



● Challenges in Refining Sector for Sustainable Future

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● State of Kuwait



- ❖ Capital: Kuwait city
- ❖ Kuwait Prince (Emir) : HH Sheikh Nawaf Al-Ahmad Al-Sabah
- ❖ Kuwait Crown Prince : HH Mishal Al-Ahmad Al-Jaber Al-Sabah
- ❖ Kuwait located in middle east , bordering the Arabian Gulf between Iraq and Saudi Arabia.
- ❖ Population : 4.63 Million.
- ❖ Independence :19/06/1961 from UK
- ❖ Economy: Kuwait has open economy with crude oil reserves of about 102 billion barrels more than 6.5% of world reserves.(~3 millions BBL/day) (Refined petroleum product (800,000 BBL/day) in KNPC).

● KPC & Subsidiaries

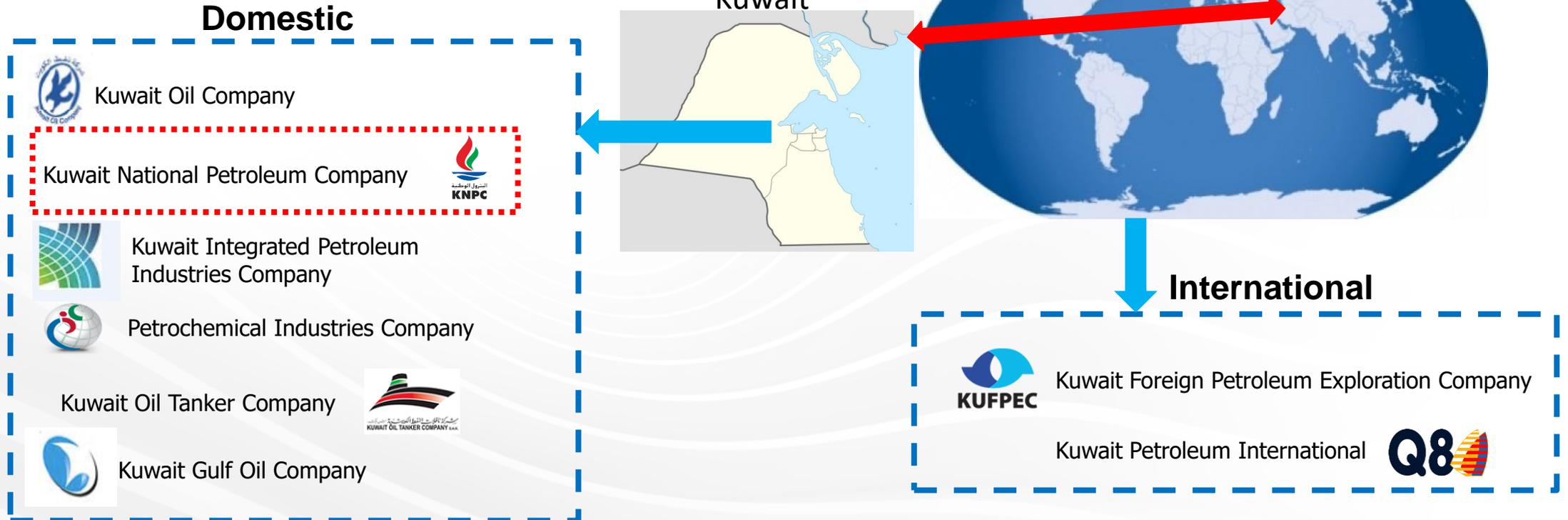
🕒 Kuwait Petroleum Corporation



- 🕒 KPC was first established in 1980 as a corporation of economic character, run on a commercial basis and fully owned by the state.
- 🕒 The objective of KPC establishment was to bring together all state-owned elements of the Kuwait oil sector under one corporate umbrella.

