Transitioning Hong Kong to Green Shipping & Ports:
Summary of Challenges

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1. IMO Timelines and Targets

- IMO’s 2023 GHG Strategy: 20% - 30% GHG reduction by 2030 and 70% - 80% by 2040 (compared to 2008 levels).
- *Update (MEPC 83, April 2025):* Phased introduction of mandatory GHG pricing + marine fuel GHG intensity standard starting 2028 – marking a new **global regulatory floor** with incentives for early movers using ZNZ fuels.

2. MEPC 83 & Green Fuels

- **LNG** – limited life under WTW GHG accounting & CC still challenging.
- **Biofuels** – transitional due to limited feedstock.
- **ZNZ** – Methanol, Ammonia & Hydroge (qualify for credits) & **China's WTW advantage**.
- **Nuclear** – small nuclear being developed.

3. Access to Green Fuels

Fuel Type	Availability	Scalability	Infrastructure	Safety	MEPC 83 WTW Life Cycle
Methanol	Medium	Medium	Partially available	Moderate risk	Promising as ZNZ
Ammonia	Low	Medium	Being developed with pilots	High (toxic)	Good ZNZ candidate for deep sea shipping
Hydrogen	Very Low	Low	Lacks maritime infrastructure – early pilots	High (flammable)	Long term ZNZ fuel

4. Suppliers & Ports Alliance?

- MEPC 83 favours ZNZ fuels by awarding credits – fuel access and bunkering strategies should anticipate demand spikes.
- **China** as main fuel supplier - **coordination is key**: stronger cross-border coordination is becoming urgent.

5. Port Electrification & OPS

- OPS reduces emissions at berth, lowers GHGs, cuts noise, and improves local air quality.
- Technology ready and feasible.
- Essential for Green Corridors.

6. Investment in Retrofitting & New Dual Fuel Ships

- Higher upfront costs but MEPC 83 WTW requirement means investments must consider LCA and digital tracking for verification.
- Asset lifecycles (20-30 years) i.e. decisions today impact 2050.

7. Understanding Technologies

- **Digitalization** alongside green transition.
- **Energy Efficiency** (e.g. wind-assisted propulsion, hull air lubrication, and battery hybrids) – limited for deep-sea sailing.
- **Systems integration** is key – MEPC 83 encourages holistic solutions, combining AI-driven energy management, and emission tracking.

8. Regulatory Uncertainty

New Regulatory Floor but National Gaps Remain

- MEPC 83 sets global baseline for carbon pricing and fuel GHG intensity. **IMO and national alignment** needed going forward.
- **Fragmented regulation** in fuel regulations, carbon pricing, incentives, penalties, safety, operational protocols & data requirements.
- Global operators must navigate **multiple regulatory frameworks**.

9. Financing the Transition involves $$$

MEPC 83 strengthens investment case by clarifying compliance and potential upside – **Early movers who 'go beyond compliance' are more likely to access incentives and premiums.**

Stakeholders consider together who and how to help transition e.g. policy, regulation, incentives, subsidies, bonds, loans and cost-sharing among ports, shipping lines, fuel suppliers, infrastructure developers and governments.

10. Workforce Training

- **Hong Kong becomes training hub?**
- New & specialized training for seafarers and onshore staff to comply with evolving fuel safety, digital systems, and emissions tracking protocols.

12. Summary: What Now?

From compliance to competitive advantage and public good

1. New global regulatory in place.
2. Compliance 2028; action starts now.
3. Green corridors and ZNZ fuels will define competitive edge.
4. Holistic approaches across fuels, tech, and finance are rewarded.
5. Cross-border collaboration (ports, governments, industry, cargo owners) is essential **– forming alliances?**
6. Prepare workforce for ZNZ fuels and digital compliance.

13. Beyond GHGs: Clean Air Benefits of Electrification

- Port and local vessel emissions contribute significantly to urban air pollution.
- Electrification (including local ships) improves health & wellbeing.
- Supports achieving WHO AQGs.
- Policymakers can deliver environmental gains and long-term healthcare savings.

14. Hong Kong Capturing Opportunities

1. Align with MEPC 83.
2. Capture GBA location advantage & China's green fuels WTW advantage.
3. Plan phased transition:

   First Phase:

   (i) Target 2025 methanol bunkering pilot;

   (ii) Commit now to cruise terminal OPS.

   (iii) Adopt electrification policy.

14. Hong Kong Capturing Opportunities

4. Align HK/Mainland disparities:
   (i) Green fuels standards
   (ii) Bunkering/ship standards
   (iii) Use policy to de-risk private investment, including tax.
5. Create specific platforms for curated:
   (i) Industry-Stakeholders Alliance;
   (ii) Industry-Government Dialogue.