

# Delivery and Funding of the Solent Energy Strategy

## An Outline Business Case

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*October 2015*

*In Partnership With:*



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## 1. Executive Summary

1.1. In March 2015<sup>1</sup> a Mini-Stern style report was produced which identified that with the right levels of investment in the Solent area it would be possible to increase employment by up to 2178 jobs annually, as well as increase the local GVA by £104.26m per year. This is in addition to reducing the energy bill of the region by £508.3m and reducing its carbon emissions by 34%.

1.2. Future Solent and PUSH have developed an energy strategy which sets out the objectives as to how this might be achieved. This report takes this to the next stage and evaluates potential projects that deliver those growth, jobs, and energy outcomes for the Solent area.

1.3. By evaluating projects it recommends a number which could be taken forward within the next 18 months, including some which would facilitate the delivery of others (section 4), it is recommended that a Lead organisation for each project is identified as soon as possible.

1.4. In terms of wider delivery it is recommended that the partners within PUSH pool their existing resources to facilitate project delivery across the wider region, and that a Programme Manager be funded and appointed to oversee this work. The wider engagement with partners, such as happened at the workshop on April 10th 2015<sup>2</sup>, should be maintained and this group or similar should continue to meet.

1.5. The Programme Manager should have direct access to the existing staff resources across the PUSH authorities in order to progress the projects identified, and act as a point of coordination for the delivery of the work programme, funding bids and other key work areas in order to realise the initial stages of growth identified by the Mini Stern.

1.6. In order to support work that existing officers are unable to complete due to technical complexity or capacity, it is recommended that PUSH fund a discretionary budget for the Programme Manager to be able to utilise to fund such work.

1.7. Beyond the initial 18 months it is anticipated that the growth via delivery of projects would enable the work programme to become financially self-supporting, with the aim to be fully self-funded in the longer term, as well as bringing forward the growth, jobs, energy bill and carbon reductions identified by the Mini Stern. To monitor this clear targets would be developed to monitor delivery

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<sup>1</sup> [http://www.push.gov.uk/item\\_10\\_-\\_annex\\_2\\_-\\_the\\_mini\\_stern\\_report.pdf](http://www.push.gov.uk/item_10_-_annex_2_-_the_mini_stern_report.pdf)

<sup>2</sup> Developing our approach to implementing our local energy strategy – 10<sup>th</sup> April 2015

1.8. Strategically the existing objective leads and steering group for this work should continue to meet, and is recommended that a “figurehead” be appointed to champion this work on a wider basis. Delivery structures are covered in detail in section 6.

1.9. Work to identify specific funding for projects should form part of individual business cases for projects, however this report does review potential funding opportunities (section 5). A recommendation to consider a perpetuating energy fund is included, which is briefly explained, but needs further detailed analysis to understand how this would actually work.

## 2. Background & Methodology

2.1. In 2014/15, Future Solent and The Partnership for Urban South Hampshire (PUSH), commissioned Ove Arup to undertake the development of a Solent Energy Strategy. This document was finalised in January 2015. The Strategy set out four objectives and a number of actions within each objective. These are listed in Annex 1.

2.2. Following the production of the Strategy key stakeholders came together<sup>3</sup> to identify next steps in terms of achieving the objectives and actions. To that end it has been identified that some key decisions are required by relevant parties, in particular PUSH in the coming months. To help inform that decision making process, an outline business case was identified as being required in order to help understand and prioritise the work programme going forward.

2.3. Key to that decision making process and therefore the prioritisation are the benefits that such a suite of projects can bring to the area. In particular whether projects can boost economic growth, and create jobs, and reduce expenditure for existing business e.g. energy supply costs. Future Solent and PUSH have identified projects that can be delivered and are of tangible benefit to the area

2.4. The mini-Stern style report produced in March 2015<sup>4</sup>, identified that with the right levels of investment it would be possible to increase employment with up to 2178 jobs annually, as well as increase local GVA by £104.26m per year. This is in addition to reducing the energy bill of the region by £508.3m and reducing carbon emissions by 34%. This assessment is only based on delivery of cost effective measures, meaning that there is still more that could be realised.

2.5. The aims of this commission are two-fold:

- To produce a prioritised outline business case for delivery of the actions under each of the four objectives; and
- To indicate possible sources of funding to help deliver the detailed business case.

2.6. The identification of projects took place using existing information e.g. The Arup report, and through consultation. This resulted in further information on projects or more details on existing work programmes.

2.7. This information gathered was analysed to produce the potential list of projects that can be found in Annex 2.

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<sup>3</sup> Developing our approach to implementing our local energy strategy – 10<sup>th</sup> April 2015.

<sup>4</sup> [http://www.push.gov.uk/item\\_10\\_-\\_annex\\_2\\_-\\_the\\_mini\\_stern\\_report.pdf](http://www.push.gov.uk/item_10_-_annex_2_-_the_mini_stern_report.pdf)

2.8. In order to prioritise the projects listed a set of criteria were used (Annex 3). These criteria give an overall “score” to each project using a consistent scoring system, in each case a more detailed project plan will need to be produced in time.

2.9. From this list of projects initial project prioritisation has taken place which gives the initial recommended projects proposed in Section 4 (focussing on projects that could be delivered in the next 18 months). Recommendations are also included in terms of the delivery approach Section 6 and also other areas that are important for work to progress in a timely manner, Section 7.

### **3. Project Analysis & Scoring**

#### **3.1. General Findings**

3.1.1. Whilst this work has focussed on “projects”, general findings have also been noted. In particular there is similar activity in a number of areas, this could be exploited to give greater economies of scale in terms of delivery and sharing of learning and experience and avoid duplication. For example The Southampton Environment Centre already manages a number of projects and in doing so, achieves linkages with other areas under the mantra of “Every Contact Counts<sup>5</sup>”.

3.1.2. Similarly some of the proposed projects, e.g. Domestic Energy Efficiency Mapping, do not directly increase income to the area or jobs. They do however facilitate this through allowing other projects to happen or be better informed. This is explained below in the details for relevant projects.

#### **3.2. Scoring**

3.2.1. Each project has been scored according to a number of agreed criteria. These criteria reflect a number of factors considered to be important for the development of the energy strategy and also for the Solent region as a whole. The criteria, scores and weightings can be found in Annex 3.

3.2.2. Some aspects of scoring for projects is based upon projects of a similar nature or type, where specific information for the local project isn't available, and not all projects will score under all criteria e.g. energy efficiency projects do not generate renewable energy necessarily.

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<sup>5</sup> <http://www.england.nhs.uk/wp-content/uploads/2014/06/mecc-guid-booklet.pdf>

## 4. Recommended Projects

4.1. Full details of individual projects can be found in Annex 2, the details below contain those projects which are recommended to Future Solent / PUSH to concentrate on under the four objectives for the immediate future (next 18 months). For each project details of potential partners are included, as well as suggested funding routes and anticipated time frames. In addition it is recommended that work is commissioned on the “Perpetuating Energy Fund” (see section 5 for details) in order to support some projects.

4.2. Other projects will undoubtedly run concurrently with those recommended below, as they will be priorities for individual organisations. It is therefore recommended that a greater level of coordination is put in place to ensure that lessons are shared across projects (where appropriate) and to ensure duplication of effort is minimised. It is recommended that the group which met on April 10<sup>th</sup> 2015 is reconvened on a regular basis to help achieve this going forward.

4.3. For each project a potential lead organisation<sup>6</sup> has been identified where possible. Due to timescales of report preparation it has not been possible to confirm that organisations indicated as lead are able/willing to do so and therefore this represents an important next step for all projects.

