

KPC's Role in Meeting Kuwait's Energy Challenges

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مؤسسة البترول الكويتية
Kuwait Petroleum Corporation



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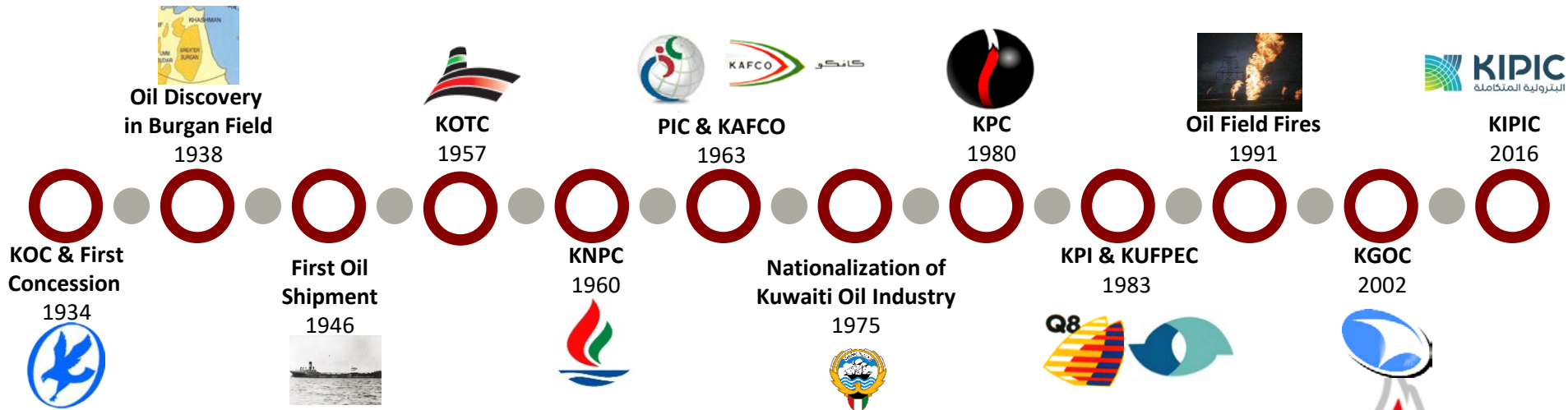
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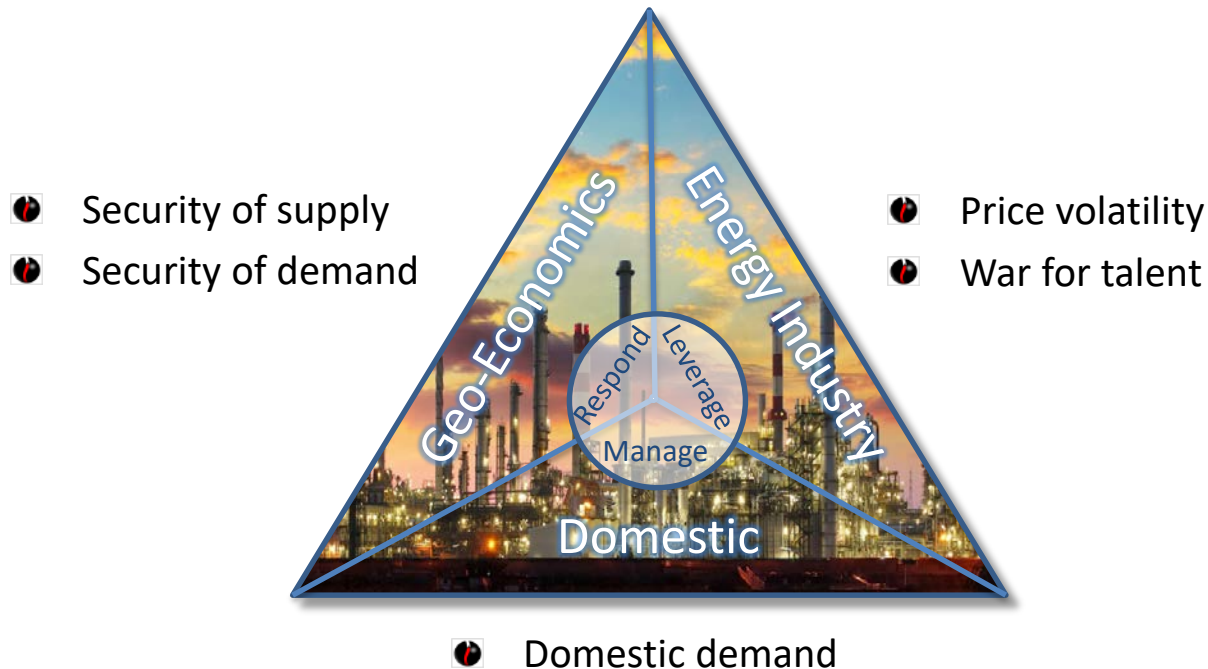


