Offshore Wind Power Farm Substations

Dansk Ståldag 2009

Offshore Substations

- The Substation
- Topside
- Substructure
- Fabrication
- Transport & Installation
- Example Projects

The Substation

- CollectCables from Wind Turbines
- House Step-Up Transformers to Minimize Export Cable to Shore
- Reduce Transmission Losses
- Minimize Export Cable to Shore
- Minimize Cable Costs
- Secondary Functions
  - Base for Maintenance of Wind Turbines
  - Accommodation for Maintenance Personnel

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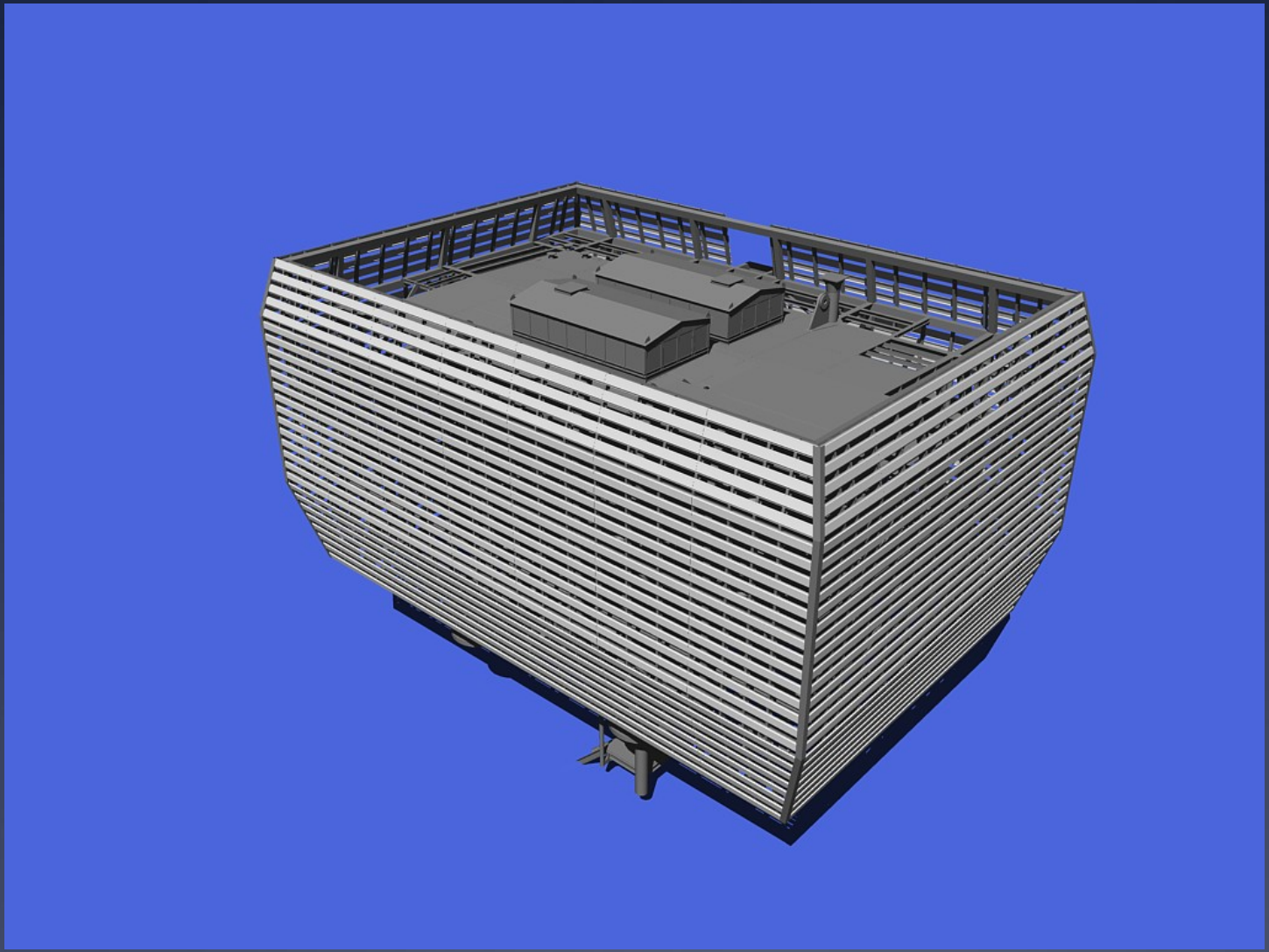
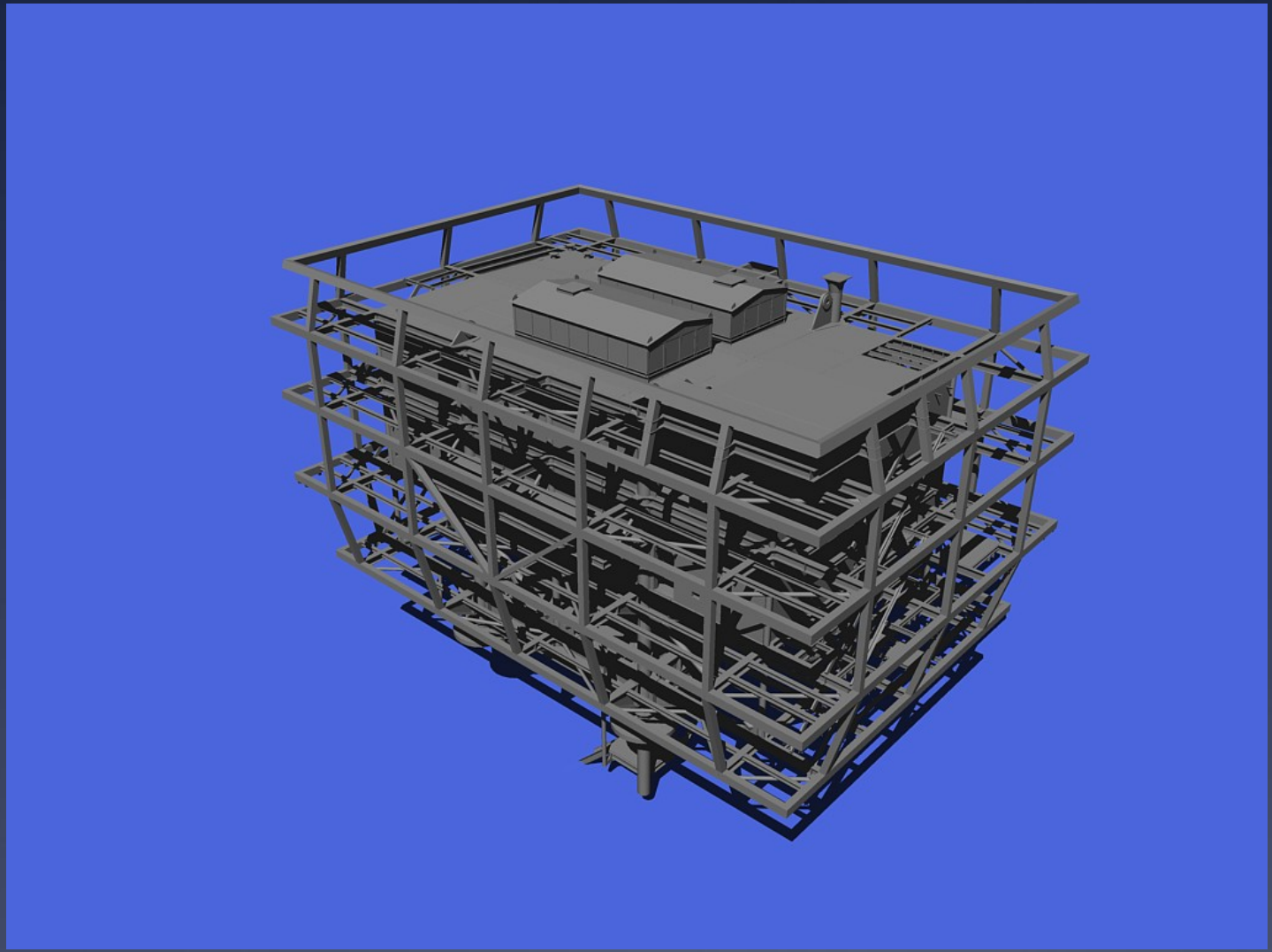
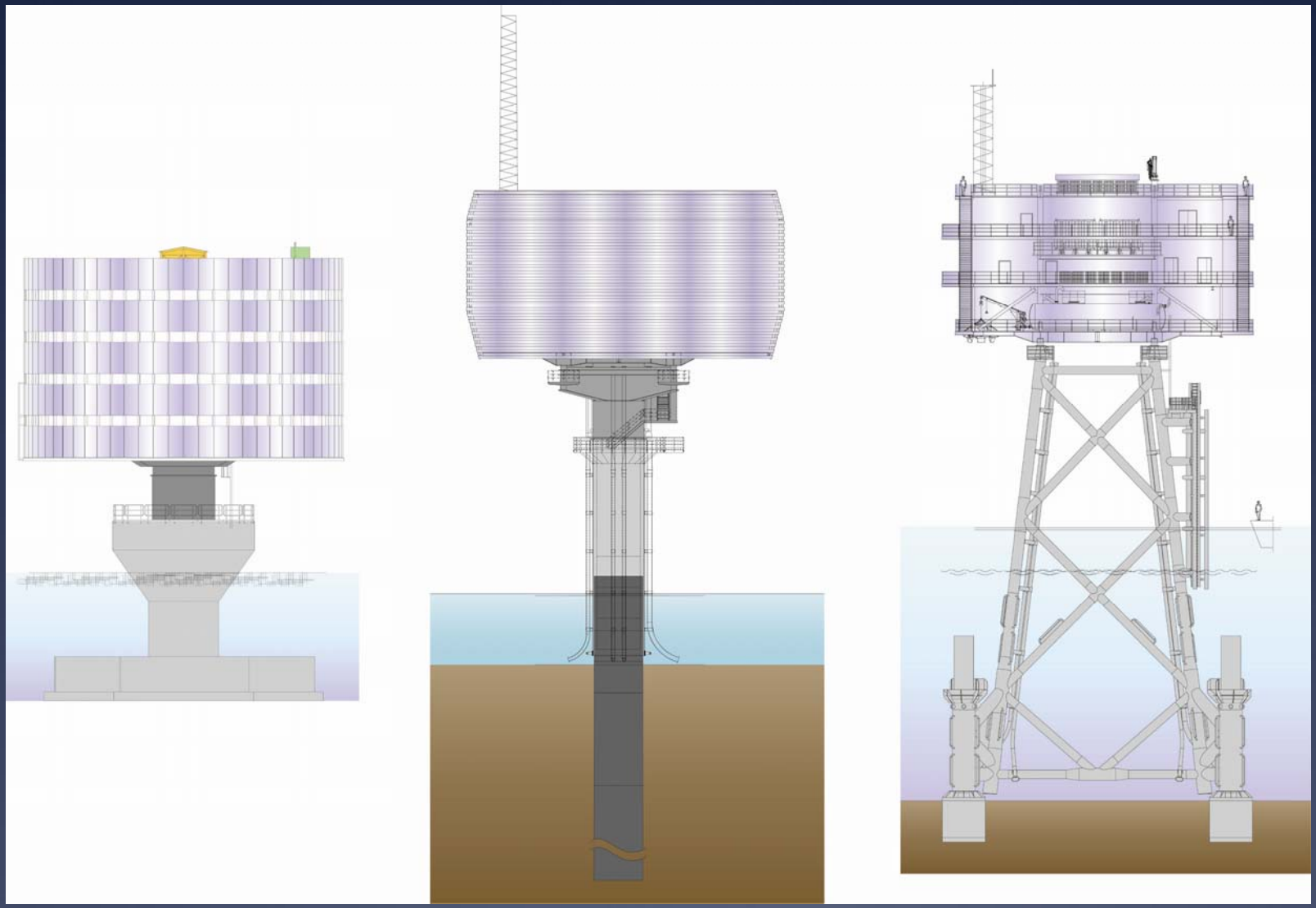
Topside



