

**SECOND QUARTERLY MONITORING REPORT, MOBILISING LOCAL ENERGY INVESTMENT**

*To:* **Commercial and Investment Committee**

*Meeting Date:* **12 July 2019**

*From:* **Steve Cox, Executive Director - Place and Economy**

*Electoral division(s):* **All**

*Forward Plan ref:* **N/a** *Key decision:* **No**

*Purpose:* **Second quarterly monitoring reporting on the four energy investment programmes.**

*Recommendation:* **Members are asked to:**

- a) **Approve the second quarterly report**
- b) **To note the key challenges and risks delivering the programmes**
- c) **Approve a one year extension to the Energy Efficiency Fund as set out in paragraph 2.3**

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|---|---|
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## 1. BACKGROUND

1.1 In March 2017, the Council approved its Corporate Energy Strategy with the view to invest in clean energy projects on its assets to generate income and make savings for the Council. The strategy also supports using the Council's assets to facilitate school and community energy projects plus work to develop the broader low carbon economy including the electrification of transport, housing and delivery of smart communities.

1.2 In March 2019, Committee approved the First Quarterly Monitoring Report for the energy investment programmes and the format for subsequent progress reporting to include:

- Share progress on the four investment programmes;
- Track development budgets allocated to the Energy Investment Programme to understand timelines for capital investment and revenue generation;
- Identify market changes and how these impact the Energy Investment, other Programmes and forecast revenues;
- Suggest and agree mitigation actions on projects where progress has slowed, e.g. political intervention on State Aid discussions;
- Update Committee with new policy relating to the energy market and how these may impact future revenues positively or negatively; and
- Identify key opportunities for future investment and pipeline development.

1.3 The four investment programmes cover:

- The £1million Energy Efficiency Fund for corporate buildings
- The Schools £10 million Energy Programme
- The £46.4 million Energy Investment Programme comprising four significant projects
- A Community Energy Programme, building a future project pipeline.

## 2. MAIN ISSUES

2.1 Progress across the four Energy Investment programmes is summarised in Table 1 below. Further detail can be found in paragraphs 2.3 and 2.8 and **Appendices A & B**.

Table 1. Progress across Energy Investment Unit work

| Programme                            | Key Projects  | Forecast /target Investment ( £) Millions | Investment to date (£) Millions | Actual net profit/ Savings (£) million per annum | Expected or actual Carbon savings – first year (tonnes / year) <sup>1</sup> | Comments  | Overall RAG status |
|--------------------------------------|---|---|---------------------------------|--|---|---|--------------------|
| <b>Energy Efficiency Fund</b>        | 38 LED Lighting Projects & 2 heating projects so far. More to follow. | 1   | 0.489↓                          | 0.11   | 215 <sup>2</sup>  | Behind profile, but 25 LED lighting projects are now scoped. Awaiting approval from Cambs2020 Board to proceed. Further projects to be scoped.                      | A                  |
| <b>Schools Programme<sup>3</sup></b> | 36 Primary & 19 Secondary   | 10  | 9.2↑                            | 0.91↑  | 3,314↑  | Schools pipeline to target £1million investment during 19/20.   | G                  |
| <b>Energy Investment Programme</b>   | Triangle Solar Farm   |   | 10.2                            | 0.4  | 3,570   | £1.1million gross profit in 17/18.  | G                  |
|                                      | North Angle Solar Farm  | 22.8                                      | 0.0045                          | 0  | 8,240   | Options for most cost effective capacity and grid connection being scoped and costed. Preliminary ecological surveys in progress and pre-planning process underway. | G                  |
|                                      | Babraham Park and Ride Solar + battery                                | 11.4                                      | 0.03↑                           | 0  | 470   | C&I Committee approved progression to phase 2 of the Investment Grade Proposal in June 2019   | G                  |
|                                      | Trumpington P+R, Solar and battery                                    | 0   | 0.025↑                          | 0  | 0   | The land is likely to be made available for housing in the Local Plan, therefore work is unlikely proceed on the solar and battery storage project.                 | A ↑                |
|                                      | Stanground solar and battery  | 9.7                                       | 0.0706↑                         | 0  | 500   | Flexible connection offered received for Stanground at a lower cost than included in the business case.   | A                  |
|                                      | Woodston- Battery only  | 2.5                                       | 0.0053                          | 0  | N/A   |   | A                  |
| <b>Community Energy</b>              | St.Ives Smart Energy Grid   | 1.8975                                    | 0.256                           | 0  | 210   | Agreeing final details of the grant agreement. Greater risk now on securing PPAs with key customers.  | A                  |
|                                      | Swaffham Prior Community Heat Scheme                                  | TBC                                       | 0                               | 0  | 831 estimated   | £100,300 grant awarded March 2019 by the Department for Business, Energy & Industrial Strategy (BEIS).  | G                  |

