ACCELERATING MOMENTUM FOR MARINE LNG THROUGH COLLABORATIVE ACTION

Presentation at Seatrade Cruise Global

Peter Keller, Chair, SEA\LNG

CRUISE SECTOR – LNG HAS ARRIVED

FOR THE REST, 2020 IS COMING……

……AND THE CLOCK IS TICKING

WHAT DO WE INVEST IN?

A few solutions

Compliant (low sulfur) fuel

- Effect on bottom line
- And/or surcharges
- Is the engine room ready?

Scrubbers

- Can vessels accommodate – scrubber, feedstock & sludge?
- Scrubbed material (sludge) – when does this become an issue?

LNG

- Conversion difficult & costly
- New builds going forward

Alex Kolokythas Photography, Shutterstock

WHY LNG?

Solves **SOx**

Deals with majority of **NOx**

Solves **PM** which is coming

Moves **CO2** down the road

Fuel costs – less scope for surprise

Source: Pivotal LNG, An AGL Resources Company

TOTE LNG PROGRAM

Encompassing every aspect of maritime LNG

- New builds – Marlin Class
- Re-engine – Orca Class
- Long term LNG fuel procurement
- Development of liquefaction plants with our partners
- LNG transfer to vessels
  - Multiple and mobile truck transfer to vessel
  - Barge to vessel transfer
  - Plant to vessel via cryogenic pipeline

TOTE LNG PROGRAM

World's first LNG dual fuel containerships

- Isla Bella operational since October 2015
- Sister ship Perla del Caribe entered service Feb 2016
  - NASSCO
  - MAN ME-GI slow speed
  - 3 DFDG Auxiliaries
- Operate weekly
- Loading 50 trailer loads of LNG each week

SEA LNG

TOTE LNG PROGRAM

World's first LNG dual fuel containerships

SEA LNG

THE INDUSTRY ADVOCATE

A strategic coalition – across the value chain

ABS

BUREAU VERITAS

CARNIVAL CORPORATION&PLC

CleanMarineEnergy® Solutions for emissions compliance

DNV·GL

EAGLE LNG PARTNERS

engie

ENN

gasNatural fenosa

GTT Expert in LNG

JAXLNG

Keppel Offshore & Marine

Lloyd's Register

MITSUBISHI

NYK LINE NIPPON YUSEN KAISHA

PETRONET LNG LIMITED

Port of Rotterdam

QATARGAS

TOTE

TOTAL

TOYOTA TSUSHO

WÄRTSILÄ

SEA LNG

THE INDUSTRY ADVOCATE

Our focus

Breaking down the commercial barriers to adopting LNG

- LNG bunkering facilities & infrastructure
- LNG market maturity
- CAPEX premiums for vessels & bunkering
- Challenging investment case for shippers
- Evolving regulatory environment
- Lack of understanding of benefits among end-users

SEA LNG

THE INDUSTRY ADVOCATE

Our approach

COLLABORATE

TO EXPAND POTENTIAL

Move away from fragmented initiatives

Use the knowledge from the value chain

Bring in the needed expertise and knowledge

DEMONSTRATE

THROUGH 'PROOF POINTS'

Real, effective examples of success

Externally validated data and facts

Member-driven pilots and projects

COMMUNICATE

FOR GREATER EDUCATIONAL IMPACT

The shipping industry

Ports and local authorities

Government and regulators

SEA LNG

At the helm of shipping's energy future

sea-lng.org

XYNTEO