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
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).
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.
### Literature and Assessment on the Impacts

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<th>IPCC Assessment Reports</th>
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<td>MIT Joint Program on the Science &amp; Policy of Global Change Report</td>
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<td>KSA Internal Assessment</td>
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#### Climate Risk
- **Demand Risk**
  - Oil demand decreases below expectation

#### 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
**Literature and Assessment on the Impacts**

**IPCC Assessment Reports**

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

**KSA Internal Assessment**

**Climate Risk**
- **Investment Risk**
  - Access to investors becomes difficult
- **Physical Risk**
  - Climatic changes disrupt operations

**Potential Outcomes**
- **Investment Risk**
  - Reduced access to capital, increased cost of capital
- **Physical Risk**
  - 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 Impacts

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

- Established in 2009
- Raise KSA Climate Resilience
- Implement climate change agreements at the national level
- Analysis of socioeconomic impacts of response measures
- DNA has a strong and effective inter-ministerial and public/private inter-agency platform for coordinating effective responses to climate change issues in Saudi Arabia

- Communicate/update NDCs and submit to UNFCCC
- Annual review of the status of implementation of NDCs for internal purposes
- Prepares/updates National Communication Report & Biennial Update Report
- Awareness at the National Level
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
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
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 (CRLF)
• Clean Energy Ministerial (CEM)
• Mission Innovation (MI)
• Global Methane Initiative (GMI)
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Learnings From Improved Forum

- Governance.
- Functions and Work Program.
- Permeant 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