

IDENTIFYING THE BENEFITS OF HAVING A LOW CARBON ECONOMIC STRATEGY FOR THE SOLENT REGION

AN ANALYSIS BASED ON THE “MINI-STERN” REVIEWS
COMPLETED FOR OTHER UK ECONOMIC REGIONS

EXECUTIVE SUMMARY FOR THE PUSH JOINT COMMITTEE

A Future Solent project



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Mini-Stern style report for the Solent region:

A review of the differing economic, social and environmental outcomes available to the Solent region depending on the level of investment in low carbon strategies.

A report compiled using the methods and assumptions in detailed mini-Stern reports for four other regions of the UK.

Background:

In 2006 Sir Nicholas Stern (now Lord Stern and previously the Chief economist at the World Bank) delivered a report, “the Stern report”, to HM Treasury that quantified as significant the risks to the UK economy posed by the predictions for climate change coming out of the Intergovernmental Panel on Climate Change and other well informed sources.

The Stern report also offered solutions and a significant upside if particular policies were followed and early investment was made in reducing carbon emissions, seeking alternative sources of energy and investing in mitigation and adaptation. Importantly, the Stern report made it clear that the economic, social and environmental consequences of continuing “business as usual” were far more expensive in the long run than early investment in finding solutions and adopting a low carbon strategy for the UK.

Lord Stern has since said that, with the benefit of hindsight, his predictions were very conservative and that, due to a lack of strategic action and the continuing of business as usual, the UK was now on a path to deliver his worst predicted outcomes.

In 2012 the LEPs of Birmingham, Leeds, Sheffield and Humber each individually commissioned their own “Mini-Stern” reports that focused on the economic, social and environmental risks and opportunities presented by climate change, energy prices and fossil fuel dependency for each of their regions. These were detailed reports based on rigorous academic standards. They contrast the outcomes based on business as usual compared to an affordable investment in a low carbon strategy.

They all find that the latter is a significantly preferable medium to long term option that

- offers a return on investment of around 20% and
- generates both jobs and an increase in GVA
- whilst increasing energy resilience and reducing the costs of energy paid to generators outside the region.

In 2014, Future Solent commissioned GEP Environmental to produce a brief equivalent report for the Solent region based on the same assumptions and data sets used in the existing Mini Stern reports but adapted to better reflect the Solent economy and social profile.

The objective of this “Mini-Stern” style review for the Solent region is to present the potential benefits of investing in a low carbon economic strategy for the Solent region. The conclusions are based on a meta-analysis of existing work on the benefits, or otherwise, to the local economy of different low carbon strategies as alternatives to a “business as usual” (BAU) approach.

The key questions we set out to answer were:

1. *“What would be the costs and benefits of implementing a low carbon economic strategy and also of not doing so and continuing Business as Usual (BAU).”*
2. *Assuming a low carbon economic strategy is adopted, what would be the level of returns in terms of GVA, job creation and carbon emissions reduction”.*

Whilst, due to lack of resources, the Solent Mini-Stern style report is not as detailed in its background research as the existing Mini-Sterns, it is based on well sourced equivalent data for the Solent region and the sound assumptions used in the existing reports.

We have taken a conservative approach to the findings and are confident that they are sufficiently accurate to be of value. However, we would like to see sufficient resources made available to complete a full Mini Stern for the region which would be adequate to inform the investment and other decisions that our findings suggest are necessary and worthwhile.

EXECUTIVE SUMMARY:

We find that a proactive approach to encouraging low carbon innovation and investment would contribute to reaching the growth targets in the Local Enterprise Partnership’s vision for the region: *“to create an environment that will bring about sustainable economic growth and private sector investment in the Solent. It will assist this globally-competitive area reach its full potential, enabling existing businesses to grow, become more profitable and to be greener; enabling the creation of new businesses and attracting new businesses to the region”.*

From various sources we estimate that the annual energy bill of the Solent was in 2011 in the region of £3.25 billion, excluding transport fuels. This represents 10.5% of the annual Solent GVA and with energy prices forecasted to grow significantly over the years ahead energy costs would also increase as a proportion of the whole.

By investing 0.08% of the local GVA, every year for 10 years, into “commercially attractive energy efficiency and low carbon opportunities”^[3] we would

^[3] *A Mini-Stern Review for the Humber*, The Economics of Low Carbon Cities, January 2013.

- significantly reduce the energy bill for the region,
- create thousands of jobs and skills in low carbon energy, goods and services,
- significantly increase energy security and resilience,
- significantly improve competitiveness and therefore GVA
- significantly benefit local health and reduce healthcare costs

Based on pursuing only the cost effective measures, the economic and other benefits could be realized through investment and become economically beneficial in less than 5 years.

| Energy bill in 2011 (£M) | Investment required over 5 years (£M) | Potential cut in <u>annual</u> energy bill (£M) | Jobs created annually | Annual carbon saving by 2022 (1990 baseline) |
|--------------------------|---------------------------------------|---|-----------------------|--|
| 3250 | 2389 | 508.3 | 2178 | 34% |

Table 1. Breakdown of key figures (cost effective measures only)

Through **cost effective** investments alone, the Solent LEP region could reduce its carbon emissions by a further 8.4% above current trends by 2022 (compared to the 1990 baseline). This would require an investment of £2.39 billion, generating annual savings in energy costs alone of £508 million.

The investment would be paid back in less than 5 years and generate savings year on year thereafter. On this basis the ROI would be in the region of 20%.

Through a combination of energy efficiency, new technology, energy resilience and SMART data enabling demand controls, this investment would also significantly reduce future energy bills compared to BAU, both capex and opex.

Additionally, the cost effective investments would also generate 2178 jobs annually and increase the local GVA by £104.26 million per year. On this basis the combined ROI is in the region of 24%.

If the returns on the cost effective measures are reinvested there is a second considerable gain available from investing in **cost neutral** measures that are made affordable through the funds provided by the outcome of the cost effective measures.

Conversely, BAU, would commit us to a loss of jobs and skills to better prepared regions, reduced competitiveness year on year and embed dependence on an ageing energy infrastructure which would threaten our continuity of energy supplies and our ability to meet government targets for carbon emissions reductions. It would also condemn the region to a dependency on sources of energy beyond our boundaries, for which we would pay an increasing proportion of our GVA.

We conclude that reducing our dependence on conventional fossil fuels would benefit the region as follows:

- cutting energy bills¹ and creating a wide set of economic opportunities, including skills, jobs, innovation and competitive advantage
- reducing unwanted environmental impacts and helping to meet government and global targets for carbon emissions reduction

Alternatively, BAU, or a slow path to change, presents the Solent with a high risk of losing out to other regions on jobs and skills. We would also lose commercial competitiveness as energy bills rise as a proportion of GVA.

The big question is not “Should we adopt a low carbon strategy?” but how to do it in a way that is a step change from current policies. The answer is that the many perceived barriers to change can be overcome, project by project, with a little seed funding and plenty of well informed leadership.

As identified by Arup’s Solent Energy Strategy, there is a significant pipeline of projects that appear to be commercially viable given some early funding and a suitable policy environment.

The first step would be to resource a full Mini-Stern report that would enable the identification of individual projects and to prioritise them.

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