Cabinet

St Edmundsbury BOROUGH COUNCIL

Title of Report:	**Developing a Community Energy Plan**	
Report No:	**CAB/SE/14/009** [to be completed by Democratic Services]	
Report to and date/s:	**Cabinet**	2 December 2014
	Council	16 December 2014
Portfolio holder:	David Ray Portfolio Holder for Resources and Performance **Tel:** 01359 250912 **Email**: david.ray@stedsbc.gov.uk Peter Stevens Portfolio Holder for Waste and Property **Tel**: 01787 280284 **Email:** peter.stevens@stedsbc.gov.uk	
Lead officer:	Peter Gudde Environment Manager **Tel:** 01284 757042 **Email:** peter.gudde@westsuffolk.gov.uk	
Purpose of report:	To put forward investment proposals to develop a Community Energy Plan based on an appraisal of options for renewable energy generation. This report summarises the business case and makes recommendations regarding the viable options which, if approved, would establish for the first time a long term energy investment plan generating stable revenue and energy cost savings for the Council alongside its existing support for improved community energy efficiency. This would form the West Suffolk Councils' Community Energy Plan.	

Recommendations:	**It is <u>RECOMMENDED</u> that:** **(1) the development of a West Suffolk Community Energy Plan, be supported;** **(2) appraisal of other energy-related options set out in the report with a view to receiving further investment proposals, be supported;** **(3) subject to the approval of full Council, the following be allocated:** **(a) £15,000 to continue the West Suffolk Greener Business Grant in support of energy efficiency improvements, as outlined in paragraphs 1.1.4 and 1.1.5 of Report No: CAB/SE/14/009;** **(b) £85,500 to improve business resource efficiency and install the next phase of solar schemes on Council property (Option 1), as outlined in Appendix A to Report No: CAB/SE/14/009;** **(c) as part of the 2015/2016 budget setting process, £1.62 million over three years to develop rent-a-roof solar schemes in partnership with local businesses (Option 3), as outlined in Appendix A to Report No: CAB/SE/14/009; and** **(d) as part of the 2015/2016 budget setting process, £50,000 to cover the identification, detailed feasibility and associated community engagement activities in support of potential sites for larger scale solar and renewable energy generation technologies (Option 5) where supported and/or led by communities in the Borough, as outlined in paragraph 1.3.5 to Report No: CAB/SE/14/009.**
Key Decision: *(Check the appropriate box and delete all those that **<u>do not</u>** apply.)*	*Is this a Key Decision and, if so, under which definition?* No, it is not a Key Decision - ☒
*The key decision made as a result of this report will be published within **48 hours** and cannot be actioned until **seven working days** have elapsed. This item is included on the Decisions Plan.*	
Consultation:	See paragraphs 3.1 – 3.3
Alternative option(s):	See paragraph 4.1
Implications:	

*Are there any **financial** implications? If yes, please give details*		Yes ☒ See paragraphs 5.1 – 5.5	
*Are there any **staffing** implications? If yes, please give details*		Yes ☒ See paragraphs 6.1 – 6.2	
*Are there any **ICT** implications? If yes, please give details*		No ☒	
*Are there any **legal and/or policy** implications? If yes, please give details*		Yes ☒ See paragraphs 7.1 – 7.3	
*Are there any **equality** implications? If yes, please give details*		Yes ☒ See paragraphs 8.1 – 8.3	
Risk/opportunity assessment:		*(potential hazards or opportunities affecting corporate, service or project objectives)*	
Risk area	**Inherent level of risk** (before controls)	**Controls**	**Residual risk** (after controls)
Financial - The projects do not achieve the predicted financial returns	High	Conservative assumptions made. Industry advice has been sought in developing the financial models. Project investment will be tightly controlled to achieve highest Feed-In Tariffs, or cease project investment should Government cut the tariffs to make the financial model unsustainable	Medium
Legal - Gain permissions and licences to operate	High	Seek legal advice before progressing options	Medium
Economic – lack of market demand	Medium	Carry out soft market testing. Refine the offer and go to test market again before launching	Low
Technological – Complexity of the technologies	Medium	Initial focus is on a mature, low technological risk.	Low
Community – Lack of effective engagement and communication to explain and win support	High	Develop an engagement and communications plan	Medium
Ward(s) affected:		All Wards	
Background papers:		None	
Documents attached:		**Appendix A**: Outline of the options considered **Appendix B**: Summary of the options appraisal	

1. Key issues and reasons for recommendation(s)

1.1 Background and Key issues

1.1.1 In the recently published Community Energy Strategy, the Secretary of State for Energy and Climate Change has called on local authorities to provide the stimulus and support to community renewable energy. The Government has also re-iterated its policy on solar energy that it wishes to see the "Big 6" energy companies become the "Big 60,000" with community-owned solar. Government sees local authorities as key to this "democratisation" of the energy supply.