Kuwait Oil History



Select Challenges

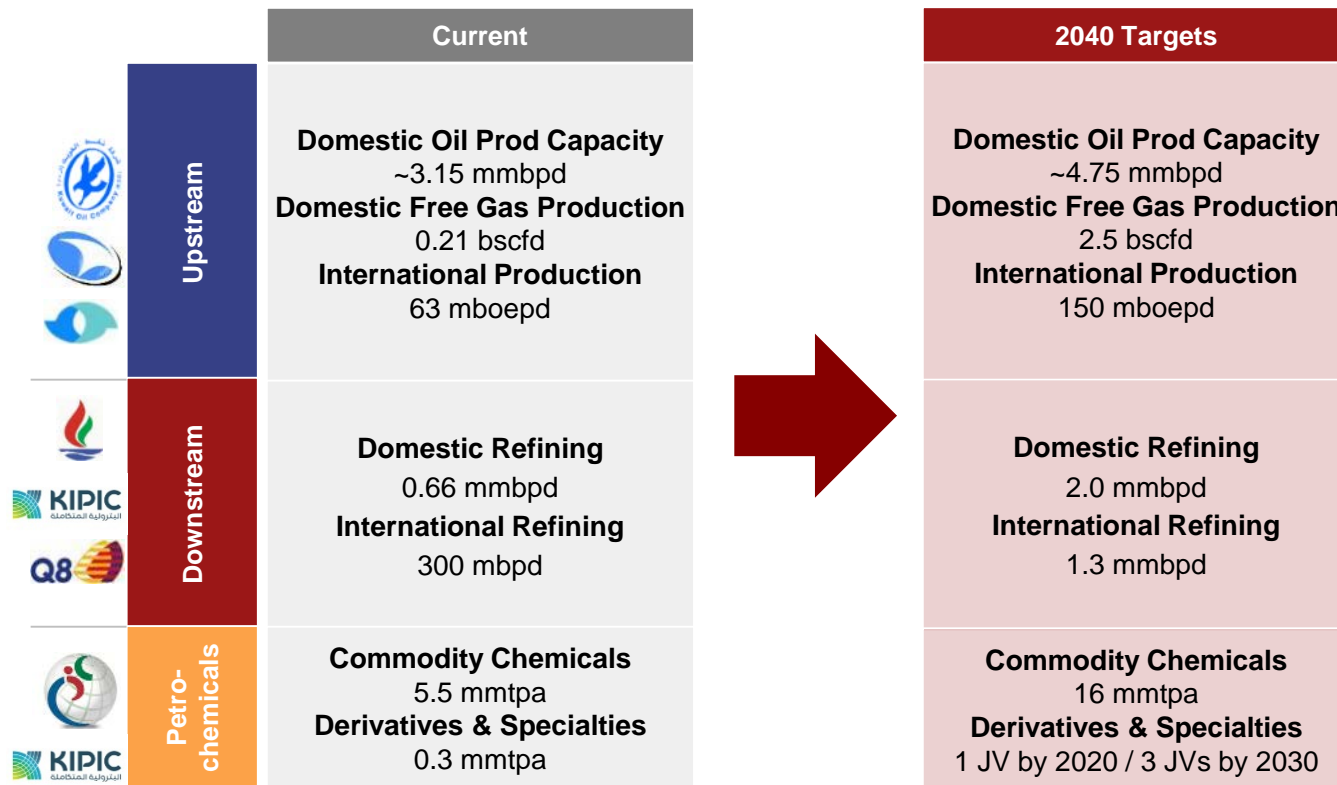
Kuwait's oil sector is facing a number of challenges; some are common such as price volatility; others are specific such as rising domestic fuel demand



Security of Supply

Being a reliable and secure supplier of hydrocarbons to the world is a cornerstone of KPC's vision, which calls for a growth strategy

KPC 2040 Strategy Overview



Security of Supply (cont'd)

Several capital programs/projects are being implemented to achieve KPC's 2040 Strategy

Building new gathering centers
Development of Heavy Oil
Development of Free Gas to boost free gas production
Aggressive drilling program with over 2000 wells to be drilled in all areas (during the coming five years)
Building a new grass-root refinery with 615 thousand BPD capacity in Kuwait, to provide clean fuels to Kuwait's power stations, with minimum sulfur content "Al-Zour Refinery"
Upgrading existing refineries to produce cleaner petroleum products "Clean Fuels Project"
Building long term LNG import facility
Building petrochemical complex (Olefins-III and Aromatics-II) in Kuwait integrated with Al-Zour refinery
Building an integrated refining/petrochemical complex in Vietnam