Topside



Substructures



Fabrication

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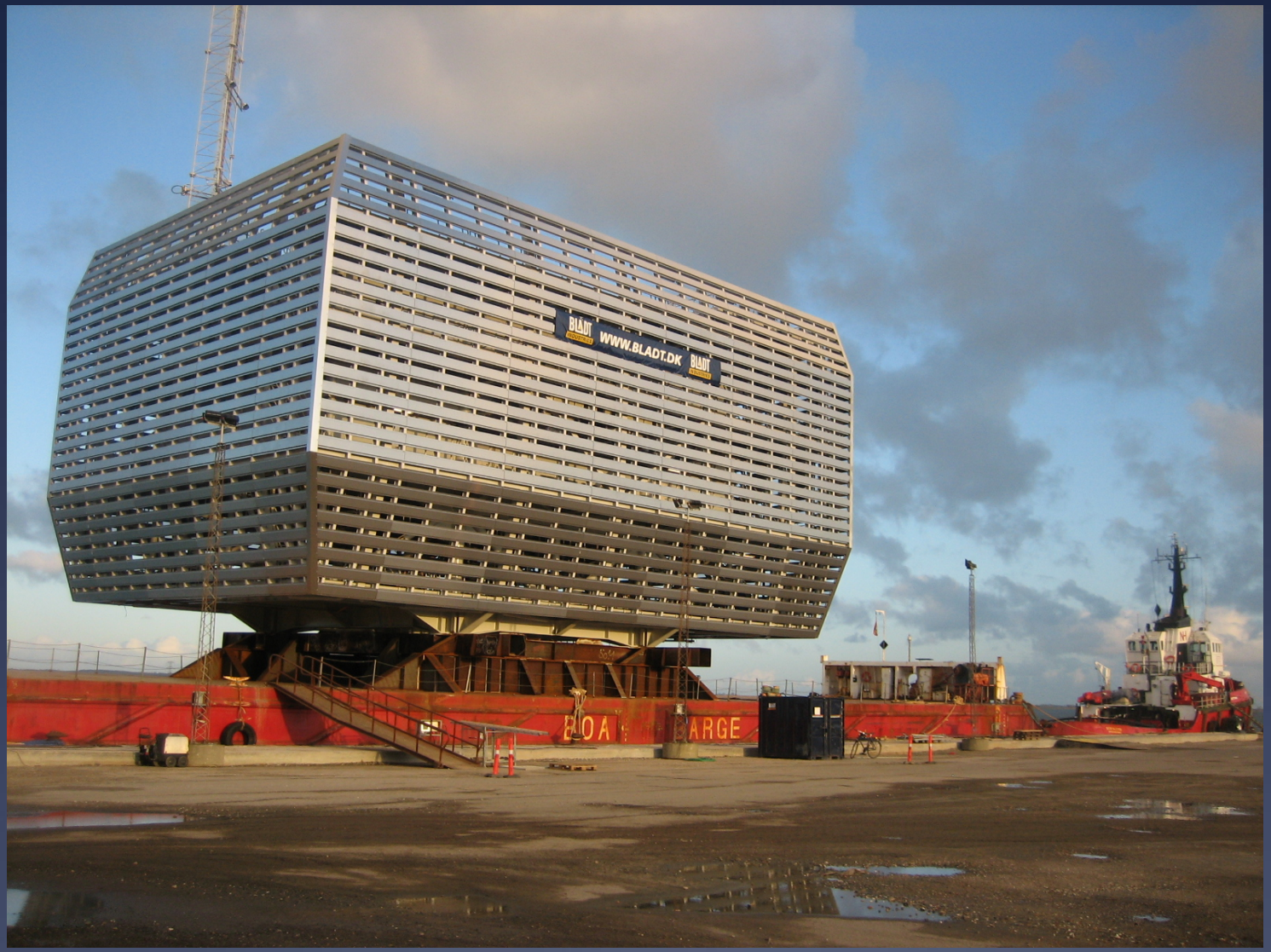
Fabrication