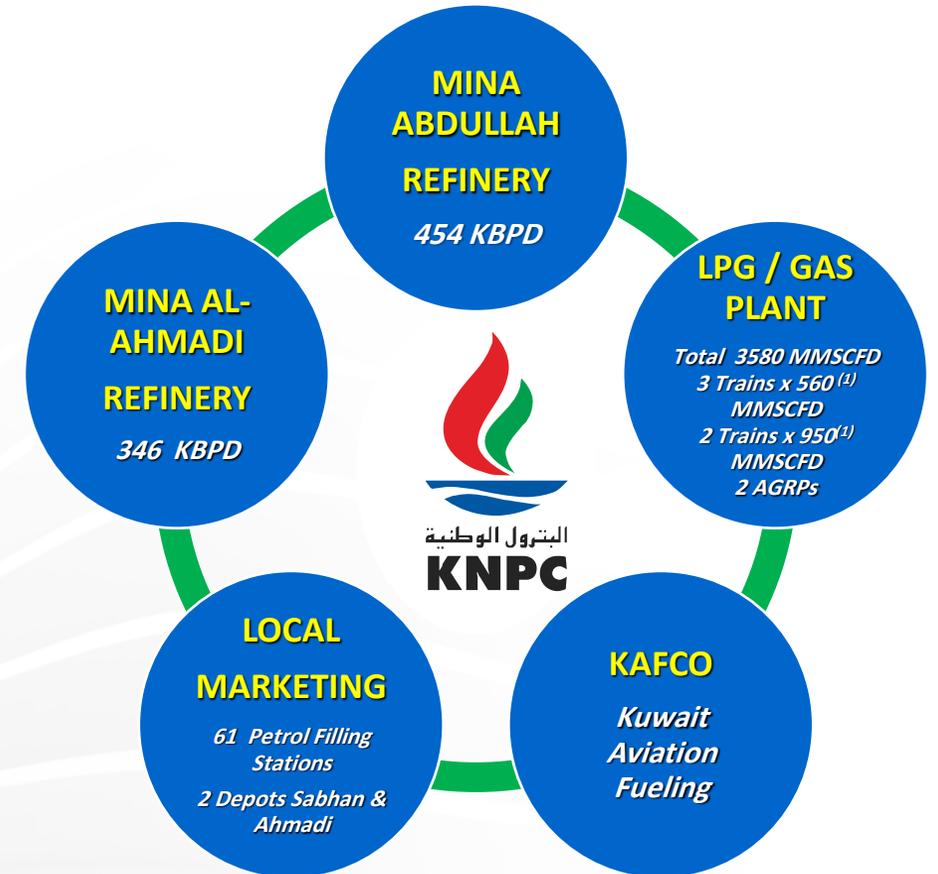
KPC & Subsidiaries

KPC Subsidiaries



● KNPC Core Business

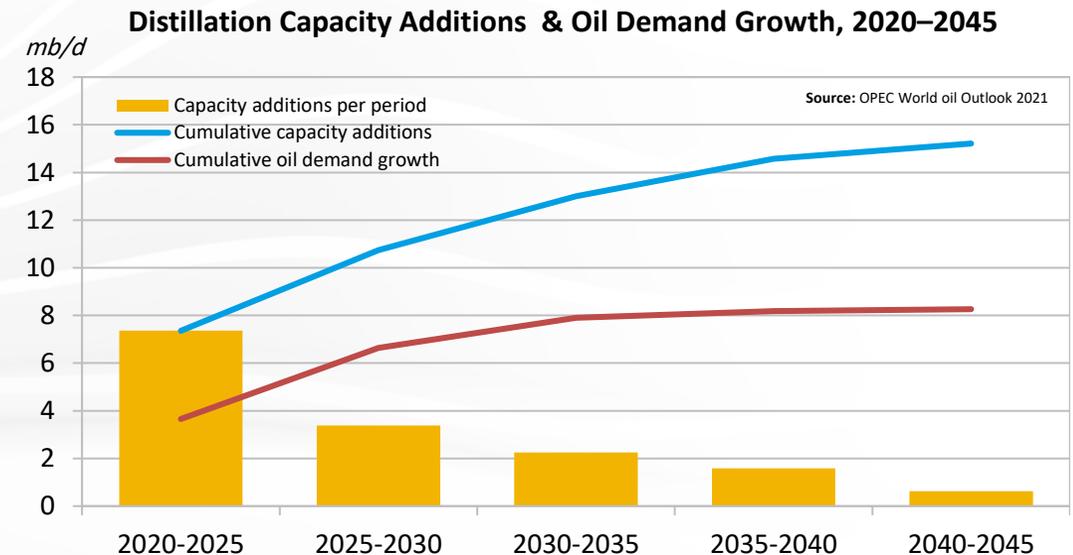
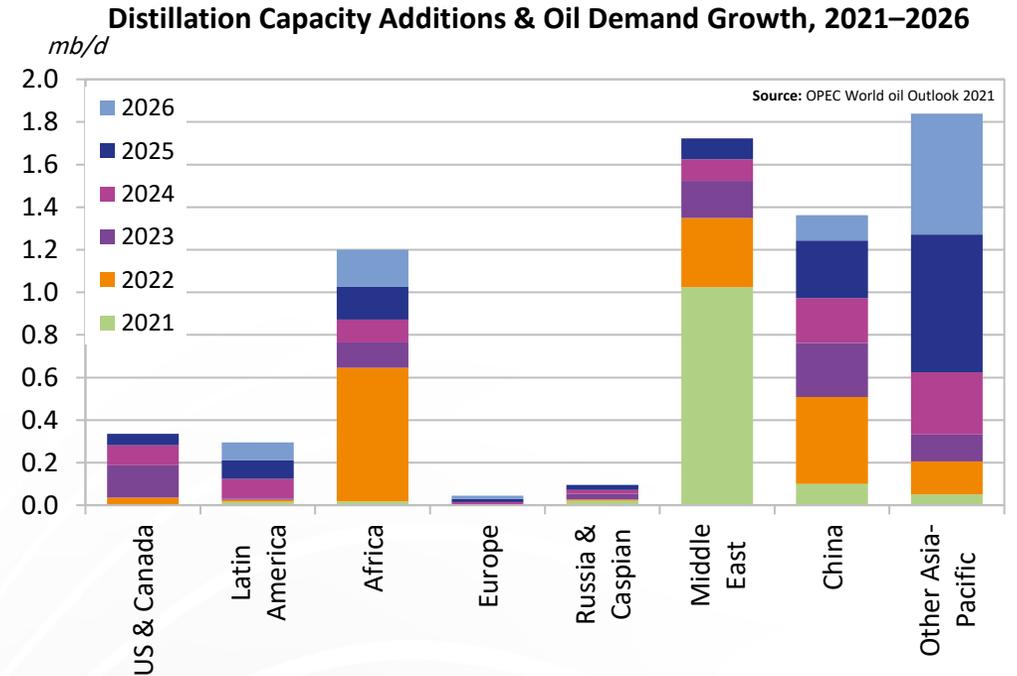
- ❖ Refining & Local Marketing arm of KPC
- ❖ Established in 1960, focused on Marketing initially
- ❖ Operates integrated two complex Refineries, as a Profit centre
- ❖ Refining capacity : 800,000 BPD
- ❖ Manages and Operates five Marine Export facilities
- ❖ Operates Temporary LNG Import Facilities since 2009
- ❖ KAFCO (Kuwait Aviation) merged with KNPC in Feb2017
- ❖ Over 6,250 employees



(1) Includes Condensate processing capacity also.

