

Transforming the energy-mix: The geopolitical dimension of going “renewable”

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“Promotion of common actions and co-operation in
the OSCE area in the fields of development of
sustainable energy and transport”
19TH OSCE ECONOMIC AND ENVIRONMENTAL FORUM
Vienna 7/8 February 2011

Survey: All forms of energy require commodities

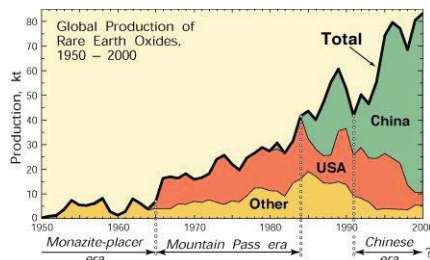
- The geopolitical dimension: rare earth elements
- The price aspect: relatively cheap natural gas
- Subsidies or support?
- The political will: who runs energy-policy
- Hype of renewable energy or true changes
- King Coal back on the agenda
- Possible role of the OSCE

Geopolitics: There are no innocent forms of energy

- The eternal quest for the “perpetuum mobile”... Commodities will continue to play a role in all forms of energy-mix
- Fossil energy – petrochemical industry. Wind-power and other types of renewable energy production needs oil to a certain extent.
- At stake: Rare earth elements. Concession/legal title and physical control
- Importance of lithium and iridium for production of photovoltaic cells. “No wars for Blackberry”...? – possible change in modes of use
- The Japanese doctrine of Re-duce, Re-use, Re-cycle

Mining concessions and costs

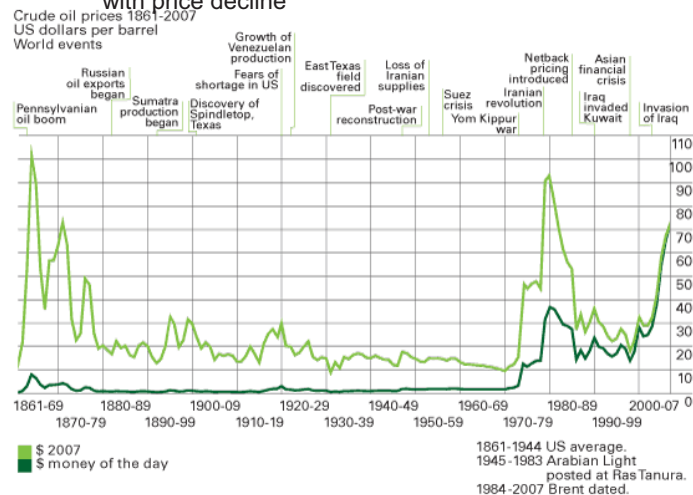
- Most REEs are not as uncommon in nature as the name implies. Cerium, the most abundant REE comprises more of the earth’s crust than copper or lead. Decreasing mining in US, Europe, quasi-monopoly of production in the PRC. Export controls in Sept. 2010 subsequent to Sino-Japanese territorial dispute
- How to deal with resource competition in that area? EC: “resource diplomacy”; increased mining in Europe



Price determines transformation

- Which factors make the price of oil/gas: Supply and demand, geopolitics, the weather, refining chain, stocks, legal constraints, taxes and subsidies.
- Oil index for natural gas has fundamentally changed since 2007.
- More volatility due to accelerated role of financial markets: “Wall street refiners”. Physical market and paper market – recent price hikes politically driven.
- Diverging outlooks (e.g. IEA –OPEC)
- Are we facing a gas glut because of unconventional gas?
- Or will tight markets dominate? Impossible to predict.

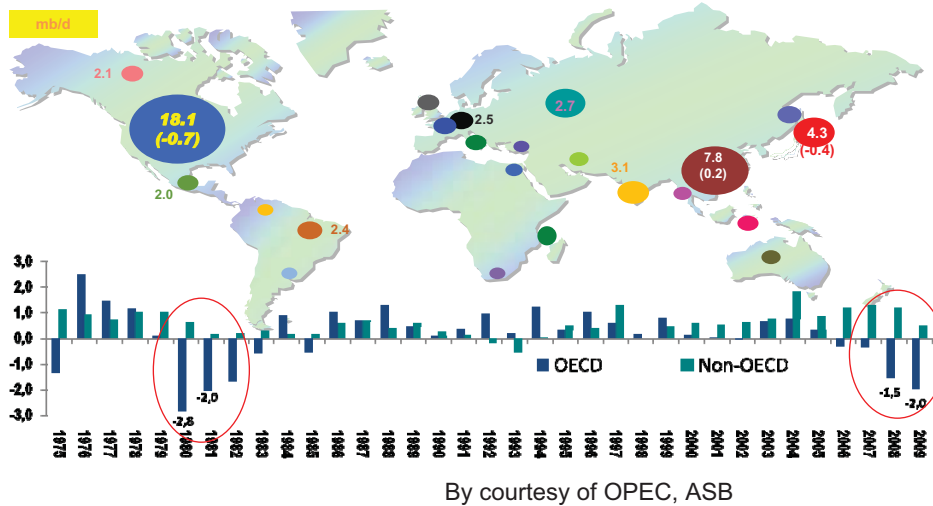
The importance of the price: lessons to be learnt from 1970s – innovation gone with price decline