<sup>1</sup> These emissions reduction figures are calculated using long-run marginal electricity emissions factors for generation published on gov.uk. As the national grid decarbonises, these avoided emissions will decrease over time.

<sup>2</sup> EEF carbon figures are based on 2018 UK Government carbon conversion factors applied to Imtech's forecast annual electricity savings.

<sup>3</sup> The total net profit/savings is shared with schools. Schools receive £756,000 p.a. and the Council £155,000 p.a.

|       |  |        |          |        |                 |
|-------|--|--------|----------|--------|-----------------|
| TOTAL |  | £59.3M | £20.29 ↑ | £1.42M | 17,800<br>t/yr↑ |
|-------|--|--------|----------|--------|-----------------|

## Energy Efficiency Fund

- 2.2 *The Energy Efficiency Fund* has completed its third year, with total investment at £488,869 split over 39 projects, mainly LED lighting upgrades. Investment to date is already delivering annual revenue savings of around £110,000, comprising of reduced energy consumption and maintenance savings. One more project from last year is still to complete and a further 25 LED lighting projects have now been scoped and quoted with a total value of £182,750. These 25 projects are currently on hold awaiting the approval to go ahead from the Cambs2020 Board, who requested the delay in order to complete the 'Spokes' work before deciding which properties to invest in.
- 2.3 If all 25 projects go ahead this will leave £328,380 remaining in the fund. It is unlikely that the remaining funds will be invested by March 2020, the original end date for fund investments. There is still plenty of scope for further energy efficiency investments across our property portfolio, which directly benefit our revenue position. A one year extension to the fund timeline will help realise this revenue benefit.

Table 2. *Energy Efficiency Fund summary*

| Year                      | Number of projects completed | Investment value | Annual savings  |
|---------------------------|------------------------------|------------------|---|
| Year 1 total (2016-17)    | 5                            | £104,470         | At least £10,377<br>(Prior to EIU taking over the fund) |
| Year 2 total (2017-18)    | 5                            | £165,805         | £43,917   |
| Year 3 total (2018-19)    | 29                           | £218,593         | £55,523   |
| <b>Years 1 to 3 total</b> | <b>39</b>                    | <b>£488,869</b>  | <b>£109,819</b>   |

NB. The year that a project fits in to is determined by when a project is completed. Annual savings are forecast savings including energy bill savings and maintenance savings, where known and applicable.

## Schools Programme

- 2.4 *The Schools Retrofit Programme* is commencing its fifth year of investment, 2019/20. Of the total number of existing schools in Cambridgeshire, 21% (55 of 265) of schools have taken up energy performance contracting of which 56% (19 of 34) of all secondary schools are included in the programme. The forecast investment for this year is £1m. Please see **Appendix A** for a breakdown of committed funding, income and energy bill savings.
- 2.5 Risks and issues
- The end of Feed in Tariff (FiT) subsidies for solar PV makes business cases, especially for small schools, more challenging. Rising electricity prices mitigate this to a degree, but securing Renewable Heat Incentive subsidy while it remains available (until March 2021) will become more important.

- The programme has financed replacement of some end of life gas and oil fired boilers. Government has now identified the need for nearly all building heat to be decarbonised by 2050 and committed to phase out fossil fuel heating in off gas grid buildings in the 2020s<sup>4</sup>. In this light, and bearing in mind the 20+ year lifecycle of boilers, boiler replacement should now focus on low carbon heating solutions such as ground source heat pumps instead of oil or gas fired boilers unless economically unviable.
- A pilot project is being explored with Comberton Village College for low carbon heating in the form of a Ground Source Heat Pump (GSHP). This project will be capital intensive and may necessitate a new business model e.g. the Council owning the plant and supplying heat to the school under a Heat Purchase Agreement. Progress on the business model development will be reported regularly to Committee and subject to a separate committee report for an investment decision.