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<sup>6</sup> Highlighted in **Bold**

## 4.4. Prioritised Projects by Objective

### 4.4.1. Objective 1: Improve Energy Efficiency and Conservation

<p><b>Whole-House Retrofit &amp; Energy Efficiency:</b> Deployment of measures to increase domestic energy efficiency and other areas such as water and waste, across the Solent region.</p> <ul style="list-style-type: none"> <li>• Increasing levels of employment and jobs around the installation and delivery of measures.</li> <li>• Increasing residents disposable income (by lowering their energy costs),</li> <li>• Reducing energy and water demand,</li> <li>• Lowering carbon</li> <li>• Tackling fuel poverty, and</li> <li>• Reducing pressure on health, social care and housing budgets across the area.</li> <li>• Strong links to Domestic Energy Efficiency Mapping project in Objective 4.</li> </ul>		
Partners	Funding Routes	Time frames
TEC, <b>LAs</b> , Public Health, NHS,	Subsidy (e.g. Energy Company Obligation), Perpetuating Energy Fund, Water Companies, LAs, Solent LEP	Commence within next six months, and continue.
<p><b>Next Steps:</b> Understand opportunity (e.g. mapping project), develop funding proposal</p>		
<p><b>SAVE (Solent Achieving Value from Efficiency):</b> Research project led by Scottish and Southern Energy Power Distribution (SSEPD) trialling different ways of delivering energy efficiency to see which is the most effective across 8,500 homes. This project:</p> <ul style="list-style-type: none"> <li>• Reduces energy demand,</li> <li>• Reduces carbon</li> <li>• Develops options for wider roll-out and delivery and therefore growth and jobs in the future</li> </ul>		
Partners	Funding Routes	Time frames
<b>SSEPD</b> , TEC, LAs, Future Solent	SSEPD	Commencing in near future.
<p><b>Next Steps:</b> Project is already in rollout and learning will be made available to the wider industry over the next 3 years. SSEPD to continue roll-out according to plan.</p>		

<p><b>SME Energy Efficiency &amp; Retrofit:</b>  Delivery of energy efficiency measures across small to medium sized businesses in the Solent region.</p> <ul style="list-style-type: none"> <li>• Representing a significant opportunity for increasing job numbers and employment in the deployment and delivery of measures and surveying (or utilising students to increase skills and learning in surveying and monitoring of effectiveness).</li> <li>• Lowering business costs, by reducing energy bills</li> <li>• Offering opportunities to drive economies of scale in procurement and delivery by allowing SMEs to collaborate and share savings through clustering of delivery</li> <li>• Reduces energy demand</li> <li>• Lowering carbon</li> <li>• Working with landlords</li> </ul>		
Partners	Funding Routes	Time frames
LAs, Universities, Private sector	Perpetuating energy fund, Private finance e.g. through an energy performance contract approach, SME own funding, Potential European project e.g. H2020 or Elena, Solent LEP	Planning next six months, delivery thereafter
<p><b>Next Steps:</b>  Develop business case and develop funding bid, including the best route / source</p>		

<p><b>SME Water Efficiency Audit &amp; Retrofit</b>  Delivery of a programme of water audits and retrofits for SMEs in the Southern Water, water supply area.</p> <ul style="list-style-type: none"> <li>• Reducing water usage</li> <li>• Lowering costs for SMEs by lowering water use</li> <li>• Lowering carbon (via heated water reductions)</li> <li>• Increasing resilience</li> <li>• Can be rolled-out to domestic customers and schools</li> </ul>		
Partners	Funding Routes	Time frames
<b>Southern Water,</b> Eastleigh BC,	Funded by lead partner	Imminent start
<p><b>Next steps:</b>  Lead partner is due to start this project in the near future, however it only covers the Southern Water, water supply area, which means some areas within the Solent region will not be able to benefit. Therefore consideration of how the lessons of this work can be shared with other water suppliers to increase the availability of similar programmes in the remainder of the Solent region should be made.</p>		

#### 4.4.2. Objective 2: Increasing the Use of Renewable Energy Resources

<p><b>Solar PV – roof top projects (Southampton City Council):</b>                  SCC is developing the business case to deploy solar PV on the roof tops of 10 of its buildings with a view to building on this in the longer term. Whilst SCC will deliver this project without the need for significant external input. There are opportunities to:</p> <ul style="list-style-type: none"> <li>• Share learning</li> <li>• Potentially economise on future procurement (via harmonisation / frameworks)</li> <li>• Expand on employment and job opportunities</li> <li>• Understand and overcome issues surrounding leases and other landlord / tenant arrangements</li> <li>• Lowers carbon</li> <li>• Increase the generation and local utilisation of renewable energy</li> </ul>		
Partners	Funding Routes	Time frames
SCC	LAs	Next six months
<p><b>Next Steps:</b>                  SCC is taking this project forward.                  Develop an understanding of the best opportunities to share learning or benefit from SSC lead work.                  Understand implications of FiT changes and their potential impact on projects of this kind.</p>		

<p><b>Solar PV – Community (and other) Solar Farms:</b>                  The development and delivery of community led Solar Farm projects across the Solent region, where communities self-select and/or potential sites are developed in close discussion with local communities to understand and overcome local concerns. Wherever possible sites are to maximise the use of energy locally or directly via power purchase agreements. This project:</p> <ul style="list-style-type: none"> <li>• Represents job opportunities in the design and delivery of solar farms</li> <li>• Increases the opportunity to generate and utilise renewable energy locally</li> <li>• Reduce carbon</li> <li>• Generate potential income via; sale of energy, planning fees, business rates, land lease</li> </ul> <p>There are strong linkages to the Strategic Planning for Renewables option (see Objective 4 below).</p>		
Partners	Funding Routes	Time frames
LAs, West Solent Solar Coop, Future Solent,	Crowd / community, LA investment, private investment	Potential sites identified within six months, and developed over next two years (where appropriate)
<p><b>Next Steps:</b>                  Identify lead organisation, identify sites, and develop business case(s)</p>		

#### 4.4.3. Objective 3: Maximising the Uptake of Business Opportunities Locally

<p><b>Solent Wood Fuel Hub(s):</b>          Development of a wood fuel (and other timber products) hub within the Solent region, to develop underutilised woodland as a resource for wood fuel for biomass projects in the region and beyond. This option has strong linkages to those CHP / District energy projects that are being developed across the region (see annex 2) and could increase their viability by having a suitable and local source of fuel, lowering fuel supply costs and in some cases making biomass a more realistic option as opposed to gas. This option would:</p> <ul style="list-style-type: none"> <li>• Lower carbon (indirectly)</li> <li>• Create significant jobs in the management of woodland, harvesting and preparing biomass. In addition develop jobs in allied professions exist e.g. hauliers (transportation of wood fuel); designers / engineers (development and delivery of wood fuel systems)</li> <li>• Increase the uptake of renewable energy</li> <li>• Increase the market for biomass fired systems, by allowing for local supply of fuel</li> <li>• Provide significant opportunity for training and skills</li> <li>• Provide opportunity for other products to be developed and sold e.g. composts, timber products</li> </ul>		
Partners	Funding Routes	Time frames
FC, LAs, Landowners, Private Sector, FE & Agricultural colleges, Future Solent / PUSH	Government grants, Solent LEP	Six to twelve months.
<p><b>Next Steps:</b>          Identify a consortium of partners to take forward and prepare business case and funding bid. This includes the identification of potential sites and landowners.</p>		

### Renewables Supply Chain Training for SMEs

Working with the Offshore Renewable Energy Catapult and existing mechanisms / organisations such as SOREC to develop a programme of training for SMEs to support and become involved in the supply chain for the delivery of offshore renewable energy projects.

- Support renewable energy generation (indirectly)
- Allow for economic growth within the SME sector
- Increase number of jobs in SMEs
- Support offshore renewable energy projects within and beyond the region by developing skills and a centre of excellence within the local supply chain
- Supporting the identification of the Marine Renewables USP
- Develop regionally targeted innovation challenges to invigorate and mobilise the supply chain
- Support the development of funding calls and bid writing to target UK and EU funding mechanisms
- Provide links to other Catapults, e.g. Advanced Manufacturing (including the National Composite Centre in Bristol), Digital Economy and Satellite applications

Partners	Funding Routes	Time frames
<b>Future Solent,</b> Hampshire Chamber of Commerce, SOREC, Perpetus tidal	Future Solent, LAs, Catapult	Generate programme within next six months and then deliver
<b>Next Steps:</b> Agree arrangements with the Catapult and SOREC and develop and deliver programme		

### Low Carbon Skills / Training and Development:

The identification of skill gaps and areas where growth may lead to skills gaps or workforce shortages in the future and develop and deliver appropriate training packages to support future growth in this area. This project will:

- Support the retention of job opportunities locally by skilling workforce appropriately
- Provide growth in Further Education sector and potentially increase in provider jobs
- Support wider project delivery by ensuring that workforce is able to respond to demands of project roll-out

Partners	Funding Routes	Time frames
FE colleges, Future Solent, PUSH,	FE Colleges, Solent LEP, Government Grants	Six months and ongoing.
<b>Next steps:</b> Identify existing courses and opportunities available and compare with potential requirements, following agreement of projects to be taken forward. Develop a funding bid where necessary.		