● Challenges in Refining Sector for Sustainable Future

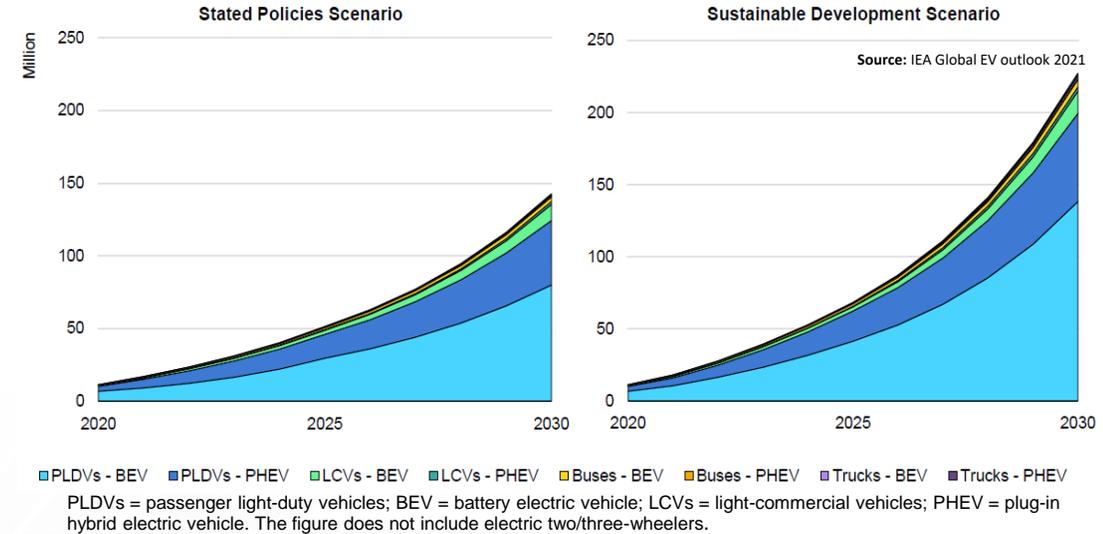
- **Refined Product demand growth lower than Net Capacity Additions.**
- In the medium-term (2021–2026), around 6.9 mb/d of new refining capacity is projected to come online, mostly in the Middle East, Asia-Pacific and Africa. Potential medium-term refining capacity is around 4.5 mb/d higher than incremental required refining capacity. However, projected closures should help to offset this imbalance by 2026. The Reference Case estimates closures of 4.5 mb/d between 2020 and 2026, mostly in the US & Canada (1.1 mb/d), Europe (1.4 mb/d) and the Asia-Pacific (1.8 mb/d).
- Long-term (2021–2045) capacity additions are expected at 14 mb/d, mostly in developing countries. However, the Reference Case projects a significant slowdown in the rate of additions. Africa and Other Asia-Pacific are the regions where significant incremental capacities are expected even after 2030. At the global level, around 6–7 mb/d of refinery closures will be required beyond 2026 and to 2045 in order to maintain Refinery utilization rate at 80%.



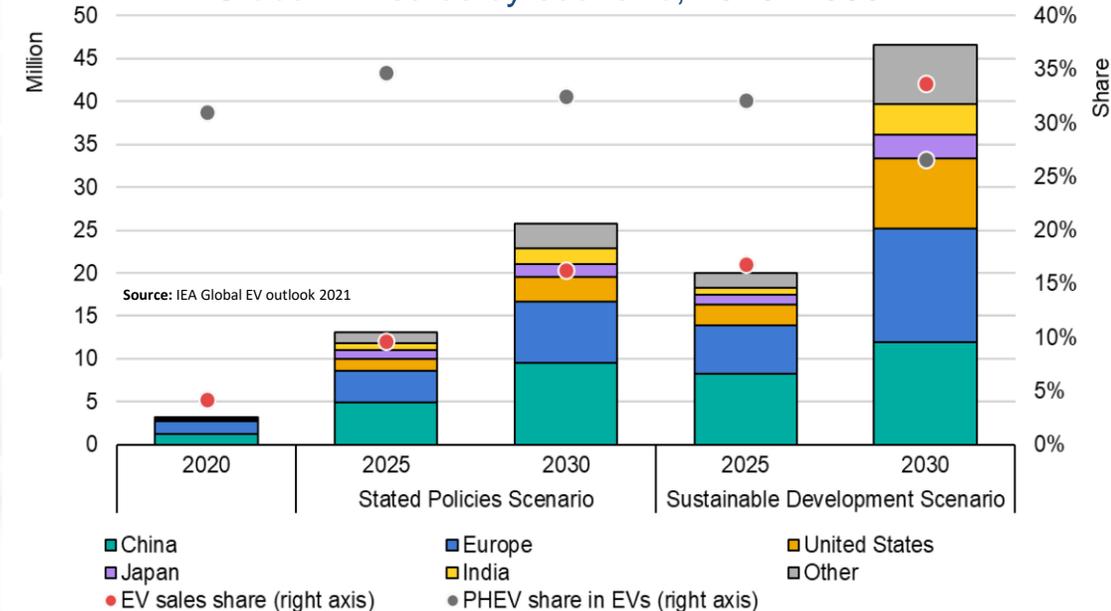
● Challenges in Refining Sector for Sustainable Future

