The Oil Drum: Europe
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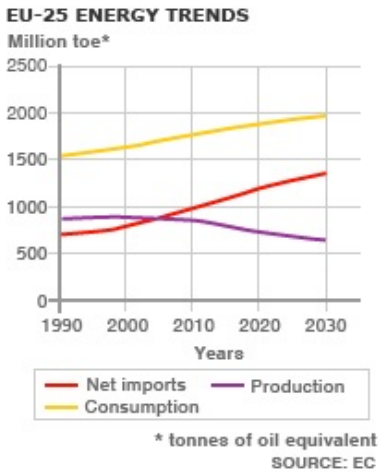
A New Energy Policy for Europe

Posted by Luis de Sousa on January 12, 2007 - 6:33pm in The Oil Drum: Europe
Topic: Policy/Politics
Tags: carbon emissions, energy grid, energy policy, market liberalization, peak gas, peak oil [list all tags]

[ED by Prof. Goose] Jerome a Paris also has an article on the EU energy plan today, it can be found here. It will be up on TOD:Main tomorrow morning.

Wednesday the European Commission released a series of Communications proposing a new revolutionary Energy Policy attempting to address EU's energy challenges for the XXI century. This is a set of first comments to such proposals.

For a first perspective on what's at stake, here's a small graph published by the BBC, that's worth many thousand words:



This new Energy Policy can be considered revolutionary for two reasons, first it acknowledges (although shyly) problems in the future energy supply and secondly it integrates Energy and the Environment. In doing so the Commission clearly draws a direction towards energy efficiency/conservation that suits both concerns with energy sources and sinks.

But in spite of a new clearer direction being drawn, the ways to follow it are in some cases not at all clear and in others openly wrong. Following is a brief analysis of each of the Communications, taking in perspective the daunting challenges imposed by the internal peaks in Oil and Gas production.

A New Impetus for the Internal Energy Market (full text)

> The EU has clearly recognised that the internal energy market is the policy line that ensures fair prices to citizens and industries. At the same time, it guarantees that even smaller companies, for instance those that invest in renewable energy, have access to

> the energy market. A well functioning market also ensures sufficient investments in power plants and transmission networks to avoid interruptions in power or gas supply. In order to realise the full potential of the internal gas and electricity market, the European Commission has put forward new proposals as part of its Energy Policy for Europe.

The main goal of this Communication is a fully integrated energy market, both physically as economically. First to achieve is the complete liberalization of the electrical and gas networks. On the electrical network, emphasis is given to the decoupling of the generation and distribution sectors, still commonly hold locally by the same companies. The Commission believes that a more competitive internal market will allow more efficiency and investment, benefiting consumers and improving supply security.

On the Physical side the Commission has as goal to achieve a fully integrated internal energy network by January of 2009, leading to a true single European energy grid. An unified grid is for the Commission essential to secure sufficient generation capacity in the future. Four lines of action are drawn to achieve such grid:

- Separation of energy production from energy distribution;
- Management by a single body in partnership with the Commission;
- Transparency;
- Investment in bottlenecks (mainly borders between countries).

On the last item the Commission has a clear idea where the investment is needed:

> A number of the most problematic missing links has been identified, such as power links between Germany, Poland and Lithuania, off-shore wind power connections in Northern Europe, electricity connections between Spain and France, gas pipelines from the Caspian to central Europe.

Since the model of state owned energy utilities is being put aside by the EU it is naturally better to have the private owned companies working on a fully liberalized market, improving the service to the final costumer. In such model, liberalization measures are surely welcome.

As for the Integrated Energy Grid it also presents major improvements for the EU internal energy market, allowing for better load balancing and helping to give a single “energy voice” to the Union. But beyond that, a fully integrated energy grid is essential to take complete advantage of the growing renewable energy generation sector, allowing for the compensation of its intermittent nature. Such integration is already underway in Scandinavia with encouraging results.

Absent from this section of the initiative are measures to directly address the current peaking of internal Natural Gas production. Although put forward as so, market liberalization wont secure the increasing Natural Gas imports needed in the following years to meet internal demand. Lines of action to substitute Natural Gas or to secure other foreign sources simply do not exist. The main energy problem in Europe is not mentioned even less dealt with.

A Low CO2 fossil fuel future (full text)

> Climate protection involves making the most efficient use possible of our available

> energy sources. The potential to increase the efficiency of converting coal into electricity must therefore be exploited in Europe and worldwide. Furthermore, the technologies for the capture and permanent storage of carbon dioxide produced by power plants must be developed further and used more widely. As part of its Energy Policy for Europe, the European Commission has adopted today a Communication on how to generate power from fossil fuels in a sustainable manner with a focus on sustainable coal technologies – these will enable coal to maintain its important contribution to secure and competitive energy supplies for Europe.

In this section the Commission acknowledges that Oil and Natural Gas will leave the dominating position in the current energy mix, expecting the world-wide doubling of the electricity produced from Coal by 2030. Such doubling, thinks the Commission, will turn the EU on a net Coal exporter from the current net importer position. Internal Oil production has already peaked, Natural Gas production is peaking, Coal is being imported from as far as New Zealand; how that will evolve to a Coal surplus is hard to envision.

The Commission is endorsing Coal as the alternative energy source capable of assuring the correct energy security for the EU. To achieve such goal the Commission pretends to improve research and investment on CO2 capture and storage technology, systematizing the use of "near zero emission" power generation by 2020. To further improve it, the Emission Trading Scheme is proposed to incorporate capture and storage.

