

Motorways of the Sea - MoS Digest #11  
8<sup>th</sup> of July 2016



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## Transport is now Europe's biggest climate problem - EEA data

**Keywords:** Greenhouse gas emissions, European Environment Agency, Transport & Environment (T&E), European Commission, Member States, ICAO, IMO, the EU's Paris commitments



Greenhouse gas emissions from the transport sector have grown for the first time since 2007 while those of other sectors of the economy have decreased, data released today by the European Environment Agency (EEA) revealed. The EEA's report on EU-wide trends in greenhouse gas emissions in 2014 plainly shows that transport has now become the single biggest emitter of greenhouse gases in Europe.

Greenhouse gas emissions from all transport modes increased by 0.6% to 1,153 million tonnes of CO<sub>2</sub> equivalents (MT CO<sub>2</sub>eq).

Emission from sectors other than transport decreased. Emissions of the power sector, until recently the biggest emitter of CO<sub>2</sub>, fell by 7.4% to 1,066 MT CO<sub>2</sub>eq due to the combined effects of closure of around 10GW worth of fossil fuel-powered plants and the installation of around 20 GW of new wind and solar generation capacity across the continent.

Jos Dings, executive director of Transport & Environment (T&E), said: "These numbers serve as a wake-up call to those who thought that Europe was turning the corner on its transport emissions. Transport is now without question Europe's biggest climate problem."

The findings are highly significant because the European Commission is planning to release a strategy to decarbonise transport in Europe on 20 July. On that date it will also present a proposal to implement the EU leaders' commitment to cut greenhouse gas emissions from sectors outside the ETS - the largest of which is transport - by 30% between 2005 and 2030 in the so-called 'effort sharing decision'.

"The European Commission has no choice but to help Member States and come with an ambitious 'efficiency and electrification' strategy for transport with new car and truck CO<sub>2</sub> standards by 2025," Jos Dings continued.

CO<sub>2</sub> emissions from international aviation and shipping, which are not included in the total EU GHG inventory, increased by 1.6% and decreased by 0.2% respectively. When international transport is included, the share of transport in the EU's total CO<sub>2</sub> emissions now stands at an all-time high 30.8%, of which international aviation and shipping represent 7.3%.

Bill Hemmings, aviation and shipping director at T&E, commented: "These trends are a clear risk to achieving the EU's 2030 emissions reduction targets and show clearly that effective measures to control aviation and shipping emissions are urgently needed at European level. For Europe simply to outsource climate policy on aviation and shipping to two UN agencies, ICAO and IMO, with poor track records would be a clear betrayal of the EU's Paris commitments. International transport needs to contribute to EU's 2030 climate target as all the other sectors of the economy do."



T&E stresses that the figures for transport are worse than what EEA figures show because biofuels used in transport are counted as zero-carbon and hence 'disappear' from the numbers, despite the fact that most biofuels used in Europe are worse for the climate than their fossil equivalents. This means transport emissions are in reality around 6% higher than the EEA numbers indicate (1).

Jos Dings added: *"The Commission should also urgently close the loophole by which first-generation biofuels count as zero-emission when in fact most of them make climate change worse not better."*

Source: Transport & Environment

Link: <http://bit.ly/29DOjZm>

## Exclusive: ECB reviews banks' lending to troubled shipping industry - sources

**Keywords:** *European Central Bank, shipping industry, global ship finance, Deutsche Bank*



The **European Central Bank** has launched a **review of banks' lending to the shipping industry**, much of which is suffering a deep downturn, five people familiar with the situation told Reuters.

The review by the ECB's banking supervisor has raised concerns among lenders, **particularly in Germany**, that they may be required to set aside more capital and make higher loss provisions against loans to the industry.

At the end of last week, the supervisor sent an email asking a series of European banks for details of their shipping loans and the status of their loan loss provisions as an "initial step" in a broader review of lending in the sector, one of the sources quoted the email as saying.