## Energy Investment Programme

2.6 The Energy Investment Programme in 2019/20 will be seeking approvals to progress to the second phase of their Investment Grade Proposals for four of the five projects. Work will focus on developing designs, conducting studies to support planning applications, developing detailed energy modelling and finalising grid connection agreements. If projects remain viable, construction is expected to be completed between 2021 and 2022. Work is currently in abeyance on Trumpington Park and Ride, whilst discussions with Property progress on this site, please see below.

**Appendix B** is a summary of the project finance if all projects except Trumpington P+R proceed.

2.7 Risks and issues.

- The risks and opportunities of investing in battery energy storage projects were highlighted in a June 2019 report to C&I Committee entitled 'Battery Energy Storage System Market Opportunity & Risk'. Committee unanimously supported continued development of battery storage projects and agreed to create a Member's Working Group to advise on the development on the Energy Investment Programme. The Woodston project, the only utility scale battery only project in our portfolio, is particularly sensitive to these risks.
- Development of a smart energy grid project at Trumpington Park + Ride was initially delayed pending a decision by the Greater Cambridge Partnership (GCP) in June 2019 on park and ride provision in the Cambridge Southern Fringe. Proposals to build a second P+R off junction 11 of the M11 will be presented to GCP for decision.
- At the same time, the Cambridge City and South Cambridgeshire District Councils shared planning service is scoping new development sites to promote through the next local plan. Trumpington Park and Ride has been identified as a valuable growth area for housing development. Discussions are now

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<sup>4</sup> Clean Growth Strategy

underway to understand whether the park and ride should be promoted for housing or remain as is. Whilst this discussion continues, the EIU has stopped work on the Park and Ride energy project and removed the project from forecast income projections. The key issue to note is that existing investment into the site by the EIU is now at risk and will need to be picked up by the housing project if that proceeds.

- Further projects are being scoped to supplement the current pipeline of investment projects. This is required for a number of reasons including (i) the Trumpington P+R project may not progress due to the site having more lucrative housing development opportunities (ii) changes to market mechanisms adversely impacting one technology more than others (iii) developing a diverse portfolio of technology projects will provide greater resilience across the portfolio and future revenues.
- There are plans for a number of solar farms in close proximity to the North Angle site. It is understood that these other projects are at broadly the same stage of project development as North Angle. The North Angle project is being progressed quickly to mitigate potential issues of cumulative impact in the planning process.

## **Community energy projects**

**2.8 St Ives Smart Energy Grid.** The land title for the St.Ives Park and Ride has been secured pending stamp duty payment. MHCLG have been unwilling to commit to a grant until this was secured, as covenants must be registered against the land title. The project programme is currently being updated along with securing final costs for the project. The grant agreement should be in place during July 2019 with a plan to proceed to construction by the end of the year. Discharging of planning conditions should be complete by end of July 2019. The key risks remaining on the project include decisions from local customers on participating in power purchase agreements and the application to UKPN for grid capacity.

**2.9 Swaffham Prior Community Heat Project.** Carbon Smart and Janet Hall Ltd have been procured as external project managers and community engagement specialists to work in the village during May-September 2019. The Swaffham Prior project is in a critical stage managing some key project risks including community by-in to the scheme and technical risks associated with ground conditions for the design of the ground source heat pump. BEIS has sponsored the cost of the project managers and community engagement specialists and these roles are making a positive difference to how the community understands and is involved in the project. The specification to review technical risks has been agreed with BEIS and Bouygues and work is progressing on getting heat data to check modelling assumptions and preparing for a test borehole to check thermal conditions for the heat pump. The outcomes from this work are expected during September 2019.

## **2.10 Further community heat projects**

The Council has been approached by a further three parishes to discuss opportunities to progress community heat projects including Great Staughton (Huntingdonshire), Reach (East Cambs) and Wicken (East Cambs). Further communities are expected to also come forward during this year.