#### 4.4.4. Objective 4: Ensuring Focussed, Integrated Delivery and Implementation

(See also Section 6 of the report for a wider appraisal of future delivery and leadership)

<p><b>Domestic Energy Efficiency Mapping:</b>          Completing the mapping of all local authority areas in PUSH to highlight those properties that could benefit from energy efficiency measures and identifying which potential measures should be deployed. This project would:</p> <ul style="list-style-type: none"> <li>• Directly support the delivery of domestic energy efficiency projects</li> <li>• Support a targeted approach to fuel poverty</li> <li>• Identify opportunities to delivery projects at scale by area and/or by measure</li> <li>• Indirectly support carbon reduction</li> <li>• Indirectly support demand reduction</li> <li>• Indirectly support jobs and economic growth</li> <li>• Support reduction in fuel poverty</li> </ul>		
Partners	Funding Routes	Time frames
TEC, LAs, Universities	LA	Next six months
<p><b>Next Steps:</b>          Identify gaps in current mapping (i.e. which LA areas unmapped) and produce maps.</p>		

<p><b>Perpetuating Energy Fund:</b>          The aim of this project is to develop and deliver a fund which seeks to fund projects, whilst at the same time providing investors a return on investment (income) and provide a potential source of funding in the longer term, for projects that don't provide a direct return to the investor. This is explained in more detail in Section 5 below.</p>		
Partners	Funding Routes	Time frames
Future Solent, PUSH, Solent LEP, LAs, Private Sector	PUSH, Solent LEP, Potential European bid, crowd funding, private sector funding	Immediate start and aim to complete within 12 months.
<p><b>Next Steps:</b>          Identify project lead, and resources to deliver, or develop brief and commission business case.</p>		

**Strategic Planning for Renewables and Energy Efficiency:**

This project focuses on the development of strategic documents for the development of renewables projects and energy efficiency in private rented commercial buildings and builds on exiting documentation from other organisations e.g. BRE and Green Building Council. It would also provide for a standardised approach across the Solent region. Principally the following documentation would be produced:

- Constraints map: Identifying constraints to renewables projects e.g. grid capacity, environmental sensitive areas, site suitability
- Supplementary planning guidance for renewables, harmonised for the region where possible and taking a similar approach to other PUSH planning documents
- Specimen leases and other common documentation e.g. where project promotor and recipient are different and in situations where power purchase, energy benefit and other leaseholder / freeholder issues may cause projects to stall.

This would facilitate the delivery of other projects and allow for more rapid delivery and deployment.

Partners	Funding Routes	Time frames
<b>Future Solent</b> , Solent LEP, LAs, PUSH	Potential European bid, Solent LEP	Immediate start and aim to complete within 12 months.

**Next Steps:**

Identify project lead, and resources to deliver or commission delivery

**Municipal Tariffs and Energy Supply Company**

Exploratory development of projects and business cases to understand the requirements of establishing municipal energy tariffs for the Solent Region, and the possibility of developing a municipal energy company either now or in the future.

- Generate income, and economic growth locally
- Increase jobs locally (longer term)
- Provide a local, potentially cheaper set of energy tariffs in the region

Partners	Funding Routes	Time frames
<b>LAs</b> , Hampshire Bank, Private sector,	Private sector finance, perpetual energy fund, LAs, self-generating through energy sales income,	Develop exploratory projects and business cases within 6 to 12 months, wider roll-out and delivery in the longer term

**Next steps:**

Appoint a lead partner to develop this area of work and to scope project briefs for development of business cases in the short term.

## **5. Funding / Investment**

5.1. There are a number of opportunities for funding and investment across the range of projects identified. At this outline stage, none of the above contains a sufficient level of detail for significant investment decisions to be made, and each require further work to take them forward to an investment ready position. Some e.g. solar PV, perhaps represent a more tried and tested formula that has been seen to work in other areas, and therefore can already attract finance.

### **5.2. A Perpetuating Energy Fund**

5.2.1. For some projects Future Solent / PUSH partners and others may wish to invest in projects that generate a return on investment in addition to paying back the initial capital funding. Other projects are unlikely to generate a return or at least not one that goes back directly to the investor. A potential way to overcome this might be for a Perpetuating Energy Fund to be established.

5.2.2. In simple terms investors pay into a pot which is utilised to fund projects which generate a return. This return is then split on a pre-agreed basis and timescale to the investor and back to the project fund. A proportion of the return to the fund could also be used to invest in projects that do not generate a return, Figure 1 below explains this diagrammatically.

5.2.3. Investors could be private funds, Local Authorities (who can access the Public Works Loans Board – see Section 5.8), organisations such as the Solent LEP, crowd sourced, community organisations. Further work to understand potential levels of investment and investment types as well as the viability and potential levels of funding required, would be needed including the modelling of levels of investment for particular projects, return rates etc. However in a lesser subsidy driven economy, this or a similar approach may be required in order to deliver some projects that are not capable of developing their own funding.

