
CARDIFF'S ENERGY PROSPECTUS – MEMBER UPDATE

Purpose of Report

1. This item will provide Members with the opportunity to:
 - Receive a progress update on the development of Cardiff's Energy Prospectus;
 - Receive an update on the energy related achievements of the Council during 2015/16;
 - Consider the energy priorities for Cardiff and the Council during 2016/17;
 - Consider the implications of recent government policy changes and the strategic impact that these could have on energy projects in Cardiff;
 - Consider the future approach taken by the Council to record its energy achievements and identify a future strategy.

Background

2. The Council's energy programme covers four key areas which are categorised as:
 - Staff awareness to reduce energy consumption;
 - Energy efficiency and retrofit;
 - Installation of decentralised energy generating plant;
 - Applying for external funding to support, develop and showcase innovations in energy technologies.

3. During 2014/15 a series of 'pipeline' energy projects from within Cardiff were brought together to create Cardiff's Energy Prospectus; this new document was presented to Full Council in June 2014. A considerable number of the projects listed within Cardiff's Energy Prospectus have now been converted into the Council's energy portfolio. Cardiff's Energy Prospectus is attached to this report as **Appendix 1**.
4. The Environmental Scrutiny Committee received an item titled 'Member Update: Council Energy Prospectus & Proposals for the Route to Market' at the meeting on the 14 July 2015. A copy of the cover report for this item along with the letters sent and received after the meeting are attached to this report as **Appendices 2, 3, 4 and 5**.
5. At the time of the July 2015 meeting it was estimated that by the end of 2015/16 the Council would have enhanced Cardiff's position in terms of energy sustainability by delivering on a number of projects, which included:
 - The installation of 6MW of electricity generation capacity (equivalent electricity for 3,000 homes) with solar schemes at Lamby Way depot roofs and landfill site; solar on schools; and hydroelectric project at Radyr Weir;
 - Energy efficiency retrofit in almost 1,000 homes;
 - The installation of a range of energy saving measures on the Council's estate;
 - The reduction of £100,000 in energy costs for schools across Cardiff. This was to be achieved through improved energy management, for example, using the 'Carbon Culture' system to reduce energy consumption during school holidays;
 - The Council has helped to facilitate the development of the Energy from Waste facility at Trident Park which converts residual waste into 30MW of renewable energy; the project also has the potential of supporting a city centre district heating scheme. Since the creation of the Energy from Waste facility at Trident

Park the Council has been a key partner in helping to drive forward the goal of achieving a city centre district heating scheme;

- The demonstration of innovation through winning a total of £2.2m in external funding for six energy related research and innovation projects. The aim of these is showcase Cardiff's approach to sustainability and fund innovative products and technologies that will bring added benefits to the Council's estate;
- Bringing in £8m of external funding for the projects listed above and securing enough revenue grant income to fund 2.5 full time equivalent salaries in the Council's Energy and Sustainability Team.

6. The energy projects which are currently being progressed and planned also relate to Council's wider Sustainable Development and "One Planet Cardiff" objectives. The projects include research and development initiatives where Cardiff is the first and only Authority in the UK to have run schemes under the UK Government's Small Business Research Initiative, managing innovation competitions, "heritage retrofit" solutions and "portable renewables" technology.
7. At the time of the July 2015 Environmental Scrutiny Committee the Council was looking forward to the development of future exemplar work. For example, the British Geological Survey looking at tapping into the city's geothermal sources of heat and seeking funding from Europe for "Smart City" bids to test integration of data sets to optimise the sustainable way in which a city runs its key infrastructures like transport, waste, water, energy and digital.
8. The approach taken by the Council in the creation of Cardiff's Energy Prospectus was appreciated by Welsh Government, to the extent that they commissioned Local Partnerships to interview and catalogue the rest of the energy pipeline for all Welsh Authorities. Local Partnerships is a jointly owned not for profit venture between the Local Government Association and HM Treasury, offering specialist support and capacity. This work identified enormous potential for Wales with 143 projects identified, the bulk of which were in concept and need support in getting to the point of

installation. It was estimated that if all of the projects reached the point of generation then they could provide 14% of the energy needs of the public sector estate in Wales.