Table 3. Community Energy scheme investment and forecasted income

| Project                              | Grant /Value               | Council's Development Budget          | Investment to date from development budget to March 2019 | Forecast Council Investment value | Forecast income over 25 years |
|--------------------------------------|----------------------------|---------------------------------------|--|-----------------------------------|-------------------------------|
| St.Ives Smart Energy Grid            | ERDF/£1.8million           | *£257,000                             |  | £1.8million                       | £1.8million (IRR 4.2%)        |
| Swaffham Prior Community Heat Scheme | BEIS HNDU/Round 8/£100,300 | **To match BEIS Round 8 grant £29,700 | -  | £3.2million                       | TBA                           |
| <b>TOTALS</b>                        | <b>£1,900,300</b>          | <b>£276,700</b>                       |  | <b>£5 million</b>                 | <b>TBA</b>                    |

\* Please note spend to date on the St.Ives Smart Energy Grid Demonstrator Project is £257,000. This includes the EIU's time negotiating the grant application process. The excess will be reduced once ERDF grant is secured.

\*\* Initial grant from the Round 8 Funding for Swaffham Prior means that we only need to draw down £29,700 initially from the total of £97,500 agreed by Committee.

## 2.11 Energy market changes and risk

- Capacity Markets** – The Capacity Market is part of the government's Electricity Market Reform package to ensure security of electricity supply. In November 2018, the Capacity Market was suspended following a challenge in the European Court of Justice by Tempus Energy. In March 2019, the Government announced interim measures to cope with the standstill on the UK's Capacity Market. Delayed auctions will now take place throughout this standstill period until October 2020 (the cut-off date for this ruling). In re-opening auctions the Government is optimistic that approval will be forthcoming, however there remains substantial risk with entering the market at this time – while contracts can now be entered into, payments will be conditional on state aid approval being given by October 2020. Tempus Energy has also brought judicial review proceedings against BEIS, alleging that the legal effects of the Tempus Decision require that the UK not just suspend the Capacity Market as it has done, but also recover all of the payments that it has made to Capacity Market contract-holders to date. Further to this, Tempus Energy are also filing a similar suit in Poland which may have a bearing on the EU's decisions.
- Targeted Charging Review.** OFGEM has been consulting on changes to its charging regime for use of the network for all asset types across the UK power system. The proposals aim to level the playing field between different forms of



generation from 2023. However, the current proposals would negatively impact solar and battery storage schemes connecting to the distribution or transmission network more than any other type of asset. This has led Ofgem to review their proposals, but if left unchanged, this has the potential to delay subsidy free solar and battery schemes by up to 3-5 years, as there may be no mechanism for these projects to recover the additional charges. Other asset classes can access Contract for Difference or Capacity Markets to recoup the additional charges. Discussions are ongoing with the Department for Business, Energy & Industrial Strategy to prepare Government on the impact of these proposals on their Clean Growth Strategy.

- The Department for Business, Energy and Industrial Strategy will be releasing an energy policy white paper this summer. This paper will set the longer term strategy for the energy sector and influence the shape of the market, as well as existing and future projects.

### **3. ALIGNMENT WITH CORPORATE PRIORITIES**

#### **3.1 A good quality of life for everyone**

Utilising Council's assets to help the community to reduce greenhouse gas emissions and improve local air quality for residents.

#### **3.2 Thriving places for people to live**

Investments into clean energy projects support the local economy through developing the local supply chain skills and knowledge, supports local energy generation providing local jobs for operations and maintenance of systems and helps the economy to move off fossil fuels and better manage future energy costs.

#### **3.3 The best start for Cambridgeshire's children**

The Community Energy projects in particular will help prevent vulnerable households falling into fuel poverty by providing cheaper and cleaner alternatives. The schools energy work will free up resources that can be redirected to hiring teaching staff.

### **4. SIGNIFICANT IMPLICATIONS**

#### **4.1 Resource Implications**

All development projects carry risk which need careful management. Sometimes projects cannot progress as planned due to unforeseen changes or issues. The impact of this on the Council's budget and forecast revenue projections will need to be

monitored carefully but it is anticipated that overall benefits can be realised for the Council and its communities.

#### **4.2 Procurement/Contractual/Council Contract Procedure Rules Implications**

Exploring and testing new business models and schemes can bring procurement and contractual risk.

#### **4.3 Statutory, Legal and Risk Implications**

There are no statutory, legal or risk implications of this progress update.

