Project Name	Solar for Business Pilot Project
Project Officer	James Lees, Climate Change Project Manager
Date	February 2024

1. Executive Summary

1.1. This paper provides the case for a pilot 'Solar for Business' scheme. This pilot would involve paying to install solar panels on the roofs of at least five businesses in the district, free of charge to the businesses. These businesses would be located in larger commercial premises, such as on industrial estates, so that solar arrays can be installed with a combined generating capacity of up to 750 kW.

1.2. Electricity is then generated from the panels and sold to the businesses at a rate lower than their current electricity tariff, generating revenue for the Council, reducing energy bills for the businesses and suppling renewable energy. These three benefits support the People First and Sustainability Council priorities.

1.3. The project would need an estimated capital investment of up to 563k to deliver installations on at least five commercial units. Estimated set ups costs are £50k.

1.4. An allocation from the UK Shared Prosperity Fund (UKSPF) of £95k would enable the project to be set up and partially cover the initial capital investment required which, if complemented by the remaining capital investment from the Council, would enable the upper range of capacity installed to be reached and generate greater revenue. Net initial costs are estimated at £518k with a £95k UKSPF allocation under the recommended approach.

2. How the scheme works

2.1. This project is based on the successful solar for business scheme delivered by West Suffolk District Council since 2016, installing solar panels on over 80 businesses, achieving carbon savings of 1670 t/CO_2e and generating 2.2 million kWh of renewable electricity in 2022[1].

2.2. The steps to deliver the project are:

2.2.1. Identify suitable businesses – businesses need to be in buildings large enough for at least a 50 kW solar array to be installed and using enough electricity to meet the maximum generated. Actions would be undertaken to work with supportive landlords.

2.2.2. Reach legal agreements – this involves engaging with the building landlord to agree a lease agreement for use of roof space for the solar panels and power purchase agreement with the business on the cost of use of the generated electricity.

2.2.3. Confirm connections and building suitability – this involves engaging with the network operator, conducting a structural survey and managing planning requirements.

2.2.4. Tender of installer – holding an open tender for installation across all sites to achieve installation costs sufficiently low to meet the financial case.

[1] https://www.westsuffolk.gov.uk/environment/business-support/solar-for-business.cfm

2.2.5. Installation and monitoring and maintenance – manage installation on sites, install metering and set up billing to provide revenue stream.

3. Financial information

3.1. The financial case is based on three scenarios for possible capital investment – a low performing scenario, a mid-range scenario and a high performing scenario.

3.2. The headline figures are set out in table 1. The upper scenario closely matches the approach and assumptions from West Suffolk Council. This scenario involves higher capital investment (54% more than the mid scenario) but also greater revenue (144% higher), a payback period of seven years and IRR of 14.88%. Two more conservative scenarios have been considered. The low performing scenario includes the lowest capital investment but also the lowest return leading to a 13-year payback period and Internal Rate of Return (IRR) of 5.49%. Under a mid-scenario £35k more investment is required but with greater revenue leading to a 10-year payback and IRR of 9.21%.

3.3. The inclusion of an allocation of the UKSPF to deliver the scheme in 2024 improves the IRR and shortens the payback period. In the current assessment, it is assumed £95,000 is allocated to the scheme, covering set up costs and some of the capital investment required. Without the allocation, payback periods range from 8 to 17 years and IRR from 2.57% to 12.38%.

3.4. The cost of capital borrowing has also been included at 9%. As set out in table 1, Incorporating this cost leads to an average annual surplus of £45k under the high scenario, which follows the recommended route of aiming for larger buildings, and a surplus of £9.5k in the mid-scenario while leading to a small shortfall under the low scenario of £633. This supports the case for aiming for larger buildings.

