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*11<sup>th</sup> International Energy Forum*  
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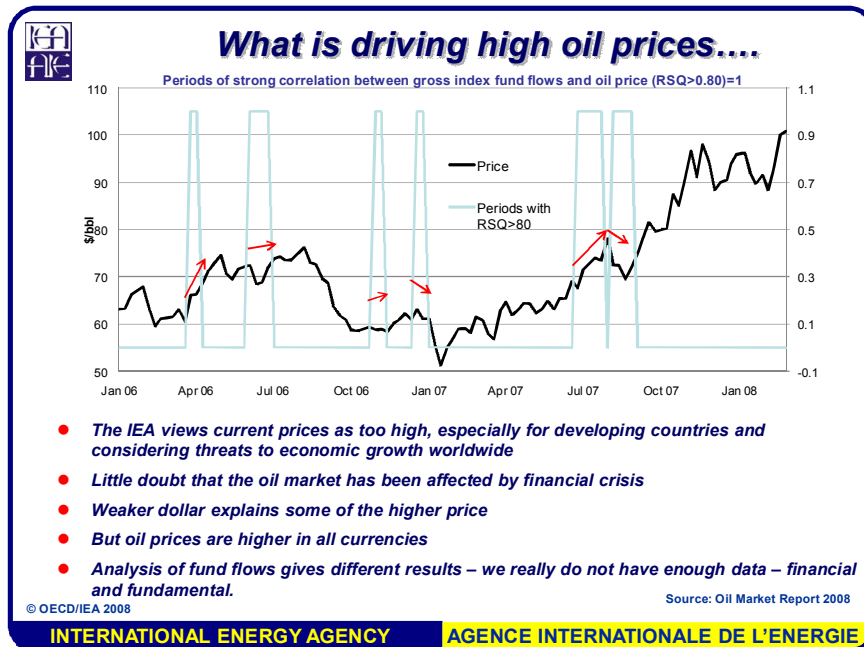
***Enhancing Energy  
Resource Availability***

**Nobuo Tanaka  
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**INTERNATIONAL ENERGY AGENCY** **AGENCE INTERNATIONALE DE L'ENERGIE**

Dear Minister, fellow panelists, distinguished guests, ladies and gentlemen, it is a great honor to represent the IEA at this important forum. This year, unprecedented energy prices, coupled with growing concerns over the environment, make the dialogue of the coming days more crucial than ever. To help set a framework, I would like to share with you key elements of the IEA's outlook for energy markets.



With oil recently touching \$115 a barrel, I feel obliged to start with a few comments on the oil price. Let me be clear, the IEA views current prices as too high for everybody, especially for developing countries who face other significant cost increases. As you are no doubt aware, there is ongoing debate on whether today's prices are due to fundamentals, or are the result of financial flows. In response to this interest, the IEA recently held an Experts' Roundtable.

A diverse range of opinions was voiced. For instance, large increases in money flows were noted yet the complexity of the relationships and the lack of data makes it difficult to draw firm conclusions on their impact.

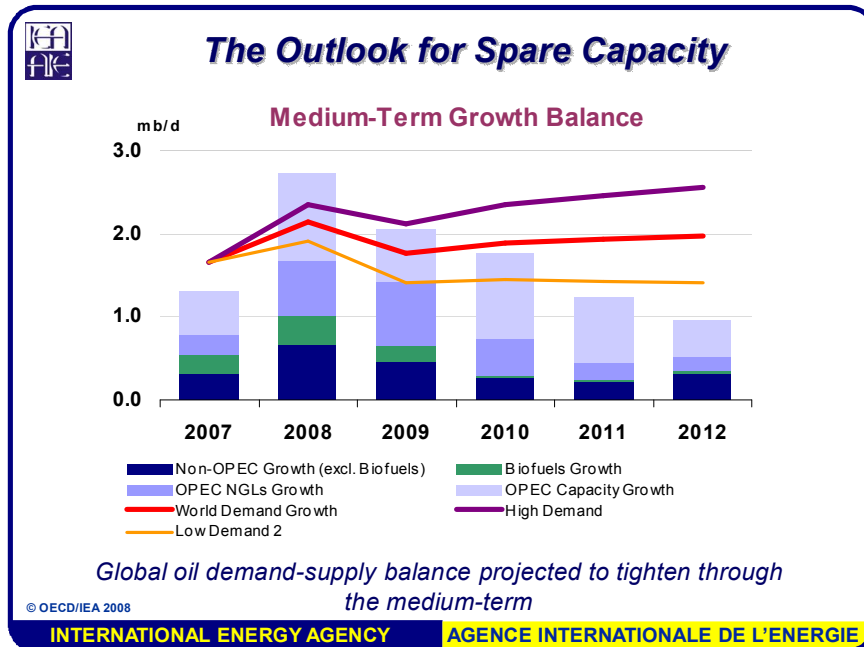
The turmoil in the credit market is also an issue. Credit is less an issue for the super-majors, but it may be for the independent developing marginal oil.