Source:www.bp.com

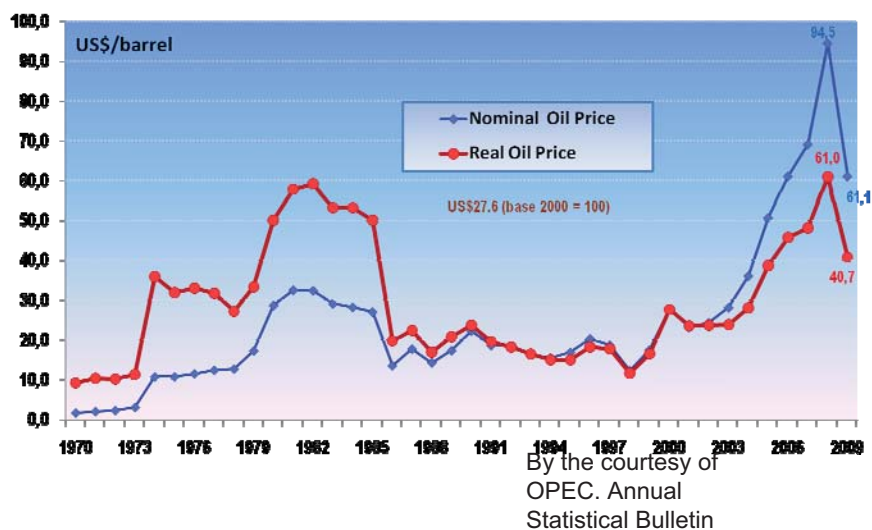
2009 witnessed drop in world oil consumption

- World's consumption dropped by 1.5 mb/d in 2009, to a level of 78 mb/d \approx back to 2005
- Consecutive declines in a row from 2008 and largest since 1981.
- OECD's down by 2 mb/d between 2008-9, and by 4 mb/d between 2005-9.



OPEC Reference Basket (ORB) is much lower in real terms

- ORB in real term was much lower than in nominal terms, indicating large extent of inflation and exchange rates in the sales of OPEC MCs crude oil.



Conventional and unconventional gas: are we in a gas glut?

- Tight market or over-supply due to recession, shale gas, investments since 2005 (LNG etc)
- Cheap and easily available natural gas affects investments in renewable energy
- Contradicting and confusing predictions
- “The rise of unconventional gas production, and in particular shale gas, has been the greatest revolution in the US energy landscape since the Second World War and has the potential to transform that country’s requirement for LNG imports (and hence global LNG trade).” (Oxford Institute of Energy Studies, Dec.2010)
- the term ‘unconventional gas resources’ refers to natural gas from coal (also known as coal-bed methane (CBM)), tight gas sands and gas shales

Subsidies or support

- IEA critical of subsidies in its last WOO, but different stances on support for renewable energy
- Blurring of real price
- How sustainable are support mechanisms? Legal frame.
- Cutting subsidies for solar industry in Spain, Germany etc has resulted in uncertainties for business
- solar panels are more or less a commodity, which favours big producers with access to cheap capital. Cost of capital is essential.



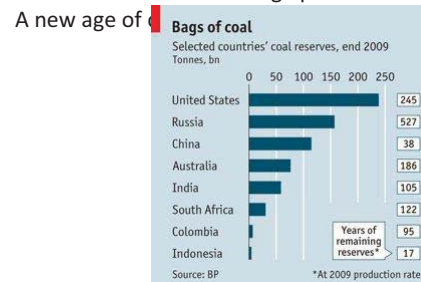
Tar sands in Alberta/Canada



Spanish solar power production plant

Tackling climate change: hype or real trend?

- Cancún Climate Change Conf. puts pledges on emission cuts into UN documentation, but none of the cuts legally binding.
- Decisions on the future of the Kyoto protocol, the current international treaty binding rich countries to cut emissions, were effectively deferred. Whether countries will sign up for a second "commitment period" to cuts beyond 2012 remains to be seen.
- The Kyoto protocol makes countries responsible only for their own direct emissions.
- In parallel: global increase in coal production. Coal boom upsets efforts to restrain greenhouse-gas emissions.
- The International Energy Agency (IEA) reckons world consumption will increase by a fifth over the next 25 years, assuming governments stick to their current climate-change policies.



Momentum for OSCE

- Transforming the energy-mix should take into account geopolitical dimension of certain commodities
- Price – real market forces should prevail, control paper-market
- Soft law: code of conduct; standard setting of best practices.
- “Liberty lies in variety and in variety alone” (Winston Churchill 1911)

Thank you for your attention!

Looking forward to our debate