

2011 SEVERN ESTUARY FORUM



THE BRISTOL PORT COMPANY

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1. A view of Climate Change
2. Ports and their role
3. Bristol Port
4. Our approach to Climate Change
5. Our approach to renewable energy
6. Challenges in the Estuary
7. Conclusion



A Port Engineer's View

Climate Change –
It's about emissions;
man made emissions
that are screwing up
the system



- We all have a responsibility to reduce harmful emissions
- Ports must set an example
- We might not stop climate change, it may be too late to reverse it
- But We must still try to slow the change



Shipping, Freight & Ports

SHIPPING

- Carries 90%+ of world trade: Raw materials and commodities, Finished goods, Foodstuffs, Fuel
- Underpins global economy and is essential for sustainable development
- Is safe, secure and the most environmentally- friendly and fuel-efficient of all modes of freight transport

FOR THE UK

- 97% by tonnage of all the goods entering and leaving the UK do so through sea ports
- Our balance of trade is an annual deficit of £100 billion
- UK is increasingly dependant upon imports; and thus as an island nation, we are reliant upon Ports



Ports – multimodal transport hubs, economic generators for the UK

Must have a significant role to play in meeting the objective (of reducing emissions)

Primary role - Reduce emissions from the logistics chain

Secondary role

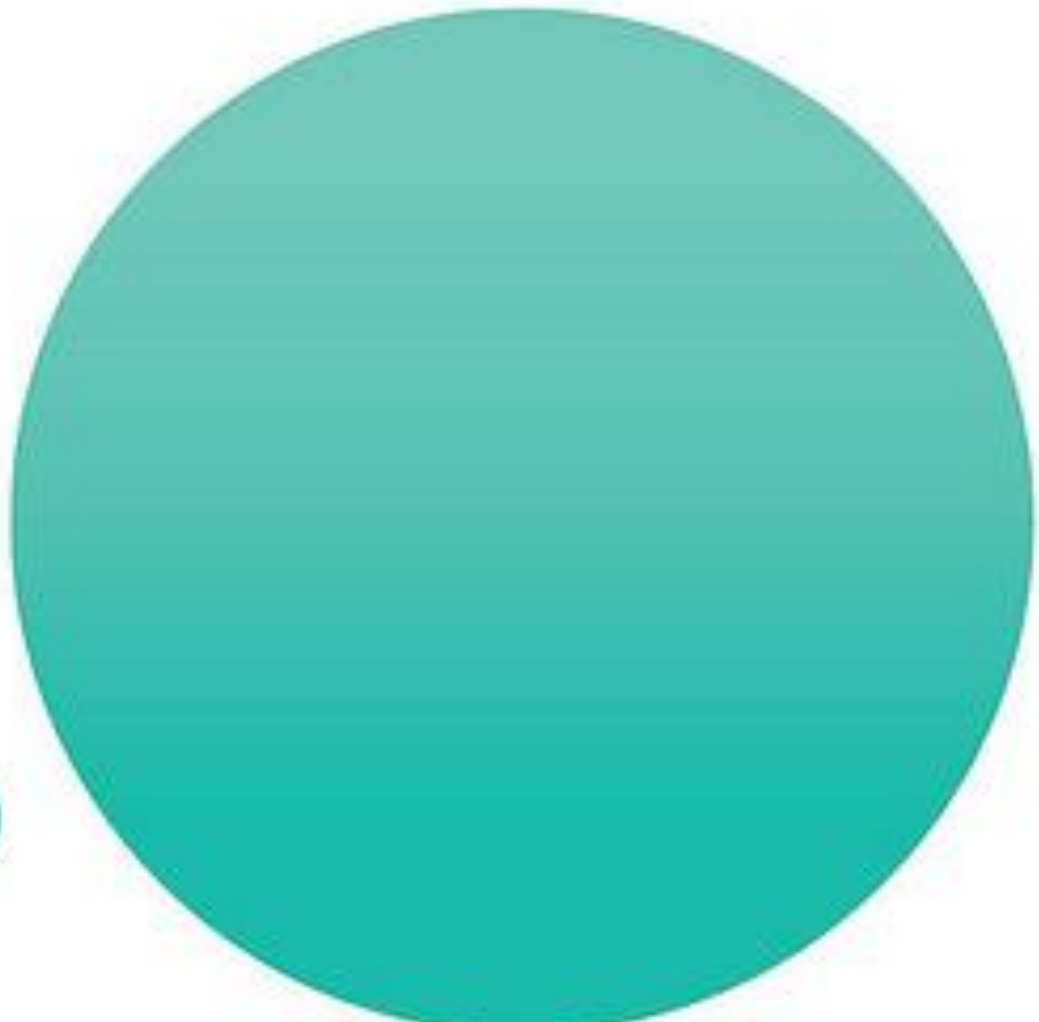
- Reduce their own power consumption
- Use renewable energy
- Reduce waste
- Help customers and tenants
- Undertake sustainable development

Furthermore:

- Satisfy obligations – CRC
- Meet & exceed customer requirements/expectations



Grams of CO₂ emitted by transporting 1 ton of goods 1 km





THE BRISTOL PORT COMPANY

Annual tonnage 13m

Turnover £75 m

**8,000 depend on the Port for their
employment**

Close to the UK population

Big ship capacity

**Multi-modal facility with excellent
links by sea, road & rail**



Major Customers

E.ON UK

International Power

RWE NPower

SSE Energy

Daimler Chrysler

Fiat

Honda

Mitsubishi

Toyota

Land Rover

Jaguar

Autologic

Arkady Feed

Matthew Clark Wine

LaFarge Plasterboard

International Plywood

Mondi Business Paper

MSC

Esso Petroleum

Kuwait Aviation Fuel



Bristol's approach : Smarter Operations

- High Efficiency
 - Trucks
 - Pumps
- Programme of Fleet modernisation
- 'Turn off' campaigns
- Green travel plans
- Wind Turbines
- Proactive environmental approach
- Efficient land utilisation
- Cold Ironing





Bristol's approach : Smart approach

- ISO 14001
- CRC
- *Suds et cetera*
- Added value at Port
- Assist our customers





Work with Customers (1)

Bristol's Feeder Hinterland

Bristol

- Retail distribution hub
- Food manufacturing

South Wales

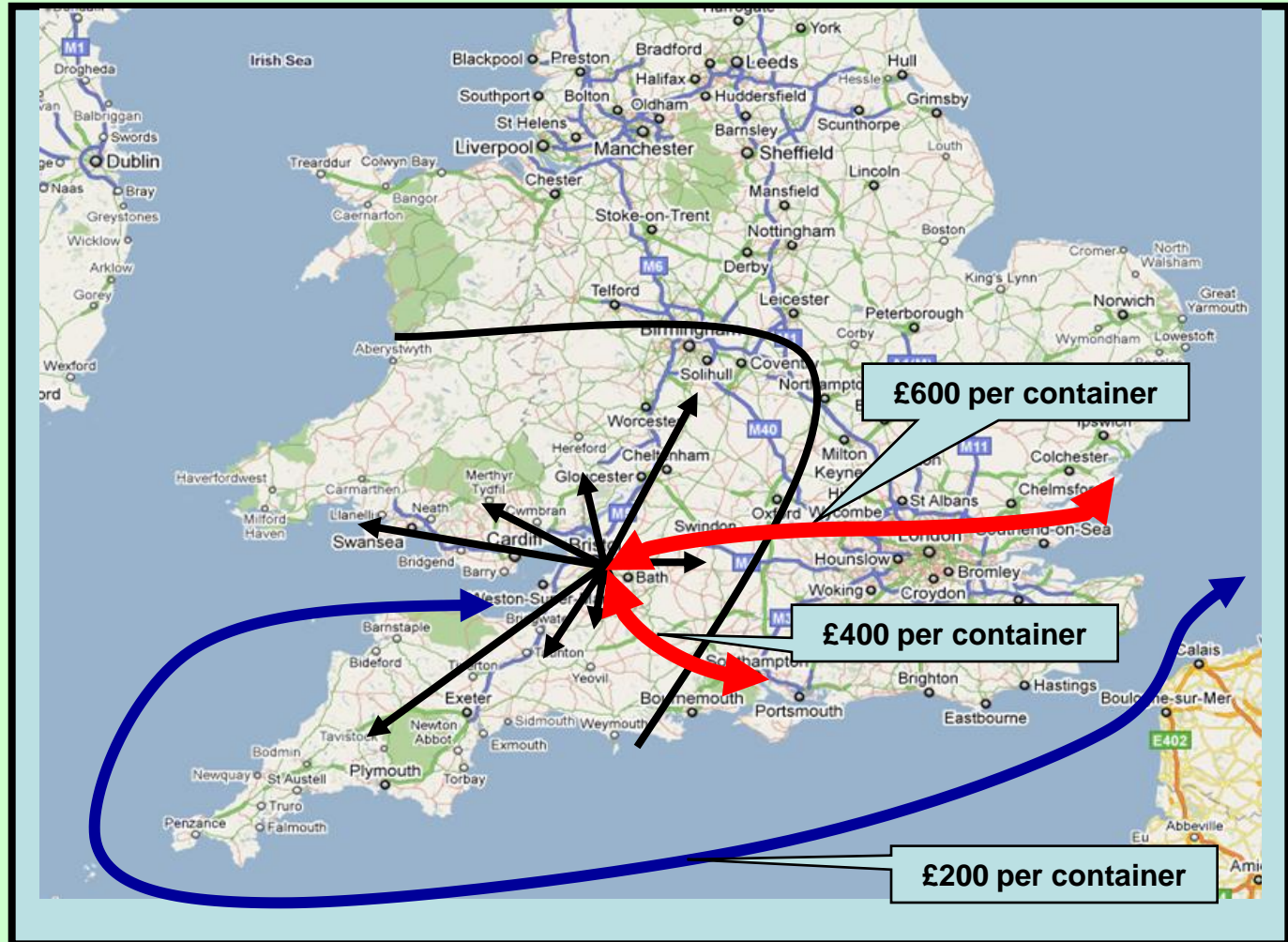
- Industrial manufacturing

West Midlands

- Car manufacturing
- Steel

Devon / Cornwall

- Mineral exports

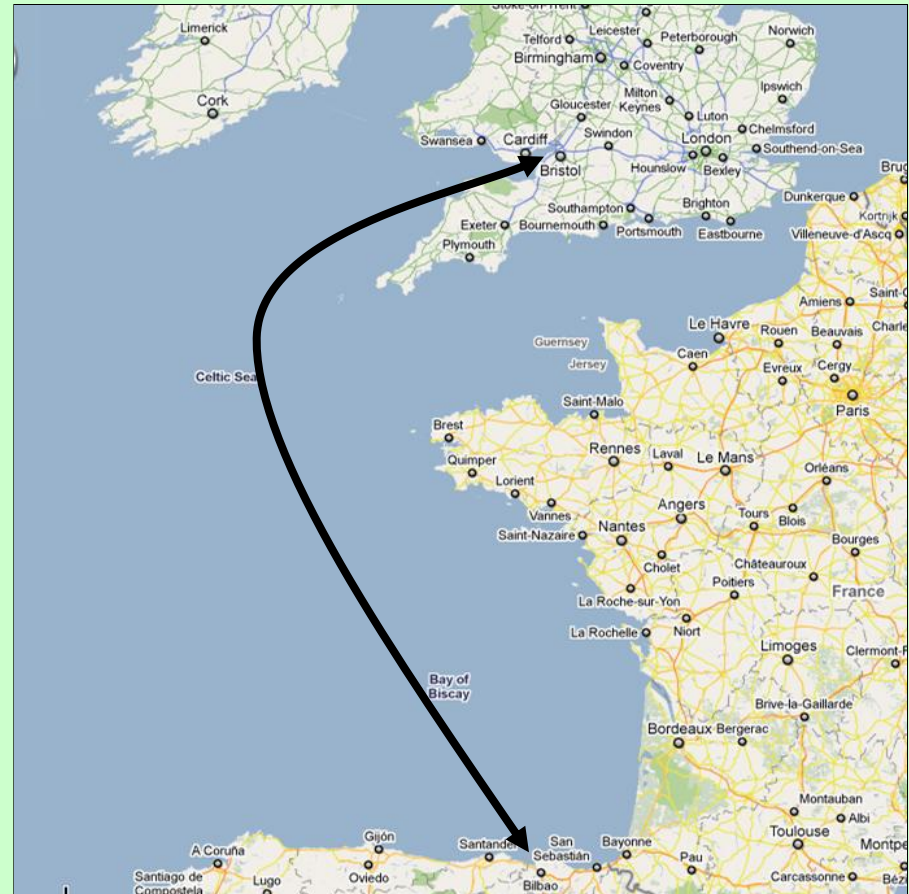




Work with Customers (2)

Short sea container service

- Operated by DFDS/Suardiaz and MacAndrews
- Bilbao to Bristol weekly
- Main cargos: wine, fruit, fruit juice, metals
- Saves thousands of miles and emissions trucking across France





Ports and renewable energy (1)

Wind Turbines

- 3 turbines, 2MW each

Actual Generation:	15+ GWh
Equivalent homes	4,669
CO2 saving	15,408 tonnes
Major reduction in power costs	£1 million

- Planning Consent recently secured for 3 more





Ports and renewable energy (2)

Port-based Power Stations