Recently the rise in price is co-related to the weaker dollar - but this does not explain everything - oil prices are higher in all currencies.

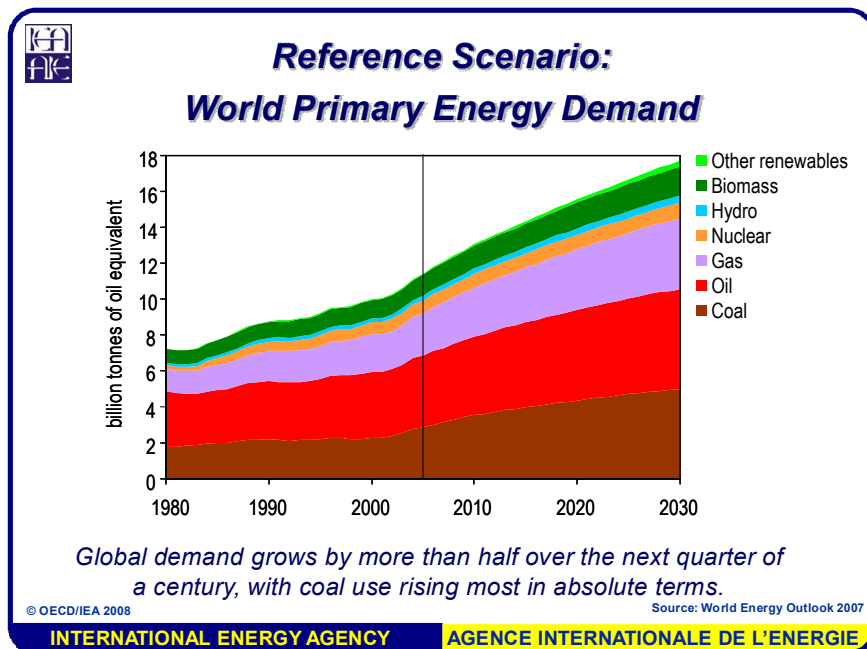
Roundtable participants agreed that the lack of stock data is a major problem. Individually countries may feel their data is sensitive, but globally a lack of transparency aggravates volatility.

Concerns were also expressed about rising costs of production. But, I don't think we saw a \$40 jump in marginal costs last year.

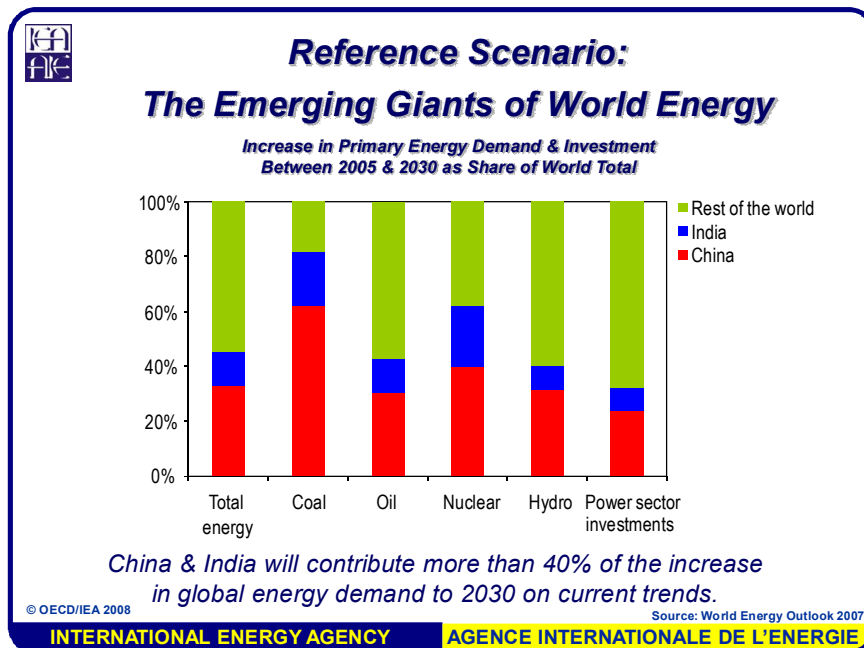
In short, it is clear that there is no single explanation for higher prices, and the impact of the various drivers can vary over time. We do believe however that many of the variables only find fertile ground in a fundamentally underinvested commodity.