On this section two main lines of action are drawn:

> - Design a mechanism to stimulate the construction and operation by 2015 of up to 12 large-scale demonstrations of sustainable fossil fuel technologies in commercial power generation in the EU;
> - Provide a clear perspective when coal- and gas-fired power plants will need to install CO2 capture and storage. Today, the Commission believes that by 2020 all new coal-fired plants should include CO2 capture and storage technologies and existing plants should then progressively follow the same approach.

This push for "clean coal" presents some very optimistic views on this finite energy source. Coal is simply admitted as being capable of fulfilling the energy needs of the EU and the World, in whatever flow rates desired. The declining EROEI of European Coal Exploration and the EROEI reduction imposed by CO2 capture and storage are ignored, leaving a considerable hole in this Communication.

Promoting biofuels as credible alternatives to oil in transport (full text)

> With the significant rise in oil prices and the growing concern about stable, secure and environmentally friendly energy supplies, the promotion of biofuels use in transport is a priority on the European political agenda. Today, **biofuels are the only way** to significantly reduce oil dependence in the transport sector. As part of its Energy Policy for Europe, the Commission is committed to encouraging the production and use of biofuels by proposing to set a binding minimum target for biofuels of 10% of vehicle fuel by 2020.

Unfortunately this is the weakest section of the initiative, exactly where it should be the strongest. Like the Commission notes Oil represents today 98% of the base energy used for transportation, and transportation accounting for more than half of the EU's Oil consumption. But for the Commission life without cars and trucks is unimaginable.

The lines of action pointed are two: tax exemption for biofuels and the introduction of biofuels obligations. The fuels of election are those usable in today's internal combustion engines: biodiesel (from rapeseed, sunflower, etc) and bioethanol (beet, cereals, etc).

The Commission seems to be taking the same unsuccessful path took by the US executive, keeping the business-as-usual auto dependency and in parallel promoting oil substitution by fuels with lower or even negative EROEI. At roughly the same latitudes, European states do not present harvest improvements over the low results already patent across the Atlantic. Absent is also an assessment of the impact of such policies in food production.

Without actions to reduce demand and with substitution policies bound to failure, Transport dependency on foreign Oil is set to grow. Without a proper energy policy for Transport the whole program rest at risk. A major change in attitude and concept towards Transport is needed; life without (or with less) cars and trucks has to start to be imaginable.

An energy policy for Europe: Commission steps up to the energy challenges of the 21st Century (full text)

> The world today is facing energy and environmental challenge, a challenge that is acute for Europe, and a challenge which is shared by all Member States. This is: how to secure competitive and clean energy for Europe against a backdrop of climate change, escalating global energy demand and **future supply uncertainties**. If one Member State fails to meet this challenge, other Member States will be affected. If problems arise outside the European Union, they can have an impact on the whole of the EU. This is why Europe needs a strong energy policy. The European Commission' Strategic Energy Review is an important step towards an effective energy policy for Europe.

Again the Commission shyly admits to difficulties in the future energy supply. To tackle that a new integrated Energy Policy is endorsed where the EU acts to the outside as a single unified bloc. This new energy unity will promote economic growth and limit the vulnerability of the Union to Oil and Gas imports.

Such policy will mean, in the Commission words, "**the EU taking global leadership in catalyzing a new industrial revolution**", defining the following lines of action:

- Energy efficiency;
- raising the share of renewable energy in the energy mix;
- reinforcing solidarity among Member States;
- a renewed focus on nuclear safety and security;
- determined efforts for the EU to "speak with one voice" with its international partners

Although lacking more objective measures (which might not belong to such communications) these simple five items show that the Commission has the compass showing the correct direction. All of these lines of action move towards independence from foreign fossil fuel sources, and this time the optimistic views on Coal and biofuels are left out.

The sense that the European Commission is correctly acknowledging the current European

energy scenario is materialized in one of the most important sentences in these Communications:

> The concern is not only about climate change, it is also about Europe's security of energy supply, economy and the wellbeing of its citizens. Even without climate change, there is every reason to take the steps proposed by the European Commission.

Final Comments

"Too little too late" is a sentence that comes to mind when considering this whole set of Communications. The real problem of internal and foreign peaks in fossil fuel production is only indirectly admitted and the lines of action put forward rely either on other fossil fuels (Coal for electricity generation) or on low EROEI renewable sources (biofuels for transportation). Market Liberalization, although positive in a privatized model, is presented as a factor of securing energy supply – something it simply can not do.

Still, having an Energy Policy is better than having none, and the final tone stressing Energy Efficiency and the role of Renewable and Nuclear Energy sources on a New Industrial Revolution towards energy independency and sustainability leaves some hope.

Finally is worth stressing that none of these initiatives are effective, for they lack the approval of the European Council. Early next March the Council will reunite for the Spring Summit and analyze these proposals. The 27 member states will be at the table and the obstacle put to such measures are already unfolding, with larger countries opposing the Market Liberalization issues and smaller polluting countries opposing the CO_2 emission targets for 2020. On this last subject the fact that Italy, Spain and Portugal (three of the countries farther from meeting Kyoto targets) are being governed by Socialist executives might be a point in favor, but at the Council's table much is different.

This in turn stresses that beyond a new Energy Policy the EU still needs a new Political Model. Either in the form of the European Constitution or in other form, only with clearer effective powers can the European Commission correctly achieve "one voice" Energy Policy for the EU.