

當前海運產業及未來發展 (以船舶運送業及其輔助業為方向)

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國際環保法規日趨嚴格

環保要求(NOx, Sox, 碳稅...) 越來越多與嚴格

✓ NOx Regulation

RPM (engine's rated speed)	Tier 1 (from 2000.01.01)	Tier 2 (from 2011.01.01)	Tier 3 (from 2016.01.01)
Under 130	17.0 g/kWh	14.4 g/kWh	3.4 g/kWh
130~2000	$45.0 \times n^{-0.2}$ g/kWh	$44.0 \times n^{-0.23}$ g/kWh	$9 \times n^{-0.2}$ g/kWh <small>n=RPM</small>
Over 2000	9.8 g/kWh	7.7 g/kWh	2.0 g/kWh

✓ SOx Regulation

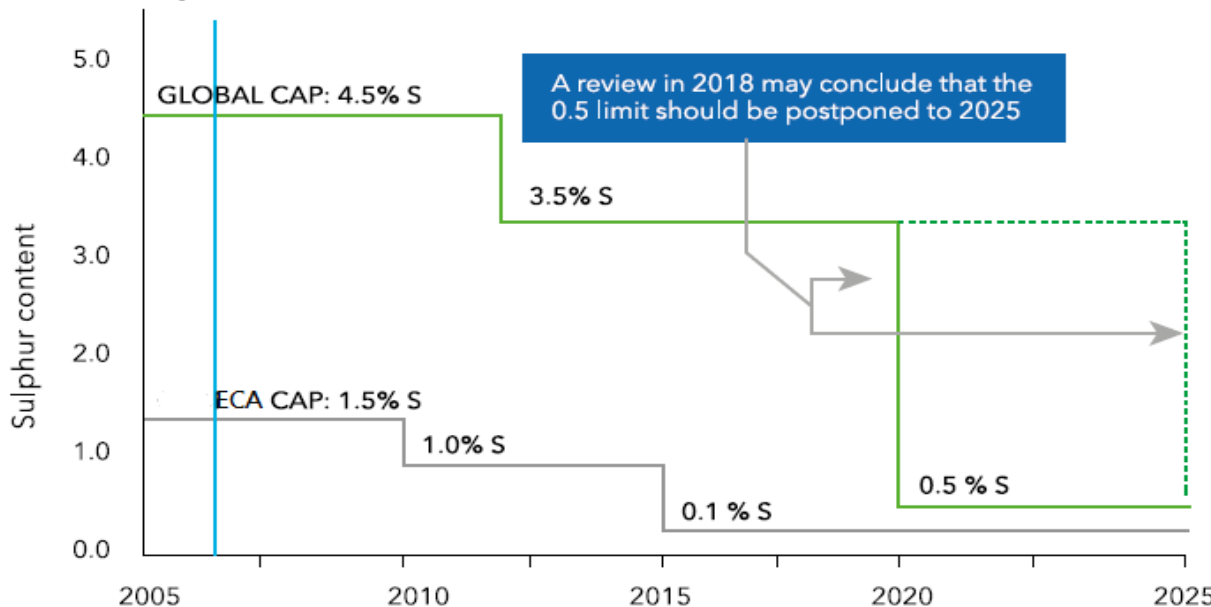


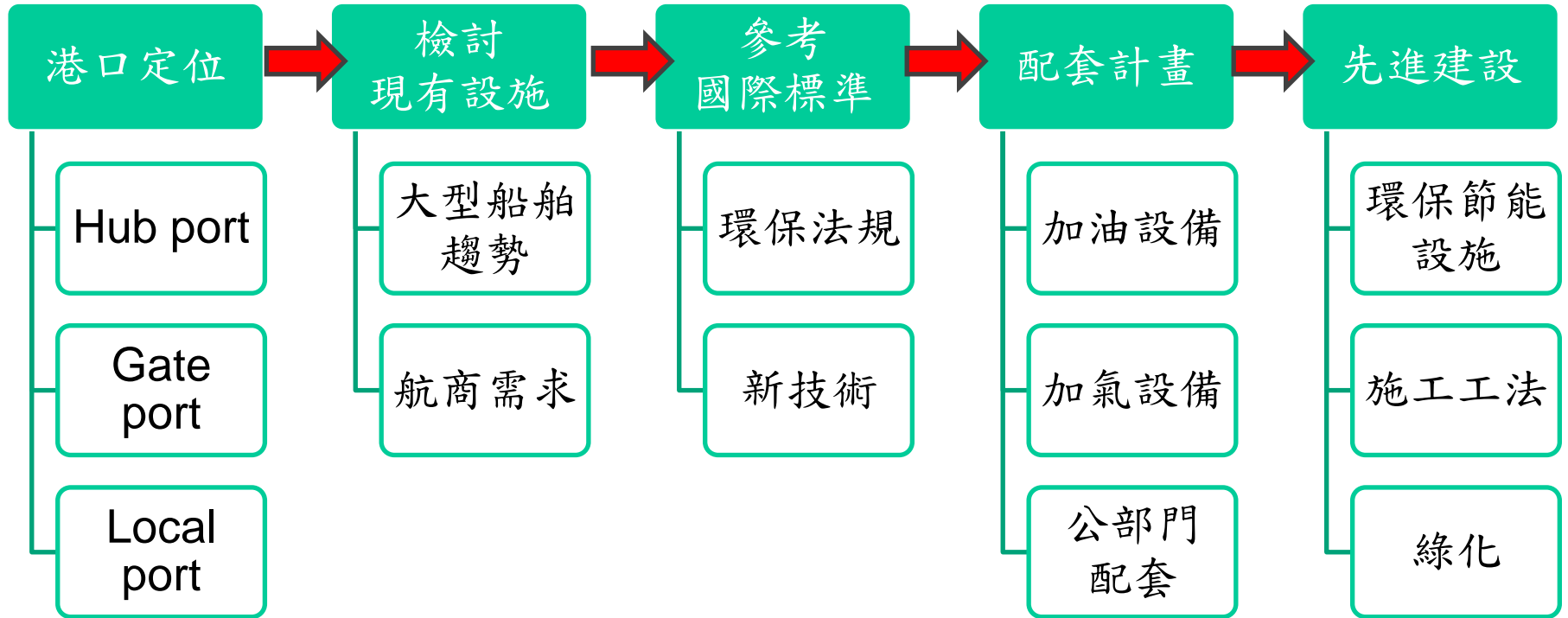
Figure 1. MARPOL Annex VI fuel sulphur content limits

ECA: Emission Control Areas
強化競爭力 迎接新挑戰

美國加州港口環保規定

- Clean Truck Program
- 岸電設施
- 船舶減速計畫
- 船舶低硫油計畫

綠色港口的長期規劃及配套措施



Green Terminal- KMCT

Green Terminal

Solar Power System

- Generate Electricity
 - 150,000 kWh / year
(Office Building + Gate)
- Reduce CO₂
 - 100,000 kg / year



Green Terminal

Solar and Wind Power Light

- Energy Source
 - Combine solar and wind power.
 - Lighting around the office building.
- Reduce CO₂
 - 4,000 kg / year

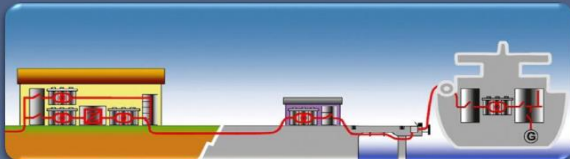
Lights Combine with Solar and Wind Power



Green Terminal

AMP

- Alternative Maritime Power
 - Shore Power
 - Cold Ironing
- Shore to Ship power.
- Reduce CO₂
 - 470,000 kg / year