- Large capital investment (\$116 bn in FYP) required to meet the demand growth in a low oil price environment
- Rising finding and development costs
- Complex reservoirs that require advanced technology and capabilities
- Political concerns

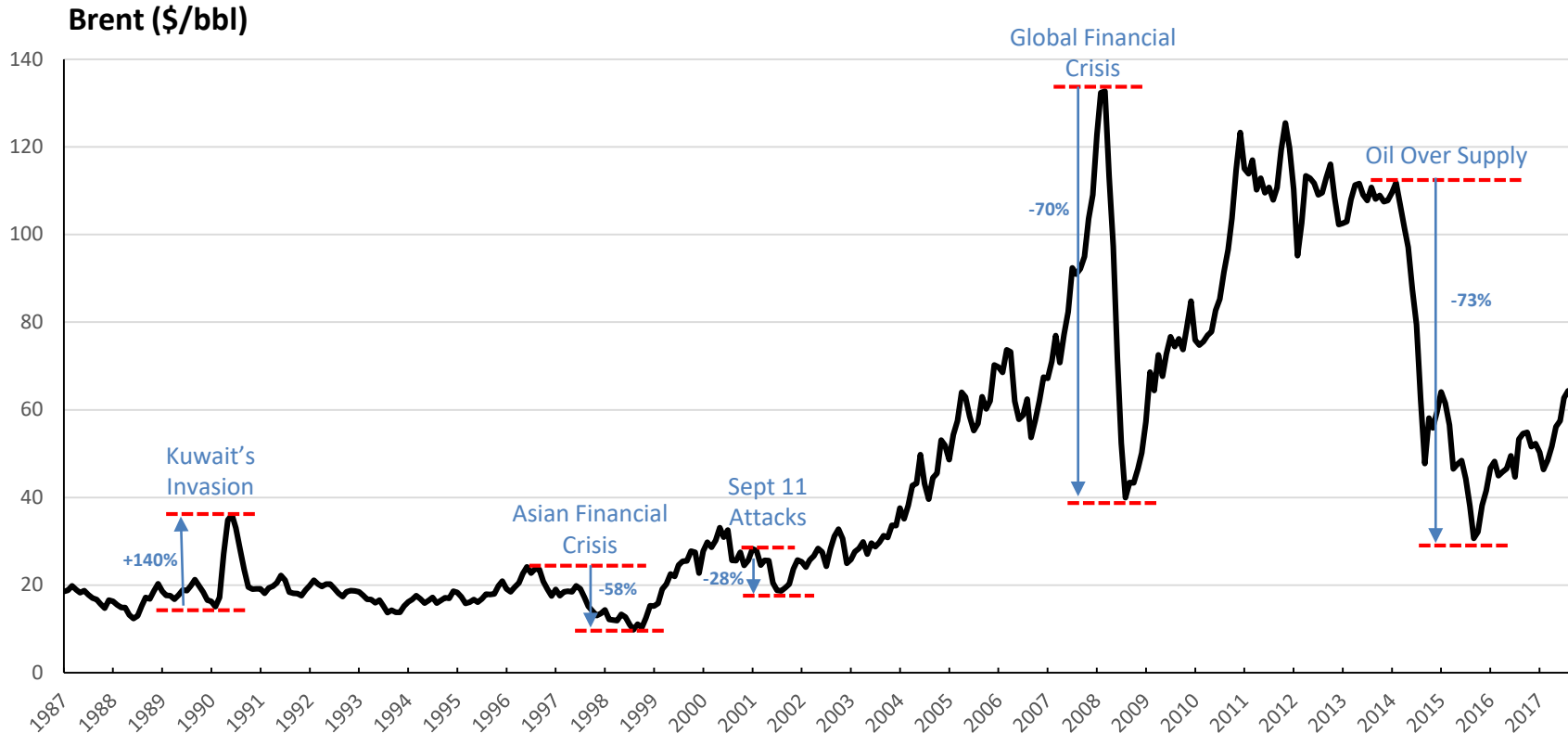
Security of Supply (cont'd)

🔗 Mitigation strategies

- 🔗 Diversify the portfolio by growing oil & gas operations inside and outside Kuwait
- 🔗 Integrate across the value chain
- 🔗 Leverage R&T / R&D
 - 🔗 Kuwait International Petroleum Research Center (KIPRC)
 - 🔗 Cooperation with local and international institutions and research centers
- 🔗 Tap into the expertise of IOCs for knowledge and technology transfer (e.g. ETSAAs)
- 🔗 Turn to the global capital markets to finance a portion of KPC's capital program

Price Volatility

Large oil price swings, the most recent of which was the drop of around 73%, hit oil-dependent economy



