

**CABINET SUPPORT OFFICE  
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09.12.2014

Date / Dyddiad: 13 March 2015

Councillor Paul Mitchell  
Chair, Environmental Scrutiny Committee  
Scrutiny Services  
Room 263  
County Hall  
Cardiff  
CF10 4UW

Dear Councillor Mitchell

**Environmental Scrutiny Committee - 09 December 2014**

Thank you for your correspondence dated 23 January 2015 following on from the meeting above, to which I would respond as follows.

*“During the meeting Members were told that the Council had decided to progress the development of the Lamby Way Solar Farm through a third party land lease arrangement instead of directly investing in the scheme. The Committee would like to receive a detailed copy of the business case for this proposal with a description of all weightings and assumptions used to evaluate the two models. They would also like a summary of the overall capital investment assessment process used including detail on any weightings allocated for the major Council priorities and how these would impact on renewable energy projects.”*

Cabinet received a report on the Lamby way Solar Farm proposal on 17 July 2014. This report can be accessed through the link for the July 2014 Cabinet meeting on the Council website and contains details of the business case, including a comparative analysis of the direct investment and land lease options.

*“Members believe that the Council should look into and review the case for creating an arms length energy production company. They feel that such a company could have the potential to help generate an ongoing income stream for the Council and support the energy security agenda for Cardiff and Wales. As Chair of the Committee I would be happy to provide any support that I can on the matter.”*

Officers have done some initial investigation into various “arms length” energy company arrangements that exist in other parts of the Public Sector. These include Energy Services Company (ESCO) models as well as community based investment vehicles. This work is being further informed through dialogue with Welsh Government and its Green Growth agenda. I will be working with officers in the coming months to develop this work further and would welcome the Chair’s

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support in this when we have a clearer picture of the options that might be available to the Council.

*“During the meeting Members were briefly told about a ground breaking project called the ‘HELES Hydrogen Project’. I would be grateful if you could provide the Committee with more detail on this project.”*

The Council is working in partnership with ITM Power, an energy storage and clean fuel company based in Sheffield, to deliver the “Hydrogen Enabled Local Energy Systems” (HELES) project. This project will test technologies that can produce and use Hydrogen as a renewable and carbon free source of energy. The project is funded as the result of a successful bid to Innovate UK’s ‘Local Energy Systems Scheme’.

The project has been enabled due to the rare co-existence of an active Landfill Gas Collection facility at Lamby Way (a destination for the Hydrogen fuel), and a live proposal to construct a solar farm on the same site (a local supply of clean, renewable energy to power the hydrogen plant).

ITM will deliver a bespoke “hydrolyser” facility, designed and constructed off site, which will be located at the Council’s Lamby Way waste depot. It is proposed that the system will use renewable electrical power generated at the Lamby Way Solar Farm to extract hydrogen from water. The hydrogen produced can then be used as a clean energy source, or stored for later use.

The current options for use of the hydrogen produced include:

- Injection directly into the existing landfill gas engines at Lamby Way, increasing their capacity and extending their life span.
- Use in fuel cells for hydrogen powered vehicles, or
- Injection as a renewable gas into the wider gas supply grid.

The importance of the project is in demonstrating solar power to gas energy storage, effectively converting energy generated in daylight hours into other forms that can be stored and used later off-site, or when the sunlight is not so strong.

The City Council will receive £190,000 (mainly revenue funding) from Innovate UK over a 3 year period, to support the Council’s key activities in the project which are:

- a. to facilitate supportive working agreements with the solar farm operator and the landfill gas capture contractors;
- b. to steer and support the planning application for the hydrogen plant;
- c. to support research and data collection arising from the project; and
- d. to disseminate and promote the results of the project.

*“Members would like a further progress update on the development of Cardiff’s heat energy network.”*

Officers are continuing to appraise options that might support the delivery of a heat network as part of a DECC funded initiative. This is a long term project that is currently looking at governance and viability issues from the three perspectives of:

- the potential heat sources (in particular the Energy from Waste plant at Trident Park)
- the construction, ownership and potential investment models that might be appropriate for the construction of the heat distribution network; and
- the potential to create a shared public sector customer base for the future purchase of the heat.

Much of this appraisal is dependent upon ongoing performance verification measurements which will be completed in the coming month. In parallel, extensive discussion has been undertaken with the DECC Heat Network Delivery Unit group and with reference to the experiences of other local authorities who have heat network proposals. There are also ongoing actions to attempt to engage the major local residential developers in dialogue on district heating opportunities on sites through early investment in network infrastructure.

*“The Committee felt that the creation of the Carbon Reduction Strategy was a positive step forward and thought that the initial draft proposals were a good starting point for the creation of a Council policy.”*

I thank you for this comment and look forward to your further input as the strategy makes its way through the Council decision making process.

Yours sincerely,  
Yn gwyir,



**Councillor / Y Cynghorydd Ramesh Patel**  
**Cabinet Member for Transport, Planning & Sustainability**  
**Aelod Cabinet dros Drafnidiaeth, Cynllunio a Chynladwyedd**

Cc Councillor Michael Michael, Chair of the Planning Committee  
Andrew Gregory, Director for Strategic Planning, Highways, Traffic & Transport  
Phil Williams, Head of Planning  
Simon Gilbert, Principal Planning Officer  
Jane Forshaw, Director for the Environment  
Gareth Harcombe, Commercial Manager – Energy & Sustainability  
Joanne Watkins, Cabinet Office Manager  
Members of the Environmental Scrutiny Committee