"It is a very extensive request," the source told Reuters.

**The ECB** declined comment.

Germany was one of the world's main centers of **global ship finance** before the 2008 crisis, and the five German banks with the closest links to the shipping industry still have around 80 billion euros (\$90 billion) on loan to the sector.

State-backed lender NordLB said this month it plans to take full control of subsidiary Bremer Landesbank because of the latter's burgeoning losses in ship finance.

Peers such as **HSH Nordbank and Commerzbank** have also taken writedowns and boosted capital buffers against the risk of shipping loans turning sour.

While the oil tanker trade has picked up, the container and dry bulk shipping industries are struggling with a glut of ships, a faltering global economy and weaker consumer demand.

The **ECB** already combed through ship financiers' books during its **Asset Quality Review** of the largest euro zone lenders in 2014 before it took over responsibility for supervising them from national bodies.

Banks now fear tighter supervisory conditions following a renewed downturn in the shipping market since the third quarter of 2015 and the ECB's patience with gradual corrective measures may have worn thin.

"People (will) more and more face reality, but that means more and more increased loan loss provisions and the capacity to crystallize losses," **Klaus Stoltenberg**, global head of ship finance at **Deutsche Bank**, said on June 7.



Banks will be forced to mark down their loans and adjust portfolios to market values over the next two years, he told a **Tradewinds shipping forum in Athens** "There is no more room to kick cans," he said.

NordLB, HSH and Commerzbank declined comment.

*Source:* Reuters

*Link:* <http://reut.rs/29XGvGF>

## Danish ships to be issued with digital certificates

**Keywords:** *Denmark, Danish Ministry of Business and Growth, digital certification, electronic certification, digitalization, International Maritime Organization*

As one of the first countries in the world, **Denmark will, as of 24 June 2016, put an end to the 100 years old tradition of certifying ships by means of old-fashioned certificates on paper**, the **Until now**, the certification has been carried out by printing, stamping and signing paper certificates and subsequently sending them around the world to be kept on board ships, the **Danish Ministry of Business and Growth** said in a press release.

**Digital certification** – or electronic certification which is the term used internationally – **will put an end to these cumbersome procedures, reduce administrative workloads and pave the way for further maritime digitalisation.**

The Minister for Business and Growth, **Mr Troels Lund Poulsen**:

"It is important for our businesses to embrace the digital era. Therefore it makes me proud that Denmark is one of the very first countries in the world to use electronic certification, which will reduce the administrative workload and save time and money in the maritime sector."

Many years' worth of international negotiations has laid the ground for today's launching of electronic certificates. Denmark has worked in the **United Nations' International Maritime Organization, IMO**, to keep reduction of administrative burdens on the agenda. And electronic certificates are an excellent example of a simple, digital solution that will make life easier for Danish shipowners and seafarers on board Danish ships.

The Director General of the Danish Shipowners' Association, Ms Anne H. Steffensen:

"The **Danish Maritime Authority has been working hard in the IMO to gain acceptance of electronic certificates.** It is a major step in the right direction that will help reduce administrative burdens and costs imposed on Danish shipowners and ships. Denmark is in the lead here and we hope that other **Flag States** and classification societies will follow Denmark's initiative."

The ships' old paper certificates will be replaced one at a time as they expire. Ship owners will also get online access to their own certificates, which will further reduce the amount of administrative work.

The **Ministry of Business and Growth comprising six agencies conducts thorough economic analyses** and suggests policy initiatives in areas imperative to economic growth. The Ministry is responsible for a number of policy areas which are important for the general business environment, including business regulation, Intellectual Property Rights, competition and consumer policy, the financial sector and shipping. The Ministry



is engaged with various international organizations enhancing international framework conditions for growth. In the **European Union**, the **Ministry participates in the work of the councils for Competitiveness and Maritime Transport**. The Ministry comprises 6 agencies.