1.1.2 Every Council in England has a responsibility under the Home Energy Conservation Act, alongside wider health and wellbeing responsibilities, to tackle fuel poverty and help households become more energy efficient. Through our participation in the Suffolk Climate Change Partnership, St Edmundsbury Borough Council has been able to help local households, communities and businesses access independent advice and support to make sustainable energy choices, reduce the impact of energy cost volatility and move from fossil fuels.

1.1.3 The Council has already demonstrated leadership by:

- Improving energy efficiency across its property portfolio;
- installing 227kWp[1] of renewable energy generation on its own property;
- publishing its Home Energy Conservation Act Plan setting out the help the Council will provide to help householders insulate their homes;
- actively participating in initiatives including the Warm as Toast and Suffolk Energy Action insulation programmes and the multi-award winning Suffolk Warm Homes Healthy People winter fuel poverty project;
- offering Greener Business Grants to small and medium sized businesses to assist them become more energy efficient and save money; and
- supporting and promoting community and business support services provided by Suffolk Climate Change Partnership.

Excluding officer time, all the community-focussed initiatives are delivered at an annual revenue cost to the Council of £17,000.

1.1.4 Improvements in energy efficiency deliver immediate savings generally with short financial paybacks. In addition, achieving certain levels of building energy efficiency is a requirement for the highest renewable energy tariffs. Since its launch in 2011, the West Suffolk Greener Business Grant has contributed to the improvement in efficiency of 62 businesses in West Suffolk from a pot of £60,000 provided by West Suffolk Local Strategic Partnership. The performance of this fund is set out in Table 1.

[1] kWp – kilowatt peak – the generating capacity of the installation

Number of businesses supported	Amount granted	Predicted value of energy savings to the businesses		Predicted CO_2 savings	
		Annual	Over the expected lifetime of the measures	Annual	Over the expected lifetime of the measures
62	£46,165	£52,500	£827,000	220 tonnes	4,150 tonnes

Table 1 – West Suffolk Greener Business Grant

The fund has been used by businesses to match-fund either their own capital or other funds, for example Grants for Growth funded by the European Regional Development Fund.

1.1.5 It is proposed, therefore, that as part of the broader support to business in the Community Energy Plan that the Council allocates £15,000 to top up the grant pot. A similar amount will be sought from Forest Heath District Council so that the grant can continue to be offered to help cut local business costs which in turn will support our strategic priority to stimulate economic growth across West Suffolk.

1.1.6 By combining our current energy efficiency work with a renewable energy investment programme, the Council would be able to fulfil the following outcomes:

- A long term, sustainable source of revenue for the Council
- Households, businesses and communities in West Suffolk which are less reliant on fossil-based energy
- Locally-owned renewable energy generation to the benefit of the local taxpayer

1.1.7 With Forest Heath, this can form the basis of a West Suffolk Community Energy Plan comprising:

- Continued support to residents to insulate their homes and improve energy efficiency – delivered through our participation and promotion of Suffolk Energy Action and other schemes as they become available

- Continued support to vulnerable residents during the winter – delivered under the Suffolk Warm Homes Healthy People programme

- Continued resource efficiency advice and support to businesses and communities – delivered through our participation in the Suffolk Climate Change Partnership

- Subject to Council approval, continued capital funding to improve business energy efficiency – using the West Suffolk Greener Business Grant to unlock other capital within the business or from elsewhere

- Subject to Council approval, capital financing of renewable energy in the community.

1.2 **Options appraisal**

1.2.1 Following informal discussion with Cabinet Members over the summer and autumn 2014, officers have undertaken an options appraisal of a range of renewable energy generation opportunities in order to develop a business case for the renewable energy investment programme. The appraisal has focussed on solar photovoltaics (solar PV) since the technology is now mature in the UK market and has a relatively low technological risk.

