

المملكة العربية السعودية
وزارة الطاقة والصناعة والثروة المعدنية



Saudi Arabia

Addressing Response Measure

Ministry of Energy, Industry and Mineral Resources
4th December, Katowice

Outline

- **Assessment of Climate Action Impact on KSA**
- **Measures Taken by KSA to Manage Climate Change Impact**
- **Learnings From COP-24 on the Forum**
- **Discussion**

Literature and Assessment on the Impacts

IPCC Assessment Reports

Kyoto Emission reduction policies will **reduce the demand for carbon-based fuels**, and thus introduce a downward pressure on their prices e.g., in the world price of crude oil;

Oil-exporting countries will be most impacted with **reductions in projected oil revenues (13% to 25%)**.

Most mitigation scenarios are associated with **reduced revenues from coal and oil trade for major exporters (high confidence)**. The availability of CCS would reduce the adverse effects

Mitigation policy could **devalue fossil fuel assets** and reduce revenues for fossil fuel exporters, but differences between regions and fuels exist (high confidence).

Literature and Assessment on the Impacts

IPCC Assessment Reports

MIT Joint Program on the
Science & Policy of Global
Change Report

Clearly, the greatest loss is imposed on energy exporters, and **the more dependent a country is on these exports, the greater the percentage effect on its economic welfare.**

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KSA Internal Assessment

Climate Risk	Demand Risk	Regulatory Risk	Societal Risk
	Oil demand decreases below expectation	Climate related regulations tighten	Societal ties weaken
Potential Outcomes	Reduced revenue impacting ability to maintain and grow kingdom contributions	Increased cost, project delays for Vision 2030 work program	Damaged reputation, difficulty to attract key stakeholders and investors

KAPSARC and other international organizations

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KSA Internal Assessment

Climate Risk

**Investment
Risk**

**Physical
Risk**

Access to
investors
becomes
difficult

Climatic
changes disrupt
operations

Potential Outcomes

Reduced
access to
capital, increased
cost of
capital

Increased
capital &
Operating costs,
higher
likelihood of
disruption
across the
Sectors and value
chains

KAPSARC and other international organizations

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Measures Taken by KSA to Manage Climate Change Impact

Establishing a National Center to Address the impact of Climate Change and its action

Integrating Climate Change action within the program of Vision 2030

Each sector development, projects, or measures within a developing sector shall address:



Energy Efficiency



Renewable Energies



Carbon Capture and Utilization/Storage



Utilization of Gas



Methane Recovery and Flare Minimization



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Integration of Climate Change in all Adaptation Action



Urban
planning



Water and waste
water management



Marine
protection



Reduced
desertification

Measures Taken by KSA to Manage Climate Change Impact

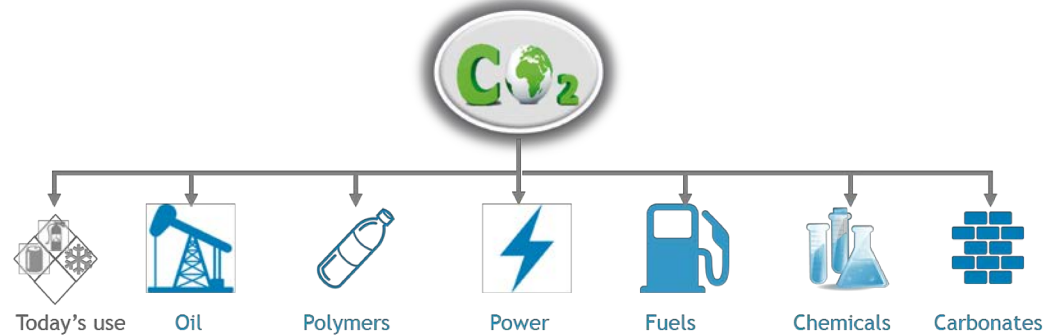
Establishing a National Center to Address the impact of Climate Change and its action

Integrating Climate Change action within the program of Vision 2030

Integration of Climate Change in all Adaptation Action

Focus and invest on R&D
“Emission to Value” (CCUS)

What can we do with CO2 other than sequestration?



- Beverage
- Fire extinguishers
- Dry ice
- Urea
- Blanketing
- Shield gas in welding
- ...
- EOR
- Working fluid for power cycles
- CO2 into chemical or fuels
- Convert CO2 into carbonates

- Program established on 2005 in partnership with the private sector
- Initiated partnerships with 11 global centers of excellence
- Established a fund to invest on all stages of R&D
- Current success: 2 commercial projects, 3 major pilots

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International Collaboration

- **Carbon Sequestration Leadership Forum (CSLF)**
- **Clean Energy Ministerial (CEM)**
- **Mission Innovation (MI)**
- **Global Methane Initiative (GMI)**

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Learnings From Improved Forum

- Governance.
- Functions and Work Program.
- Permanent Technical Expert Group (TEG) with clear Terms of Reference to understanding impacts of the implementation of Response Measures..
- Advancing the work of the Forum with regards to continuing the exchange of information, cooperation among parties, and sharing approaches and experiences as well as advancing R&D.

Thank You