*Source:* Port News

*Link:* <http://bit.ly/29C3HVv>

## Bulgaria Signs Declaration to Develop Orient/East Med Rail Freight Corridor

**Keywords:** Bulgaria's Transport Minister, rail freight corridor, TEN-T 2016 Days, North Sea, Baltic Sea, international freight transport, Trans-European Transport Network, European Commission



Bulgaria's Transport Minister Ivaylo **Moskovski** has signed a declaration to develop the Orient/East Mediterranean **rail freight** corridor – a project dedicated to improving railway freight services in Europe.

The document was also signed by the **transport ministers of Austria, the Czech Republic, Slovakia, Hungary, Romania, Greece and Germany** within the framework of **TEN-T 2016 Days conference** taking place in Rotterdam on June 20-22.

The project embodies the principle of the trans-European network and illustrates the challenge its integration poses. Ultimately, it aims to connect **Central and Eastern Europe** better to the **North Sea and Baltic Sea coasts**.

"The development of **international freight transport** will contribute to the development and smooth functioning of a sustainable single European railway area," **Moskovski** said at the **conference**, according to a statement issued by the Transport Ministry in Sofia on Tuesday.

The TEN-T 2016 is an event organized by the European Commission.

The inclusion of the Western Balkans in the Trans-European Transport Network (TEN-T) is of great importance for **Bulgaria**, **Moskovski** said at a ministerial meeting of **Bulgaria** and neighboring countries held as a part of the **conference** under the motto "TEN-T - a bridge between Europe and the rest of the world".

The creation of a common transport network in Europe and its neighboring regions is extremely challenging as it needs significant financial resources plus good coordination and cooperation in order to achieve and implement common standards, procedures and interoperability, **Moskovski** said.

Source: Novinite

Link: <http://bit.ly/2afNOEI>

## Declaration about further development of Rail Baltica signed in Rotterdam

**Keywords:** *Trans-European Transport Network, TEN-T Days 2016, Rail Baltica, European Commission*



Latvia, Lithuania, Estonia, Poland and Finland as well as the European Coordinator for the North Sea-Baltic TEN-T Corridor, Catherine Trautmann, today signed a joint declaration about intention to continue active implementation of Rail Baltica project for construction of the European-gauge railway linking the Baltic States with the rest of Europe, reported LETA, referring to the Latvian Transport Ministry.

The declaration signed during the Trans-European Transport Network (TEN-T) Days in Rotterdam underlines

the project's strategic importance for improving the transport network between the Baltic states, neighboring countries and the rest of Europe and for facilitating mobility of population and domestic and cross-border cargo flows.

The parties to the declaration confirmed their commitment to construction of *Rail Baltica* on the route Tallinn-Parnu-Riga-Panevezys-Kaunas-Warsaw.

Latvian Transport Minister **Uldis Augulis** said during the signing ceremony that the declaration reiterated support to *Rail Baltica* in all countries involved in the project, which would create connectivity with Europe by means of a high-speed rail line.

"By this declaration all the parties involved, including Finland and Poland, reaffirm their willingness to cooperate in implementation of the project and awareness of its geopolitical and economic value added," Augulis said.

**TEN-T Days 2016 in Rotterdam on June 20-21 were organized by the European Commission in cooperation with the Dutch Presidency of the Council of the EU.**

As reported, the *Rail Baltica* project deals with construction of a new 1,435 millimeter standard-gauge railroad in the Baltic countries. The **European Commission has allotted Latvia EUR 238 million for the first round of the project.**

By 2020, the three Baltic states will receive a total of EUR 442.2 million (co-funding of 81.83 percent) for this project.

The *Rail Baltica* project seeks to re-establish a direct connection between the Baltic states and the European railway network. The project is expected to facilitate regional integration by means of a railway link from Helsinki that would link **Tallinn, Riga, Kaunas, Warsaw and Berlin** and might potentially be extended to Venice.