- **E-on UK** 150 MW power station – wood pellet
- **Helius Energy** 130 MW power station – wood pellet
- **Confidential Client** 150 MW power station – wood pellet
- **Confidential Client** 50 MW power station, veg. oils

- **Eon will save 500,000 tonnes of CO₂ annually** *ES, Feb 09*

- **Only Electricity is transported inland – not the fuel !**



Ports and renewable energy (3)

Helping to meet Government Objectives

- Nuclear – supply chain during construction
- Bristol Channel Array – part of the Round 3 off shore – supply chain during construction
- Biomass import for UK inland power stations





M49,
Wales

M4/M5
i/c

Twin rail
tracks to
Parkway

M5,
J18

Avonmouth/
Severnside

North

Proposed Avonmouth Deep Sea Container Terminal



Benefits of Container Terminal development in reducing CO₂

- Provide container import/export capacity for UK on West Coast
- Enable the distribution of cargo from Bristol to the local hinterland
- Utilise existing road & rail infrastructure
- Support developing local distribution market
- Anticipate opportunity for coastal shipping



The Severn Estuary – a unique environment

- ***High tidal range and flows*** – a challenge for manoeuvring & berthing but an asset for big ships
- ***Suspended Sediment*** – limits wildlife in the water and looks unattractive but self-scours and limits wildlife.
- ***Mud Flats*** – dangerous and unattractive but supports wildlife



Conclusion

Ports have a key role to play in reducing the UK's emissions, principally in the logistics chain but also in helping to deliver renewable energy

Ports also contribute by helping their customers & tenants

Bristol Port already contributes significantly to emissions savings by providing multi-modal transport options and delivering cargo near to its users

Bristol and other Ports have an essential role in helping to meet the Government's objectives for energy supply