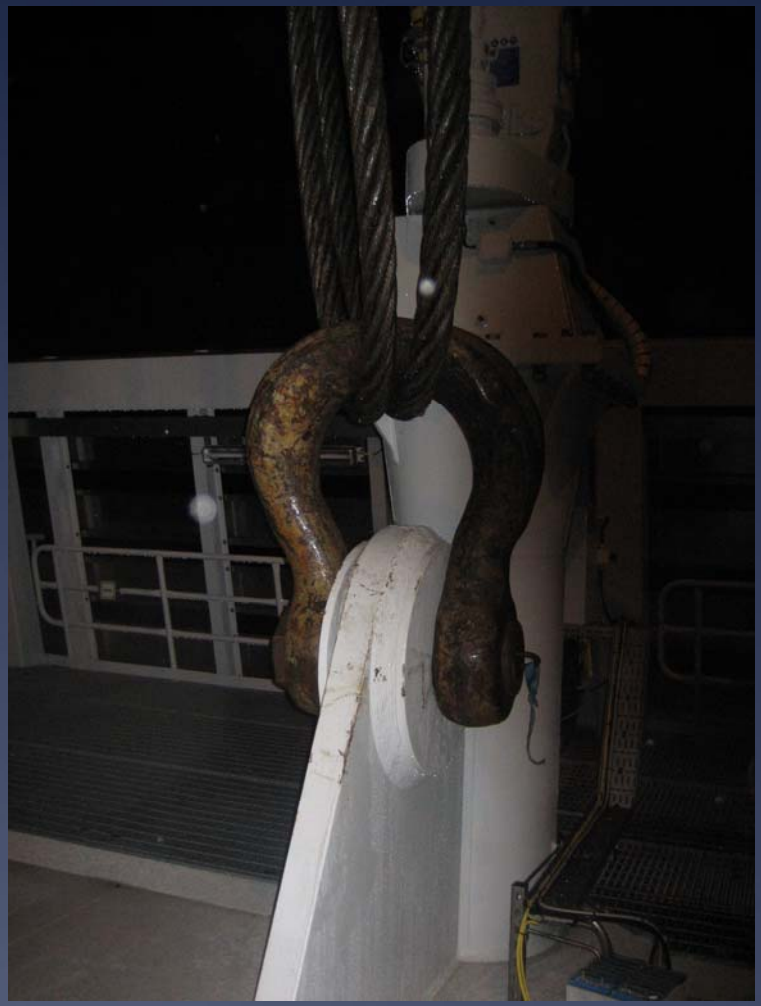
Transport & Installation

Transport & Installation



Transport & Installation

Transport & Installation



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Transport & Installation

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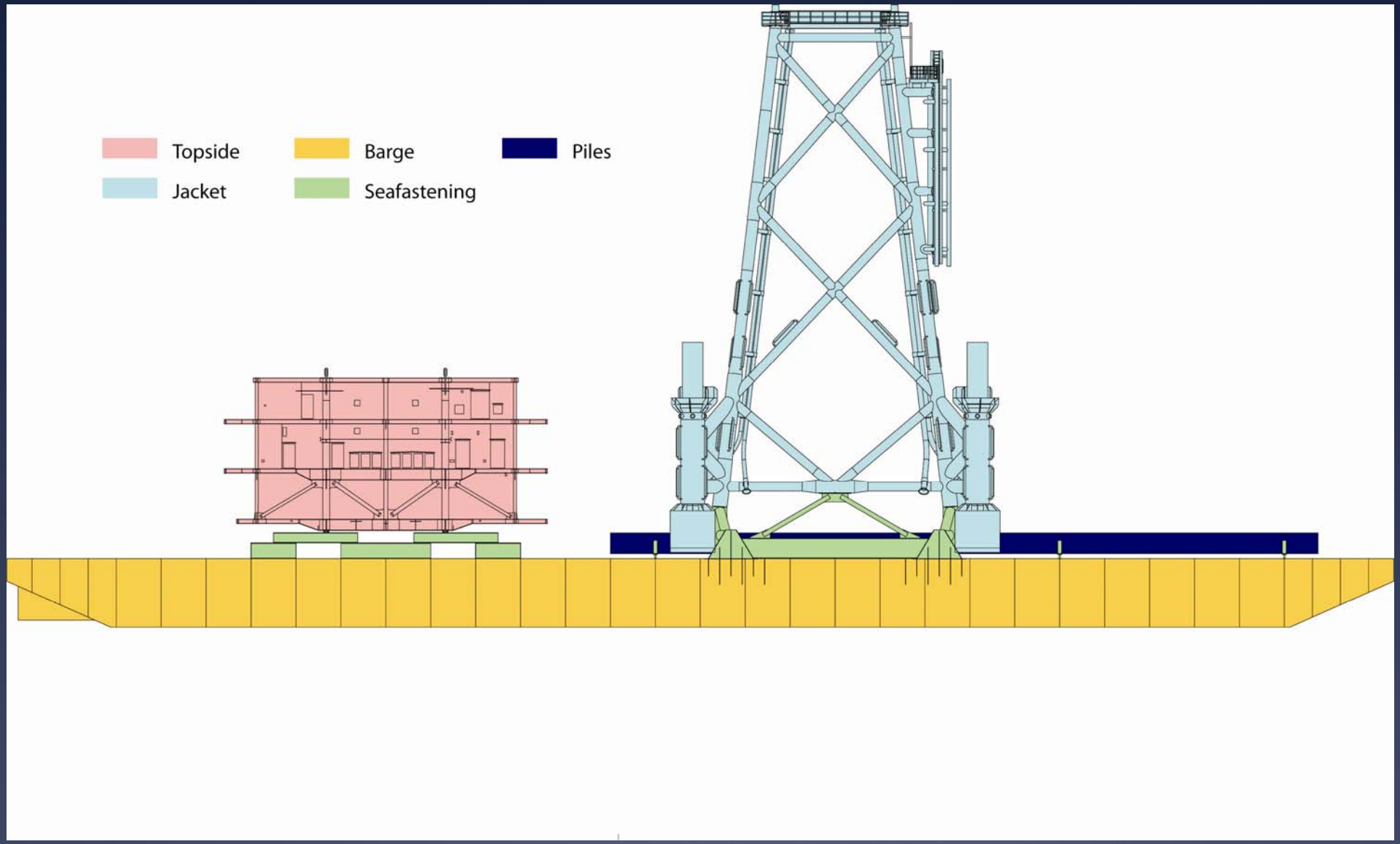
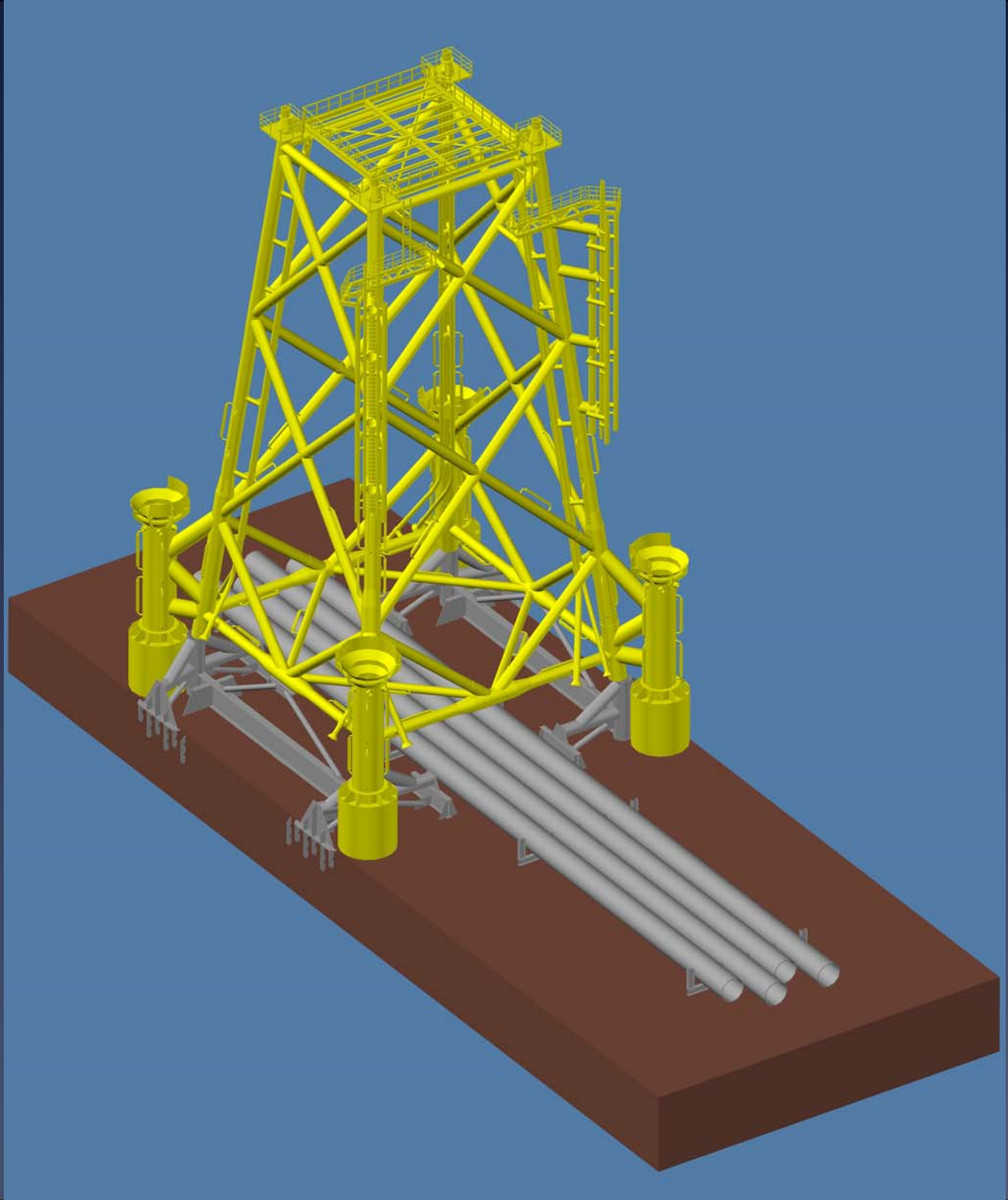