1.2.2 The following options have been considered in the appraisal:

(a) Developing more solar on Council property
(b) Developing a "rent-a-roof" solar scheme for homes
(c) Developing a "rent-a-roof" solar scheme for local business
(d) Brokering investment in renewable energy on behalf of local communities
(e) Other renewable energy technologies.

A description of each option and an outline of the appraisal findings are given in Appendix A.

1.2.3 A summary of the options appraisal is set out in Appendix B. The options appraisal shows that there are opportunities to develop a portfolio designed to deliver the outcomes set out in 1.1.6.

1.3 **Proposals based on the findings from the options appraisal**

1.3.1 It is recommended that the Council approves the proposal to develop more solar on council property (Option 1) and to develop a rent-a-roof scheme for local businesses (Option 3).

1.3.2 Further market research is required on the option to develop a rent-a-roof scheme for homes (Option 2) and the option to broker investment in renewable energy on behalf of local communities (Option 4); a future report will be provided for Cabinet to consider on these two options.

1.3.3 In addition to the options, an "Invest-to-save" proposal has been identified for water efficiency improvements to the Haverhill Depot which are not included within existing budgets or the Council's Repair and Maintenance Programme provisions.

1.3.4 Based on a capital investment of £1,705,500 and assuming lower end returns and upper end costs, the viable options could deliver potential revenue of £152,500 per annum in Year 1, moving towards £213,000 per annum in Year 10. This Feed-In Tariff component would be index-linked over a 20 year period. The predicted Internal Rate of Return from this investment has been calculated and presented in this report BEFORE taking account of loan interest and principal repayment BUT after taking account of operating costs. Taken together, these proposals are close to achieving the 10% threshold in the Council's Medium Term Financial Strategy. Additional value will be gained where the energy is used onsite, displacing grid supply.

1.3.5 Initial analysis is also underway of the potential opportunities that arise

from renewable heat technologies such as Anaerobic Digestion and biomass (Option 5). These are now supported through the Renewable Heat Incentive and can generate commercial returns in the region of 15% compared to around 8-10% for solar PV. Renewable heat technologies also make a significant carbon saving contribution given that most of the energy used in buildings is for heating and cooling. The findings of this options appraisal will be presented in a future report.

1.3.6 A summary of the costs and financial returns of each option is presented in the Table 2. These exclude the additional value to the consumer of any tariff discount which the Council may be able to offer.

Option	**Capital cost**	**IRR[2]**	**Revenue/Saving after operating costs**	
			Year 1	**Year 10**
Improve water efficiency	£21,000[3]	21%	£2,000	£2,500[4]
Option 1 Develop more solar on council property	£64,500	9%	£6,500	£9,500
Option 3 Develop a "rent-a-roof" solar scheme for local businesses	£1.62 million over three years (£540,000 pa)	9.5%	£144,000 (by year 3)	£201,000
Total	**£1,705,500**		**£152,500**	**£213,000**

Table 2 – Investment returns

1.3.7 Investing in the viable options would open up associated opportunities and benefits for both the Council and local communities:

- Energy generation in community ownership – the initial delivery model is based on the Council being the primary investor. The Council could retain ownership or look to develop a shared ownership model whereby individuals or community groups take an investment stake

- Sell electricity to local consumers – where energy generation is at a business or community building as in the Option 3, the electricity could be sold for use on site

Energy security and carbon savings – the proposed options, if developed, would make a valuable contribution in both cases.

1.3.8 By developing an investment programme, the Council will be in a strong position to be able to offer householders and local businesses an integrated energy advice and support service through our work with the Suffolk Climate Change Partnership. This would also help support inward investment by helping communities and businesses gain more effective access to support funding like the Energy Companies Obligation and Grants for Growth.

[2] an indicator of the net benefits expected from a project over its lifetime, expressed as a percentage comparable to the interest rates
[3] The total scheme cost is £100,000 with the remaining £25,00 already funded from a S106 agreement
[4] Assuming 5% per annum indexation of energy costs

2. Additional supporting information

2.1 The proposals bring together economic, social and environmental benefits by:

- delivering sustainable, long term financial benefit for the Council to achieve its Medium Term Financial Strategy
- showing community leadership by helping to deliver legally-binding national targets to reduce greenhouse gas emissions and to generate more electricity from renewable energy
- Developing wider economic benefits, for example by using local suppliers during the construction phase, and supporting local businesses taking up energy efficiency and renewable energy
- Helping local communities access low cost energy.