- Penetration of Electric Vehicles for sustainable development leads to lower demand growth of transport fuels and therefore impacts Refining business.
- In the Stated Policies Scenario, the global EV stock across all transport modes (excluding two/three-wheelers) expands from over 11 million in 2020 to almost 145 million vehicles by 2030, an annual average growth rate of nearly 30%. In this scenario, EVs account for about 7% of the road vehicle fleet by 2030. EV sales reach almost 15 million in 2025 and over 25 million vehicles in 2030, representing respectively 10% and 15% of all road vehicle sales.
- In the Sustainable Development Scenario, the global EV stock reaches almost 70 million vehicles in 2025 and 230 million vehicles in 2030 (excluding two/three-wheelers). EV stock share in 2030 reaches 12%.

Global EV stock by mode and scenario, 2020-2030



Global EV sales by scenario, 2020- 2030



PHEV = plug-in hybrid electric vehicle. EV sales share = share of EVs (BEV+PHEV) out of total vehicles sales. PHEV share in EVs = share of PHEV sales out of EV (BEV+PHEV) sales

Challenges in Refining Sector for Sustainable Future

SHORT – MIDTERM

- Due to COVID-19, Refinery Profitability dampened due to need to operate at lower utilization rates mainly due to lower demand.
- Crude prices have recovered with production cuts but Crack Margins still remains weak.
- Gasoline Demand is recovering but likely to stay below pre COVID-19 Levels.
- Jet Fuel Demand likely to lag in terms of recovery as air travel to come back slowly.
- Lower economic activity having impact on Diesel Demand as well.
- The COVID-19 impact is likely to accelerate the capacity rationalization, with some operators already announcing closures. This overcapacity will cause a period of very low margins in the Midterm and therefore likely to cause a continuation of capacity rationalization.
- Refineries with lower complexity and lacking scale/size will be under pressure and run risk of closure.

Challenges in Refining Sector for Sustainable Future

LONGTERM

- Refining Margins likely to improve beyond 2025 with moderate increase in demand. However, some rebalancing will continue this decade due to excess capacity expected with Europe particularly vulnerable to rebalancing.
- Demand Growth is likely to be less as compared to past due to structural changes that includes the penetration of Electric Vehicles and Alternative Fuels for sustainable development.
- Push for cleaner fuels will continue – it is unlikely to be an opportunity now for higher profit but for being in business. Delay in costly decarbonization initiatives due to constraints on public finances may help to some extent.
- Longer term, refining capacity will be needed mainly in East of Suez. Future of refining will be in large integrated complex with use of technologies like crude to chemicals (CoC). Hydrocrackers and FCCs will increasingly focus on providing petrochemical feed stocks rather than fuels.
- Product exports are likely to be more competitive.
- IOCs reducing their refining capacity (shift to Energy Companies) will help NOCs. Middle East and Asia expected to be Refining centers with about 50% of global Refining capacity utilization in 2040.
- Beyond 2035, paradigm shift is expected with reduction in petroleum products (except Naphtha & Jet Fuel) demand. Oil Demand likely to peak between 2035 to 2040.
- Challenges to improve the Refineries reliability and productivity will continue.

Thank You

