

**IAEE's Rio 2010 International Conference
The Future of Energy: Global Challenges, Diverse Solutions**

OPEC 50th Anniversary

OPEC a mature organization in a globalised interdependent world

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OPEC 50th Anniversary

OPEC a mature organization in a globalised interdependent world

OUTLINE

- **What makes OPEC unique?**
Reserves; Market share; Spare capacity; Depletion rate; Sovereignty; Adaptive capacity to global governance; Consumer price and taxes
- **Why OPEC is not a Cartel**
Market analysis; Model analysis
- **OPEC and global governance**
OPEC integration in a globalised interdependent world
- **Selected issues of relevance to OPEC**
Energy security; Protecting the environment; Long-term transition in the Energy Mix; Fighting energy poverty



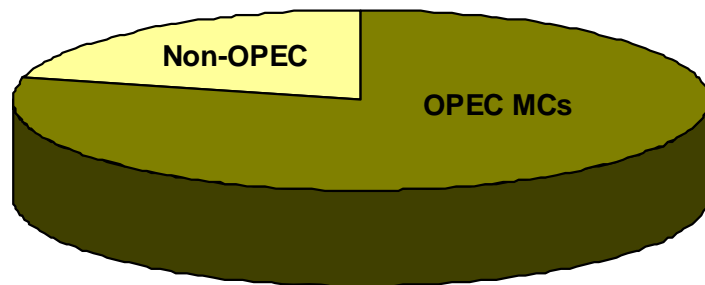
What makes OPEC Unique ?

Exceptional natural resource endowment of OPEC MCs

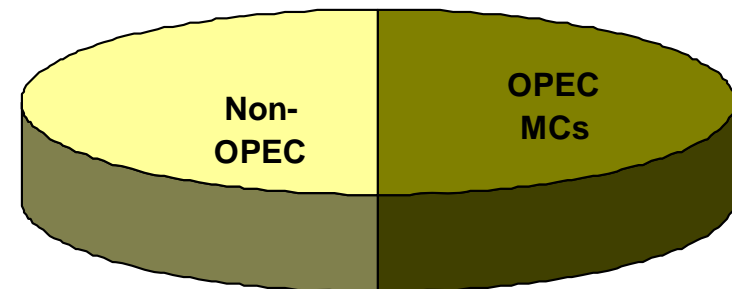
- ~79 % of World oil reserves: 1023 bn bbl
- ~ 50% of World gas reserves: 91 trillion m3

‘Technology continues to blur the distinction between conventional and non-conventional oil/gas’

World oil reserves



World gas Reserves



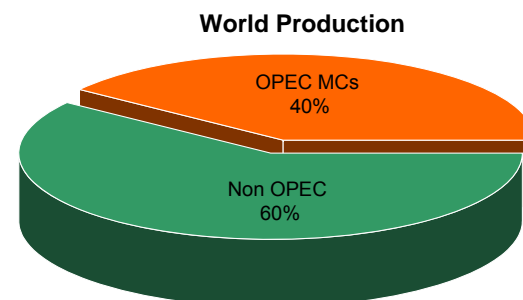
Source: OPEC Secretariat



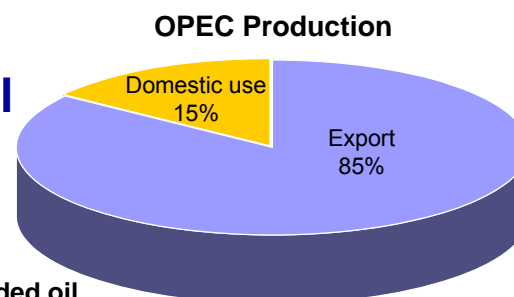
What makes OPEC Unique ?

Substantial share in production and international oil trade

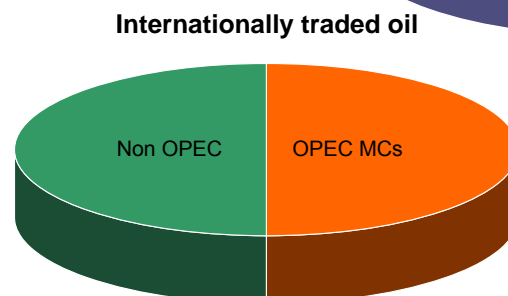
- OPEC MCs produce approximately 40% of world oil production



- OPEC MCs export approximately 85% of their oil production representing



- Close to 50% of all the oil traded internationally.



