




A Zero emissions vision

Seeing the future of freight movement technologies



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LOGISTICS



**New key drivers: Increasing operational costs
and stronger focus on environmental impact**

Customers and logistics providers will need to agree on new performance parameters





Global regulations ensure level playing field and simplify operations



Challenges for the 21st century

Less fuel oil? No fuel?

Less emissions?

No emissions?

Reduce energy consumption?

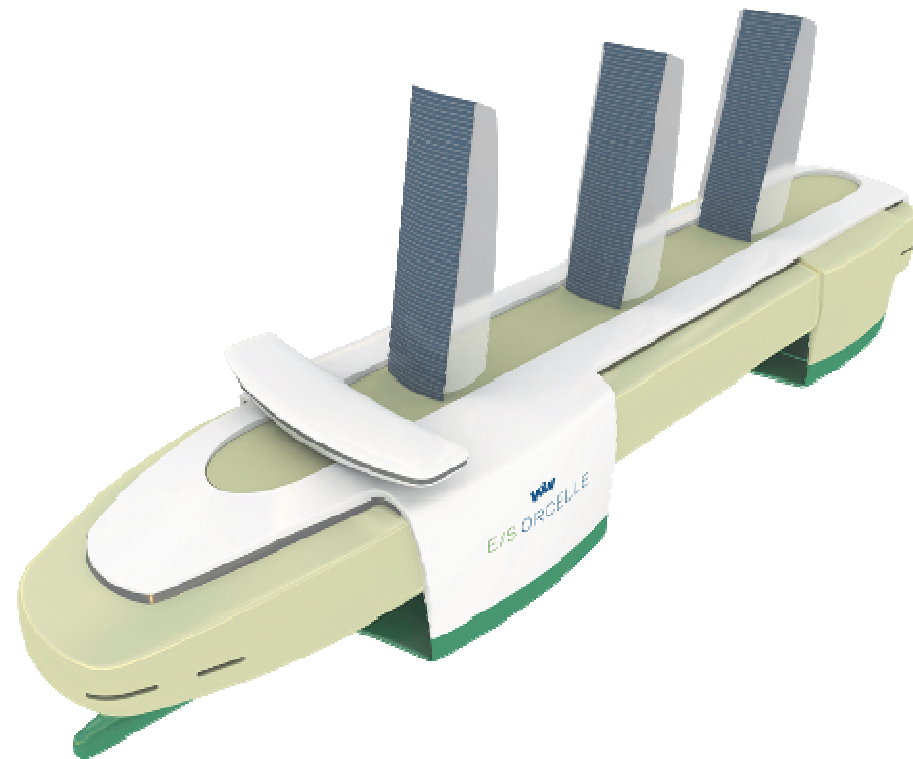
Make the entire supply chain greener?

Inspiration



E/S Orcelle – cost???

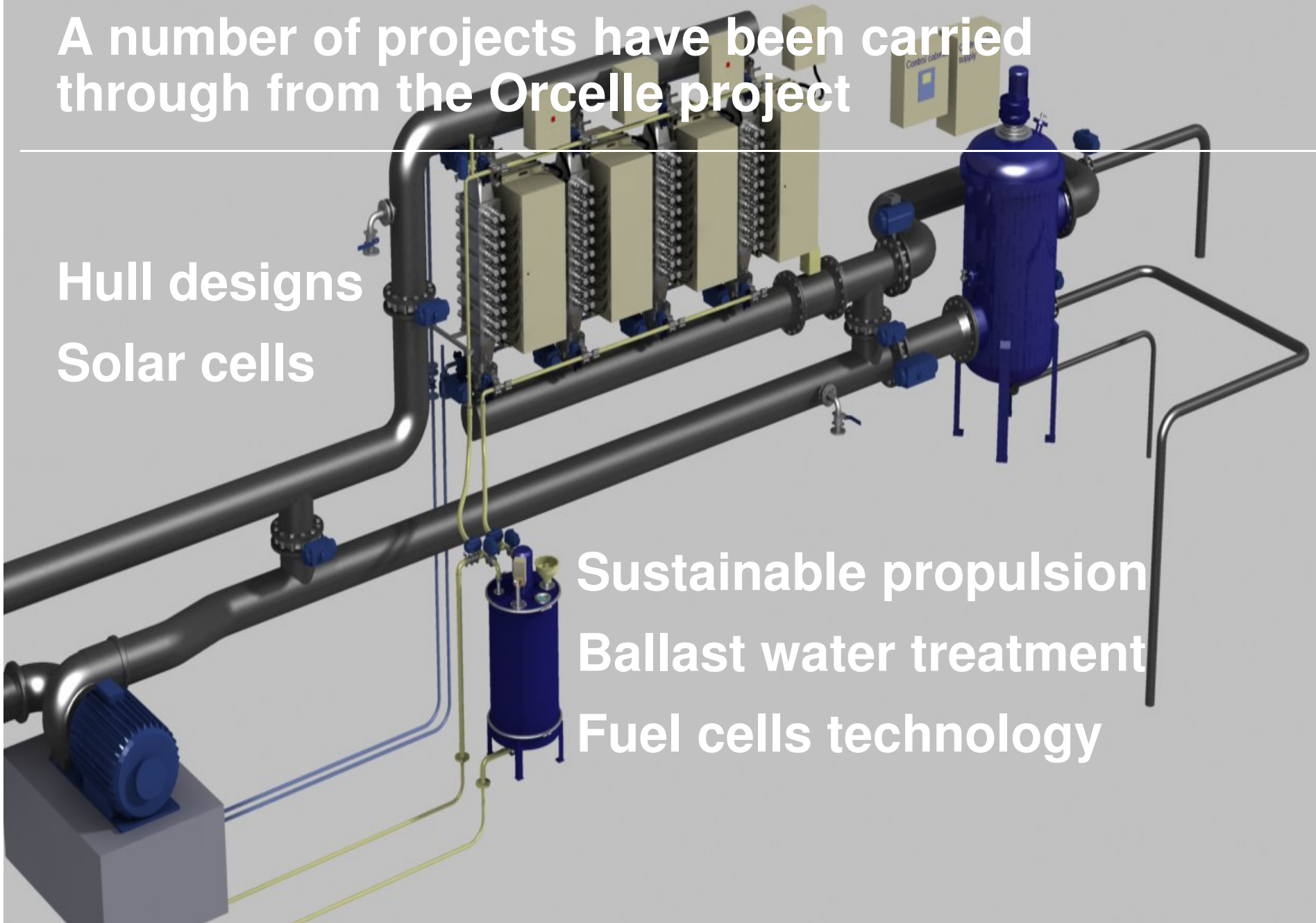
30 year supply of Bunker fuel at TODAY'S cost:
\$511,5 mil



