SOUTH EAST ENGLAND DEVELOPMENT AGENCY

BOARD MEETING ON 14 MAY 2009

ITEM 5

PROGRAMME FOR A GREEN ECONOMY

Recommendation

The Board is invited to:

a) **NOTE** that the South East has many of the key elements of a very exciting green economy agenda. This agenda is about economic development and global market opportunities that go hand-in-hand with business resource efficiency and community behaviour change to drive market demand.

b) **ENDORSE** a more focused and sectorally-based approach to our Ecological Footprint RES target which joins up existing SEEDA programmes on research, development and deployment; innovation and clustering; inward investment and skills and links them in a more purposeful way with place-based action planning.

b) **CONSIDER** the strategic approach set out in paragraphs 8-14 and **endorse** an approach which defines SEEDA's role in terms of:

- Providing an **integrated approach** leading to major 'city-scale' projects which will have a strong chance of attracting major European funding
- Helping the region to take green **market opportunities**
- **Market development** to pull inward investment into the SE and to develop businesses and products for export at the same time as securing the future of the SE economy in terms of energy, water, waste and land use.

Background

1. The South East has almost 3,000 VAT-registered 'cleantech' businesses whose combined sales turnover was 11.16bn in 2006, 0.5% of the global market[1]. This is 14% of the UK share of the market[2]. By 2016, the global market for 'cleantech' in the top 21 countries is expected to be worth £5,235bn. The South East's share of this would be £26.2bn if its market share remains stable. To achieve this is highly challenging, however, given the enormous competition from other countries whose governments invest significantly more in cleantech.

[1] Envirobusiness (March 2008) Global Leadership in Environmental Technologies and Services

[2] HMG (April 2009), Investing in a low carbon Britain

2. SEEDA's existing work on research, development and deployment, commercialisation, innovation and clustering, inward investment, and skills all applies to the green economy but it could be argued that a more focused sectoral approach is needed if we are to develop as a leading global player. Annex 1 sets out examples of economies where such an approach has been taken and evidence that the UK is lagging behind.

3. Government environmental and industrial policy is now developing very quickly to put in place the right framework of targets and incentives to support SEEDA's ambitions for the South East in terms of green economic development:
   - Low Carbon and Resource Efficiency has been identified as a key business opportunity for the UK[3];
   - The UK is the first country in the world to have a legally binding carbon emissions reduction target;
   - The Government has identified[4] four key low carbon business opportunities for the UK, all of which are particularly relevant to the South East:
     - Carbon Capture and Storage
     - Offshore wind, marine and other renewables
     - Nuclear and
     - Low carbon vehicles

4. Following on from this shift in Government policy, it is clear that the European Investment Bank (EIB) is more willing to lend into this favourable UK environment giving SEEDA an opportunity to facilitate more low-cost investment into the South East which will create jobs and reduce costs for citizens and businesses.

Introduction

5. The table in Annex 2 sets out the SEEDA products and investments which could be joined up and focused to support green economic development. SEEDA-sponsored thought leadership has already started this joining up with cross-cutting work on the Institute for Sustainability and SusCON in the Thames Gateway. Work on the eco-region is making links with China which potentially create opportunities for collaboration on carbon capture and storage and export of UK know-how.

6. This emerging approach could be developed into a more purposeful programme of activity where:
   - The new Innovation and Growth Teams are focused on green economic development opportunities in their areas
   - The Science and Innovation campus at Harwell joins up effectively with activity with the major cluster of activity across Oxfordshire, Buckinghamshire and Berkshire
   - Business support and access to finance products help in the development of a home market in resource efficiency at the individual

[3] HMG (April 2009) Building Britain's future: new industries, new jobs.
[4] HMG (April 2009) Investing in a low carbon Britain

business community and local authority level, which will drive skills and jobs
- EID strengths in assembling sites and funding packages for business critical infrastructure are focused on the development of infrastructure for energy, water and waste.

7. Much Skills and Sustainability work is currently focused on managing regional partnerships to deliver current RES targets which are framed in terms of mitigating environmental risk rather than taking business opportunities. These partnerships could act as an important market development mechanism and their scope broadened to include supply chain development work following the model of the Pathway to Zero Waste programme.