The IEA maintains that the run-up in prices is primarily due to fundamental factors, in particular strong demand growth in the developing world coupled with constraints in bringing new oil to market. During the past 5 years, spare capacity has fallen below the 3-4mb/d typical of the past decade. Unfortunately, our analysis shows that there is no quick fix on the supply side and spare capacity is likely to remain tight. This underscores the need for more investment, an issue I will come back to.

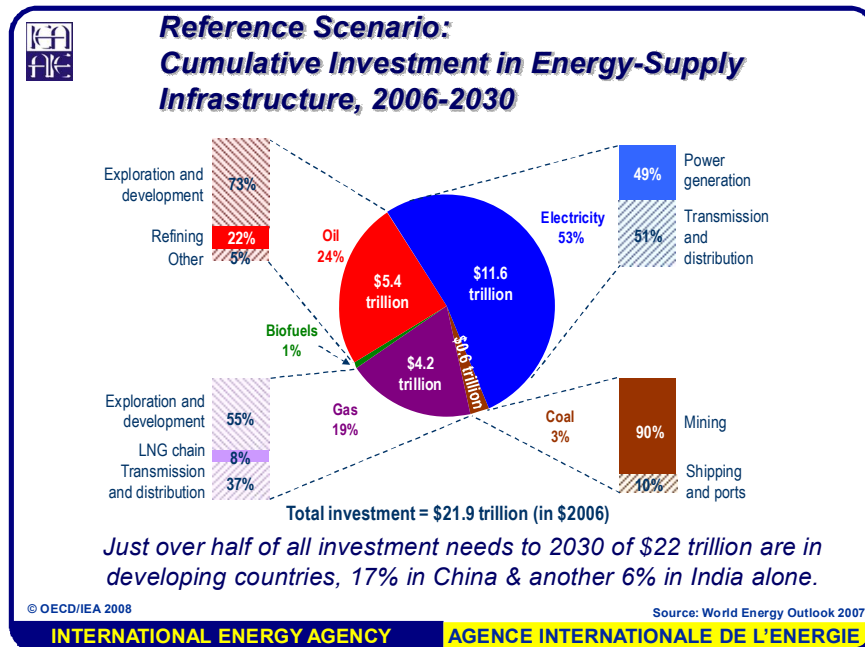


Now let's have a look at the longer-term. As shown by the World Energy Outlook, unless government policies change, world energy demand will grow by 55% by 2030. Despite all the attention that is given to biofuels, wind and solar, the reality is we are still heading for a fossil fuel future. Oil, natural gas and coal will remain the largest sources of energy worldwide, accounting for 84% of the overall increase.



Developing countries, whose economies and populations are growing fastest, and who are starting from much lower per-capita usage, will contribute the bulk of the increase in demand to 2030.