9. During 2015/16 the Welsh Government was considering an investment vehicle which could offer £500m borrowing capacity, or potentially equity, into the energy projects. This initiative approach was launched in as “Green Growth Wales” and Cardiff has already secured a £2m Invest To Save fund from this to support additional retrofit work.

Issues

10. At the time of the July 2015 scrutiny the Council was at the point where it needed to agree the extent of future investment into energy projects. In July 2015 Members were informed that a generic paper on capital investment criteria for Invest to Save schemes was being prepared to look at issues including:

- overall business case requirements;
- approval process as part of the budgetary framework;
- interest rates;
- repayment mechanisms;
- acceptable returns on investment, and
- (crucially for the energy piece), whether there should be a maximum cap to capital exposure in certain categories of investment.

A report on these issues was presented to Cabinet in July 2015.

11. It was felt at the time that the generic paper on capital investment criteria for Invest to Save schemes would include a discussion on risk and reward to determine the appetite for further direct investment in the remaining pipeline. In broad terms the Council’s energy investment / support options were:

- To continue to invest directly as a Council from the capital programme and take the rewards back into the revenue account as the projects return on investment;
- To take a lower risk option of leasing assets (as in the various “rent-a-roof” solar schemes that are on offer) or leasing equipment, for example, heat exchangers or PV (in the same way one leases photocopiers), though generating lower return;
- To engage more actively with community energy company models to share the responsibilities and opportunities, but this would also mean sharing the profits;
- As the Council owned energy production estate grows, it could decide to step into the energy buying and selling business and set up an Energy Services Company (ESCO).

12. The view in July 2015 was that in reality, a multi-dimensional approach encompassing all of the above options would probably be the most appropriate option as individual schemes often present different risks, rewards, and complexities.

13. The July 2015 scrutiny report also set out a number of background issues and opportunities which were evolving as the Council’s energy knowledge grew – these it was felt would help to guide future options. For example, at the time electricity purchasing arrangements were available, known as direct power purchase agreements or “sleeving”. These could provide the Council with the opportunity to buy back the electricity that it produces at rates which are better value than traditional purchasing from the grid.

14. In the last year a major issue for the Council was around maximising the renewable energy potential of the Energy from Waste Plant at Trident Park. Last year the Council secured funding from the Department of Energy and Climate Change (DECC) to explore the potential of delivering a district heat network to supply properties in the

vicinity of the plant with the heat that is the by-product of its combustion process. The grant allowed the Council to work with partners to identify the possible investment opportunities and governance issues that would arise in the delivery of such a scheme. The funding extended into 2015/16 and in the last twelve months has considered a number of issues including:

- The Council's potential options as a funder into a new company that would deliver and run the network;
- The Council's options as a customer of the heat, along with other major public sector organisations in Cardiff;
- The ability of the Council to address fuel poverty issues via links between the heat network and housing retrofit funding.

15. In July 2015 the heat network was a part of the Council's current list of either incomplete or potential future renewable energy projects, this list also included:

- District heating networks with the Energy from Waste Plant at Trident Park and other potential sources of heat for the city centre;
- Additional hydro schemes on the city's rivers;
- Large scale roll-out of solar schemes on the Council's estate and, especially schools (a potential £12m investment);
- Extending the conversion of Street lighting to LED technology;
- Possibilities to support the Tidal Lagoon proposal;
- Possibilities to maximise the sustainability credentials of the new communities arising from the LDP by working proactively with developers and other infrastructure providers to build renewables more positively into emerging designs;