Table 1: headline figures

	Low	Mid	High - recommended
Net initial costs required (including UKSPF allocation)	£277,625	£312,875	£518,725
- Capital (part funded by UKSPF)	£325,000	£358,750	£562,500
- Revenue (fully funded from UKSPF)	£47,625	£49,125	£51,285
UKSPF allocation	-£95,000	-£95,000	-£95,000
Net revenue (20 years)	-£487,064.13	-£751,224.62	-£1,839,765.76
Surplus (20 years)	-£209,439.13	-£438,349.62	-£1,321,040.76
Average net revenue per annum	-£24,353.21	-£37,561.23	-£91,988.29
IRR	5.49%	9.21%	14.88%
Payback (Years)	13	10	7
Capital not funded by UKSPF	£277,625	£312,875	£518,785
Cost of capital at 9%	£24,986	£28,159	£46,691
Average annual surplus after cost of capital	£633	-£9,402	-£45,298

3.5. The key variables in the scenarios are the installation costs of solar panels and size of array installed. The low scenario uses official statistics for the average cost of installation per kW for solar panels on smaller arrays. The high scenario uses much lower installation costs based on West Suffolk Council's recent tenders for installation. The average sized installation in the West Suffolk scheme is 150 kW and this is the

recommended size for the pilot. Under the low and mid scenario much smaller installations of average 50 and 70 kW in size are assumed. Larger installations lend closely to lower installation costs per kW due to fixed costs such as scaffolding being similar.

3.6. Initial costs are set out in table 2. Beyond the capital investment for installation, the biggest contributor is legal costs where it is assumed all legal support is provided externally. The £15k for development and approvals includes a structural survey, engagement with the network operator with possible connection costs, and planning support if needed. The administration set up currently covers possible additional external requirements.

3.7. Staff resource requirements include project management, business engagement, estates for initial negotiations on lease terms, procurement and administration to deliver the scheme. It is currently anticipated that there is sufficient internal capacity to deliver these requirements.

3.8. Annual running costs include a rough estimate of insurance costs as well as some staff costs for administration of billing. In West Suffolk, servicing is done ad-hoc after an initial two-year contract but this approach may need to be reviewed depending on insurance requirements and / or the lease agreement.

Table 2: Initial costs

	Low	**Mid**	**High**
Capital investment for installations	£325,000.00	£358,750.00	£562,500.00
Publicity event	£500.00	£500.00	£500.00
Administration set up	£3,000.00	£4,500.00	£6,660.00
Legal agreements for five installations	£29,125.00	£29,125.00	£29,125.00
Development/approvals/permits for five installations	£15,000.00	£15,000.00	£15,000.00
UKSPF allocation	-£95,000.00	-£95,000.00	-£95,000.00
Net initial costs	**£277,625.00**	**£312,875.00**	**£518,725.00**

4. Expected benefits

4.1. Launching a solar for business scheme for SMEs in North Herts would benefit businesses through reducing their energy bills, provide long-term revenue generation to the council and reduce greenhouse gas emissions through generation of renewable energy. Table 4 highlights the benefits of the scheme.

Table 4: Benefits

Revenue	**Low**	**Mid**	**High**
Annual revenue from sale of electricity to businesses (year 1)	-£22,592.08	-£31,171.48	-£66,796.03
Annual revenue from sale of excess electricity to grid (year 2)	£ -	-£1,504.06	-£8,057.48
Energy costs saved for all businesses			
Annual energy costs saved (year 1)	-£18,073.66	-£24,937.19	-£53,436.83
Energy costs saved (over 20 years)	£473,482.98	£653,289.35	£1,399,905.75
Emissions saved (tonnes CO2e)			
Annual CO2 emissions saved (year 1)	31.19	43.03	92.21
CO2 emissions saved (over 20 years)	623.77	860.64	1844.23

5. Risks

5.1. The following priority risks and mitigating actions have been identified:

5.1.1. Legal agreements delay scheme. Protracted negotiations could delay scheme delivery. This could be managed through initial negotiations completed by non-legal teams so that the broad terms are agreed ahead of formal legal negotiations.

5.1.2. Limited internal capacity and skills to deliver scheme. The cost of external legal support has been included in the financial case. Allocation of capital and sufficient capacity is needed to mitigate the broader risk.

5.1.3. Poorly managed installations / unable to get sufficiently low installation costs. The procurement process could manage the first risk, particularly applying a similar weighting to West Suffolk's 50% for quality and 50% for price. Early engagement with installers would also identify whether the targeted installation cost is realistic.

5.1.4. Long-term contract and risk of change. Change of building ownership or new business tenants could affect the scheme. The break clauses included in the two agreements mitigate these risks.