Source: OPEC Secretariat



What makes OPEC Unique ?

Existence of spare capacity

- OPEC MCs are currently carrying approximately 6 mb/d spare capacity as a means to stabilize the market and avoid price volatility. This is equivalent to the production of Canada and Mexico combined
- Virtually no spare production capacity for Non-OPEC

Relatively low rate of depletion in OPEC MCs

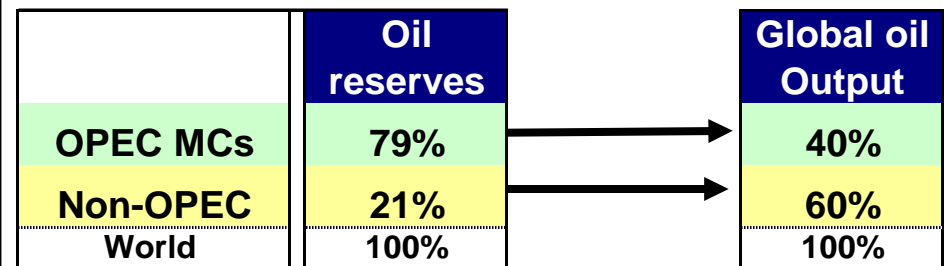
For OPEC MCs:

Oil reserve share: **high**

Global oil output share: **relatively low**

Thus,

Depletion rate: **relatively low**

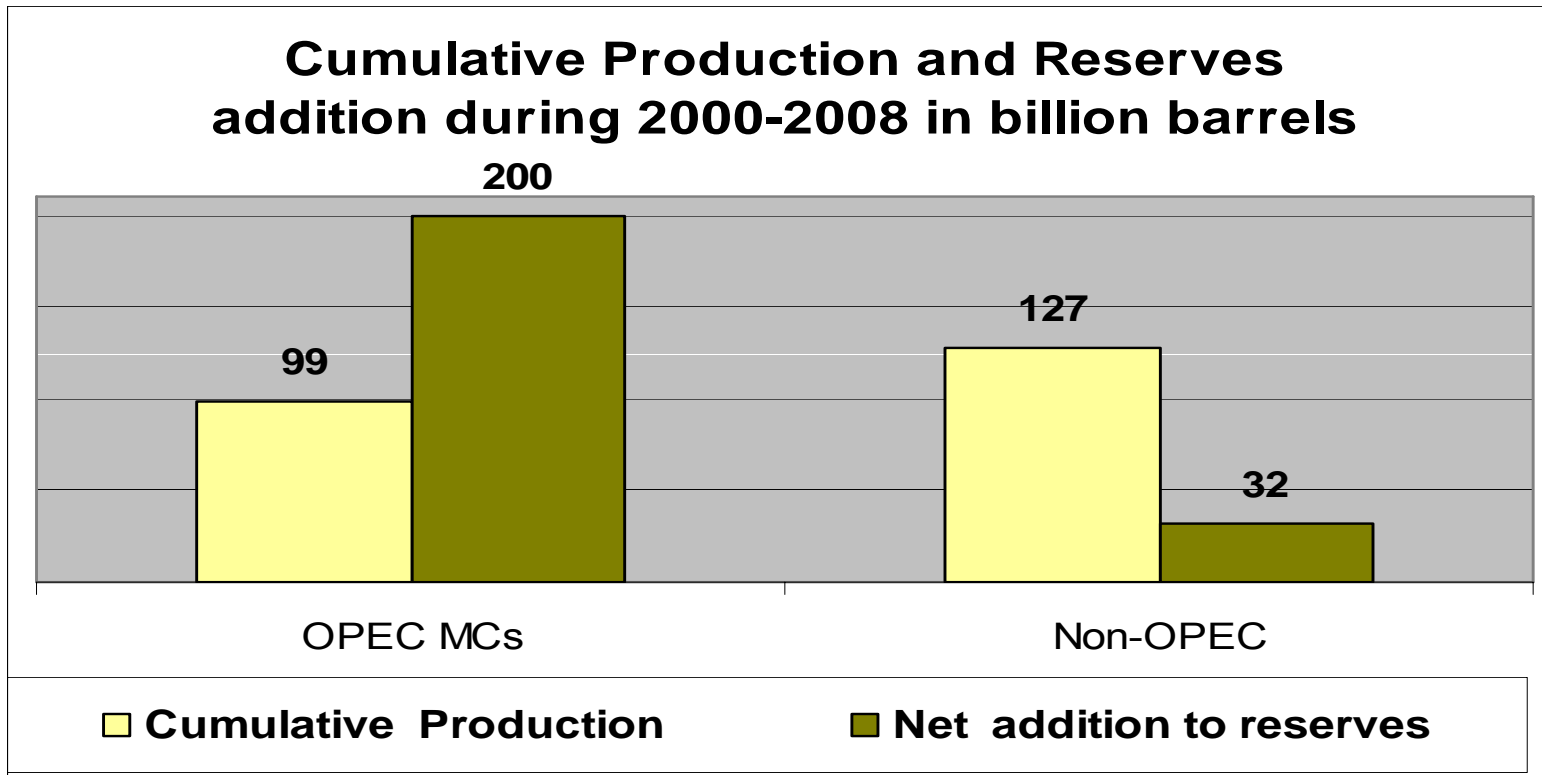


Source: OPEC Secretariat



What makes OPEC Unique ?

Increasing reserves of OPEC MCs