KAO MING CONTAINER TERMINAL CORP.
高碼貨櫃碼頭股份有限公司

Green Terminal

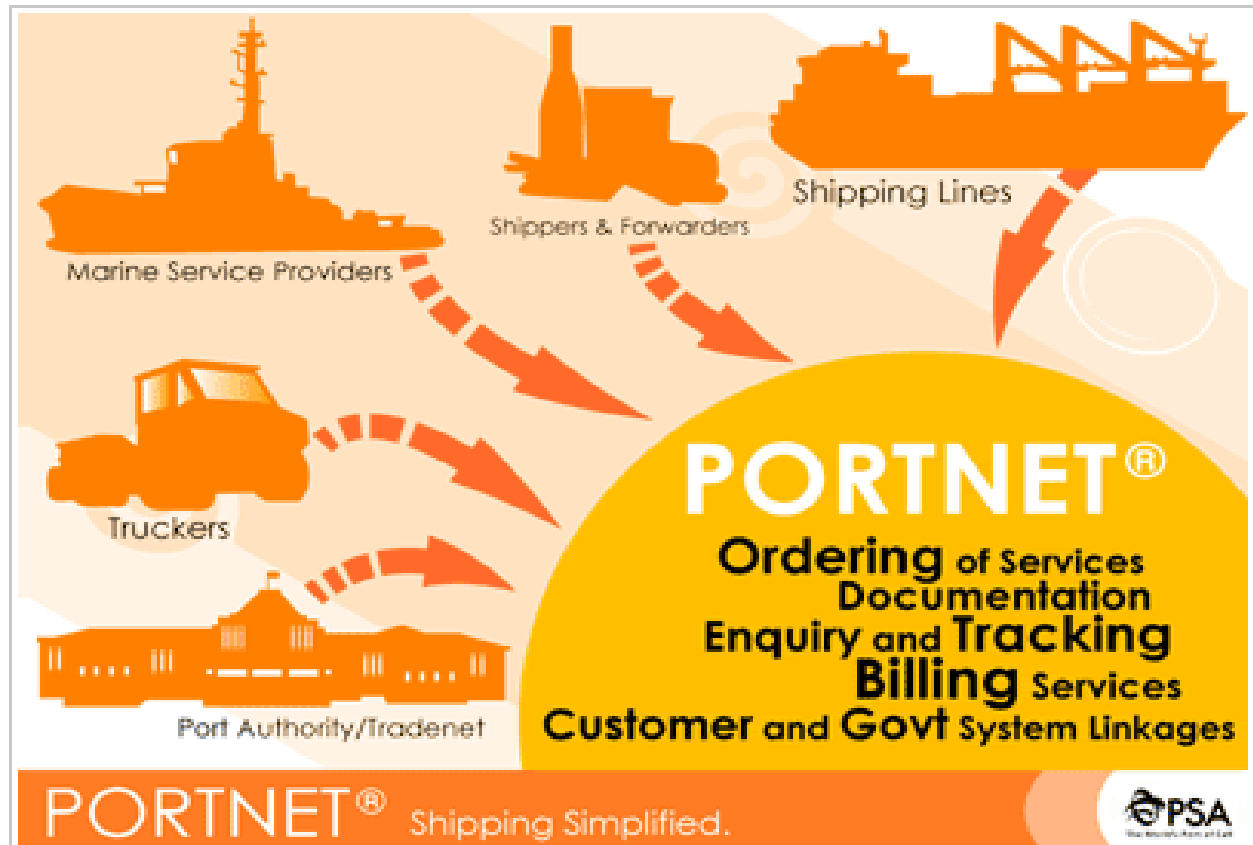
Sustainability

- Recycle Wastewater
 - Collect the wastewater of office building and container cleaning area.
 - Recycle it and water the flowers.
- Keep Native Plants
 - Relocated native plants and trees to the office building.
- Electric Vehicles
 - Provided for transportation inside the terminal.
 - For the use of staff, workers, sailors, etc.



海運及物流資訊系統共通平台

- ex: 新加坡 PorNet
- 國家級主導: B2B port community solution



資訊平台比較表

	Taiwan	Singapore
海關系統	<p>TradeVan 關貿網路</p> <p>以海關規範的EDI訊息做為基礎，可加速海運通關流程作業</p>	<p>TradeNet</p> <p>國家級EDI base交換平台，各級使用者可以進行線上關務資訊交換，加速通關流程</p>
港口資訊平台	<p>MTNet</p> <p>航港單一窗口服務平臺</p> <p>提供單一帳號簽入各項申辦服務及資訊發布</p>	<p>PortNet</p> <p>國家級新加坡港海運資訊平台</p> <p>透過與海運上中下游供應鏈使用者的資訊互動，提供便捷化的船舶貨物追蹤等進階管理功能。</p> <p>使用者皆可付費使用資訊。</p>

人才養成

- 學校教育
 - 英文能力
 - 敬業精神與態度
- 職場
 - 短期進修
 - 產業專業證照制度

簡報結束
敬請指教