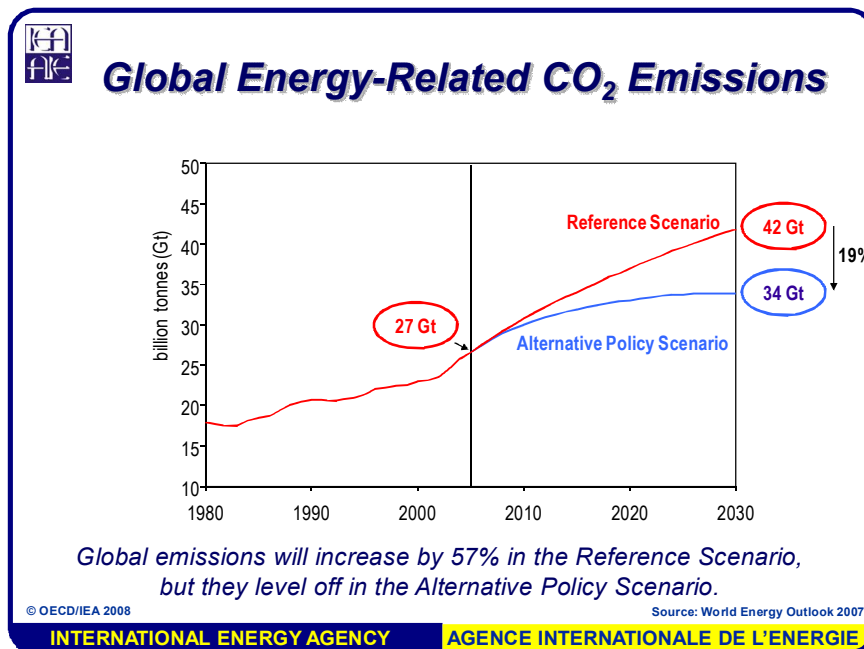
Our most recent Oil Market report demonstrated that even though OECD oil demand has flattened, growth in demand outside the OECD has actually increased in the face of higher prices. A major factor at play here is that prices in many of these countries remain subsidized. Oil subsidies in China, India and the Middle East totaled \$50 billion last year. In many cases, this is becoming an unsustainable economic burden.



I would now like to touch on some of the key challenges that emerge from our projections. I am sure these will be discussed in more detail over the next two days. The first is investment.

\$22 trillion in investment will be needed in energy-supply infrastructure by 2030. The oil sector alone needs \$5.4 trillion. Although we are seeing a surge in spending, supply growth could remain sluggish, because of increasing costs and a proliferation of above-ground risks, such as more frequent access limitations and tighter fiscal and regulatory regimes. We believe these are currently more of a constraint than below-ground risks like depletion and decline rates.

Governments and industry need to do all they can to increase the output response of new investment. This means tackling the multitude of factors that hinder capacity additions along the entire value chain. Likewise, there is a clear need to enhance cooperation between National and International Oil Companies.

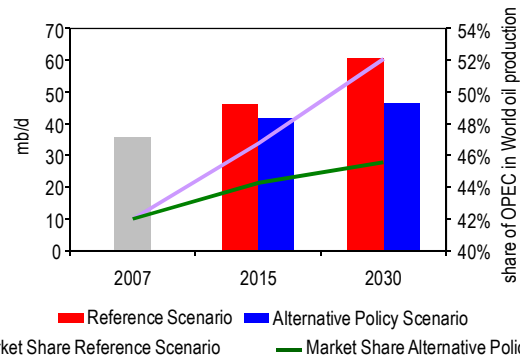


The second challenge I would like to mention is climate change. Spiraling growth in carbon dioxide emissions and current high prices are stimulating interest in decarbonizing energy. Such action is essential. Without new policies, emissions could jump by 56% by 2030, putting us on track for an increase in temperature of up to 6°C. But, as demonstrated by our Alternative Policy Scenario, policies that are currently under discussion could stabilize emissions by 2025. Based on this finding, I have some very blunt advice to all countries. It is, the IEA has shown you the policies to reduce emissions. In response your first priority must be implementation! Your second priority must be implementation. And your third priority must be implementation!



## The Impact of Possible New Policies to Improve Energy Security and Sustainability

Scenarios for OPEC's Oil Production to 2030



*In any feasible scenario, there will be increasing demand for OPEC oil. Although the situation in 2030 is less certain, decisions that will deliver supply at that time need not be taken today.*

