

A faint world map is visible in the background of the slide, centered behind the text.

**Presentation by**  
**The Kingdom of Saudi Arabia**  
**to the**  
**Ad-hoc Working Group**  
**Round Table**  
**on Mitigation Potentials**  
**Risks and Uncertainties**

**Bonn**

**May 14, 2007**

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# Content

## ❖ Spillover of implemented policies

- IPCC TAR (2001)
- McKay Study (2006)

## ❖ Case study on Saudi Arabia

- Policy Choices by Annex I
- Policy Choices by Energy Exporters

# IPCC TAR 2001

- ❖ Emission Constraints on developed Countries have well-established spill-over effects on developing Countries. Analysis report reduction in both projected GDP and reduction in projected oil revenue for oil exporting developing Countries

# MacKay Consultants and IPA 2006

## Impact of Climate Change Policies on National Oil Companies:

- ❖ Initiated by the National Oil Companies Forum (NOC),
  - Qualitative Assessment of over 2500 Climate Change related policies in 40 countries
  - Focused on 13 Countries that Account for >80% of Global GDP: UK, Germany, Italy, France, Spain, Japan, USA, Canada, China, India, South Korea, Brazil and Russia (plus EU15)
  - Selected 19 Policies where Climate Change Regulations can be developed and Applied, Drawn from:
    - ✓ Taxation
    - ✓ Fuel Switching
    - ✓ Energy Efficiency
    - ✓ Technology Developments

# MacKay Consultants and IPA 2006

Climate Change Polices	UK	Germany	Italy	France	Spain	EU15	Japan	S Korea	USA	Canada	China	India	Brazil	Russia Federation
<b>Tax-Related Policies</b>														
Local Carbon Tax	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	✓	-
Energy Tax	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓	✓	✓	✓✓	✓✓
Excise tax on oil products/fossil fuels	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓	✓	✓	✓	✓✓
Tax credits for renewable energy projects	✓	✓	✓	✓	✓	✓	✓	✓	✓✓*	✓✓	✓	✓	✓✓	-
Border adjusted taxes	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
<b>Fuel Switching</b>														
Policies to encourage use of Nuclear Power	✓✓	-	✓	✓✓✓	✓✓	-	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓	✓	✓✓✓
Policies to encourage use of renewable energy	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓
Biofuels	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	-	✓✓✓	✓✓✓	✓	✓	✓✓✓*	✓✓
Natural Gas	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓*

✓✓✓	Major Impact
✓✓	Medium Impact
✓	Minor Impact
-	Not Applicable

# MacKay Consultants and IPA 2006

Climate Change Policies	UK	Germany	Italy	France	Spain	EU15	Japan	S Korea	USA	Canada	China	India	Brazil	Russia Federation
<b>Energy Efficiency</b>														
Investment in Private Households	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓	✓	✓	✓
Investment in Industry	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓*	✓✓✓	✓✓	✓✓✓
Voluntary Agreements	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓	✓✓	✓
Energy from CHP	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓	✓	✓	✓	✓	✓✓✓
<b>Technology Developments</b>														
Hydrogen/Fuel Cells	✓	✓✓	✓	✓	✓	✓	✓✓	-	✓✓	✓✓	✓	✓	-	✓
Carbon Capture & Storage	✓	✓	✓	✓	✓	✓	✓	-	✓✓	✓✓	✓	✓	✓	✓
<b>Other Policy Measures</b>														
EU Emissions Trading	✓✓✓	✓✓✓	✓✓✓	✓✓*	✓✓✓	✓✓✓	-	-	-	-	-	-	-	-
Non-EU Emissions Trading	-	-	-	-	-	-	✓✓	✓✓	✓✓	✓✓	✓	-	-	✓
CDM and JI Projects	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓	-	✓✓	✓✓	✓✓	✓✓	✓
Green Certificates	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	-	-	-	-

✓✓✓	Major Impact
✓✓	Medium Impact
✓	Minor Impact
-	Not Applicable

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# Case Study on Saudi Arabia

- ❖ Saudi Arabia is vulnerable to both Climate Change impacts and to response measures
- ❖ Actions to deal with the impacts of response measures include efforts to:
  - increase financial resilience, such as economic diversification for the long term,
  - insurance and financial risk management tools (i.e. hedging) for the short term



# Impacts of mitigation actions: Energy Exporters

## ❖ Policy choices by Annex I make a difference

- Fuel bias (conventional vs renewable):
  - ✓ Policies that favor specific fuels create market distortions
  - ✓ Pushing too much on renewables creates negative market signals on investment and supply of conventional fuels with clear risks for future energy security
- Flexibility mechanisms (CDM, JI, Trading) should be encouraged to lower implementation costs and minimize response impacts
- Treatment of pre-existing fuel taxes and subsidies:
  - ✓ Partial or complete removal of pre-existing taxes and subsidies lower implementation costs and the impact of mitigation policy

# Impacts of mitigation actions:

Continued ...

- ❖ **Policy choices by Annex I make a difference**
  - **Selection of policies should take into account minimizing the adverse effects of response measures on developing countries**
  - **Sector-specific policies are costly and inflict greater burden:**
    - ✓ **Specific policies that target oil-intensive sectors such as transportation have greater negative impacts on the economy**
    - ✓ **Comprehensiveness in treatments of all GHG gases (not only CO<sub>2</sub>) will have lower negative impacts**
    - ✓ **Carbon intensity tax has lower impact, than petroleum products tax**
    - ✓ **Carbon Capture and storage technology provide win-win mitigation option**

# Impacts of mitigation actions:

Continued ...

## ❖ Policy choices by energy exporters

### ➤ Diversification

- ✓ Short and medium terms options include development of downstream products (petrochemical) and energy/capital intensive manufacturing due to comparative advantages
- ✓ long term options include services such as high tech and knowledge intensive, tourism, transport services, finance and insurance, desalination technologies and renewables

# Impacts of mitigation actions:

Continued ...

## ➤ Competitiveness

- ✓ Successful diversification depends on being competitive at the international level
- ✓ Needs for market access during the transition, and favorable terms of trade
- ✓ Needs for technology transfer, foreign direct investment and partnership to strengthen competitive capabilities

## ➤ Incentives by Annex I is essential for the success of economic diversification

# Concluding Key Points

- ❖ **Bottom up approaches have less spillover effects on developing countries**
- ❖ **Magnitude of economic consequences on developing countries will depend on the policy choices by Annex I countries**
- ❖ **Success of economic diversification policies in developing countries requires incentives from Annex I countries**