During the last decade, OPEC MCs Reserves addition have more than offset (two fold) its production. Reserve Replacement Ratio (RRR) more than 200%.

Source: OPEC Secretariat



What makes OPEC Unique ?

Sovereignty: a central issue

- ‘Reaffirming the inalienable and **permanent sovereign rights** of our Countries over their natural resources’ (OPEC Head of States, 2007)
- The bulk of OPEC MCs production is realized **by NOCs**
- Most of OPEC MCs have **allowed IOCs** to invest in E & P (Only in gas fields for some countries)
- All OPEC Member Countries do **exercise their sovereignty**.

Adaptive capacity to global governance

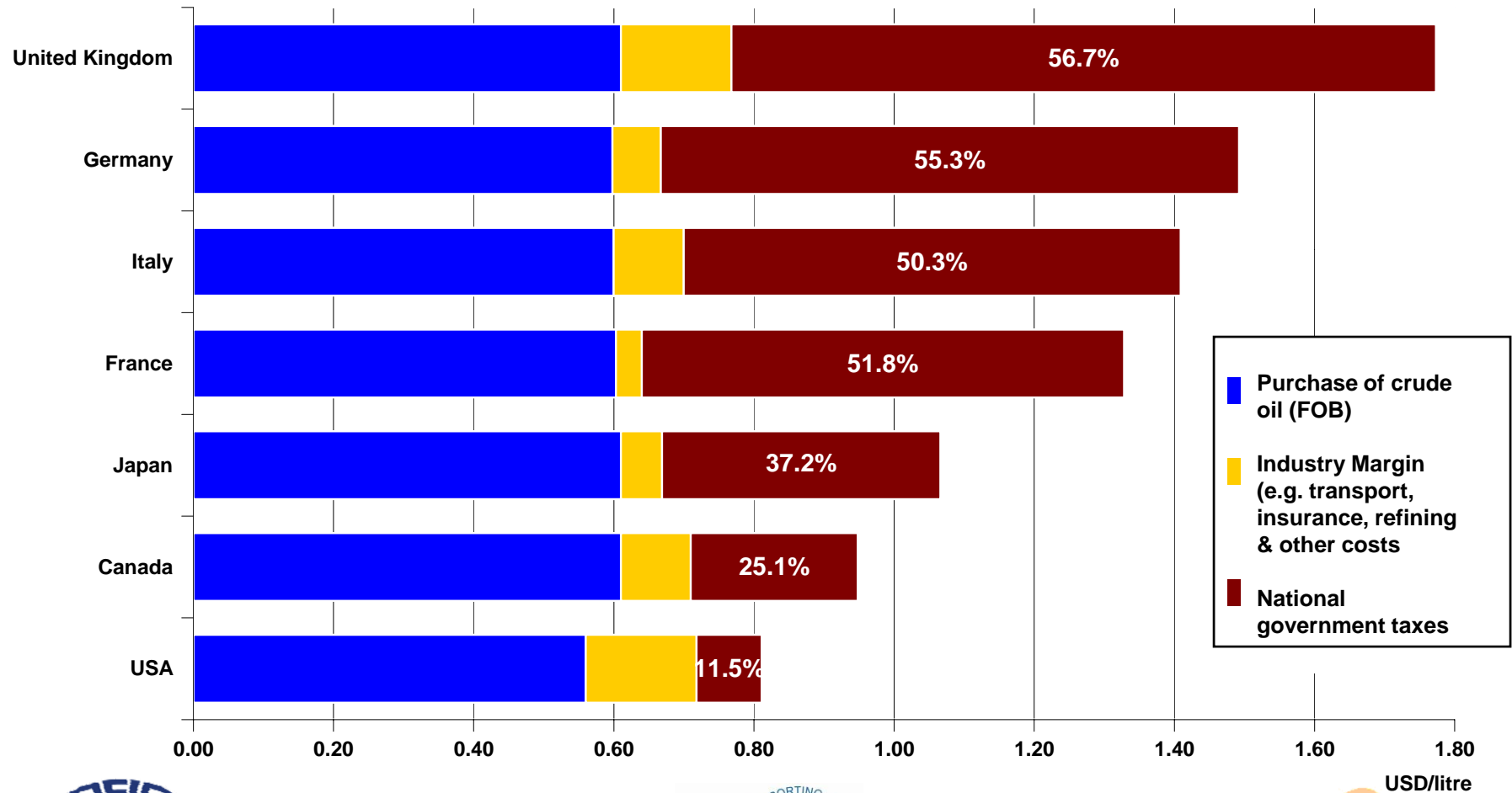
Over its 50 years of existence OPEC has progressively evolved in line with the global order:

From a Third World Intergovernmental organization in a **highly compartmented world (North/South, East/West)** to an Intergovernmental organization of international cooperation in an **interdependent world** based a (neoliberal) globalization



What makes OPEC Unique ?

Consumer taxes are higher than oil prices in many OECD countries
 Gasoline consumer price USD/litre (average 2008)



Source: OPEC Secretariat



Why OPEC is not a Cartel

Period		Key highlights	Cartel behaviour*?
1	1960-1973	<ul style="list-style-type: none"> ❑ Weak bargaining position ❑ Market control by oil majors: Posted price 	no
2	1973-1982	<ul style="list-style-type: none"> ❑ Increasing power. ❑ Rise of nationalism, Sovereign rights ❑ South-south cooperation: inception of OFID (Jan 76) ❑ Tightening of S/D: growth in demand ❑ De-integration and diversification of markets ❑ Inception of the IEA (Nov 74): to challenge OPEC? ❑ Price maker. Volume taker: Fix ref price and passively accept impact on demand 	no
3	1982-1985	<ul style="list-style-type: none"> ❑ Considerable increases in Non-OPEC production ❑ Fall in oil demand. Shift to alternative energy ❑ OPEC MCs prod: 30 mb/d in 1981 to 16 mb/d in 1985 ❑ Introduction of quotas 	yes/no

Source: Dr. Mabro, Dr. Fattouh, Oxford IES, others

*To restrict production in order to support prices



Why OPEC is not a Cartel

Period		Key highlights	Cartel behaviour*?
4	1986	<ul style="list-style-type: none"> <input type="checkbox"/> Failure of Net back pricing <input type="checkbox"/> Price ~\$ 7/bbl 	no
5	1986-1998	<ul style="list-style-type: none"> <input type="checkbox"/> Development of futures market <input type="checkbox"/> Oil price volatility <input type="checkbox"/> Come back of IOCs in some exporting countries 	no
6	1998-2003	<ul style="list-style-type: none"> <input type="checkbox"/> Price;~ \$10/bbl in1998 then price band [\$22, \$28] 	yes/no
7	2004-2008	<ul style="list-style-type: none"> <input type="checkbox"/> Explosion of oil demand sustained by strong economic growth <input type="checkbox"/> high resilience to high oil prices 	no