Source: Baltic - course

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Link: <http://bit.ly/2ablAx7>

## EU Ministers Agree on TEN-T

**Keywords:** *Trans-European Transport Network, Violeta Bulc, Connecting Europe Facility*



*The EU transport ministers convened at the first day of the TEN-T Days in the Van Nelle Factory in Rotterdam.*

They discussed the process of implementing the Trans-European Transport Network: **new challenges and opportunities, new technologies and mobility patterns for passengers, as well as digitalization and automation of freight transport.**

EU Commissioner for Transport Violeta Bulc said, "Only days after we allocated € 6.7 billion to priority projects as part of the **Connecting Europe Facility**, the TEN-T Days offer another opportunity to mobilise funding for transport investments. *Implementing the Trans-European Transport is not only about building new infrastructure, it also serves our broader objectives such as the decarbonisation and digitalisation of transport.*"

The ministers agreed upon the implementation of TEN-T and reaffirmed the **importance of TEN-T as a key driver of sustainable growth, jobs, competitiveness and territorial cohesion in the European Union.** They underlined the need for additional funding from public and private sources to cover investments in the context of TEN-T.

The ministers also paid attention to the importance of **developing inland navigation and promoting the use of inland waterways.**

The European Commission is firmly delivering on President Juncker's top priority of creating jobs and boosting growth in the European Union, by unveiling a list of 195 transport projects that will receive €6.7 billion of funding under the Connecting Europe Facility (CEF).

Source: Marine link

Link: <http://bit.ly/29ZJRqO>

## Demetriades says Turkey must lift restrictions on transport

**Keywords:** *Cyprus, Trans-European Transport Network, TEN-T Days 2016, EU transport networks, all EU Member States, Core Network Corridors, ERTMS, Motorways of the Sea*



Turkey must lift the restrictions on Cypriot air and sea traffic, which prevent the implementation of the principles of free competition, Transport Minister Marios Demetriades has said.

The minister, who participated in the conference of the **Trans-European Transport Network** (TEN-T Days 2016) that took place in the Netherlands, also said that Cyprus believes that sea routes must become a basic tool for Europe's connectivity with the rest of the world.

The conference discussed the interconnection of **EU transport networks**, with an extension of the **TEN-T to third countries, and ways to support the development of these infrastructures.**

In his intervention, Demetriades said that Cyprus fully supported a further extension of the TEN-T beyond the immediate neighbourhood of EU members.

"This should be applied without exclusions, but above all in a transparent manner, involving **all EU member states**" he said.

Demetriades, in the **context of Turkey's participation in the meeting, pointed out the restrictions on transport that Ankara imposes and which prevent the implementation of the principles of free competition, increase significantly the cost of transport and violate the fundamental principles of the EU.**

"These restrictions should be lifted immediately," he said. Turkey does not recognise the Republic of Cyprus, in spite of repeated calls by the EU to do so and normalise its relations with Nicosia.

On the sidelines of the conference, the Minister held a meeting with the coordinator of the Orient/East–Med Mathieu Grosch and the coordinator of the central **Motorways of the sea** Brian Simpson, with whom he discussed projects that Cyprus will propose for funding.

The event gathered all stakeholders playing a key role in delivering the efficient transport network that **Europe needs, EU Ministers, Members of the European Parliament, the European Commission, the TEN-T Coordinators, the European Investment Bank, Ministers from Europe's neighbouring countries and the whole TEN-T stakeholders community** including project promoters and private investors.

Participants had the opportunity to collectively address the major challenges of boosting investments in transport and discussed the development of the trans-European transport network, with a special focus on the **Core Network Corridors, ERTMS and Motorways of the Sea**, with a particular view to their implementation and financing.

