European Commission

DG Enterprise and Industry

Initiatives on the Greening of the Shipbuilding Industry and the Diversification of Shipyards

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Greening and Diversification: What does it mean?

- ***Greening*** *of shipbuilding means improving the the* *<u>environmental performance of ships</u>.* *Shipbuilding provides the technical solutions for sustainable shipping.*
- ***Diversification*** *(sometimes "transformation" or "conversion") of shipbuilding means a full or partial change of the production programme of a shipyard.* *Reasons: Exploiting new business opportunities outside shipbuilding which allow further use of the facilities and know-how of staff for new productive measures.*

Greening and Diversification are very different from the perspective of the enterprise and require different business models and strategies

Greening of shipbuilding and shipping Importance for practice and policy

Three crucial developments over the past few years

1. Move from a research topic to an implementation challenge
2. Move from an option to an obligation
3. Move from a niche strategy to a key factor in international competition in shipbuilding

1. From a research topic to an implementation challenge

Improvement of the environmental performance of ships has been a central topic in public and private research in the past decade. The majority of R&D projects in FP6 and FP7 have an environmental dimension.

Technical solutions for virtually all topics have been developed and Europe is in a leading position.

The challenge now: Implementation in industrial practice; overcome doubts on functionality under real life conditions by getting practical experience (example: scrubbers to control sulphur emissions).

Consequence for policy making:
Partial move of focus from R&D projects to innovation programmes (inovation aid, financing for innovative green projects) and providing the right framework conditions (regulatory and financially)

Greening of shipbuilding

2. Move from an option to an obligation

The **regulatory landscape** has dramatically changed over the past few years. A large number of challenging regulatory requirements will come into force in the coming years. Most important:

For CO_2 / GHG: EEDI (ongoing process), SEEMP and discussion/preparation of Market Based Measures

For SOx: MARPOL Annex VI and the revised Sulphur Directive

For NOx: MARPOL Annex VI

For Ballast Water: Ballast Water Convention

In addition: The enormous **increase in the price price of marine fuels** focuses the attention of ship operators on energy efficiency

Consequence for policy making:
The regulatory backlog which impeded innovation in shipbuilding for a long time is largely gone. The challenge now is rapid implementation in a very difficult economic and financial climate

Greening of shipbuilding

3. From a "niche strategy" to a key factor in international competition for scarce new building orders

During the big boom in global shipbuilding (ca. 2004-2008) environmental considerations and fuel efficiency hardly played role. Quantity and speed came first. Unfortunately this means that we have now a very large number of fairly new cargo vessels that are technically outdated.

Since the outbreak of the crisis the picture completely changed. Shipowners and shipfinancers realise that ships with a low performance have massive difficulties on the charter and second hand market.

The consequence is that energy efficiency and environmental performance have become key marketing arguments. Most ships ordered now are at least partly "green". On one hand this is positive for European shipbuilders and even more for the European marine equipment industry which have been early movers. On the other hand competition has become much stronger.

Consequence for policy making:
Greening needs to be addressed in trade policy for the sector (OECD and bilateral dialogues)

Shipbuilding and off-shore engineering

Shipbuilding and off-shore engineering are closely linked. The construction and operation of any off-shore installation, be it for off-shore oil and gas, dredging, or since recently for the construction of off-shore wind farms needs ships!

(Some) shipyards have a long and unique experience in the production and maintenance not only of off-shore supply vessels, but also drilling rigs and platforms.The shipbuilding industry in some European countries and regions is specialised in these products and highly successful. However, until some years ago this market has been relatively quiet due to a low level of new investments, especially in Europe.

The move to more renewable energy and the beginning technical feasibility of off-shore wind farms changed the picture completely. Enormous investments are envisaged in the coming years in this sector.
In addition off-shore oil and gas moves to ever more sophisticated projects.
Improvements are needed to avoid severe consequences for the environment.

Diversification in shipbuilding

Diversification into off-shore renewables – a massive challenge

Especially in the current crisis hopes are high that off-shore renewables will create the much needed employment for a flourishing shipbuilding industry in Europe. In principle these hopes are justified, but

- the operational experience with off-shore wind farms is still very limited. This creates massive risks for delays and cost over-runs. Banks are very cautious in financing;
- The wind energy sector has little experience in operating in a marine environment. Energy companies are reluctant to enter into the purchase and operation of ships themselves. Until now there was a strong reliance on chartering vessels from the off-shore oil and gas sector;
- Location counts: proximity to the future wind farms is a very important asset;
- Skills and experience: Given the inherent risks and engineering demands the energy companies require solid references, which make an entry to newcomers difficult, especially when it comes to erection vessels;
- Increasing international competition and financing needs: Especially the big Korean shipbuilding and heavy industry groups target off-shore installations and support vessels as a key area to diversify from the inattractive market for cargo vessels.

Greening and Diversification – the core of the revised LeaderShip initiative (1)

Prime objective of LeaderShip:
Enhancing the competitiveness of the European shipbuilding by a focus on knowledge and innovation
Europe has managed to keep a top position in the production of specialised vessels with a high engineering and design content, examples: Cruise and passenger vessels, marine dredgers, off-shore supply vessels;

This position needs to be defended in the current shipbuilding and shipping crisis. The revision of LeaderShip, launched by Vice President Tajani end of 2011, with participation from all stakeholders, is to provide an updated policy response.

Greening and Diversification – the core of the revised LeaderShip initiative (2)

"Greening" of ships as contribution to sustainable maritime transport, and

Diversification into new emerging markets are the central topics of the revision of LeaderShip.

<u>Three elements are decisive for both business strategies</u>:

- Availability of the necessary know-how => Research, development and innovation;
- Availability of the right skills => training and employment
- Availability of financial resources at competitive conditions => Finance and international competitiveness

Three working groups are currently working on these issues; Results including recommendations for practical measures should be available in early 2013

Thank you for your attention

For further reading:

Green Growth opportunities in the EU Shipbuilding Sector,

study by ECORYS, CE Delft and Idea Consult for DG Enterprise and Industry

available on our website:

http://ec.europa.eu/enterprise/sectors/maritime/shipbuilding/index_en.htm