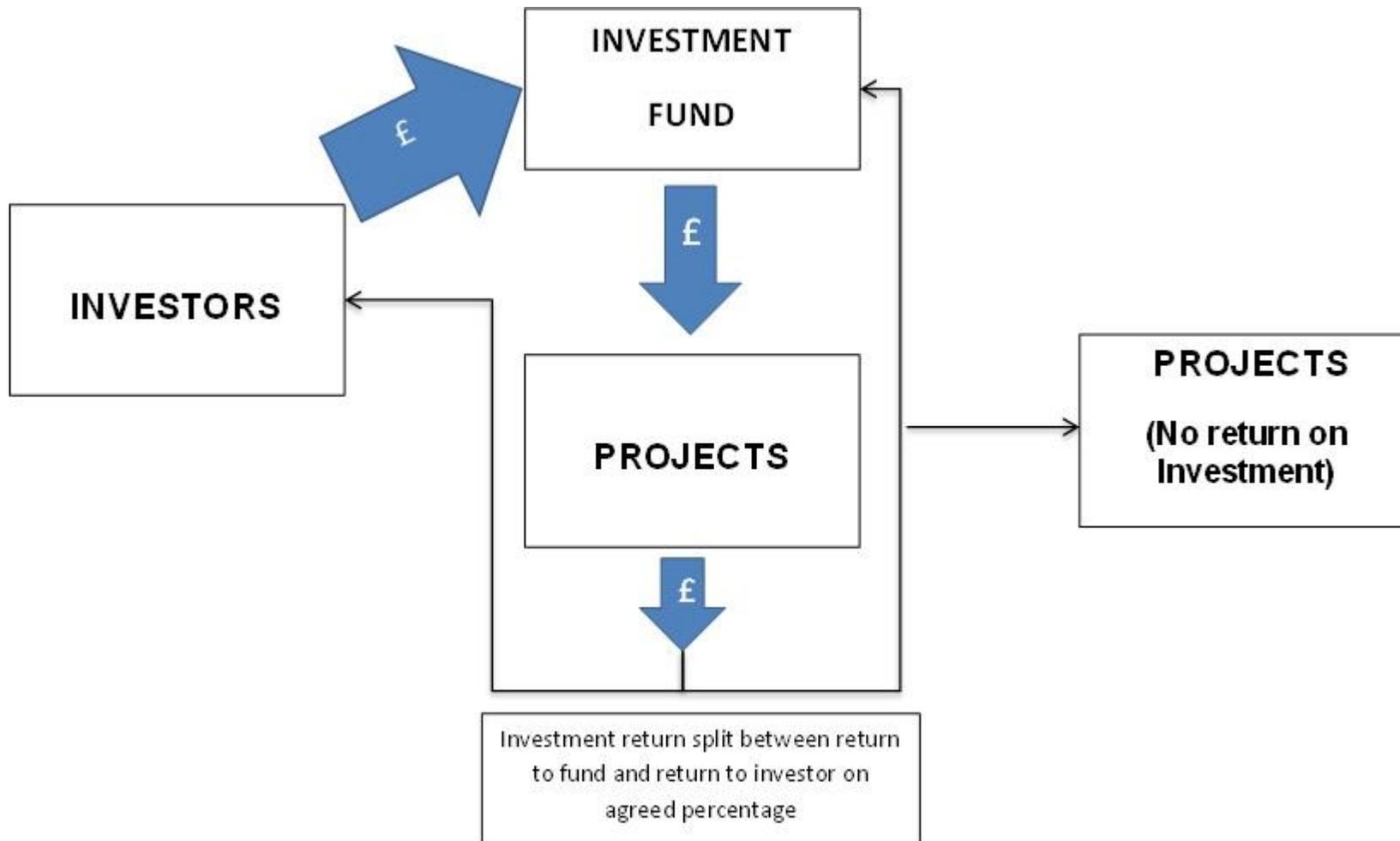


Figure 1: Simplified Drawing of How a Perpetuating Energy Fund Could Work

### 5.3. Potential European Funding Measures

5.3.1. European funding is a potential opportunity for projects included in this report. A number of relevant EU funding programmes contain priorities or objectives that relate to energy and/or low carbon and stimulating the area for growth and jobs. Further work would be required to look in more detail at whether or not this is worth pursuing, as criteria for eligibility can be quite specific, and often require partners to work together, both from different sectors and different member states. In some cases funding will not be able to be used to support capital projects e.g. infrastructure. In almost all cases match-funding from partners is required for access EU funds, although the levels of match funding can vary dramatically. Monitoring requirements can be quite strict and there is not always guarantee of success, project development can also take significant time and resource.

5.3.2. With respect to funding calls and deadlines, many funding strands have multiple calls within a year, however others are more specific. From a brief review of the currently available draft programmes (final versions will be available in due course). Of calls within the next year to two years the following seem to be of most interest. Details of the funding strand, relevant topic(s) and where indicated match-funding rates are given below.

5.3.3. **Interreg 2 Seas.** Requires a partnership from the eligible area (England, France, Flanders, Netherlands), next call is likely to be in November 2015. Priority 2C (Stimulate energy efficiency and development of renewable energies), most closely matches this area of work. Eligible costs receive 50% match funding.

5.3.4. **Interreg NW Europe.** Requires a partnership from the eligible area (Belgium, France, Germany, Ireland, Luxembourg, The Netherlands, Switzerland and the United Kingdom). Priority Low Carbon most closely matches this area of work and have a number of sub-headings:

- “To facilitate the implementation of low-carbon, energy and climate protection strategies in order to reduce GHG-emissions in North-West Europe
- To facilitate the uptake of low carbon technologies, products, processes and services in sectors with high energy saving potential in order to reduce GHG-emissions in North-West Europe
- To facilitate the implementation of transnational low-carbon solutions in transport systems in order to reduce GHG-emissions in North-West Europe.”

There is a current call, with a deadline of 30<sup>th</sup> November 2015. The next deadline is listed as 31<sup>st</sup> May 2016.

5.3.5. **Horizon 2020 (H2020)**, draft programme for 2016-2017 contains a specific area – “Societal Challenge 3 "Secure, Clean and Efficient Energy". Within this there

are a number of opportunities for funding that match the projects outlined above. At the moment the programme is in draft form, however the final version is expected in the near future. Call deadlines vary depending on the specific project area. A more detailed assessment of the value of H2020 is recommended.

**5.3.6. European Local Energy Assistance (ELENA).** In 2016 and 2017, ELENA funding will aim at supporting significant investment projects or programmes in two key areas. One of these covers energy related projects. In particular:

- Energy efficiency and distributed renewable energy. Projects could cover one or more of the following areas:
  - public and private buildings, including social housing, commercial and logistic properties and sites, and street and traffic lighting, to support increased energy efficiency – e.g. refurbishment of buildings aimed at significantly decreasing energy consumption (both heat and electricity), such as thermal insulation, efficient air conditioning and ventilation, efficient lighting;
  - integration of renewable energy sources (RES) into the built environment – e.g. solar photovoltaic (PV), solar thermal collectors and biomass;
  - investments into renovating, extending or building new district heating/cooling networks, including networks based on combined heat and power (CHP); decentralised CHP systems (building or neighbourhood level);
  - local infrastructure including smart grids, information and communication technology infrastructure for energy efficiency, energy-efficient urban equipment and link with transport.

**5.5.7.** ELENA will fund up to 90% of eligible costs, however it does seek to drive a 20% leverage factor for each project delivered, and whilst there are no specific maximum or minimum funding levels, the leverage factor is key in putting forward projects. Typically higher value suites of projects are more easily funded. Were Future Solent / PUSH minded to pursue an ELENA bid it would necessitate the building of a programme of projects that could accommodate some redundancy, if some projects proved unviable or didn't progress for other reasons.

**5.5.8. LEADER Funding.** LEADER funding is available through several Local Action Groups (LAG) in the Solent area. Funding decisions are made by the LAG but have to meet one or more of the LEADER objectives:

- support micro and small businesses and farm diversification
- boost rural tourism
- increase farm productivity
- increase forestry productivity
- provide rural services
- provide cultural and heritage activities

5.5.9. Further work and discussion with the LAGs would be required in order to determine whether funding is available, however from a cursory review this fits closest with the development of potential wood fuel hubs, and in the longer term potential community energy projects.

## **5.6. National Subsidies.**

5.6.1. A number of government subsidy measures exist, in particular for renewable energy generation projects. These include the Feed-In Tariff, Renewable Heat Incentive, Renewable Obligation Certificates and for larger scale projects Contracts for Difference.

5.6.2. Over recent months there has been considerable change in the subsidy levels and consultation on future changes. This has meant that for some renewable technologies e.g. wind and solar; reductions (or removal in some cases) in subsidy impacts on the financial business case.

5.6.3. Indications are that the use of subsidies will be increasingly removed or reduced and therefore going forward, whilst some subsidy might still be available, the overall business case will need consideration at revised levels (where applicable). This is likely to have an impact on payback periods and investment returns, but not whether projects are technologically viable.

## **5.7. Crowd / Community Funding.**

5.7.1. There are numerous examples where energy projects and initiatives have been directly funded by communities or wider crowdfunded means. In most cases this is by an investor buying a share in the project at a specific value, and in time seeing a return on their investment. One such example in the Solent area is the West Solent Solar Cooperative, which has a 2.4MW solar farm near Lymington. Other examples such as the West Mill Community Wind Farm (Oxfordshire) also exist, and the organisation Energy4All<sup>7</sup> champions community projects of this type.

5.7.2. Structures and terms for such projects vary, but returns on investment can be direct or indirect e.g. into a community fund for delivery of other local projects, and be structured depending on the type and requirements of a particular project.

5.7.3. Further work to consider community/crowd funding for projects in the Solent region could be undertaken to understand the benefits of such an approach, and how such a scheme might be used to support other areas of related work e.g. retrofit projects or skills and training projects.

5.7.4. Government are proposing changes to the way that cooperative societies operate and no longer considers energy cooperatives to be “true” cooperatives and is therefore proposing that new projects are developed as Community Benefit Societies.

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<sup>7</sup> <http://energy4all.co.uk/>

## **5.8. Local Authority (Reserves / Public Works Loan Board)**

5.8.1. Local Authorities have access to finance via the Public Works Loan Board (PWLB). Typically this is at interest rates lower than would be available from a commercial lender, and set procedures and other conditions apply, which includes local authorities borrowing under this arrangement to act prudently. Technically a local authority could choose to access PWLB funding for energy related projects, although it may also choose another means e.g. use of reserves if available.

5.8.2. The local authority could also choose to be a lender, subject to being able to demonstrate that it is not lending below market rates which would be in violation of State Aid rules.

## **5.9. Solent LEP**

5.9.1. The Solent LEP has significant funding available across multiple work streams which subject to appropriate match funding and approval of the relevant authorities could be used to support projects in this area. More detailed costs for those projects considered to be the most viable going forward would be required in order to support any bids for funding.