Source: Dr. Mabro, Dr. Fattouh, Oxford IES, others

*To restrict production in order to support prices



Why OPEC is not a Cartel

Period	Key highlights	Cartel behaviour*?
8 2008-Today	<ul style="list-style-type: none"> □ A sense of oil scarcity and higher conciensness of environmental issues □ Record high price: \$146/bbl in june 2008 □ Unrealistic targets for renewables: threatening Oil investment □ On- going Structural changes: Interactions between physical and financial elements <ul style="list-style-type: none"> ▪ Oil becoming a financial asset ▪ Upsurge of financial markets: 35 to 40 times the physical volume ▪ Increasing number of: players, financial products and market places ▪ Increasing number of non regulated transactions (OTC) ▪ Questioning the price discovery ▪ Much Higher volatility 	no
*To restrict production in order to support prices		

Source: Dr. Mabro, Dr. Fattouh Oxford IES, others

Conclusion: by analysing all the periods of the last 50 years, it is shown that **OPEC did not have a sustained cartel behaviour**. There are only short periods of time that OPEC could have been considered as acting as a cartel



Why OPEC is not a Cartel

From a modelling point of view:

Statistical approaches, Econometric models and Game Theory have been used extensively by academia to model the oil market and to investigate OPEC behaviour:

Author/ Date	Type of model used	Results
C.Y.C Lin University of California Jan-2009	Dynamic model with OPEC acting as a Stackelberg leader	Results support oligopolistic behaviour among non-OPEC producers and collusion among OPEC producers except in the last 15 years
P. Almoguera, a. Herrera FCC/Michigan State University Aug-2007	Nash-Cournot model with competitive fringe	Results fall in line with the findings of later studies that, using longer or more recent samples, find that OPEC does <u>not</u> behave as a cohesive organisation

A comprehensive literature survey shows that numerous empirical studies **do not confirm OPEC's consistent cartel behaviour**. For some researchers cartel behaviour was observed only during a limited time in the 80's.



OPEC and global governance

OPEC is integrated in the (neoliberal) globalised world

- 1- To avoid global disruption OPEC MCs **have always maintained an adequate export level** during crises/ wars.
- 2- To foster dialog OPEC **meets regularly** with the IEA and the EU.
- 3- OPEC played a key role in establishing the IEF Secretariat in Riyadh as a key forum for **dialog between producers and consumers**.
- 4- Encourages market transparency through **data sharing** through JODI (Joint Oil Data Initiative).
- 5- Supports Members Countries in the **international negotiations** on climate change issues.
- 6- Supports Members Countries in their negotiations within the **WTO framework**.



OPEC and global governance

OPEC is integrated in the (neoliberal) globalised world (Cont')

7- The Riyadh Declaration of the third OPEC Summit (Nov 2007), confirms that OPEC is a stakeholder in key global issues. Indeed, OPEC Heads of State agreed on broad principles in three areas of international relevance:

- 1- Stability of global energy market
- 2- Energy for sustainable development
- 3- Energy and Environment

8 - Saudi Arabia is member of the **newly set up G20** (G20 summit level) which is '*the premier forum for international economic cooperation*'

9 - Recently the **G20 called on the World Bank, IEA and OPEC** to carry out a joint study on energy subsidies

OPEC is acting as a key player to ensure that international oil issues of common interests can be overcome within a true perspective of international governance.