#### **4.4 Equality and Diversity Implications**

There are no significant implications in this category.

#### **4.5 Engagement and Communications Implications**

All energy projects require engagement activities. For projects in close proximity or involved closely with the community require good communication and engagement strategies to ensure acceptance of schemes.

#### **4.6 Localism and Local Member Involvement**

Where projects are based in local areas Members are kept informed on progress with project development.

#### **4.7 Public Health Implications**

There are no negative public health implications.

| <b>Source Documents</b>  | <b>Location</b>   |
|--|---|
| The Council's Corporate Energy Strategy  | <a href="https://www.mlei.co.uk/section-1/ccc-energy-strategy/">https://www.mlei.co.uk/section-1/ccc-energy-strategy/</a>   |
| Trumpington and Babraham Outline Business Cases – May 2018 C&I Committee                 | <a href="https://tinyurl.com/yaya9xgi">https://tinyurl.com/yaya9xgi</a>   |
| Woodston and Stanground Closed Landfill Outline Business Cases – Sept 2018 C&I Committee | <a href="https://tinyurl.com/yxpbhmf5">https://tinyurl.com/yxpbhmf5</a>   |
| Clean Growth Strategy  | <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf</a> |

|  |   |
|--|---|
| Outline Business Case for Solar Farm on Rural Estate Land at Mere Farm– Jan 2019 C&I Committee | <a href="https://tinyurl.com/y4nvqmlc">https://tinyurl.com/y4nvqmlc</a> |
|--|---|

| <b>Implications</b>  | <b>Officer Clearance</b>                                       |
|--|--|
|  |  |
| <b>Have the resource implications been cleared by Finance?</b>   | <b>Yes / No</b><br>Name of Financial Officer: Sarah Heywood    |
|  |  |
| <b>Have the procurement/contractual/ Council Contract Procedure Rules implications been cleared by the LGSS Head of Procurement?</b> | <b>Yes / No</b><br>Name of Officer: Gus da Silva               |
|  |  |
| <b>Has the impact on statutory, legal and risk implications been cleared by LGSS Law?</b>  | <b>Yes / No</b><br>Name of Legal Officer: Debbie Carter-Hughes |
|  |  |
| <b>Have the equality and diversity implications been cleared by your Service Contact?</b>  | <b>Yes / No</b><br>Name of Officer: Elsa Evans                 |
|  |  |
| <b>Have any engagement and communication implications been cleared by Communications?</b>  | <b>Yes / No</b><br>Name of Officer: Joanna Shilton             |
|  |  |
| <b>Have any localism and Local Member involvement issues been cleared by your Service Contact?</b>                                   | <b>Yes / No</b><br>Name of Officer: Emma Fitch                 |
|  |  |
| <b>Have any Public Health implications been cleared by Public Health</b>   | <b>Yes / No</b><br>Name of Officer: Stuart Keeble              |