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Source: Cyprus Mail

Link: <http://bit.ly/2a8i3zR>

## EU's message, values more important than ever post-Brexit, Bulc says

**Keywords:** *Brexit, European Union, Violeta Bulc, UK, European Commissioner for Mobility and Transport, World Economic Forum*



The Brexit won't stop the European Union (EU) pushing on with transport and infrastructure projects, the European Commission's transport chief told CNBC, amid the upheaval caused by Britain's impending exit from the EU.

Instead, the U.K.'s vote to exit the EU had underlined for the trade bloc the importance of its "fundamental messages and values," Violeta Bulc, European

Commissioner for Mobility and Transport, on the sidelines of the **World Economic Forum** (WEF) 2016 in Tianjin, China.

"We will make sure that we don't challenge economic stability and are very much focused on creating conditions for businesses to evolve," she said, of the EU's transport and infrastructure plans.

The **European Commission announced 195 transport projects in June**, according to an official statement, which said the project would receive 6.7 billion euros (\$7.39 billion) of funding under the Connecting Europe Facility (CEF), and could create up to 100,000 jobs in the European economy by 2030.

Recently completed projects include Switzerland's Gotthard rail tunnel, the world's longest and deepest rail tunnel, that goes through the Alps as part of the **core trans-European transport network** (TEN-T).

Bulc told CNBC the **European Commission** was also committed to building infrastructure ties with China.

"We are now strategically planning one of the most important global projects, which is Silk Road, which could enhance the transport connectivity between Europe and Asia," the Slovenian politician said.

"We need to make sure that all countries along the [Silk Road] corridor can use it for their own growth and development as well," she added.

Source: CNBC

Link: <http://cnb.cx/29Uz7r7>

## Trilogue on Ports Regulation: agreement reached on June 27th, 2016

**Keywords:** *Feport, Ports regulation, financial transparency of European ports, EFT, Commission and the European Parliament, DG MOVE, DG Competition, transport, logistics*



On Monday the 27th of June, in the framework of the last trilogue meeting under the Dutch Presidency, representatives of the three institutions have reached an agreement on a compromise text of the Ports Regulation.

A large merit for this important successful outcome is owed to **M. Knut Fleckenstein**, his staff and to the **Shadow Rapporteurs** who have constantly consulted port stakeholders with the objective of producing a balanced text which among others contributes to a clarification of the applicable rules in terms of **financial transparency of European ports**.

The compromise text also acknowledges the existence of a diversity of ports models, the existence of competition in the cargo handling industry and includes social provisions that have been supported both by **FEPORT and ETF**.

FEPORT also warmly congratulates the Dutch Presidency negotiators for their efforts in reconciling the positions within the Council during the whole process of discussions and between the **Commission and the European Parliament**. FEPORT is looking forward to continuing the open dialogue with the **Commission (DG MOVE)** as it has prevailed these last months.

“By calling for a vote “en bloc” for **M. Fleckenstein’s report during the European Parliament Plenary** last March 8th, **FEPORT** and its port sister organizations have given the best evidence that contrary to what is often pretended the port sector is not conservative nor opposed to change. It is a “living” cluster ready to play its role for further sustainable growth and development to the benefit of the **transport and logistics sector in Europe.**” comments **Lamia Kerdjoudj-Belkaid**.

“Looking ahead, an important discussion regarding the GBER (Global Block Exemption Regulation) which also concerns ports will take place in the coming months and we sincerely hope that a real cooperative spirit and dialogue will continue to prevail be it with **DG Competition or DG MOVE**. Private investors need to have visibility and legal stability to be able to engage. It is therefore essential that the port sector is supported by a **European sustainable and business friendly port and competition policy**” concludes **Lamia Kerdjoudj-Belkaid**.