Transition to a Green Economy Programme

8. In order to pull together and focus work on this sector across SEEDA, it is proposed that a 'Transition to a Green Economy' programme is set up. This would own the evidence base, strategic influencing work and some direct programme spend where gaps in existing provision exist but would draw on other programmes for funding by working with them in a collaborative, cross-cutting way. Annex 1 shows the full proposed structure for the new programme. It is proposed that it has two foci:
   - Market opportunities and
   - Market development

9. The **market opportunities** part of the programme builds strongly on existing Competitiveness and Growth programmes and focuses their attention on major priorities for the region in terms both of technology and place as shown in the table below:

Technologies	**Place**
Carbon capture and storage	Thames Gateway
Offshore wind	The Coast, particularly Isle of Wight and Newhaven
Marine energy	Solent
Electric cars and infrastructure	Oxford Milton Keynes Sussex
Nuclear	Kent Oxfordshire

10. Developing the supply chains for energy and water retrofitting, other forms of renewable energy and waste management are also clearly major opportunities for the South East, given the size and density of the home market, and so more generic business support for these areas will be needed across the region.

11. The **market development** part of the programme will focus on organising businesses, local authorities, higher education and communities to take concerted action on new Government targets thereby pulling forward

innovation and inward investment. Action in place will be an important part of market development as action plans are drawn up at each geographical scale to address the full range of environmental risks to the economy as shown in the diagram below:

12. Some regional partnerships and delivery programmes are already in place as set out in Annex 4. But very recent discussions with the European Commission suggest that a more integrated and action-oriented approach could bring in major EU and EIB investment through the development of a SMART Cities approach. At present the South East's programmes of retrofit, zero-carbon new-build, smart grid, traffic management and electric car development are all too dispersed and small-scale to drive major job creation or attract serious EIB funding. A major gap in terms of regional partnerships is on energy where SEEDA expects that the Government will task RDAs with holding a regional evidence base by which to organise their regions to address the national target.

13. A gap in delivery has been identified through research into carbon reduction delivery in the South East[5]. This is around community support and development. Work to address it could focus on the development of a new social enterprise sector which could develop into a key part of home market and supply-chain development. An Ecological Funding Escalator is proposed to address this opportunity as set out in detail in Annex 5.

14. **Communications** If this proposal goes forward there will be a need for a communications plan to cover SEEDA staff, partner organisations and external stakeholders such as businesses. A clear understanding of the green economy aims and opportunities will be essential for those delivering elements of the programme. There is also an opportunity to consider a public relations campaign with relevant partners to raise awareness of the importance of a green economy, the business benefits and job opportunities and the support available for businesses in developing opportunities.

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[5] *Retrofitting the existing housing stock in the South East* (2008), CSE et al http://www.seeda.co.uk/Publications/Sustainable_Prosperity/docs/SE_Strategy.pdf

Annex 1: Examples of successful focused approaches and evidence that UK lags behind the best

Danish leadership in wind turbine manufacture
In 2007, Denmark was producing 19.7% of its electricity from wind power with 150,000 families in 2,100 co-operatives owning 75% of the wind turbines. Danish manufacturers were producing half the world's wind turbines, exporting 96% of their capacity and supplying the Danish economy with 23,000 jobs.

Supportive policies have included: long-term energy policies; tax exemptions for people generating within their own or adjoining communes; close collaboration between universities and industry on R+D, test facilities and certification.

Economic impact of action on energy efficiency: California
Over the past thirty-five years, innovative energy efficiency policies created 1.5 million additional fulltime jobs in California. Looking forward, the report finds that if California improves energy efficiency by just 1% p.a., this will increase the Gross State Product by approximately $76 billion, increase real household incomes by up to $48 billion and create as many as 403,000 new jobs.

http://climateprogress.org/2008/10/20/green-policies-in-california-created-15-million-jobs/

The UK lags behind the US in early-stage cleantech investment
BVCA figures show that in 2007 only 4% (£200m) of £38bn total investment was in early stage technology compared to 33% in US

In a Cleantech Inc survey, the UK was ranked number 2 worldwide in terms of the number of cleantech companies but 4th in terms of capital invested in these businesses