5.9.2. A low carbon call for projects was expected from the Solent LEP, however it is now understood that this has been delayed, and a revised date is not currently available. Future Solent / PUSH needs to consider whether it wants to anticipate this call by deciding which projects it might like to take forward for when such a call is announced.

## **5.10. Salix Funding**

5.10.1. Salix offers funding towards energy savings projects in the public sector. Various criteria apply, but principally funding can be used for projects which have a payback period of five years or less. Many public sector bodies have already made significant use of the Salix mechanism and in some cases the majority of projects that would fit within the five year payback window may have already been delivered.

## **5.11. Other funding**

5.11.1. Other opportunities for funding also exist in terms of private finance and conventional loans. These are generally widely known and understood and are therefore not explored in more detail here. In addition in relation to energy efficiency, opportunities such as Energy Performance Contracts and other types of funding mechanisms could also be considered. It is possible that Future Solent / PUSH could consider working with a private sector partner in these areas to deliver some of the projects above. In particular SME and Commercial and Industrial retrofit. This would however require the development of a supporting business case as well as the need for an appropriate procurement procedure.

## 6. Structures Delivery & Leadership

6.1. Whilst the projects listed above in Section 4 represent the currently most viable opportunities, in the longer term they are unlikely to be the only projects going forward. It is therefore recommended that management of work to support these projects, the development of funding bids and to manage the future pipeline is coordinated centrally.

6.2. Currently there are a number of officers employed across the PUSH authorities who already have this type of work as their day job (in part or as a whole). It is recommended that the partners combine their existing resources for the betterment of the partnership, in order to deliver similar projects collectively across the region, rather than within their individual authorities alone. Whilst this has been the principal of work to date, in reality this has only led to delivery of projects that are of direct benefit to individual authorities firstly with any wider regional benefits being secondary.

6.3. It is recommended that the appointment of a “Programme Manager” to oversee this work is made. Again with a view to this utilising an existing resource, and on a part time basis (approx. 2 days / week); rather than a new post at this stage.

6.4. For the initial 18 months of projects currently identified above, it is recommended that PUSH fund this role, and that the Programme Manager should have access to the existing staff resources across the PUSH authorities in order to progress the projects identified.

6.5. Acting as a point of coordination for the delivery of projects, funding bids and other key work areas the Programme Manager would generate momentum, to realise the initial stages of growth leading to the longer term results identified by the Mini Stern.

6.6. Beyond the initial 18 months it is anticipated that the growth via delivery of projects would enable the work programme to become financially self-supporting, with the aim to be fully self-funded or funded via the Perpetuating Energy Fund in the longer term, as well as bringing the growth, jobs, energy bill and carbon reductions.

6.7. The development of a Programme Manager should be undertaken in such a way so as to formally measure future performance against the delivery of projects. Criteria linked to energy, growth and jobs are important to this work and performance measurement, to evaluate progress and monitor delivery against similar targets would form part of the ongoing support for this role.

6.8. Whilst this approach might take some re-tasking of resources and greater cooperation amongst the individual employing authorities, it wouldn't necessarily have to involve any logistical alterations e.g. office locations. It would however give greater coordination over the delivery of the proposed projects in section 4, the longer term

development of the work programme and greater coordination over other resources e.g. consultants, across the Solent region.

6.9. It is also recommended that PUSH fund a discretionary budget to help support the Programme Manager and his wider “virtual” team in delivery pieces of work that may require specialist skills or additional capacity at key times.

6.10. An ongoing dialogue with those partners who are not directly members of PUSH is also important, as happened at the workshop on April 10th 2015, and it is recommended that this group (or similar) continues to meet on a regular basis to share knowledge & best practice and ensure that any duplication of effort is avoided.

6.11. In addition to the day-to-day delivery of this work, there is also a need for some strategic leadership and engagement on this work. The Future Solent working group (Objective Leads) and PUSH can provide this to a degree, however a “figurehead” or similar individual would significantly help and support wider engagement and in particular provide an apolitical approach to wider engagement with businesses, the public and other organisations.

6.12. Work on a combined authority approach for the whole of Hampshire and the Isle of Wight, including Portsmouth and Southampton, has recently been submitted to government. Whilst not all of the partners in that approach are included in the current Future Solent / PUSH partnership, in terms of this area of work there is significant commonality that the work could easily be scaled up and this would also drive further efficiencies in those areas already mentioned above.

## 7. Conclusions

7.1. There is significant opportunity to grow the regional economy and numbers of jobs. With the right levels of investment in this area it would be possible to increase employment by up to 2178 jobs annually, as well as increase the local GVA by £104.26m per year. This is in addition to reducing the energy bill of the region by £508.3m and reducing its carbon emissions by 34%<sup>8</sup>.

7.2. There are a number of immediate projects that are recommended to be undertaken in the short term (within the next 18 months) and provide an ongoing direction of travel to build on this in the medium and longer terms. These have been highlighted in Section 4, and Annex 2. It is recommended that Leads are agreed for these projects as a priority.

7.3. Recommendations towards future structures and delivery are made in Section 6, this includes not only for PUSH, but also wider engagement with partners and interested organisations, as well as the appointment of a figurehead to be an ambassador for the work programme overall.

7.4. In terms of funding options, suggested options are laid out individually for each project in Section 4. However there is some overlap between potential funding sources e.g. European and potential bids to the Solent LEP. It is therefore recommended that Future Solent / PUSH take a combined approach to funding, in particular with respect to a future bid to the Solent LEP.

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<sup>8</sup> [http://www.push.gov.uk/item\\_10\\_-\\_annex\\_2\\_-\\_the\\_mini\\_stern\\_report.pdf](http://www.push.gov.uk/item_10_-_annex_2_-_the_mini_stern_report.pdf)

## Annex 1: Objectives and Actions from Solent Energy Strategy 2015

<b>Objective 1</b>	<b>Improving energy efficiency and conservation</b>
Action 1.1	Review domestic energy efficiency programmes.
Action 1.2	Review contribution to fuel poverty targets.
Action 1.3	Scope projects that address non domestic energy efficiency.
<b>Objective 2</b>	<b>Increasing the use of renewable energy resources</b>
Action 2.1	Agree a renewable electrical generation target for 2020.
Action 2.2	Agree a renewable electrical generation target for 2030.
Action 2.3	Agree renewable electrical generation technology targets.
Action 2.4	Bring forward a further 200 MWe of capacity into investment readiness rating grades 2 or 3 by 2020.
Action 2.5	Carry out detailed analysis of grid constraints and opportunities.
Action 2.6	Support feasibility study development for district heating projects.
Action 2.7	Improve information on feedstock supply for biomass and district heating.
<b>Objective 3</b>	<b>Maximising the uptake of business opportunities locally</b>
Action 3.1	Review port infrastructure to establish suitability for offshore renewables.
Action 3.2	Develop a plan to support diversification and company development associated with support of offshore renewables.
Action 3.3	Develop a plan to support diversification and company development associated with support of smart energy sector opportunities.
Action 3.4	Develop a plan for port energy supply.
Action 3.5	Support the take up of local jobs in fossil fuel projects.
<b>Objective 4</b>	<b>Ensuring focused, integrated delivery and implementation</b>
Action 4.1	Strategy alignment within the Solent (e.g. across transport, economic development and other strategies).
Action 4.2	Establish a governance arrangement to provide a focus for implementation.
Action 4.3	Pipeline management and development.
Action 4.4	Learn from and promote good practice.

## Annex 2: The Projects

1. The projects listed below are those developed from the meetings held with the key stakeholders and other previous sources of information. The list is not exhaustive, nor does it repeat all of the projects already identified by the Arup report where they are being developed by commercial or private organisations, however where available it does bring forward those projects that are or could be within the control of the Future Solent / PUSH partners.

1.1. Further work to develop each project will still be required, including in some cases detail business cases. Similarly other opportunities can be developed in tandem where information shows there is a need or opportunity to do so.

### **Solar PV - roof top projects (Southampton City Council)**

1.2. Southampton City Council is currently developing a business case for Solar PV across its commercial built estate. This project is focussing on the most viable buildings first, but could be expanded in the medium to longer term to the remainder of the estate. Complexities of building ownership vs. building occupation will need to be resolved, as will the sale and/or export of the energy generated.