Topside
Barge
Piles
Jacket
Seafastening



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Example Projects

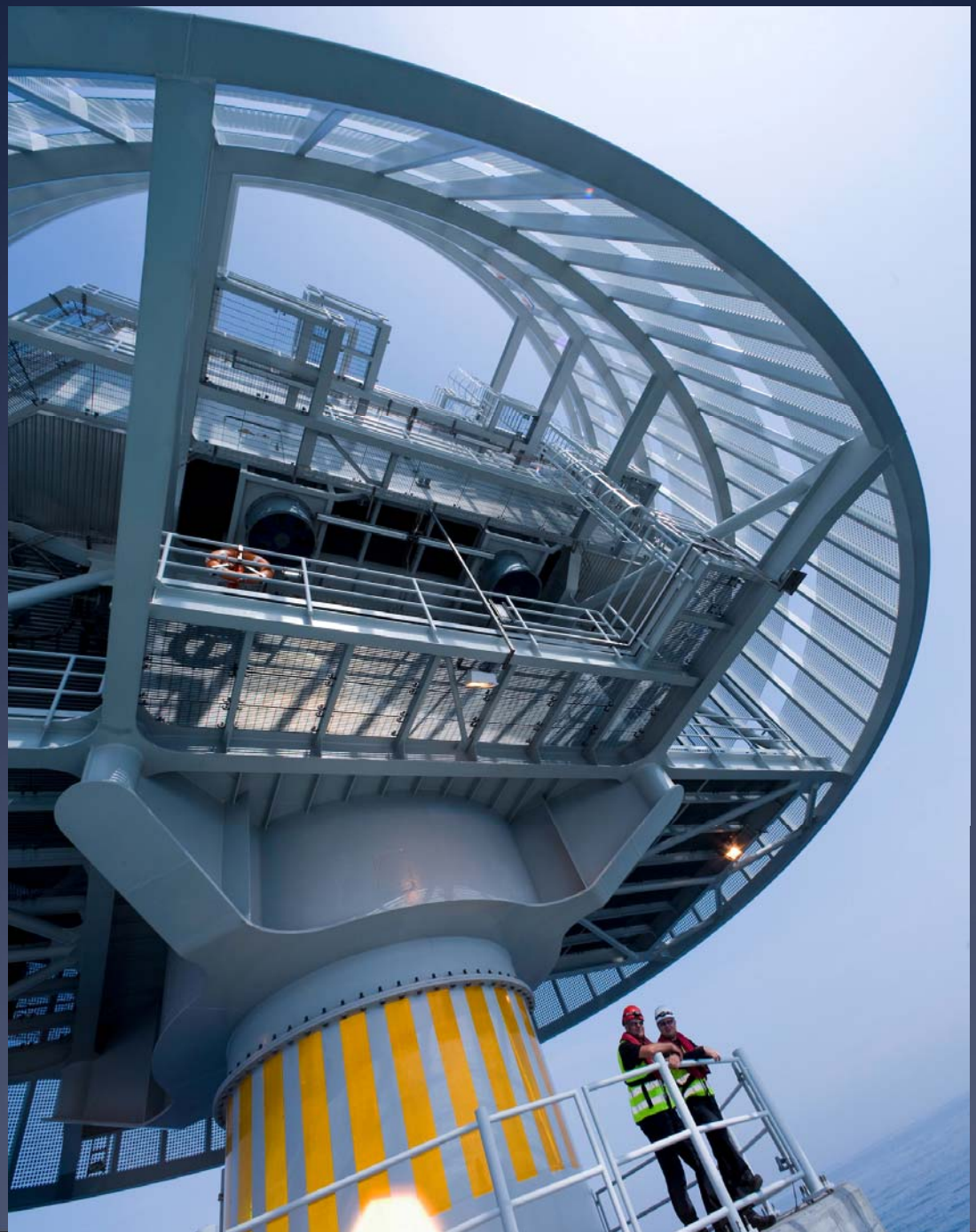
Nysted I 2003

First Wind Farm Offshore Substation in Operation