Source: Hellenic Shipping News

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Link: <http://bit.ly/2aalARc>

## ESPO congratulates Council and Parliament for reaching a deal on the Port Regulation

**Keywords:** *European Sea ports Organisation (ESPO), Commission, Council, Parliament, Port Regulation*



After 15 years of discussions, Commission, Council and Parliament have reached an agreement on a Port Regulation, a legal European framework for organising the port services and financial transparency for ports in Europe. On Monday evening, during the 4th trilogue meeting, **the Dutch Presidency and the EP main**

**negotiators reached a compromise.** The port regulation can however only be considered as adopted after the formal approval by both the Parliament and the Council following their respective procedures. This formal approval process is expected to take place in autumn.

**The European Sea ports Organisation (ESPO) believes that the final compromise is, in many ways, a significant improvement on the original Commission proposal of May 2013. European ports welcome in particular:**

- A flexible framework for the organisation of port services respecting the diversity of port in Europe by allowing different tools (limitation, PSO, internal operator,...);
- More financial transparency when ports receive public funding;
- The way the initially very prescriptive provisions on customers and stakeholder relations have been amended in favour of more realistic general principles on how to deal with stakeholders and port users;
- The fact that the concept of an “Independent Supervisory Body” was abandoned in favor of a more hands-on and less bureaucratic provision setting out a good mechanism for handling complaints;
- The decision not to enlarge the scope of the directive on the award of concession contracts 2014/23/EU through this regulation.

**ESPO however regrets that national governments have not shown more ambition in moving towards a clear framework for port authorities to set their own charges and develop their own financial strategy.** European ports believe that the plea for less public funding for ports can only be realised if port authorities can manage themselves their financial situation and decide how to structure and optimise their income.

ESPO and its members considered the principle of autonomy as put forward in the initial Commission proposal and fully supported by the European Parliament as one of the main assets of the Port Regulation and an important condition for unleashing the potential of all European ports in Europe.

ESPO fully recognizes that the final text of Article 14 will be giving port authorities in Europe the possibility to determine the level and structure of the port infrastructure charges and to enter into individual negotiations



with their customers. It remains however unclear to what extent national governments may limit this negotiating power of port authorities by setting general requirements within their national ports policy.

*“The final text of Article 14 on infrastructure charges may be seen as a sort of consolidation of the current 2-tier system consisting of ports which can develop their charging system in an autonomous way and those ports that do not have these basic management tools. We must hope however that Member States will use this opportunity to review the way they consider ports and to realise that giving port authorities the power to negotiate and to develop their own charging policy is the best way to enhance the competitiveness of European ports and the level playing field”,* says Secretary General Isabelle Ryckbost.

*“We would like to thank the Commission, the Council and the Parliament for their constructive cooperation during this legislative process. Our special thanks go to the Rapporteur, Knut Fleckenstein, for his continuous support in favour of giving European ports more autonomy. We regret that the port regulation has not delivered fully on that point.”* says ESPO Chairman Santiago Garcia Mila.

Source: ESPO

Link: <http://bit.ly/29joceY>

## The Most Environmentally Friendly Icebreaker Ever Built

**Keywords:** Environmental protection, icebreaker, LNG, Baltic Sea, CIMAC World Congress, Finnish Transport Agency, Wärtsilä



Ice is extremely dangerous to ships. In northern climates, especially in the Baltic and North Seas, history is replete with accidents and even total loss incidents due to ice.

Ice hazards can take many forms, from ships hitting ice to ice hitting ships (i.e. due to waves driving ice into the hulls). At other times, ships can become trapped in ice fields and become subject to friction and pressure from ever increasing ice loads which will challenge the endurance of even the toughest-built hulls. In extreme

situations of this kind, even icebreakers can be brought to a stand-still.

Finland's state-owned icebreaking company, Arctia, must contend with demanding and challenging conditions like this. Will Arctia's new icebreaker, the *Polaris*, be the next generation icebreaker that commercial navigation needs in the Baltic Sea to ensure that the shipping lanes are free?

I was given a thorough look at *Polaris*' capabilities at the CIMAC World Congress on June 6, 2016, in Helsinki. Arctech Helsinki Shipyard, Arctia, the Finnish Transport Agency, ILS, Lamor and the Finnish Marine Industries are working together to build the icebreaker which is fitted with the latest technology and which will offer performance superior to existing Urho-class icebreakers.

