

Understanding the Green Economy

BCM Hanby Wallace

14th May 2009

Brendan Halligan

Chairman

SEI Mission



To make Ireland a global leader
in sustainable development

- Transformation to a ‘low carbon’ society is now accepted
 - Programme for Government – 3% p.a. GHG reduction
 - EU 2020 commitment - 30% GHG reduction (baseline: 1990)
 - Both targets are identical for 2020
- 2050 target of 80% reduction on 1990 levels
- Electricity demand will double by 2050

The Inevitable

- Rule One: the inevitable always happens
- Rule Two: let it happen – don't fight it
- Rule Three: Embrace it – be ahead of the curve
- Rule Four: Claim credit for making it happen

Internalising the Inevitable

- The 'low carbon' society is inevitable
- The biggest transformation since the Industrial Revolution
- Profound change in behaviour of both individuals and society on the way
- A vision of the inevitable is essential
 - A springboard for action

Re-inventing Ireland

- The need for a new Whitaker
- Public service: either a key to change...
 - or a clamp on progress
- Start here: legitimises vision for politicians and public
- But no sign yet of a Whitaker II

Re-educate

- *Quis custodiet ipsos custodes?*
 - *Who will teach the teachers?*
- The public service must lead, and
- Engineer the change
- Lemass – semi-states became development corporations

Re-invent

- The market needs supporting framework
 - Institutions, law, regulations, taxes, prices, etc.
- Physical infrastructure
 - grid
- Finance
 - Importance of financiability
- Little of this infrastructure exists today

Re-orientate

- Personal behaviour
 - Heating/cooling
 - Appliances
 - Retrofitting
- Corporate behaviour
 - Energy Management
- Travel and transport
- Power generation and distribution

Vision for 2050

- All building stock retrofitted
- Positive carbon buildings
- 100% RE power generation
- Distributed generation and distribution
- Electrified transport
- A smart, electric economy

Irish Strengths

- Comparative advantage in wind and ocean energy
 - Major producer/exporter of RE
- Architectural profession and construction industry
 - Leaders in energy efficiency
- Manageable communities
 - Leaders in sustainable living
- IT community
 - Smart electric economy

Retrofitting

- New materials, fittings, design
- New managerial and craft skills
- New planning philosophy
- Retraining of professionals and crafts
- New financial products
 - Green mortgages, bonds and building societies

Carbon Tax

- Essential price signal
- Revenue to be hypothecated
- Ring fenced to support retrofitting

RE Power Generation

- Limits to onshore wind...
 - But offshore is literally limitless
- New ports, shipping
- Ocean Energy is promising
- Also Solar Energy
- New manufacturing and construction plus
- IT support systems and
- Operations and maintenance

RE Exports

- Vision of a ‘supergrid’
- Ireland linked to mainland Europe by three power superhighways:
 1. North: Scotland – Norway – Denmark - Germany
 2. East: Wales – England – Netherlands - Germany
 3. South: Cornwall – Brittany – France –Germany
- Enables Ireland to link up with the Mediterranean Solar Supergrid

The Electric Economy

- Vision for 2050
- RE Power Generation
- Electric transport (cars, trains, metro, trucks, buses)
- Sustainable communities
- Smart buildings and grid
- Opportunities here to create exemplars
 - E.g. manufacturing of batteries and cars

The Role of SEI: Initiatives



BUILT ENVIRONMENT

- Energy Performance of Buildings Directive (EPBD)
 - BER certification (domestic and non-domestic)
 - HARP database
 - Display Energy Certificate for large public buildings
- Home Energy Saving Scheme
- Greener Homes Scheme

SEI Initiatives cont.

- Warmer Homes Scheme
- Renewable Heat Deployment Programme (ReHeat)
- Lower Carbon Homes Programme
- Public & Commercial Sector Programme
- Pilot Electricity Use Awareness Trial
 - Smart metering

SEI Initiatives cont.

RENEWABLE ENERGY

- Microgeneration pilot field trials
- CHP/Biomass
 - CHP Deployment Programme
 - Biomass & AD CHP grant scheme

SEI Initiatives cont.

- Wind Energy
 - REFIT schemes
 - Guidelines for wind farm development
 - Irish Wind Atlas
- Ocean Energy
 - Ocean Energy Development Unit
 - Ocean Energy Industry Forum
 - Galway Bay Wave Energy Test Site
 - Prototype Development Fund

SEI Initiatives cont.

RESEARCH AND DEVELOPMENT

- Sustainable Energy Incubator Programme
- Research, Deployment & Development (RERDD)

ELECTRIC VEHICLES

- Electric Vehicles Conference
- Buyers guide
- Promotional programme

SEI Initiatives cont.

DUNDALK 2020

- Sustainable Energy Zone (SEZ)

ENERGY EFFICIENCY AND MANAGEMENT

- Energy MAP
- Large Industry Energy Network (LIEN) and for SMEs
- Accelerated Capital Allowance (ACA)

SEI Initiatives cont.



COMMUNICATION & SUPPORT

- Renewable Energy Information Office (REIO)
- Energy Policy Statistical Support Unit (EPSSU)
- Annual events (Energy Show, Sustainable Energy Awards)
- Power of One campaign

Input/Output Model

New Employment Evaluation

- Development of standard methodologies needed
 - particularly for measuring job creation
 - example of power generation: 3 jobs/MW
- Free economy is labour intensive employment
- Benefit of export/earnings/import substitution
- Greater energy security

Conclusions

- The inevitable is unfolding
- Ireland has the capacity to be a leader
- We need Whitaker II – a green book?
- We can simultaneously solve:
 - environmental crisis
 - economic crisis
- Greatest economic opportunity in history
- On with the Green Revolution!