Lillgrund 2005

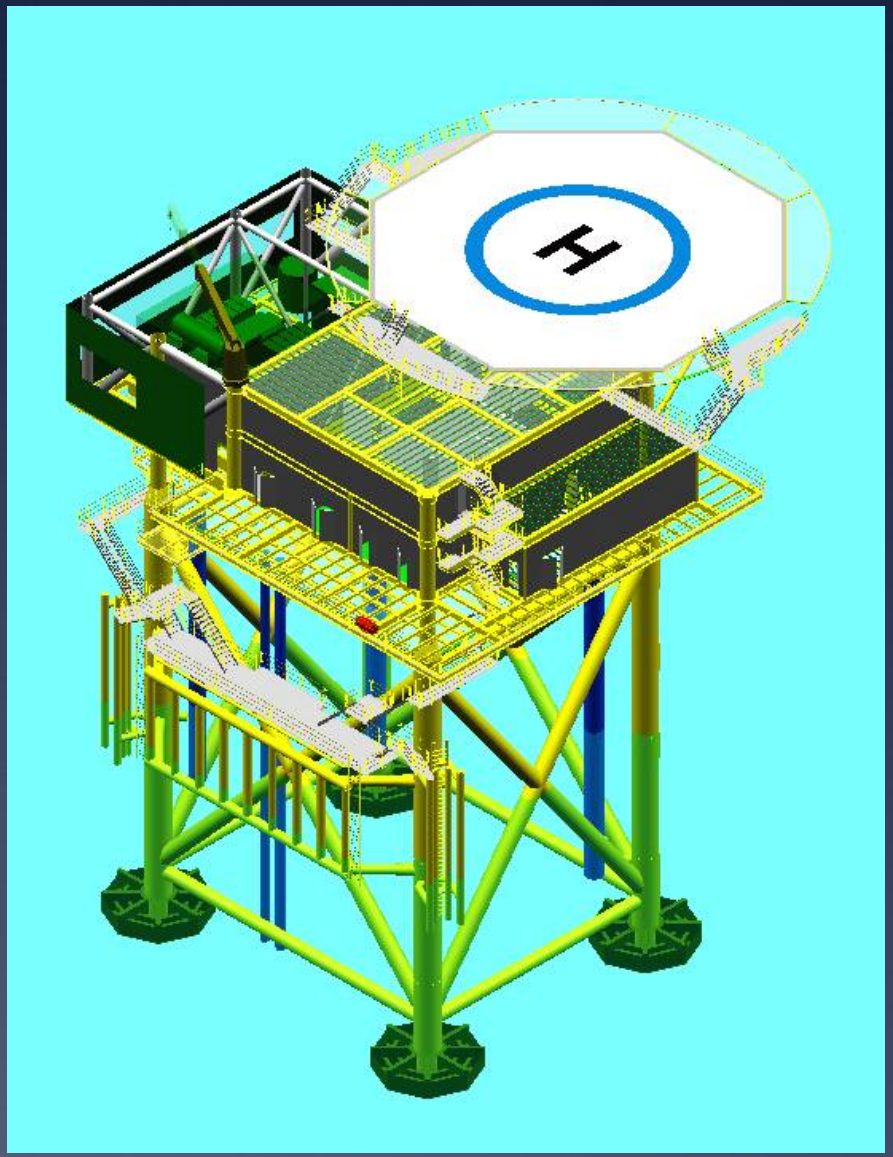
ISC

Lillgrund 2005

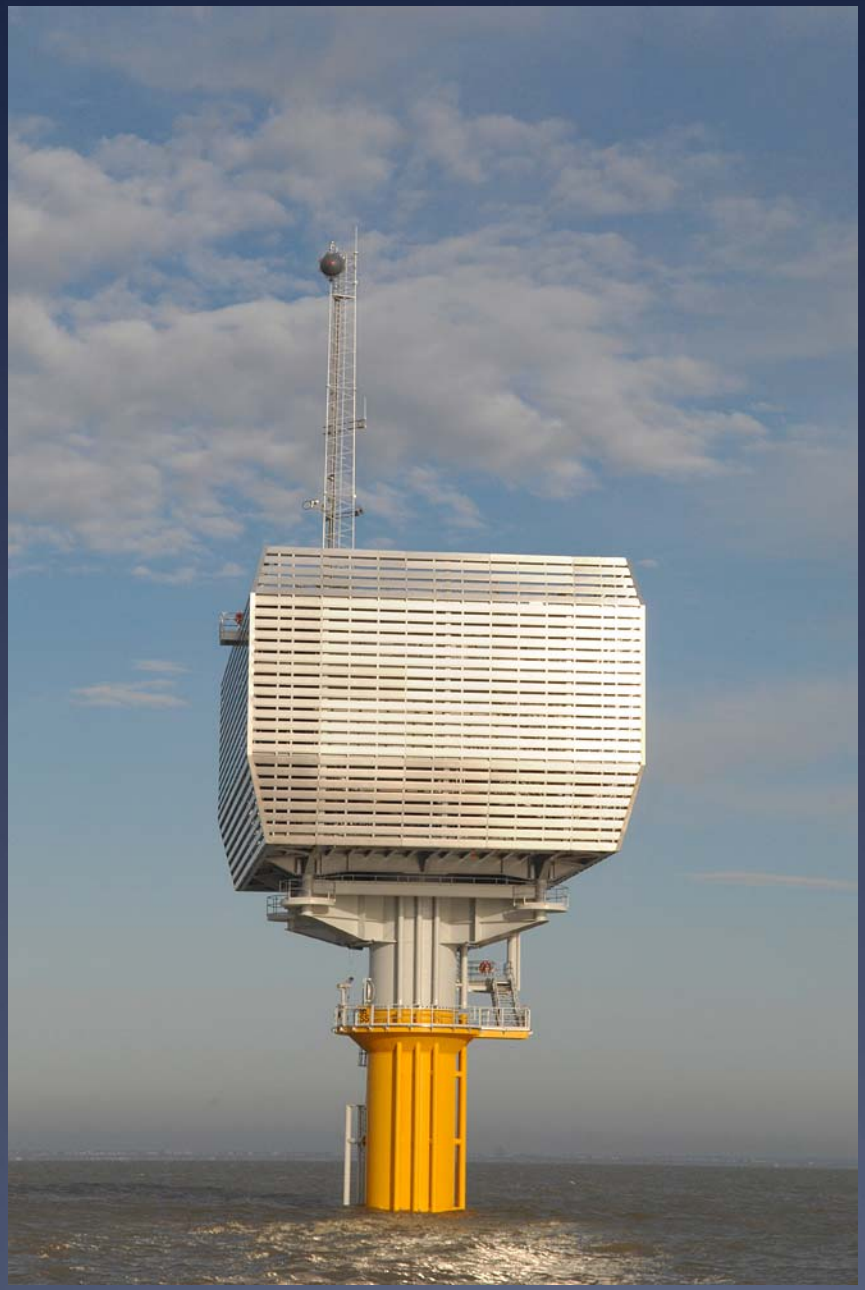


Q7 Princess Amalia 2005

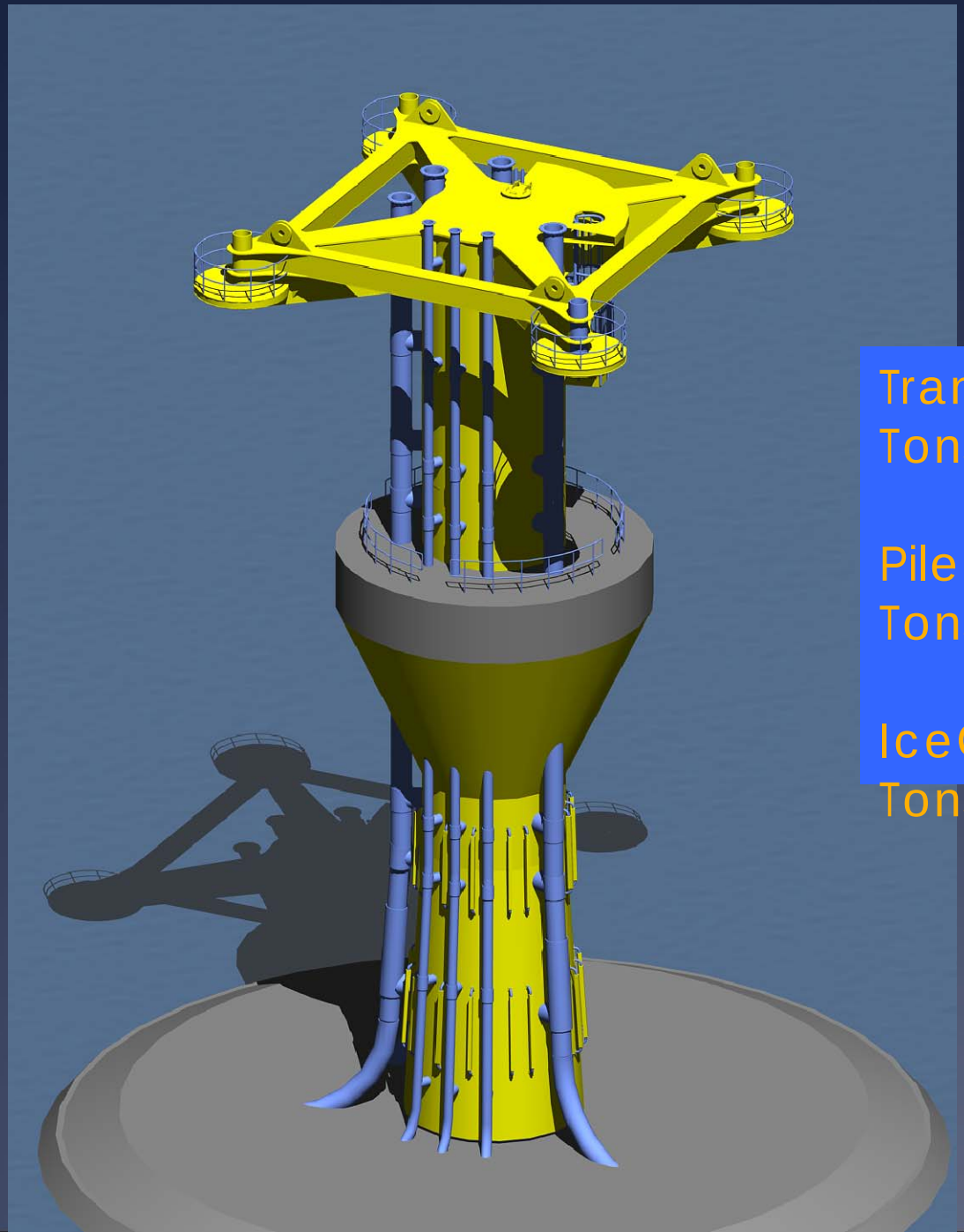
