to commit to a PPA to formally commit the schools for a period of time.
16	**Revenue generation and energy saving opportunity not realised**	The various income streams/savings e.g. grid services, are withdrawn or grid service price drops.	Work with a trusted, reputable third party with experience in battery storage projects, operational management and are up to date on market and regulatory information.
17	**Lifetime costs higher than expected**	Cost	Undertake due diligence and ensure ALL potential operation and maintenance costs are considered when developing the procurement process. Include adequate contingency for unforeseeable costs or remedial works.

7 Policy alignment and compliance

7.1 Legal Implications

7.1.1 The Council is a Contracting Authority as defined in the Public Contract Regulations 2015 ("PCR") and as such is governed by those regulations. The value of the proposed contract will be £7.7 million over five (5) years. The value of the proposed contract is above the relevant EU thresholds as referred to in the PCR of £5,336,937 for works contracts. As such the Council will competitively tender these services in accordance with the procedures set out in the PCR.

7.1.2 The terms and conditions are approved by Commercial Legal Services and compliant with the Council's Standing Orders on Procurement and Contracts.

7.1.3 These are new Services and so the provisions of the Transfer of Undertakings (Protection of Employment) Regulations 2006 ("TUPE") will not be relevant on commencement of the Services

7.1.4 There is no risk that this contract will be considered illegal State Aid because the contract will be subject to a competitive tender thereby ensuring that the Council is not selectively granting an advantage to one particular economic operator over another.

7.1.5 The ITT needs to make it clear to bidders that the works are subject to the Schools and Corporate sites agreeing to the works. Bidders will also need to have clarity as to which sites require Leases whereby further governance approvals will be required and that currently the Council cannot guarantee the value of the contract and works required.

7.2 Equality Duty & Human Rights Act

7.2.1 This procurement will comply with the above Act by promoting equality of opportunity and will consider applications from persons of all backgrounds and suppliers. Contracts will include equalities clauses/specifications. Due diligence will be undertaken to identify any risks related to human rights in the supply chain and measures to prevent or mitigate these will be put in place.

7.3 Crime and Disorder

7.3.1 No implications identified.

7.4 Public Health

7.4.1 There are a number of public health benefits that can be expected from the successful procurement of the project, these include improved air quality from a reduction in CO_2 and other harmful emissions as a result of less non-renewable grid electricity being consumed.

7.5 Climate Change Impacts

7.5.1 This project will contribute to a number of commitments in the County Council's Climate Change Strategy 2020-2030 including:

- Mitigating the effect of climate change by increasing onsite renewable energy systems and generation in West Sussex
- Adapting and becoming more resilient to climate change by building resilience into all our services

- Supporting our local green economy by promoting opportunities to bid for renewable energy projects
- Encouraging sustainable businesses by enabling growth opportunities and supporting innovation.

7.5.3 Additional sustainability benefits of this project include:

- Delivering measures that will help improve air quality
- Reduction in bills for West Sussex schools signed up to this project
- Reducing operating costs of the council's operations
- It supports the social aspects of sustainability by creating a resource that schools and other organisations can use to raise awareness of sustainability issues.

7.6 Social Value Act

7.6.1 There are no negative Social Value Act implications from the successful procurement of this project, and it makes a positive contribution to social value in the following ways:

- Savings on energy bills and any income generated as a result of the project can be used to support other council services, benefitting the wider community, in the case of schools this can be staff and pupils.
- It provides an opportunity for sustainability issues to be considered and people can be educated on these issues and how they can benefit or help.

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Appendices

Appendix 1 – SPVBS Shortlisted Corporate Sites
Appendix 2 – SPVBS Shortlisted School Sites
Appendix 3 – SPVBS Finance Model Summary

Background papers

None