

## *Is the shipping industry ready to act on climate change?*

### ***Carbon policy for shipping is coming***

The global shipping industry is responsible for c.3% of all CO<sub>2</sub> emissions, a third of which result from voyages involving EU ports.

To date the shipping industry has not had to comply with any carbon emissions limits and does not come under existing international carbon legislations (such as the Kyoto Protocol).

This is anticipated to change as early as end of 2011 with carbon policy proposals for a levy on bunker fuel (as advised by the UN Advisory Group for Climate Change Finance), the suggested inclusion of the sector in the EU's emissions trading system (ETS) and measures to cut global shipping emissions put forward by the International Marine Organisation (IMO). It is not yet clear to what extent the different proposals will interact or overlap.

### ***What are the implications for your business?***

Fuel costs represent a high proportion of operating costs and will increase with the additional cost of carbon attributable to that fuel. On the basis that 3 tonnes of CO<sub>2</sub> are generated for each tonne of fuel consumed, we estimate that carbon could represent c.15% of total fuel costs.

With tightening carbon regulation, total operating costs could increase by 10% by 2030, based on carbon and fuel price assumptions of €55 per tonne of CO<sub>2</sub> and \$700 per tonne of HFO. Given the future uncertainty of carbon prices specifically, a scenario with a carbon price of €100 per tonne CO<sub>2</sub> in 2030 may result in a c.18% increase in operating costs. These cost increases should act as a catalyst for fuel and carbon efficiency.

Carbon policy presents an additional financial and operational burden, but also an opportunity to add business value and gain a competitive advantage.

### ***What are the business considerations?***

Strategy	<ul style="list-style-type: none"><li>Integrate climate change risks and opportunities into overall company strategy</li><li>Assess costs of carbon in capital expenditure decisions</li><li>Engage with policy makers on climate policy</li></ul>
Governance	<ul style="list-style-type: none"><li>Identify formal accountability for oversight and management</li><li>Set KPIs for climate change related activities</li><li>Establish incentives that link to these KPIs</li></ul>
Stakeholder engagement	<ul style="list-style-type: none"><li>Communicate in mainstream reporting or other regulatory filings</li><li>Verify emissions data through an external third party</li><li>Engage with key clients to explore opportunities for lower carbon intensive shipping services</li></ul>
Achievements	<ul style="list-style-type: none"><li>Implement energy or emissions reduction initiatives</li><li>Set and achieve emissions reduction targets</li><li>Capitalise on opportunities as a source of business value</li></ul>

## How we can help you?

The PwC climate change and carbon markets team has over 300 professionals worldwide. We have a deep understanding of climate change policy developments and market trends, having established strong relationships with policy makers and been involved in the carbon markets for over 10 years.

Our team provides services in carbon markets advisory and strategy, carbon valuation, and carbon risk management and governance. We provide support to audit, valuation and transaction services teams within PwC where carbon is a key business issue.

We have extensive experience of working in the Transport & Logistics sector and have recently supported a number of companies within the airline industry which will be included in the EU ETS from 2012.

### Strategic options advice

We can help devise and implement a strategy to manage risks and maximise value associated with carbon policy that is aligned with the wider corporate objectives. We also provide 'policy-preparedness' support to companies.

### Carbon valuation

We are able to provide a range of valuation services from reviewing assumptions in an existing valuation, through to building a complete carbon asset model to determine the valuation from first principles.

### Risk and governance

We provide advice on the implementation of processes and controls to support the integration of climate change considerations within your business.

### Carbon due diligence

We work with clients on the buy-side and sell-side in assessing and quantifying the potential carbon impact of acquiring or disposing of a business or carbon assets, as well as in identifying key risks related to regulatory issues and market trends.

#### Client

#### Project

Shipping companies **Carbon impact analysis** of the inclusion of the shipping sector in the EU ETS, describing the financial consequences and how the two companies would operate under the trading scheme. Work included an investigation of other fiscal instruments, such as taxes and fees, which might be used for regulating shipping emissions.

EU Commission **Development of a trading scheme** to limit sulphur and nitrogen emissions from shipping. Work included an analysis and inventory of existing systems, impact assessments and estimates of technical solutions and economic impact of the proposed market-based incentive on the shipping sector.

International airline **Buy-side M&A advice** to assess readiness and overall exposure under the EU ETS. Analysis included review of carbon projections, treasury arrangements for carbon hedging and readiness of IT systems to meet MRV requirements.

Major global airline **Strategic business plan review** looking at cost reduction opportunities and value drivers over the long term. The work also considered how carbon costs under the EU ETS are modelled over the medium term.

## How to contact our global carbon market and shipping experts

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