

# Electrification in ports and vessels -new business opportunities

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# motivation

regulation  
push  
SOx, C  
Nox, B  
noise

public  
push  
short  
power

regulation  
push  
short  
power in

maneu  
ring  
advanta

ener  
efficie

battery &  
smart grid  
evolution

# themes

hybrid  
and  
vesse

hybrid-  
e-head  
duty  
machin

port eng  
infra  
investm

sho  
pow

smar  
grid

ports -  
enablers  
of smart  
grid

# objectives

understand  
technological  
potential

increase  
market  
understanding

create  
scenarios  
for the  
future

enhance  
cross  
sector  
opportunities

find new  
business  
opportunities

evaluate  
need for  
R&D

# vision for today

lots  
Q&A

many  
new  
contacts

segments  
of  
electrification  
markets

better  
big  
picture  
grasp

bench  
marks  
China  
and US

co-creation  
smart e-  
port project

# proposal

smart,  
green and  
pioneering  
port  
ecosystem

tools  
increasing  
flexibility of  
energy  
infra

tools for  
demand  
estimation  
& response

integration  
of e-port to  
a smart  
grid

intelligent  
energy  
storage  
possibilities

creation of  
business  
concepts  
and saving  
potential

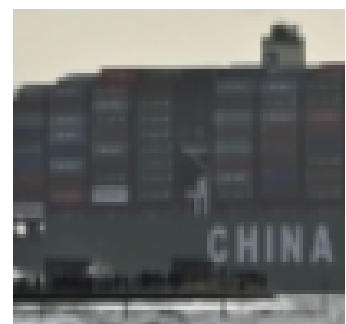
tools for  
finding  
optimal  
energy mix

18 Dec 2012 | Shore power supply makes Swedish Ystad a

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### Reducing emissions with shore power



## China wants wholesale switch to cold ironing

Ministry of transport wants 90% of ships visiting the country's major ports to be using shoreside power by 2020.

three shore power connection points. The number of cruise ships connecting to shore power has increased by 134 per cent in five years, reducing potential greenhouse gases by 8,400 tonnes. Considering an average personal vehicle emits four tonnes of greenhouse gas in a year, shore power has had the same impact of operators, particularly in Europe, the global market is likely to grow extensively during the forecast period.