Horns Rev 2 2006



Gunfleet Sands 2007

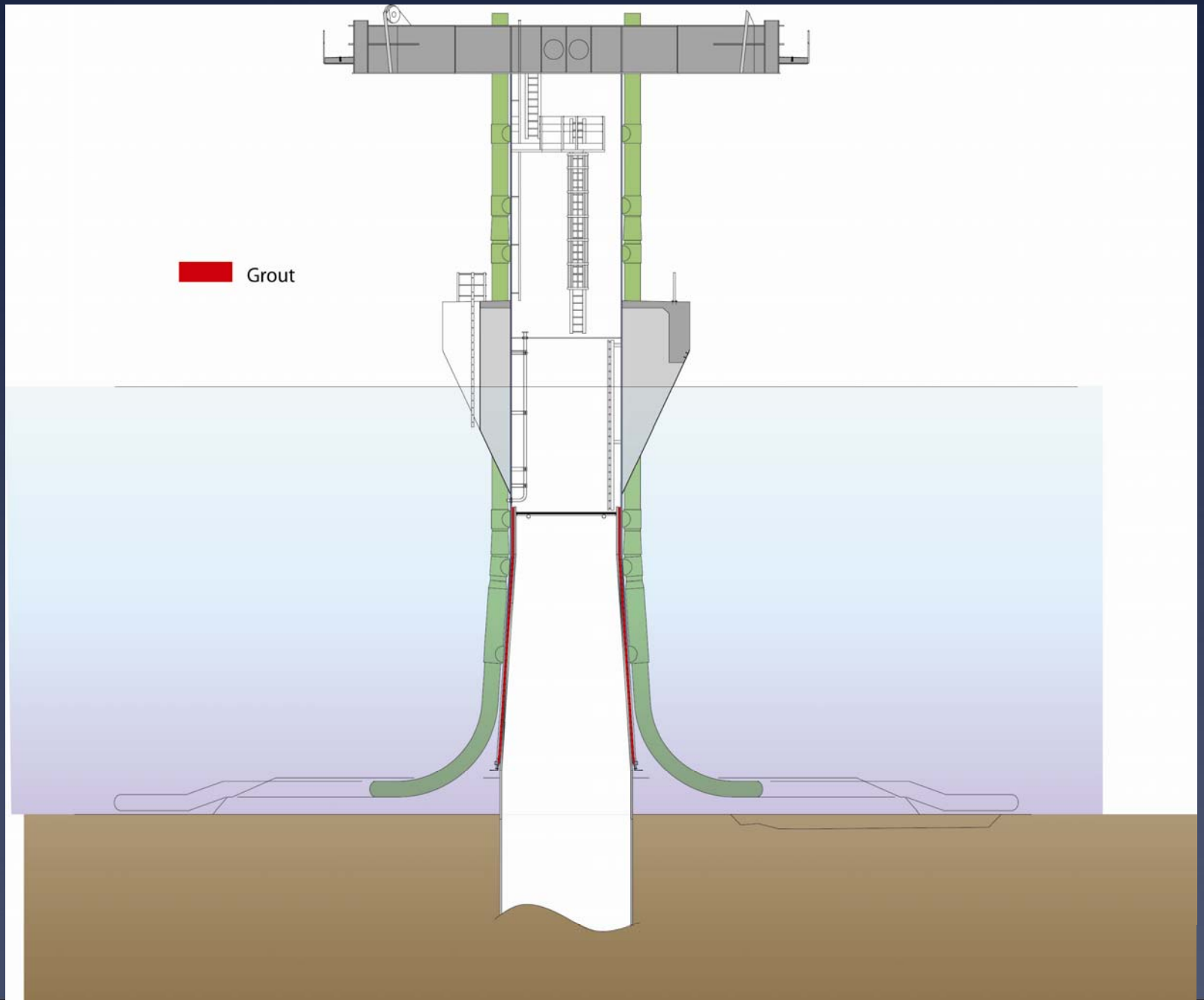


Baltic 1 2009

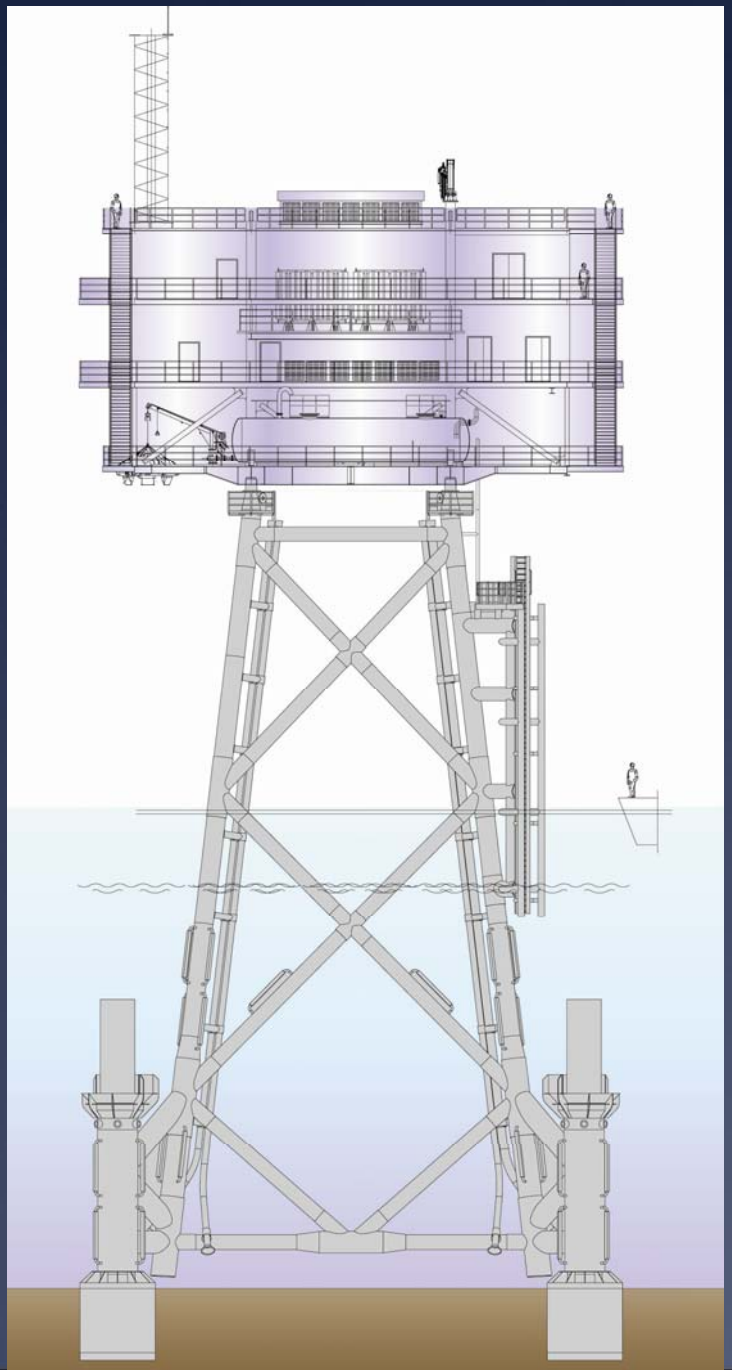


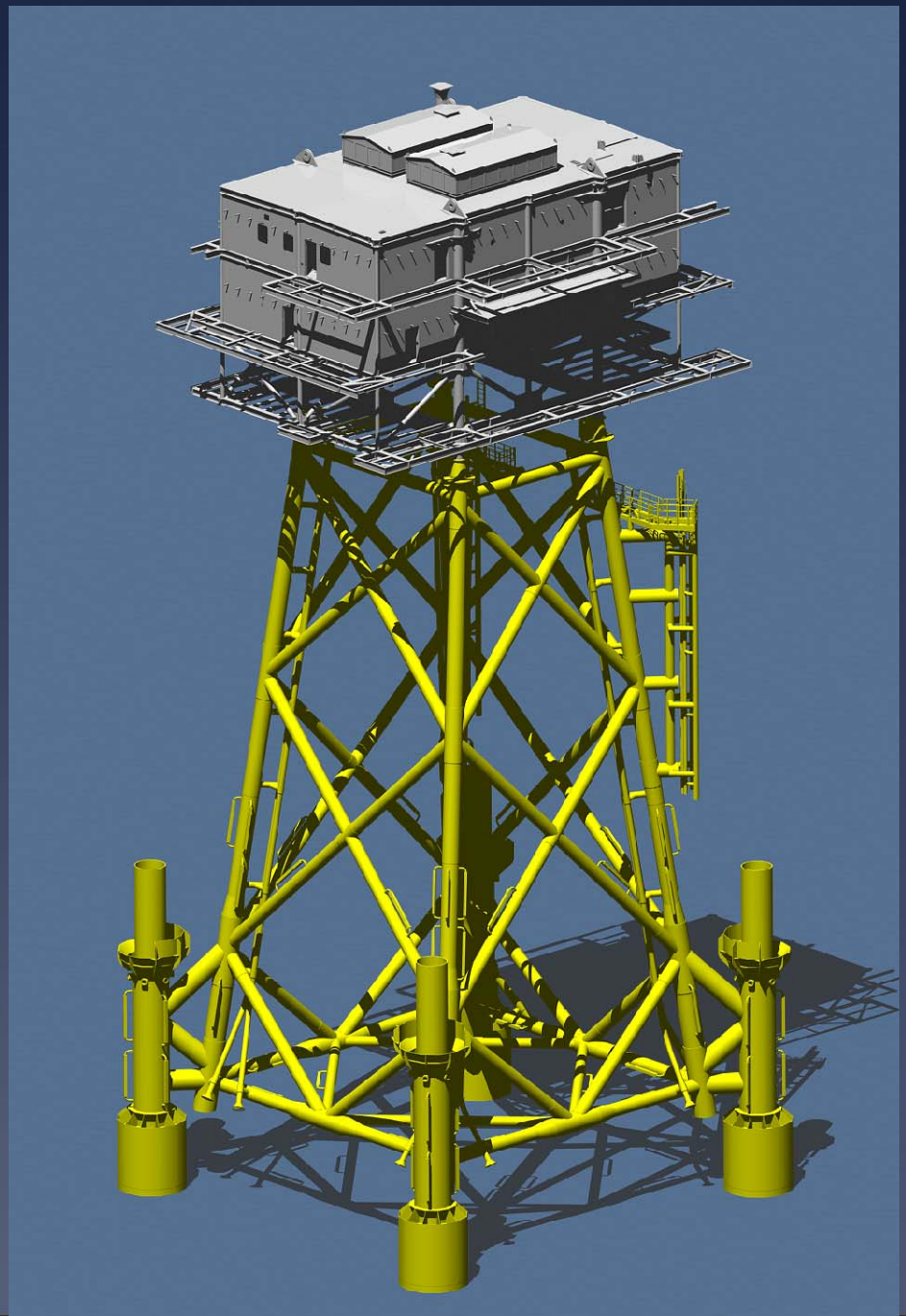
Transition Piece:	420 Tons