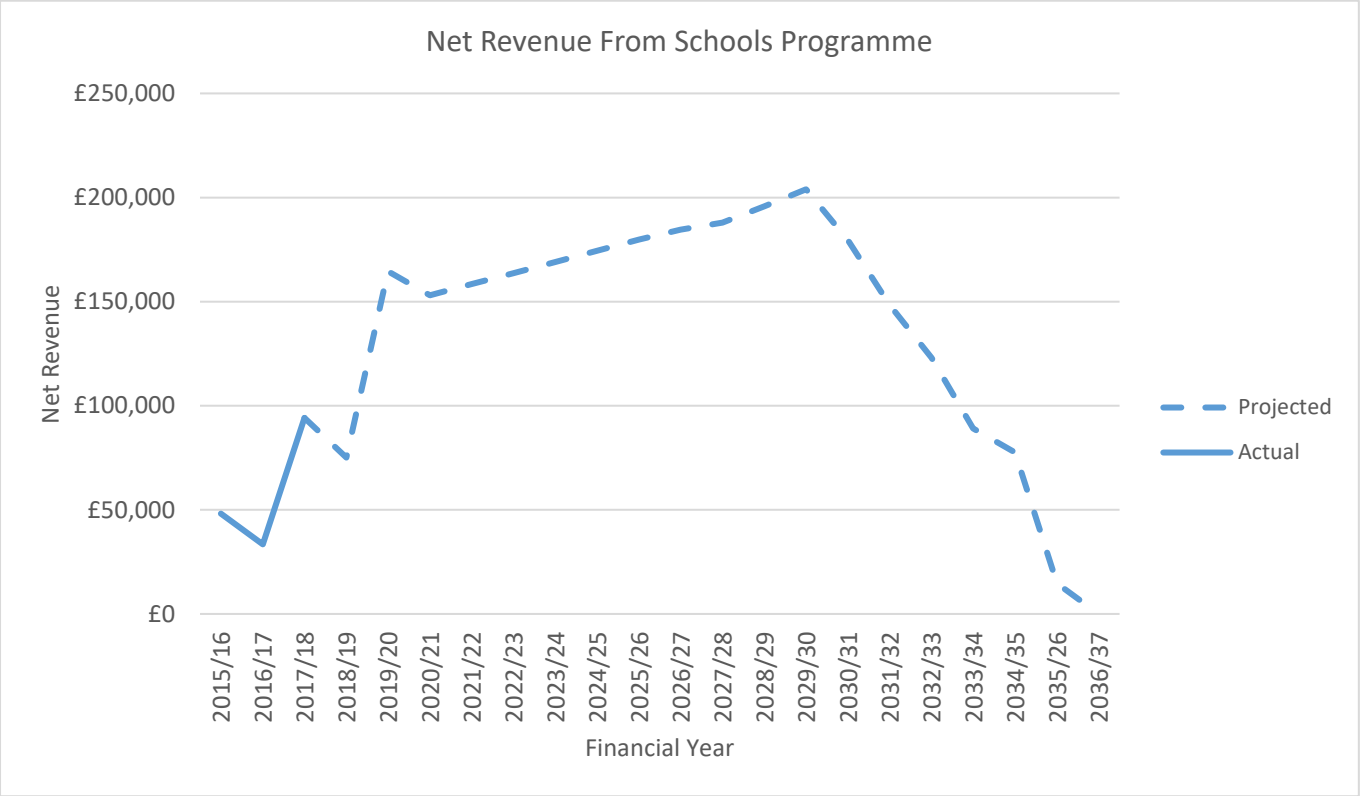
## Appendix A: Schools Programme

|                    | Number of schools | Total Value Loaned | Net Income over Loan/managed service Period* | Annual Savings to Schools    |                     |                        |
|--------------------|-------------------|--------------------|--|------------------------------|---------------------|------------------------|
|                    |                   |                    |  | Cost Saving (£) <sup>1</sup> | Energy Saving (MWh) | Carbon saving (tonnes) |
| Maintained Schools | 32                | £2,469,345         | £497,804                                     | £184,463                     | 2,125               | 778                    |
| Academies          | 23                | £6,764,906         | £1,390,750                                   | £571,848                     | 7,277               | 2,536                  |
| TOTAL              | 55 ↑              | £9,234,251↑        | £1,888,554↑                                  | £756,311↑                    | 9,402↑              | 3,314↑                 |

\* Loans are typically 15 years duration

<sup>1</sup> Gross saving prior to loan repayment, based on first year of operation

Figure 1. Net Revenue from Schools Programme



## Appendix B: Energy Investment Programme

Table 4. Summary of financials for approved Energy Investment Projects

| Project                     | Development Budget | Expenditure through 31 Mar 2019 | Total Expected Capital Revenue | 25 year net revenue |
|-----------------------------|--------------------|---------------------------------|--------------------------------|---------------------|
| Babraham P+R                | £150,000           | £29,730                         | £11.4M                         | £24.5M              |
| Trumpington P+R             | £150,000           | £25,576                         | 0                              | 0                   |
| Woodston Closed Landfill    | £150,000           | £10,675                         | £2.5M                          | £9.0M               |
| Stanground Closed Landfill  | £150,000           | £12,887                         | £9.7M                          | £36.9M              |
| North Angle Farm Solar Farm | £600,000           | £8,761                          | £22.7M                         | £29.4M              |
| <b>TOTAL</b>                | <b>£1,200,000</b>  | <b>£87,629</b>                  | <b>£46.3M</b>                  | <b>£99.8M</b>       |

Figure 2. Estimated Net Revenue for Energy Investment Programme