2.2 Option 4 may, when fully evaluated, allow the Council establish an electricity tariff offer to local residents.

2.3 The New Anglia Local Enterprise Partnership is leading nationally on the green economy. These proposals support this aspiration and could in the longer term allow local businesses take economic advantage from the energy savings that may accrue, while some may move into the energy sector to build a local supply chain.

3. Consultation

3.1 Although no formal consultation has been undertaken on the options, informal discussions have been held with a range of potential stakeholders to gather information to assess each option and test the market.

3.2 Should the Council approve any of the options, an engagement and communications plan will be put together. This will support any formal consultations required by the planning process should any larger schemes be brought forward.

3.3 Several of the options can be delivered with our partner, Forest Heath District Council. A separate report will be considered by Forest Heath's Members and should both Councils approve the proposals, discussions will be held with internal and external stakeholders to shape the shared delivery model.

4. Alternative option

4.1 **Doing nothing**
Lack of investment capital has been cited as a block to householders, communities and business taking action to improve energy efficiency and uptake of renewable energy generation themselves. This block would continue to hold back our communities and businesses if the Council chose not to support the opportunities presented in this report.

5. Financial implications

5.1 The predicted financial returns to the Council are summarised in 1.3.6. The revenue from the Feed-In Tariff is index-linked according to OFGEM-approved contracts for 20 years while electricity will continue to be developed so long as the panels remain operational. The viable options are predicted to generate stable, long term revenue which would contribute to meeting the Council's Medium Financial Strategy.

5.2 In addition, local communities and businesses partnering with the Council could receive discounted electricity, enhancing the overall value of the projects. Typically, it is considered that electricity from roof-mounted solar could be offered at a tariff at least 10% cheaper than the current grid offer.

5.3 It is difficult to predict long-term trends of energy prices. The demand for energy is probably the single most significant factor affecting price. UK Government predicts that average domestic dual fuel bills, for example, will increase by 18% in real terms between 2010 and 2020[5]. Other energy commentators are predicting higher increases and significant price volatility for domestic and commercial energy consumers.

5.4 The ability to hedge against electricity price volatility could be advantageous to the Council; this may be possible through developing a portfolio of energy generation schemes. Prices could be linked to a less volatile index compared to market prices for electricity, allowing the Council and participating businesses the ability to plan their utility budgets with more confidence.

5.5 The Council may need to borrow in order to finance the majority of these proposals and the most likely source of external financing would be prudential borrowing which is currently available at a rate of approximately 3.5%. These investments have been assessed against the Internal Rate of Return needed to cover borrowing. However, the Council's Treasury Management activities will determine when the Council will actually need to enter into external borrowing.

6. Staffing implications

6.1 Should the proposals be approved, there will be pressure placed on the Council's capacity and technical capability to deliver, particularly with larger more complex schemes. However, the financial models supporting the options incorporate an allocation of resources (staff and operational budget) for the management of the projects should they be taken forward.

6.2 Subject to Council approval, a project delivery team will be put together which will move any proposals that are viable forward to the point of delivery. Once schemes are operational, the size and nature of this team will be kept under review to ensure that it reflects the resources required and financial returns generated.

[5] Energy Prices -Standard Note: SN/SG/4153 House of Commons Library. 31 January 2014

7. Legal and policy implications

7.1 The Council has the power to generate and sell electricity and heat as described in this report by virtue of the Local Government (Miscellaneous Provisions) Act 1976 (as amended in 2010).

7.2 Legal advice has been sought to establish whether any of the options would require a trading company to be established. Furthermore, there may be circumstances where a special purpose vehicle may be required, for example where a joint venture is the best approach to delivering one of the viable options. Neither of these structures is likely to be needed at the initial stages of developing any of the options. However, these may be required at a later date. Advice has, therefore, been sought to understand the costs and benefits including taxation implications.

7.3 The proposals contribute positively to all three of the Council's strategic priorities as outlined previously.

8. Equality implications

8.1 An initial screening Equalities Impact Assessment has been undertaken which has determined that there will be no differential impact on any diversity group arising from the proposals.

8.2 The proposals could deliver significant financial value to the Council which would benefit local communities in the Borough; directly where renewable energy could be developed further; and indirectly with the revenue reducing the Council Tax burden.