1.3. This first phase is focussing on the 10 best opportunities but with a long list of over 100 potential buildings this work could be significantly expanded.

1.4. In addition lessons learnt from the delivery of this project could easily be rolled out to other areas in the Solent region to proper wider take-up and efficiency. Work has championed delivery of solar PV across the Ministry of Defence and Health Services, could be extended to include local authority procurement of PV systems. This requires further discussion and in addition projects that are at a relatively advanced state of delivery in order to test the frameworks. Depending on the timing of this and subsequent projects there are also economies of scale in areas such as procurement of installations and opportunities to establish a wider “framework” or similar procurement mechanism that could be used by other partners. The benefits of a wider approach have not been scored at this stage, although some elements of a wider scheme can be assumed to be part of the other roof-top solar projects below (assuming that they are led by local authorities).

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	6	6	4	2	4	2	9	12	12	57

### **Solar PV - commercial / other roof tops (up to 2MW in 2 years)**

1.5. Proposed changes in subsidies (most notably the Feed-In-Tariff (FIT)), mean that smaller domestic installations, whilst still viable have longer payback periods. However there are still opportunities, particular for larger installations and where energy generated is used at source for shorter payback periods or for savings on

energy bills. By developing projects that are envisaged around selling of energy via a Power Purchase Agreement (PPA), investment in these projects could lead to a return on investment and income to the investor, as well as economic growth and jobs in the delivery and installation of the programme. An initial focus of delivering 2MW of commercial roof top solar in 2 years would be easily achievable, and allow for further expansion of the programme beyond that.

1.6. Work undertaken already by Southampton University on the Southampton Solar City project, which identifies all of the solar PV potential in the City of Southampton, could be expanded to cover the wider Solent area which would support the wider deployment of this particular project.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	4	6	6	2	4	2	9	15	10	58

### **Solar PV – Community (and other) solar farms (20 x 5MW in 2 years)**

1.7. Similar to roof top projects above, this seeks to expand the deployment of Solar PV farms across the Solent region. As indicated it should be possible to deploy the equivalent of up to 20 5MW solar farms, however this can be constituted of a greater number of smaller farms, or lesser number of larger farms, depending on the identification and suitability of sites, and constraints. Where feasible focussing on the delivery of energy via a “private-wire” network would also enhance the local utilisation of energy. Where such usage takes place the sale of energy via a PPA would be possible. The West Solent Solar Coop are planning to take this approach on a future project at Netley Marsh, providing energy directly to nearby offices.

1.8. The delivery of the Strategic Commercial Planning for Renewables project below, would directly support the delivery of this project, and also potentially allow for faster deployment of sites.

1.9. Income from this project comes from a number of opportunities including:

- Sale of energy (either through grid export or directly under a PPA)
- Income from subsidies (subject to changes in tariff levels)
- Income from planning fees (only applicable to local planning authority), but also potentially includes pre-application advice charging
- Income from business rates (only applicable to the local authority)
- Income to the landowner (where the solar farm is on leased land)
- Return to investors – depending on final investment approach taken

It would be feasible for these projects to be developed as community energy projects, potentially utilising the energy produced locally e.g. via private wire, as mentioned above.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	4	6	1	3	6	4	12	3	4	43

## Domestic Energy Efficiency Mapping

1.10. Domestic Energy Efficiency is both a key area in which the installation of measures to reduce energy consumption can both save money (to the homeowner), but also generate jobs and economic growth in the delivery and installation of the energy efficiency measures deployed.

1.11. The delivery of measures however relies on knowing which properties require what measures. Work undertaken by The Environment Centre has led to a mapping process, which is both simple in its approach but leads to detailed results of potential opportunities in the areas covered. Whilst some areas of the Solent region have already been covered, this could easily and quickly be expanded to the remainder of the region, and would actively inform the Whole-House Retrofit and Energy Efficiency option below. Limitations on the usage of information may apply and therefore it is important that this work is led in conjunction with local authorities (in order to access data sets).

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	6	12	10	4	1	4	3	3	3	46

## Whole-House Retrofit & Energy Efficiency

1.12. There has been significant work undertaken in the Solent region on domestic retrofit projects. Historically this has tended to focus on specific measures (loft, cavity wall, boiler replacements, etc.), either as a result of the criteria associated with the funding available or as a result of the overall benefit (energy / carbon saving) of the measures installed. This means that in some cases opportunities for the delivery of greater efficiencies through scale have not always been able to be delivered.

1.13. By focussing on a whole-house approach across the region, would enable economies of scale to be more easily achieved as well focussing on measures that extend purely on energy efficiency e.g. water and waste. Approximately 25% of energy use in the home goes towards heating water for washing and cleaning and with increased likelihood of future water scarcity, trying to reduce per capita water usage will also save Hampshire householders money. Southern Water is aiming to reduce water consumption per person from 148 litres per day to 133 litres per day by 2020.

1.14. Changes in government funding and subsidies in this area, mean that currently there is less direct funding for work in this area, and therefore a potentially different approach will be required to maximise what funding is still available and also to look at drawing in additional funding.

1.15. This option does however provide significant opportunities for increased economic growth and jobs in its delivery, specifically in the delivery and installation of measures across properties in the Solent region.

1.16. Fuel poverty<sup>9</sup> in the region varies between 6 and 9% and many past projects have focussed on those in most need i.e. the fuel poor. Work by The Environment Centre on the “Hitting the Cold Spots” project between 2012 and 2015 has assisted 1627 households in a variety of ways including the installation of 167 heating and/or hot water systems and leverage over a quarter of a million pounds in funding to support this work. They have directly employed 2.45fte throughout the project as well as using local “Buy with Confidence” contractors in the local area to deliver the work. Overall the project is valued in excess of £1m. The Environment Centre is continuing to explore opportunities to continue this work beyond 2015.

1.17. Quite rightly focussing on the most in need, should remain a priority. In also tackling hard to treat properties e.g. solid walls and also giving strong consideration towards the more able to pay market, there are significant opportunities to drive economies of scale in procurement and delivery, whilst at the same time developing this sector locally in terms of both economic growth and jobs (potentially as many as 600).

1.18. This would require significant commitment from Future Solent / PUSH partners, including potentially financial commitment but the benefits as stated above, and from potential improving the levels of disposable income across Hampshire residents (i.e. reducing their energy bills), as well as other indirect effects to public sector services e.g. health, housing, social care. Nationally Age UK<sup>10</sup> has estimated that cold homes cost the NHS £1.36bn every year in primary care and hospital stays (this does not include associated social care support). Furthermore in 2009 the Chief Medical

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<sup>9</sup> Fuel poverty in England is measured by the Low Income High Costs definition, which considers a household to be in fuel poverty if:

- they have required fuel costs that are above average (the national median level)
- were they to spend that amount they would be left with a residual income below the official poverty line

The key drivers behind fuel poverty are:

- The energy efficiency of the property (and therefore, the energy required to heat and power the home)
- The cost of energy
- Household income

Prior to 2013 fuel poverty was defined as a household having to spend over 10% of its disposable income to pay for adequate energy services.

<sup>10</sup> Age UK, The Cost of Cold, November 2012

[http://www.ageuk.org.uk/Documents/EN-GB/Campaigns/The\\_cost\\_of\\_cold\\_2012.pdf](http://www.ageuk.org.uk/Documents/EN-GB/Campaigns/The_cost_of_cold_2012.pdf)

officer<sup>11</sup> estimated that for every £1 spent reducing fuel poverty a saving of 42pence was seen in NHS budgets.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	4	6	4	4	6	6	12	9	3	54

### **SAVE (Solent Achieving Value from Efficiency)**

1.19. SAVE is a project led by Scottish and Southern Energy Power Distribution (SSEPD), which is seeking to trial a number of different ways of delivery energy efficiency, to see which is the most effective across 8,500 homes in the Solent region.