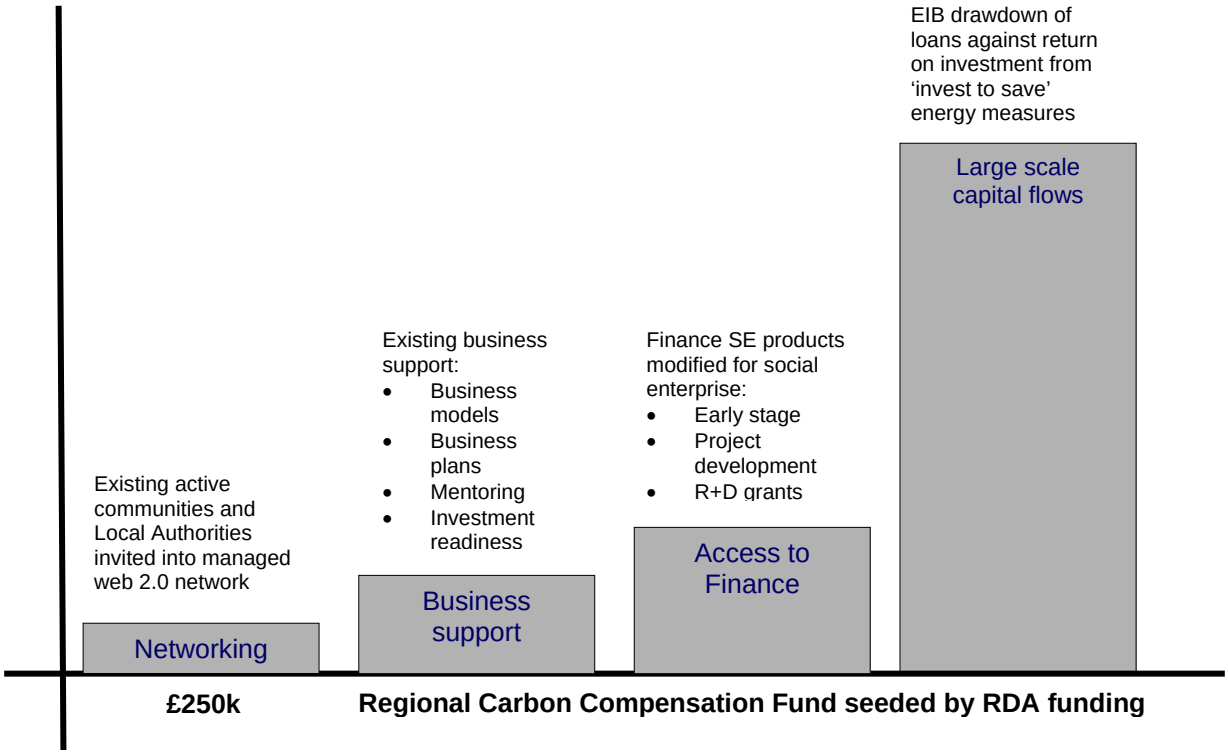
The University of Bath Environment Institute identified lack of funding as the most important issue limiting growth in the 30 largest cleantech start ups in the UK.

From 'Green Valley Oxford' prospectus

PV prices in the UK
Global silicon prices are forecast to fall during 2009 because new global production facilities are coming on-line. Prices are unlikely to fall in the UK, however, because:
- we only have one manufacturer in the UK and import most of our panels. The weak pound has meant that imported panels are more expensive and so forecast price reductions are cancelled out already
- new manufacturers are not interested in coming into a market as small as that in the UK (currently 4MW); they want to sell at least 1MW at a time
- and so the market in the UK is dominated by 2 or 3 wholesalers and competition is not leading to price falls

Environmental Change Institute, Oxford University, pers. comm. March 2009

Annex 4: Case Study for Ecological Funding Escalator



1. Rationale

The **speed** of change required to meet national targets on energy, carbon and waste – and potentially water – is such that very effective innovation and sharing of best practice is required to create the necessary market pull.

The **scale** of change required in the South East in particular is such that no one level of administration, geographic scale of operation or source of public funding will be adequate to the task. Work on renewables deployment has suggested that, to meet 2020 targets, all technologies need to be deployed at all geographic scales[6]. Work on retrofitting the 3.5m households in the South East has suggested that funding of at least £2bn per annum needs to flow into the region in order to reach 80% reduction in carbon emissions by 2050[7]. This figure increases if retrofitting water demand management technologies is added.

There is increasing understanding that the buy-in and engagement of communities will be critical to achieving the transition required in the time available[8]. This has been picked up in the Government consultation document on its Heat and Energy Saving Strategy[9]. The Office of the Third Sector and CLG are starting to develop their thinking about the role of social enterprise models in climate change and environment work.[10][11]

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[6] SEEDA Board Paper, July 2008, 'Energy Policy – review and discussion'
[7] RES Steering Group paper, February 2009, 'Sustainable Prosperity – environment'
[8] RSA (December 2008)Low Carbon Economy: final report
[9] DECC (February 2009) Heat and Energy Saving Strategy: consultation document
[10] Third Sector Taskforce on Climate Change and Environment

There evidence that South East communities are already very active and so there would be a good pool of early adopters to pilot the escalator and buy into its early stages. More than 200 communities are engaged in some form of low carbon work across the region. And 25% of Low Carbon Buildings Programme grants have come into the region. Social enterprise experts are starting to develop new models of business by which communities could take long-term, concerted action to achieve the transformations required but these are developing and disseminating quite slowly.[12][13][14]

Our 74 Local Authorities are gearing up for action in response to the new framework of National Indicators. Indicator 186 in particular requires Local Authority to think about carbon reductions across their whole area. SEEDA is already working with 36 Authorities through the Ecological Footprinting work we are doing with the Diamonds for Investment and Growth.