8.3 In the longer term, where excess energy generation can be exported to the grid, the Council could explore the development of a social electricity tariff, which could be offered to households struggling to afford their energy bills.

Appendix A – Outline of the options considered

Option 1: Developing more solar on Council property

Council properties have been identified which could accommodate the next phase of solar installations. At the same time, an energy efficiency improvement has been identified for which there is no funding in the Council's Property Maintenance programme. A "without commitment" procurement process has been undertaken; the financial and carbon savings are set out in Table 1.

Site/item	Capital investment	Annual income/Savings for the Council [6]		IRR for the Council	Estimated value to the tenant(s) (Year 1)	Estimated CO_2 saving
		Year 1	Year 10			
21-27 Hollands Road, Haverhill Solar PV[7]	£64,500	£5,000	£7,500	9.6%	£850	7 tonnes
Haverhill Depot Water efficiency	£21,000	£2,000	£2,500	7%	N/A	N/A
Total	**£85,500**	**£8,500**	**£12,000**		**£850**	**9 tonnes**

Option 2: Developing a "rent-a-roof" solar scheme for homes

Larger housing developers are arguing that renewables jeopardise the viability of development. A potential solution could be that the local authorities in effect rent the roof space to install solar panels on new built homes, taking the Feed-In Tariff while the homeowner saves energy so reducing their bill.

Economies of scale would be achieved and much of the procurement risk would be transferred since it would be for the developer, rather than the Council, to use its buying power and supply chain. The Councils would also have the ability potentially to set local employment conditions by negotiation with the developers.

To date, informal discussions have been held with, amongst others a major utility connection company a local housing association and a local authority already offering the scheme to its residents, to understand whether a model is viable.

[6] The Feed-In Tariff is index linked over 20 years.

[7] In addition to the financial returns for the Council, it will be possible to offer any generated electricity to the tenant under contract at a cheaper rate than they currently pay for grid supplied electricity.

Option 3: Developing a "rent-a-roof" solar scheme for local business

One of the barriers to businesses installing renewable energy technologies is access investment capital. Using its prudential borrowing, the Councils could work with local businesses by investing in a solar installation on their building. The Council would receive the Feed-in Tariff and the business would be supplied the generated electricity at a cheaper rate through some form of roof rental agreement.

The rent-a-roof offer would be open to all businesses across the district although to ensure value for money, it would be necessary to apply eligibility criteria. This would include technical criteria relating to the size, type and design of the host building and criteria regarding the ownership of the building and business electricity use.

Market research has shown that there is interest from businesses, although this may be limited by technical aspects, like business energy profile and building characteristics, the appetite of the key decision makers in the business and the level of financial return that could be offered.

Based on the appraisal, it is considered that the equivalent of three to five medium scale (150KWp) schemes could be progressed a year. For budgeting purposes, it has been assumed that the equivalent of three medium scale schemes could be advanced each year over a three year period. The predicted financial investment and returns are set out below.

Year	No. of schemes developed each year	Capital investment	IRR	Annual income for the Council	
				Year 1	Year 10
1	3	£540,000	9.75%	£48,000	£67,000
2	3	£540,000	9.75%	£48,000	£67,000
3	3	£540,000	9.75%	£48,000	£67,000
Total	**9**	**£1.62 million**	**9.75%**	**£144,000**	**£201,000**

Option 4: Brokering investment in renewable energy on behalf of local communities

Community energy schemes are one of the most effective ways of getting people engaged with energy issues. Energy companies are starting to offer support to communities to develop a package of energy-related benefits.

One company, OVO Energy[8], offers four key elements to energy projects developed for the benefit of the local community:

- energy supply - set up their own supply business, from front to back office, from trading to marketing
- smart metering - customers will be able to see real time energy usage, which can be used to compare portfolios of homes to identify the most energy efficient or inefficient properties
- energy efficiency – companies are offering funding through the Energy Companies Obligation
- Power generation - can buy energy from local generators.

This offer is available to local authorities; appropriately scaled schemes have yet to be identified. Option 4 may, when fully evaluated, allow the Council establish an electricity tariff offer to local residents.

Option 5: Other renewable energy technologies
Initial work is underway and, where viable, proposed schemes will be brought forward for consideration.

[8] http://www.ovoenergy.com/blog/2013/11/community-owned-energy/#sthash.EnTW0x2D.dpuf