- LED lighting retrofit
- Media led engagement
- Media led engagement with price signalling
- Community energy coaching

1.20. SAVE aims to reduce energy consumption by 13% across the four methods.

1.21. This project requires no additional direct support from Future Solent / PUSH partners at this time, but opportunities to expand on the work going forward and taking on board lesson learnt for the development of future projects should be monitored.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	3	9	15	2	6	2	6	9	n/a	52

### **Strategic Planning for Renewables and Energy Efficiency**

1.22. This project focusses on the development of some strategic documents for the development of renewables projects and energy efficiency in privately rented commercial buildings. Utilising such a suite of documents would make the identification and delivery of renewable projects easier. These could be easily be built (or adopted) around existing documents produced by other organisations e.g. BRE – National Solar Centre; Green Building Council

#### **1.22.1. Constraints mapping.**

There are a number of hurdles which any renewable project need to overcome when identifying potential sites, e.g. available grid connection, presence of environmentally sensitive areas. Mapping constraints across the PUSH / Future Solent area would enable a more realistic view of sites that have the potential for renewables and the type e.g. Solar, Anaerobic Digestion etc. Further extension of this would also be possible to give an indication as to acceptability of particular sites in planning terms for different forms of renewables e.g. much in the way zones in Local Development Frameworks are currently utilised. SSEPD involvement in this project is guaranteed;

<sup>11</sup> Chief Medical Officer, 2009 Annual Report, 2009.  
[http://www.sthc.co.uk/Documents/CMO\\_Report\\_2009.pdf](http://www.sthc.co.uk/Documents/CMO_Report_2009.pdf)

however further discussion is required to understand how this might work and whether this should still be on the basis of individual projects or more widely.

### 1.22.2. PUSH supplementary planning guidance for renewables.

Existing planning documentation is available from the National Solar Centre and other bodies, however having a tailored suite for the PUSH region would allow for commonality of approach, and be more inline PUSH’s approach with other planning related documents.

### 1.22.3. Specimen leases and common documentation.

This work would inform some of the other proposed projects e.g. Solar PV – Commercial Roof Tops, SME energy efficiency and retrofit, and is particularly important in some areas, particularly where freeholders and leaseholders are different or where projects are proposed on land / buildings where the developer does not have direct control. This could also be extended to include other potential common documentation e.g. PPAs.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	6	9	5	3	6	4	3	3	3	42

## Offshore Renewables - (Perpetuus, Navitus)

1.23. Two offshore renewable projects have been proposed for the Solent area. Navitus Bay, an offshore wind farm; and Perpetuus an offshore tidal turbine.

1.24. Navitus Bay has recently been rejected by the Secretary of State following a formal application process. The Perpetuus project is still awaiting the outcome of its planning and consents application process, and the outcome is expected later in 2015.

1.25. The analysis below is based solely on the delivery of Perpetuus.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	6	6	8	3	8	4	3	3	12	53

## SOREC (Solent Offshore Renewable Energy Consortium)

1.26. SOREC seeks to support business involved in the offshore renewable energy industry in the Solent area. Despite the unfavourable determination of the Navitus Bay windfarm there is still a significant amount of opportunity within the offshore energy sector, e.g. Rampion wind farm (Sussex coast), Perpetuus tidal.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	3	8	10	3	12	6	9 (indirect)	n/a	5 (indirect)	56

## Smartgrid

1.27. The smartgrid – enabling for active management using digital technology of supply and demand of energy from multiple different users and suppliers – is a project for the longer term. Given the number of projects that are likely to reduce demand and/or increase the production of renewables, a slightly longer term approach to developing a smartgrid for the Solent area, would allow for better integration of these projects.

1.28. A number of trials have taken place nationally including some work on the Isle of Wight as part of the “Eco Island” project and therefore learning from these projects can be taken forward. Other projects as they are taken forward should give due consideration to the utilisation of a smartgrid in the future, and how this might be integrated.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	1	1	1	4	8	2	3	3	n/a	23

### SME energy efficiency / retrofit

1.29. As with the domestic energy efficiency / retrofit option there is significant opportunity to deliver measures to the regions small and medium sized businesses. This represents a potential growth and jobs opportunity for the assessment, and delivery of measures, as well opportunities for the SME customers to benefit from cost savings on their energy bills.

1.30. Opportunities exist to expand this option by the clustering of SMEs to drive economies of scale in terms of the deployment of different measures as well as being to access wider funding opportunities and return on investment.

1.31. Further work to establish the most suitable model would be required; as there are a number of potential alternatives. For example the assessment phase could be delivered via locally employed individuals or represent an opportunity to combine with University students by providing them with some training in return for undertaking assessments. The latter would improve the student’s skills and employability once they have left university and potentially provide the mechanism for offering either free or heavily subsidised assessments to SMEs, as the main cost would be in training each cohort of students.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	2	6	1	4	8	6	12	12	3	54

### SME Water Audits & Retrofit

1.32. This project being run by Southern Water in their water supply area, will include delivery of water efficiency audits and retrofit programmes within some of the Solent

region. The work is focussed on SMEs, but will also cover domestic customers and schools where applicable. The project will create jobs in the delivery of the audit and retrofit programme as well as economic growth in supplying the retrofit programme. Energy reductions will be achieved by reducing the amount of heated water used in the area. The project is funded and due to commence imminently and therefore requires little or no additional support at this time.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	6	9	15	2	4	2	6	3	n/a	47

### Renewables Supply Chain Training for SMEs

1.33. This project, working with the Offshore Renewables Catapult and existing mechanisms such as SOREC will offer opportunities to SMEs to develop their ability to operate in the supply of goods and services to the offshore renewables industry both in the Solent Region and more widely. This will include supporting funding bids as appropriate, helping to develop unique selling points, and identifying opportunities for the regions SMEs to be involved in the offshore renewables industry.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	9	6	10	3	8	4	9	0	5	54

### Commercial and Industrial Energy Efficiency

1.34. This project aims to focus on some of the bigger energy users within the Solent region, and consequently there are potentially greater opportunities. This is one area however where users may already understand and have realised the benefits with respect to their energy usage, given the potentially significant financial savings. Further work would be required to establish the level of opportunity and whether this is an area that Future Solent / PUSH should take further.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	2	6	1	4	8	6	12	12	3	54

### Solent Wood Fuel Hub

1.35. Opportunities to develop a wood fuel hub exist for the Solent region. This would provide opportunities to develop underutilised woodland in the region as well developing both new jobs and economic growth.

1.36. There are also strong linkages to other options, in particular those CHP projects that are considering utilising biomass as a fuel source. By taking opportunities to further develop a fuel hub could lead to savings for these other projects in a number of ways, but most significantly by ensuring sufficient local supply of fuel, without the need to import fuel from outside of the region.

1.37. Significant opportunities in this area exist for skills and training, particularly around forestry and woodland harvesting which currently has a potential future skills gap due to low uptake of courses in this area and the age profile of the current workforce. Therefore it is important that Further Education & Agricultural Colleges are involved in the development of this option.

1.38. Depending on the level of take up there are also other job opportunities in allied professions e.g. hauliers (transportation of wood / fuel); designers / engineers (development and delivery of wood fuel systems).

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	2	8	5	3	12	6	3		12	51

### **Municipal Energy Tariffs**

1.39. Whilst a longer term option, a municipal energy tariff would be an opportunity to develop significant savings for both residential and business energy users. Whilst similar schemes exist, e.g. Peterborough Energy<sup>12</sup> and other options e.g. collective switching programmes have been undertaken in the past, a municipal energy tariff would work slightly differently and could be developed in such a way as to utilise any energy generated by other projects by Future Solent partners or in the region to be sold as part of this tariff.

1.40. Further work to develop the business case in this area and to understand issues around licensing and the potential to utilise current mechanisms such as “licence lite<sup>13</sup>” and/or work with private sector providers would be required to take this option forward.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	1	3	5	2	1	2	2	1	1	18

### **District Energy (Combined Heat and Power) Systems**

1.41. A number of initial business cases have been developed across the Solent region to investigate opportunities for district energy CHP systems. Of these a number would appear to be more viable than others and potentially be worthy of further investigation or the development of more detailed business case to an investment level.

1.42. The more significant of these are included in the analysis below, on the basis of work completed to date. However others may be developed and taken forward by individual organisations as they see fit.

<sup>12</sup> <http://www.peterboroughenergy.co.uk/>

<sup>13</sup> <https://www.ofgem.gov.uk/licences-codes-and-standards/licences/licence-lite>

1.43. There could be a significant opportunity for Future Solent / PUSH to support the development of these schemes and options such as the municipalisation of them to provide energy to “customers” is an area that would warrant further consideration and discussions amongst the relevant project leads to understand how collaboration might be taken forward and be of benefit.