SEEDA has a strong economic development interest in helping to enable a new community-based social enterprise sector in the South East because it will help to create a home market of sufficient critical mass to support home-grown businesses and attract inward investment, develop the enterprise culture within communities and encourage the development of new businesses and new jobs. The level of funding SEEDA can contribute to the escalator is material to the networking, business development and access to finance steps. SEEDA will need to partner with others to bring in significant flows of capital to the region to fund investment-ready business plans. Early discussions with the Commission indicate there could be major opportunities for large-scale investment over the next 12 months, following in the footsteps of, for example, the Milan and Barcelona regions.

2. Stages in the Escalator

Networking

The work of stimulating community interest and offering them models for action is done at the stage before the funding escalator starts. There are a number of good models to get communities going on the first stages of behaviour change, such as the Greening Campaign, the Transition Towns movement and the Low Carbon Communities model. In some parts of the region these are networked together, for example through the ClimateXchange in Oxfordshire. SEEDA is supporting some of this work and needs to take a view as to what the longer term rationale for doing so is within the context of the funding escalator approach.

Many communities lose momentum after the first year or so of activity because they do not have the resources available to implement real plans of action or the capacity to develop or find sustainable business models. Efficient and targeted networking could make a significant difference to this ‘market failure’

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[11] Office of the Third Sector Community Shares project.
[12] Energy4All wind share offer model
[13] Wessex Re-investment Trust Model Rules for Industrial and Provident Societies
[14] Communities Empower Fund

by bringing community groups together in order to share best practice and to be introduced to new technologies and new business and funding models.

We have a model for this in the region in the 2Degrees Web 2.0 platform, a managed network intended for business to business collaboration on low carbon innovation. The platform is a combination of the Web technology and a management team which develops themed networking events, both real and virtual, to bring expertise and interest together around specific low carbon business opportunities or issues. The membership of the network is managed carefully and is by invitation only.

About £500,000 has been invested so far to develop the platform, with a further £250,000 to be invested this year. This is just for the technology; sponsorship and membership funding is used for targeted management of the network. 2Degrees is offering the platform structure and business model to SEEDA for no cost. A 'SE Communities' network could be developed using this combination of technology and management for around £250,000. A partner sponsor may be available from the beginning to share development costs; in any event the aim would be for the network to be self-sustaining through advertising sponsorship after the initial set-up phase of 1-2 years.

There are one or two other such platforms in existence but they do not focus in the same way on climate change and the UK's response. In particular, neither of the two most similar have the content and members relevant to UK communities in the way that 2degrees has. (www.ecoia.com and www.verid.us)

3. Project Development Pipeline: business support; project development funding; investment funding

We know that a number of communities are already trying to develop sustainable models for action, founded mainly on the possibility of developing community-owned renewables projects. SEEDA is often asked for contributions to these activities, particularly grants for project development finance. It is difficult to respond to these requests because we have no process or criteria in place to judge each project in comparison to others. Neither do we have a process for judging the strength and professionalism of the organisations making the approach.

We also know that funds are in place to encourage Local Authorities to develop renewables projects, through the Partnership for Renewables, and energy efficiency projects in their own estates, through Salix Finance. There may also be funds in place for action on water. Take-up of these funds is patchy and PfR is experiencing some difficulty getting projects to implementation.

A 'project development pipeline', based on the Finance SE funding escalator for small businesses, could be material to the fast development of real projects. The aim would be to help new social enterprises and new LA-led action plans to develop through to the final feasibility, finance-ready stage. This would include business support as well as project development funding to ensure that solid, sustainable businesses could result that could have a transformational impact on their locality over the medium- to long-term.

4. Project Finance: Large-scale Capital Flows

SEEDA's own funding is not material as projects leave the end of the pipeline and seek finance for implementation or scaling-up. A regional Carbon Compensation Fund could be an important source of funding although the major flows of finance would come in at the 'investment ready' stage from funds now being set up for the purpose to make the business case for Pension Fund, EIB and Sovereign Wealth Fund investment. The Carbon Trust may also be interested in working on the project development and investment stages of the escalator. Seed funding of around £1.5m we think would give sufficient critical mass to a Carbon Compensation Fund to draw in other contributors. This may be a very attractive offer for large businesses and organisations who come into the Carbon Reduction Commitment but are not yet fully geared up to make the required reductions themselves.

Other funds currently in development or open include the 'Communities Empower' fund being developed by the Omni Group[15] and the Ventus Funds, venture capital trusts managed by Climate Change Capital[16]. The East Sussex Local Authority bank proposal could also help to draw down funding EIB funding in the order of £billions as could the SEEDA special purpose vehicle currently in development.

[15] Empower Community fund, www.omniworldview.com
[16] Ventus Funds, www.ventusvct.com