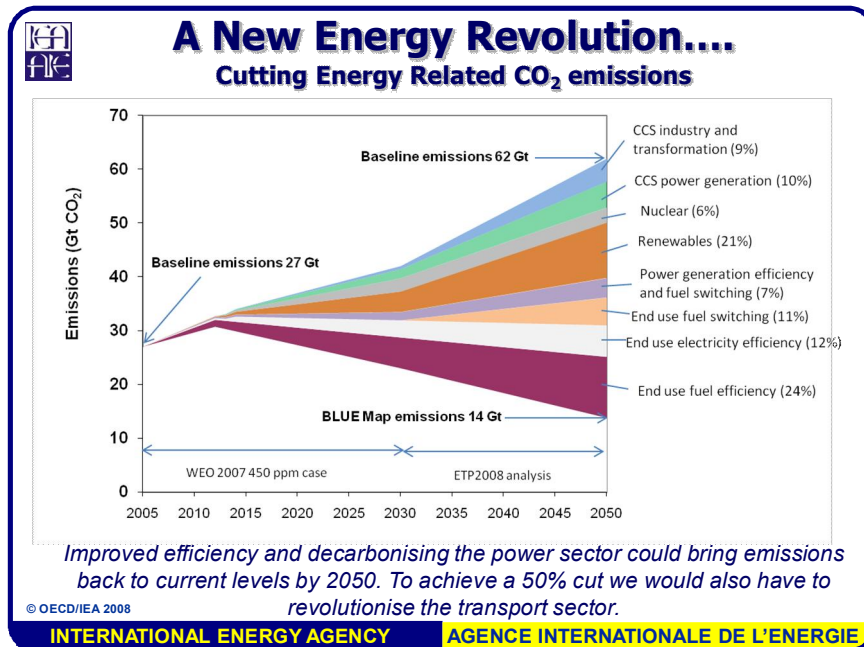
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Source: World Energy Outlook 2007

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Of course, action to combat climate change will have an impact on oil demand. And, naturally, this raises concerns amongst countries dependent on oil revenues for their livelihood. But even in our Alternative Scenario, demand for OPEC oil increases, as does OPEC's market share. Within the timeframe of the investment cycle, there is relatively little doubt over the amount of oil that will be needed.



We are all aware that in the longer-term emissions need to be cut well beyond that projected in our Alternative Policy Scenario. With this in mind, the IEA has recently completed Energy Technology Perspectives which we will present to the G8 Summit in Hokkaido, and we will outline possible post-Kyoto mechanisms in the 2008 World Energy Outlook.

Our work has identified actions needed to meet the IPCC's most ambitious scenario of cutting emissions by 50% by 2050. Meeting such a target would entail a huge amount of investment. Just in carbon capture and storage, we would need to build at least 20 demonstration plants by 2020, at a cost of \$1.5 billion each. Such a construction program should be viewed as a 'litmus test' of our seriousness towards combating climate change.

But, even in this extremely ambitious scenario, demand for oil in 2050 would still be at around 73% of current levels, at about 60 mbd. Of course, in order to accurately assess the level of supply that is possible in such a timeframe, there is a need to improve the reliability of oil reserves data. The uncertainty that surrounds such data is an area that needs immediate action. After all, it affects crucial decisions that governments need to take to ensure their future energy and economic needs. The World Energy Outlook 2008 will shed some light on this issue by detailed field-by-field analysis of 400 of the largest oil fields.



## Key Messages

- **The world is facing twin energy-related challenges:**
  - ensuring secure, affordable energy; and
  - managing the associated environmental consequences
- **These challenges can be overcome through:**
  - Boosting energy sector investment
  - Improving energy efficiency and promoting technology
- **Making CCS eligible to receive revenues generated by the CDM could accelerate deployment of this crucial technology**
- **In any feasible scenario, there will be demand for oil for many decades to come**
- **There is a need to improve transparency of energy markets, including reserve data**
- **Producers-consumer dialogue needs to be re-invigorated and focussed on delivering mutually beneficial outcomes**

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Let me close by emphasizing that the world's energy economy is on an unsustainable pathway. In the short-to-medium term, there is an urgent need for investment to restore an adequate cushion between oil supply and demand.

But for the longer-term, to meet environmental concerns, we will require a new global energy revolution to transform the way we produce and use energy. As I explained to the Environment Ministers gathered in Bali last December, the energy sector should be viewed not only as the cause of the climate problem, but also as part of the solution. After all, it readily lends itself to providing the transferable skills that will be needed.

Continuing dialogue between producers and consumers will be essential. It has already resulted in many concrete achievements, such as the Joint Oil Data Initiative. It must now focus in areas where progress is needed, and where mutually beneficial outcomes are possible. For example, the IEA and OPEC are co-operating on carbon capture and storage, as this could reduce emissions into the atmosphere while enhancing oil recovery. In this respect, I call upon all Ministers gathered here in Rome to support making CCS eligible to receive revenues generated by the CDM as this could accelerate deployment of this crucial technology.

Together we can identify and embark upon a sustainable path.

Thank you.