A number of projects have been carried through from the Orcele project

Hull designs
Solar cells

Sustainable propulsion
Ballast water treatment
Fuel cells technology

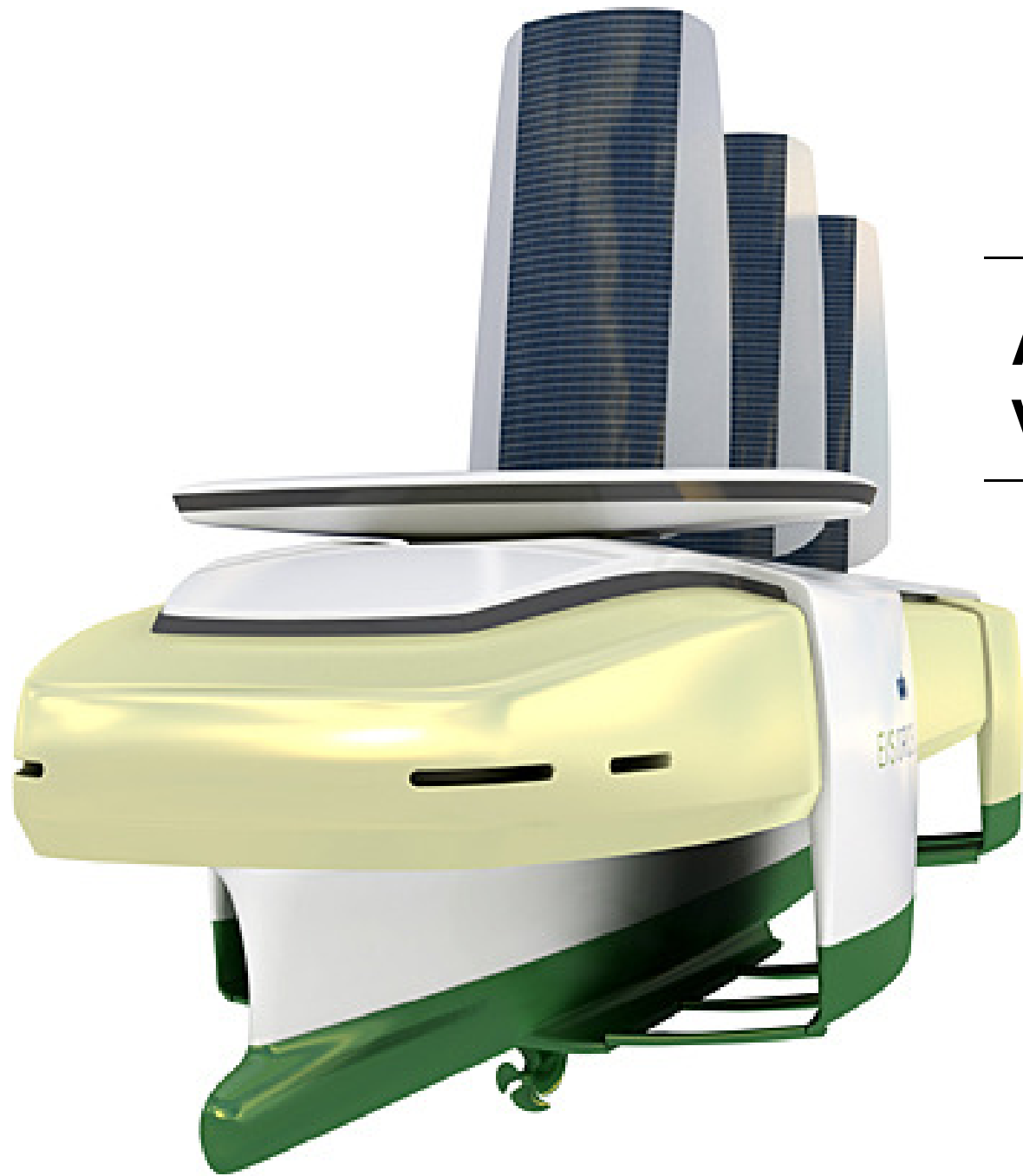


Moving from low emissions to no emissions

- ❖ **Short term: Harvest low hanging fruits**
 - Known and existing technology
 - Demonstrate improvements
- ❖ **Medium term: Explore innovative solutions**
 - Known technology – not developed
 - New and improved offerings
- ❖ **Long term: Visionary**
 - Sustainable propulsion
 - Unknown technology – ideas
 - Towards a zero emission transporter



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vision**