Pile:	415 Tons
IceCone:	535 Tons

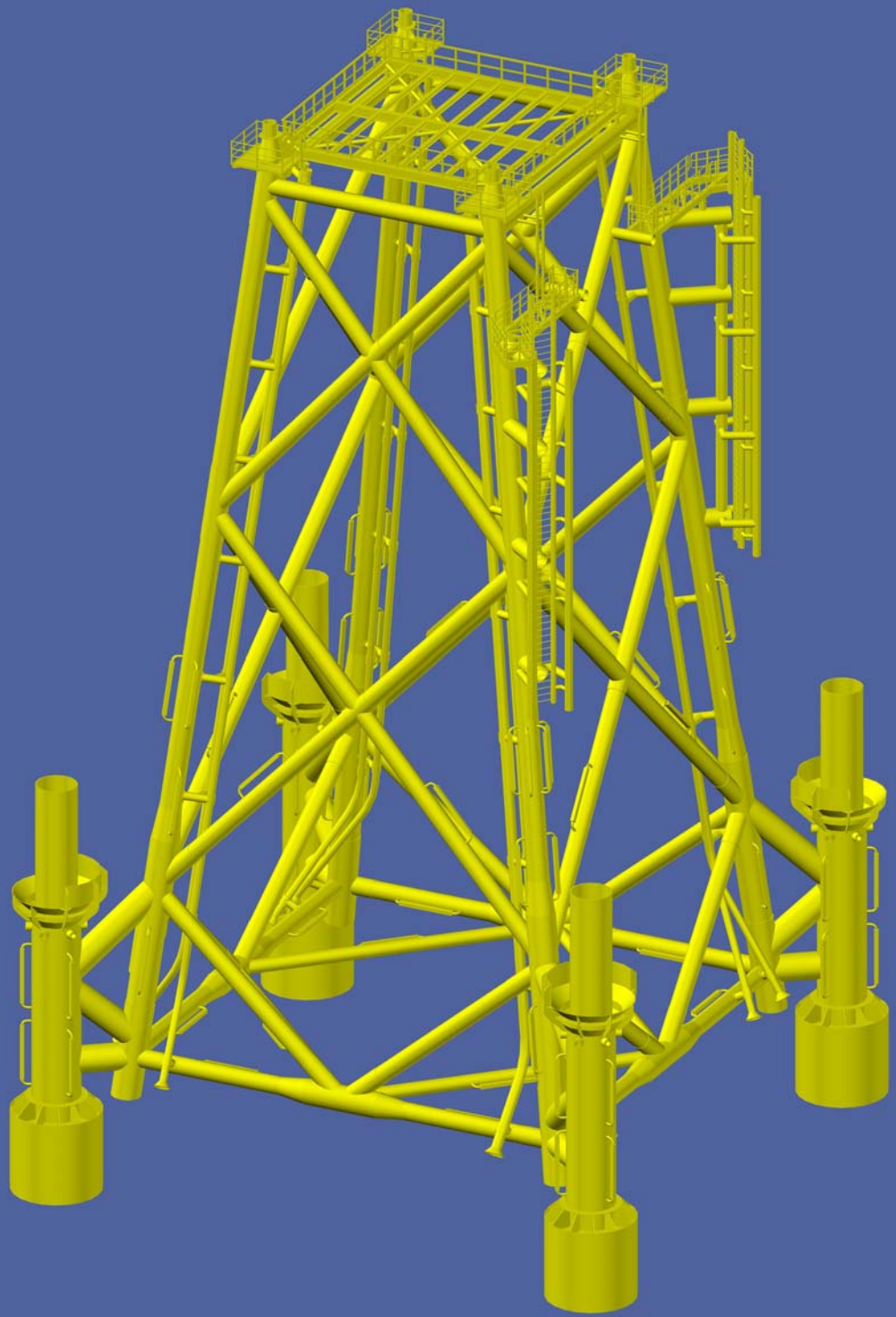
Baltic 1



Walney I & II 2008/2009







Steel weight

Topside: 504 tons (Total 996 ton)

Jacket: 868 Tons

Piles 4 off: 541 Tons