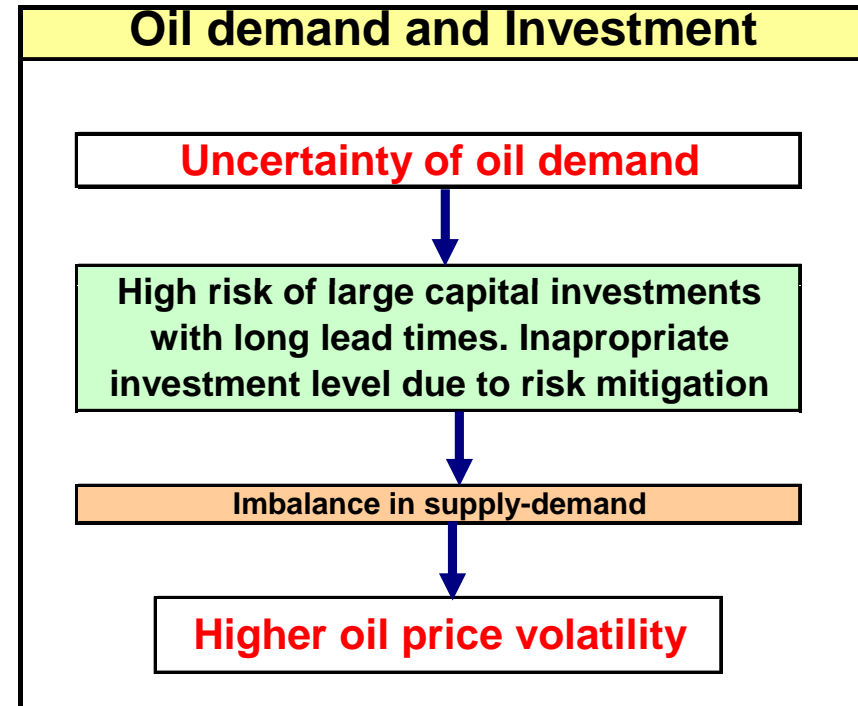


Selected issues of relevance to OPEC

1- Energy security: security of supply and security of demand Impact of uncertainty on investment

Oil demand uncertainties stem from:

- Volatile Economic growth
- Unclear policies regarding Climate Change and unrealistic targets for renewables
- The future development pace of technology
- Energy efficiency measures impact, in particular in emergent and developing countries



Uncertainties on energy security can only be reduced with an enhanced dialog based on cooperation and coordination between consumers and producers.

Selected issues of relevance to OPEC

2- Fighting climate change

- OPEC MCs are **suffering** from climate change: Desertification, water scarcity, coastline erosion, etc.
- The vital priority of **Climate Change** issues is acknowledged in the Riyadh Declaration. It stresses ‘the importance of cleaner and more efficient petroleum technologies for the protection of the local, regional and global environment’
- OPEC MCs might suffer from the **adverse impacts** of response measures to mitigate climate change
- ‘*Common but differentiated responsibility*’ is a core principle for OPEC MCs
- While **coal** remains the fastest growing primary source of energy, OPEC MCs, on a voluntary basis have:
 - Promoted **Energy efficiency** in oil and gas production fields.
 - Implemented **innovative solutions**. Example: gas flaring reduction, CCS in gas production
- OPEC’s call for more R&D in CCS to make oil and gas use cleaner (power plants)



Selected issues of relevance to OPEC

3- Long-term transition in the energy mix

- Oil and gas will remain the **leading source of energy** in the decades to come
- The very **long-term transition** to other sources of energy is inevitable. The challenge is to make a smooth transition i.e. ensuring secure and stable petroleum supplies to support global economic growth and development while taking into account vital environmental issues
- **Energy efficiency** improvements should be prioritized and **unrealistic** targets for **alternative/renewable** energy sources should be avoided
- Energy R&D is key



Selected issues of relevance to OPEC

4- Fighting energy poverty

- OPEC MCs acknowledged:
“The strong relationship between energy and development” (2007)
- Electricity and mobility are critical to sustainable development:
 - Electricity enhances income-generating activities
 - Mobility allows access to markets as well as health, education, etc
- 1.5 billion people **lack access** to electricity and 2.5 billion people **rely on traditional biomass** (wood, agricultural residues and dung) for cooking and heating
- Current trends would leave 1.3 billion people **without electricity by 2030**
(Source: IEA/WEO 2009):
 - ‘Business as usual’ is **inacceptable** and should not be an option
 - **Universal access** for all human beings by 2030 should be the only scenario to contemplate. “Eradication of energy poverty” should be the objective.
- Need to further **prioritize energy poverty issues** in the international development agenda, hopefully with as much as attention given to climate change



Conclusion

- **OPEC's objectives are today as valid as they were in 60's**
 - ✓ *'stabilization of prices in international oil markets with a view to eliminating harmful and unnecessary fluctuations.'*
 - ✓ *'steady income to the producing countries'*
 - ✓ *'an efficient, economic and regular supply of petroleum to consuming nations'*
 - ✓ *'a fair return on their capital to those investing in the petroleum industry'*

Over the Short, medium and long terms

- **The positive role of OPEC in stabilizing market should be better more acknowledged**
- **OPEC is open to new members: Brazil ?**



Thank you for your attention

See you tomorrow at the dual plenary session:

‘Energy development and poverty: key issues for energy access’

WEDNESDAY, JUNE 09

10:30am – 12:00pm

Quartzo A Room

