Energy Efficient Port Operations in the Caribbean

Challenges and Possible Solutions
The Caribbean

- 14 States and 16 Dependent territories
- All small island developing states (SIDS)
  - Haiti – least developed country (LDC)
- Economies highly dependent on international trade
  - Almost 100% of GDP
Ports

• Gateway to external and international trade
• Focal point and primary mechanism for sending, receiving and transferring cargo
• Numerous activities and operations
  – Loading and unloading
  – Refueling
  – Ship maintenance and repair
  – Transshipment, etc.
  – Customs activities
Caribbean Port Structure

- Heavily influenced by global change
- Ports were originally designed to serve colonial interests
- Globalization and containerization
  - Cargo (containerized, etc.)
  - Cruise shipping
    - 50% global market
Categories of Caribbean Ports

- **Global hub ports** - relay ports serviced by global container lines connecting three or more continents. *(E.g. Port of Kingston, Jamaica)*

- **Sub-regional hub ports** - secondary relay ports from which cargo is relayed to surrounding Caribbean islands. *(e.g. Port of Point Lisas, Trinidad & Tobago)*

- **Service ports** - small ports serving specific islands with limited infrastructure and limited connection to larger ports. *(St. Vincent & the Grenadines)*
Port Efficiency

• An efficient port – competent in operations

• Determined by:
  – Ship’s time in port
  – Cargo handling
  – Inland transport
  – Port infrastructure

• Port energy efficiency - proper allocation of resources in production, distribution and consumption of energy
Energy Consumption and Port Efficiency

- Energy consumption - a subset of port efficiency
- Caribbean Development Bank Study (2016)
  - Productivity indicators
  - Port of Nassau (Bahamas)
  - Port of Saint Lucia
Challenges

- Lack of port infrastructure / Wide disparity in port infrastructure

- Port of St. Georges, Grenada

- Port of Kingston, Jamaica
Challenges

- Institutional setting - limited private sector participation
- Lack of integrated IT systems
- Poor landside infrastructure
- Old vessels
- Limited data and literature relating to Caribbean maritime trade
- Handling charges 2 or 3 times higher than in similar ports in other regions of the world
- Outdated policies and regulations
Possible Solutions

Revised port management systems

Revolutionized training and labour

Harmonized regulatory and legal reform

Increased competition

Improved portside infrastructure
Energy efficient port operations in the Caribbean is vital to maintaining compliance with the international maritime regulations…. But can also function as the driver to sustainable development and economic growth for the countries in the region.
Thank you!

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