Oil revenues make up 94% of Kuwait's total revenues and contribute 45.8% of the country's GDP

Price Volatility (cont'd)

KPC is pursuing a number of short and long term business improvement initiatives to address this challenge, such as:

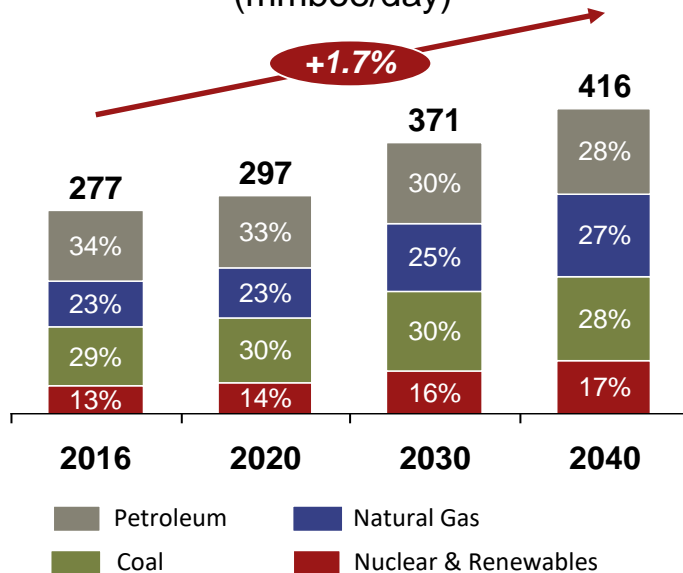
- Cost optimization
 - ▶ Optimum utilization of materials and equipment
 - ▶ Renegotiating service and maintenance contracts
- Pursuing expansion and integration through the value chain to enhance long term revenues
- Increasing energy efficiency in operations
- Utilizing technology to promote innovative cost reduction measures
- Restructuring of some business activities
- Divestment of non-profitable businesses (e.g. fertilizers)
- Effective allocation and management of capital
- Pursuing external financing options for some of the major projects to liberate cash flow and improve project economics



Security of Demand

Global demand for energy is growing but the energy mix is changing, with a growing preference for cleaner energy such as natural gas and renewables/alternatives due to more stringent regulations and climate change agenda

Total Energy Demand by Type
(mmboe/day)



● Rising competition from regional and international players to capture opportunities in the markets

Security of Demand (cont'd)

🔗 Mitigation strategies

- 🔗 Secure outlets for Kuwaiti hydrocarbons through value chain integration
- 🔗 Position businesses to take advantage of growing Asian demand and seek opportunities in geographic proximity to demand centers (e.g. China, Vietnam)
- 🔗 Enhance customer relationships and seek differentiation strategies including trading
- 🔗 Support R&T in environmentally-friendly hydrocarbon-based fuels
- 🔗 Focus on increasing investments in free gas production
- 🔗 Existing refineries are being upgraded to produce high quality products



Security of Demand (cont'd)

- KPC and its subsidiaries have initiated a number of projects aimed at reducing green house gases and utilizing renewable energy, including:
 - Sidrah 500 – solar power plant (10 MW)
 - Al-Zour Refinery
 - Clean Fuels Project
 - The utilization of CO₂ in Enhanced Oil Recovery techniques
 - Building a solar PV plant to produce 1000 MW of electricity within the Shegaya complex to meet 15% of the oil sector's energy demand by 2020 (a self-imposed more aggressive target versus the government's 2030 target)
 - The utilization of solar energy in offices, fueling stations, and parking lots
 - Convert all building into green



War for Talent

KPC's growth strategy, which includes frontier developments, call for additional talent, skills, and new capabilities

- Development and expansion of training & development programs
- Enhance training & development philosophy with a greater emphasis on on-the-job training
- Training centers
- Leadership development programs
- Knowledge transfer from JVs and technical service agreement partners
- Scholarships

Domestic Demand

Factors related to domestic demand

- ❶ Domestic energy demand will double between 2017 and 2030, which requires more fossil fuels that could impact Kuwait's oil revenues

Mitigation strategies & leverage points

- ❶ Meet rising domestic energy demand through concerted efforts with the Ministry of Electricity & Water

Oil Sector

- Increase and speed up free gas development and production
- Build Al-Zour refinery
- Expedite implementing Al-Zour LNG import (LNGI) Project
- Continue exploring the opportunities for energy efficiency and maximizing usage of renewables in the oil sector energy mix
- Pursue gas pipeline opportunity from neighboring gas producers

Electricity Sector

- Enforce energy conservation efforts and apply the building codes in line with international standards in order to save energy and water consumption
- Improve the efficiency and reduce power network losses
- Pursue with utilization of renewable energy for power generation



Thank you!