One of the most important features of the *Polaris* is the use of dual-fuel engines. Deploying an LNG engine in an icebreaker of this kind is a world first, and through the use of LNG fuel, the *Polaris* is claimed to be the most environmentally friendly icebreaker ever built. The dual fuel setup is intended to reduce both fuel costs and minimize exhaust emissions.

In total, the *Polaris*' two vertical LNG fuel tanks take up 800 cubic meters of space and offer fuel for 10 days of operation. *Polaris* also carries enough low sulfur diesel fuel to operate for a further 20 days.

It is not critical for the icebreaker to maximize its cargo capacity, as it would be in a commercial liner vessel where any carrying space surrendered to cumbersome LNG fuel tanks, potentially leading to a lower profit margin. Specialist vessels like icebreakers are thus a potential growth market for this technology.

*Polaris* has an innovative, nontraditional propulsion layout, with two thrusters in the stern (6.5 MW) and one in the bow (6 MW). These thrusters are all Azipod units, meaning that they are multidirectional. The use of podded propulsors, and the concomitant greater maneuverability of the ship, poses design challenges in the intended ice-heavy environment, since some areas of the hull could thus be subject to powerful, uneven stresses.

Possibly for this reason, among the criteria used to select the shipyard that would build *Polaris* was the requirement that the shipyard had experience in constructing an icebreaker in the past three years. Thanks to the unique problems posed by icebreaking, one would only want absolute experts in charge of the project.

Also noteworthy is *Polaris*' oil recovery equipment which, delivered by Lamor, includes the latest technology in winterization features: ridged storm and inflatable sweeping boom systems that enable *Polaris* to collect up to 200 cubic meters of oil per hour in extreme weather and ice conditions. This gives the vessel all-year utilization potential. Given its 125 million euro (\$140 million) price tag, 25 million (\$28 million) of which was provided by the European Union's Trans-European Transport Network (TEN-T), this all-year utilization is very smart economics and represents a prudent use of Finnish and European taxpayers' money.

#### VESSEL FACTS AND FIGURES



Length: 110m  
Breadth: 24m  
Draught: 8m  
Deadweight: ca. 3000t  
Installed power: 21 MW  
Propulsion power: 19 MW  
Speed: 16 knots  
Speed in 1.2m of ice: 6 knots  
Crew: 16  
Range: 30 days of independent operation  
Flag: Finland  
Classification: Lloyd's Register

The dual-fuel engines supplied by **Wärtsilä** consist of one 8-cylinder Wärtsilä 20DF engine, two 9-cylinder Wärtsilä 34DF engines and two 12-cylinder Wärtsilä 34DF engines. Icebreaking capabilities were verified by Aker Arctic's model test laboratory.

Helsinki Shipyard was responsible for basic detail design, LNG system layout, sourcing of equipment and components, outfitting, commissioning, as well as testing and delivery.

The system (oil recovery) is equipped with Lamor cargo pumps that can handle very viscous products. Arctia and Lamor have joint research projects for oil recovery in Arctic waters.

The Finnish Transport Agency was responsible for providing the operating framework for winter navigation and ensuring effective year-round seaborne transport in Finland.

The technical specifications and innovations for *Polaris* are based on requirements for year-round seaborne transport assessed by the **Finnish Transport Agency**.



Expertise of the Finnish maritime cluster was fully utilized in the planning and building process of *Polaris* under supervision of Finnish Transport Agency.

ILS participated in the conceptual design of *Polaris* and carried out the steel construction, special outfitting, oil recovery, interior and deck outfitting designs and specifications.

Open water model tests were carried out at VTT Technical Research Centre of Finland.

*Source:* Maritime - Executive

*Link:* <http://bit.ly/29T8ljZ>