- Further engagement with innovation funding sources including the European Union’s “Horizon 2020” Programme and other DECC and Innovate UK opportunities to support the roll-out of emerging technologies.
16. At the time, given the pipeline of energy infrastructure projects and the possibilities of aligning energy infrastructure with investment sites to create a unique selling point around fuel security, it was felt that another route to securing the financing and delivery capacity could be through the City Deal.
 17. Since the time of the last Scrutiny and Cabinet report the UK Government undertook and implemented a major and unexpected review of its policy and financial support for renewable energy. This made significant reductions to the various financial mechanisms that had previously supported renewable energy schemes. Feed in Tariffs (FITs) reduced considerably and Renewables Obligations Certificates (ROCs) all but disappeared. This impacted on some of the live projects being delivered through the Energy Prospectus. Some were accelerated and expanded to maximise their potential before the policy change took hold, whilst others were delayed due to the uncertainties caused to their business models. Officers have since been working to reprioritise projects and develop new delivery models that address the “post subsidy” position. Details of these impacts and actions will be reported in the meeting.
 18. This report and its appendices highlight the diverse range of activity and potential that the energy sector holds for the Council. The Council’s emerging experience in the field has also highlighted the complexity that underlies the investment decisions and delivery mechanisms that need to be navigated to achieve this potential. During 2015/16 it was proposed, therefore, that future investment decisions were made against a hierarchical framework of delivery routes. For example, where self- financed projects are prioritised they will need to meet the refreshed Invest to Save framework and deliver the best income and return for the Council. If these projects do not meet the Council investment criteria then the range of partner and other delivery mechanisms will need to be explored.
 19. In 2015/16 Local Partnerships were bidding to Welsh Government to provide a support package to each local authority in Wales which it was hoped would provide free at

point of use assistance to effect accelerated delivery of these types of projects. These could include:

- feasibility studies and business cases;
- assessment of due diligence;
- identification of further opportunities for efficiency or generation;
- assessment of investment models – for example community ownership and the identification or establishment of procurement frameworks to speed up and de-risk the process.

This Support from Local Partnerships is now in place. It was, therefore, felt that the Council needed to make best use of available support resources including:

- The Welsh Government support from Local Partnerships;
- Existing support mechanisms such as DECC's heat network grant;
- The Council's in-house financial guidelines.

Previous Cabinet Reports

20. The Cabinet received an item titled 'Update on the Council's Energy projects and proposals for the route to market for the remainder of the energy pipeline' at the Committee's 16 July 2015 meeting. A copy of the Cabinet paper is attached to this report as **Appendix 6**. Following the report the decisions taken by the Cabinet resolved:

- To note the progress achieved to date;
- That a review of the Council's strategic energy projects, guided by the delivery mechanisms set out in this report be agreed;

- That Cardiff engage with Welsh Government's Green Growth Fund and the associated Local Partnerships support package to inform and support the emerging strategy and delivery programme;
- That an options appraisal be undertaken to identify the most appropriate vehicle to deliver and operate a district heat network and deliver the Council's renewable energy goals, and a report on the findings of this work to be brought back to Cabinet.

Cardiff's Energy Prospectus - Refresh

21. Following the success of introducing 'Cardiff's Energy Prospectus' the Council is currently looking to review and update the approach used to record and direct the Council's energy policy, bringing together energy efficiency and renewable energy work under a clearly structured and target driven strategy . At this meeting officers will brief the Committee on any future developments in this area.

Way Forward

22. Officers from the City Operations Directorate have been invited to attend to give a presentation and to answer Members' questions.

Legal Implications

23. The Scrutiny Committee is empowered to enquire, consider, review and recommend but not to make policy decisions. As the recommendations in this report are to consider and review matters there are no direct legal implications. However, legal implications may arise if and when the matters under review are implemented with or without any modifications. Any report with recommendations for decision that goes to Cabinet/Council will set out any legal implications arising from those

recommendations. All decisions taken by or on behalf of the Council must (a) be within the legal powers of the Council; (b) comply with any procedural requirement imposed by law; (c) be within the powers of the body or person exercising powers on behalf of the Council; (d) be undertaken in accordance with the procedural requirements imposed by the Council e.g. Scrutiny Procedure Rules; (e) be fully and properly informed; (f) be properly motivated; (g) be taken having regard to the Council's fiduciary duty to its taxpayers; and (h) be reasonable and proper in all the circumstances.

Financial Implications

24. The Scrutiny Committee is empowered to enquire, consider, review and recommend but not to make policy decisions. As the recommendations in this report are to consider and review matters there are no direct financial implications at this stage in relation to any of the work programme. However, financial implications may arise if and when the matters under review are implemented with or without any modifications. Any report with recommendations for decision that goes to Cabinet/Council will set out any financial implications arising from those recommendations.

RECOMMENDATIONS

The Committee is recommended to:

- Consider the information in the report and appendices, and information provided at the meeting;
- Decide whether they would like to make any comments to the Cabinet;
- Decide the way forward for any future scrutiny of the issues discussed.

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12 July 2016