1.44. The opportunity to undertake further heating mapping or expand on the heat maps already produced as part of the Arup report should also be considered. This could be undertaken as part of the Strategic Planning for Renewables & Energy Efficiency option or in its own right.

### 1.44.1. East Hampshire

1.44.1.1. Work in East Hampshire has focussed on several projects for which heat mapping and analysis has taken place. This has led to three<sup>14</sup> schemes which are more viable than others. For the purposes of this analysis, these three have been combined into the scoring below.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	4	3	2	4	8	2	12	3	12	50

### 1.44.2. Portsmouth City Centre

1.44.2.1. Work on the development of a business case for a Portsmouth district energy CHP system has yet to be completed, however it is anticipated to be undertaken in due course, funding from the Heat Network Deliver Unit (HNDU) has been allocated, and previous heat mapping was included as part of the Arup report. The numbers below therefore reflect this information rather than more detailed work that might be available in due course.

1.44.2.2. Options to include Portsmouth University buildings have been factored into the HNDU funding

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	1	3	2	4	8	2	12	3		35

### 1.44.3. Eastleigh - Fleming Park

1.44.3.1. The leisure centre at Fleming Park in Eastleigh already has an existing CHP system, however there are opportunities as part of the redevelopment of this site to improve this system, and potentially change the current gas fired boilers for biomass.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	3	3	4	4	8	2	12	3	12	51

<sup>14</sup> Penns Place, Whitehill Bordon, Alton

#### 1.44.4. Eastleigh - Ageas Bowl

1.44.4.1. The Ageas Bowl presents a good opportunity for a district energy system on a mixed use development that presents a number of heat loads. Further more detailed study is required to fully understand the opportunity presented.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	3	3	4	4	8	2	9	3	9	45

#### 1.44.5. Havant

1.44.5.1. Another opportunity identified by the Arup report, with good heat loads including a leisure centre. Further more detailed study would be required to understand the opportunity presented and its viability.

Criteria	Timescale	Deliverability	Cost	Objectives	Jobs	Growth	Carbon Reduction	Demand Reduction	Renewable Energy	Total
Score	1	3	4	4	8	2	12	3	12	49

### Low Carbon Skills / Training and Development

1.44. In addition to the potential for growth and jobs there is also a need to provide suitable access to training opportunities in this area. Some local colleges e.g. Highbury<sup>15</sup> and Eastleigh<sup>16</sup>, already offer courses in this area, however further discussion would be warranted as business cases develop to understand whether there is sufficient training available to meet demand, if projects are progressed.

### Transport

1.45. Transport has not been specifically considered as part of this plan, however it is recognised that there is also significant opportunities e.g. electrification of transport or use of hydrogen technologies. It is recommended that Future Solent / PUSH consider whether a more detail view of this area is required or whether it is already adequately covered, or could be, by other organisations e.g. Solent Transport<sup>17</sup>

<sup>15</sup> <http://www.highbury.ac.uk/client/content.asp?ContentId=711>

<sup>16</sup> <http://www.eastleigh.ac.uk/careers/environmental-technologies/course-listing/>

<sup>17</sup> <http://www3.hants.gov.uk/tfsh.htm>

## Summary of Project Scoring Totals & Prioritisation of Projects

1.46. The table below gives a summary of the total scores of the projects. Whilst these scores represent the overall totals, in selecting the recommended projects that have been included in Section 4 consideration as to the totals for particular scores e.g. job creation, has been used as well as consideration of projects which are seen as enablers of others, e.g. domestic energy efficiency mapping. The final selection therefore represents the best chance of delivery of overall benefit to the region.

1.47. Projects not included in Section 4 may well continue to be developed as they are seen as important by individual organisations, and therefore it is recommended that ongoing coordination of projects is maintained; this is picked up in section 6 of the main report.

<b>Project Name / Identification</b>	<b>Grand Total</b>
Solar PV - roof top projects (Southampton City Council)	57
Solar PV - commercial roof tops (up to 2MW in 2 years)	58
Solar PV - solar farms (20 x 5MW in 2 years)	43
Domestic Energy Efficiency Mapping	46
Wholehouse retrofit & energy efficiency	54
SAVE	52
Strategic Planning for Renewables & Energy Efficiency	42
SOREC	56
Smartgrid	23
NSIP - (Perpetus, Navitus)	53
SME energy efficiency / retrofit	54
SME Water Audits & Retrofit	47
Renewables Supply Chain Training for SMEs	54
Commercial and Industrial Energy Efficiency	54
Solent Wood Fuel Hub	51
Municipal Energy Tariffs	18
District Energy (Combined Heat and Power) Systems	
a) East Hampshire	50
b) Portsmouth City Centre	35
c) Eastleigh - Fleming Park	51
d) Eastleigh - Ageas Bowl	45
e) Havant	49

### Annex 3: Criteria, Scoring and Weightings For Project Prioritisation

Ref.	Proposed Criteria	Proposed Scoring	Proposed Weighting ( 1 to 3)
1	Delivery Timescale: How long will this project take to deliver?	Long term (more than 5 years) = 1 Medium term (2 to 5 years) = 2 Sort term (1 to 2 years) = 3	Critical timescale, if not achieved project will fail <sup>18</sup> = 3 Some critical timescales = 2 Date neutral = 1
2	Deliverability: How easy is the project to deliver? e.g. is it technically complex, does it involve many stakeholders / partners, subject to planning permission or other consents.	Very complex / low deliverability = 1 No complexity but low deliverability = 2 Some complexity but high deliverability = 3 No complexity and high deliverability = 4	Project can be delivered with no additional external support e.g. consultancy services = 3 Project will require some additional support = 2 Project will require significant additional support = 1
3	Overall cost	>£10m = 1 £5m to £10m = 2 £2m to 5m = 3 £1m to £2m = 4 <£1m = 5	All funding identified = 3 Some funding identified = 2 Funding still required = 1
4	Contribution to objective(s)	Contributes to 4 objectives = 4 Contributes to 3 objectives = 3 Contributes to 2 objectives = 2 Contributes to 1 objective = 1	No weighting

<sup>18</sup> For example a project that is reliant on being delivered within a specific timescale to unlock funding.

5	Will the project maintain existing jobs and/or create new jobs?	No new jobs created = 1 Maintain existing jobs = 2 Some new temporary jobs created = 3 Some new permanent jobs created = 4 Many new permanent jobs created = 5	Jobs are solely within the Solent area = 3 Jobs are both within and outside of the Solent Area = 2 Jobs are solely outside of the Solent Area = 1
6	Does the project contribute to economic growth?	<£1m = 1 £1m to £2m = 2 £2m to £5m = 3 £5m to £10m = 4 >£10m = 5	Growth is solely within Solent Area = 3 Growth is both within and outside of Solent Area = 2 Growth is solely outside of Solent Area = 1
7	Does the project contribute to overall carbon reduction?	Some reduction, but unable to quantify = 1 Minimal reduction (10s of tonnes) = 2 Low reduction (100s of tonnes) = 3 Medium reduction (1000s of tonnes) = 4 High reduction (10,000s of tonnes) = 5	Carbon reduction is solely within the Solent Area = 3 Carbon reduction is both within and outside of the Solent Area = 2 Carbon reduction is solely outside of the Solent Area = 1
8	Does the project contribute to energy demand reduction?	Some reduction, but can't quantify = 1 Minimal reduction (10s of Kwhs) = 2 Low reduction (100s of Kwhs) = 3 Medium reduction (Mwks) = 4 High reduction (Gwks) = 5	Demand reduction is solely within the Solent Area = 3 Demand reduction is both within and outside of the Solent Area = 2 Demand reduction is solely outside of the Solent Area = 1
9	Does the project contribute to increased generation of renewable energy?	Some contribution, but can't quantify = 1 Minimal contribution (10s of Kwks) = 2 Low contribution (100s of Kwks) = 3 Medium contribution (Mwks) = 4 High contribution (Gwks) = 5	Energy generated will be used locally within the Solent Area = 3 Some of energy will be exported to grid = 2 All of energy will be exported to grid = 1