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Trade Facilitation  
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**Climate Change Adaptation for Seaports  
in Support of the 2030 Agenda  
for Sustainable Development**

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**Cross-Cutting Issues – Energy  
Efficiency and Decarbonizing Maritime  
Transport**

Presentation by

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## Cross-cutting issues – Energy efficiency and decarbonizing maritime transport



# International Chamber of Shipping

Shaping the Future of Shipping

John Bradshaw  
Technical Director

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## Regulation and Changes in International Shipping

- The last decade has seen IMO introduce a constant stream of new environmental regulation for shipping, with no sign that the pace of new regulation is slowing down
- Some examples you will all be aware of include the ballast water convention, the 2020 sulphur cap and the EEDI regulation and looking forward IMO is developing ambitious GHG reduction measures and considering the matter of underwater noise
- ICS supports decarbonizing shipping and is committed to playing a constructive and active part in the transformation of the industry
- Today I will provide an overview of some of the cross cutting issues facing both shipowners and ports



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## Shipowners and Change

- Shipowners are often negatively portrayed in the media, and perceived as being obstructive and resistant to change
- Shipowners are not resistant to change or improving safety and environmental protection
- Shipowners simply asks that regulations be proportionate, evidence based and implementable



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## Safety in a period of change

- Safety matters, people matter
- New fuels entering the industry have a lower flash point than traditional fuels and in some cases are also toxic
- Increased complexity, managing the ship – shore interface
- Less mature technologies tend to be accompanied by less mature risk controls
- Less operational experience

**All of the above can be managed, alternative fuels and complex systems can be used safely. However, risks must be properly analysed and risk control requirements developed in IMO instruments.**



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## Technology transition risk

- Proliferation of possible technological options
- Possible options include wind power, ammonia, liquid hydrogen, bio-fuels, synthetic fuels, use of carbon capture and perhaps even new generation nuclear power
- Fragmentation
- Transitional vs. long term solutions
- Availability of new fuels and energy, and materials for new technologies



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## Lower Hanging Fruit

- Zero emissions at berth – Onshore Power Supply
- Digitization and data exchange, on time arrival and departure to optimize operation and speed
- Wind assistance

**Decarbonizing shipping is not just about exotic new fuels, we need to utilize all the available technology options**



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## A possible future

Nothing looks as old fashioned as yesterdays vision of today but....a some possible projections include:

- Shipping makes the transition to LNG fuel, lowers emissions
- Development of a hydrogen production and distribution infrastructure facilitates the hydrogen economy, shipping adopts hydrogen fuel
- Large ocean going ships powered entirely by batteries are developed, with a carbon free electrical supply infrastructure to rapidly recharge them provided in ports
- Technology fragments and ships select solutions based on their unique operating profiles
- Fully unmanned ships become common in coastal trades, with increased automation (partial autonomy) with changed crewing profiles common in trans-oceanic trade



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## A way forward

- International Maritime Research Board
- Funded by a levy of US\$2 per tonne of fuel
- Identify viable technology pathways
- Accelerate technology development and commercialization of new technologies
- Mitigate risks associated with the technology transition



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## Summary

- The transition to a zero carbon future will transform the industry
- Shipowners and ports share a common interest in managing this transition and face shared challenges and opportunities
- We will make the journey to a low carbon future together
- Shipowner's are open to change and innovation, and support robust standards for safety and environmental protection, however regulation should be proportionate, evidence based and implementable
- New technologies and change must not compromise safety
- Technology transitions are associated with commercial risk
- Establishment of an internal maritime research board to identify viable technology pathways, accelerate change and mitigate risks associated with the coming transition



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