



Facing the Hard Truths about Energy - the NPC report, commented

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Last week, the National Petroleum Council, i.e. the organisation representing the oil&gas industry, released the report it had prepared over the past 18 months at the request of the Bush administration.

I wrote about it in my last [Countdown diary](#) which was based on press articles leaked prior to the publication of the report, and noted that this report appeared to break new ground in the acknowledgement of some hard truths about the sector.

Having now read the [Executive Summary](#) (warning, 5MB pdf), I'd like to provide more extensive commentary of what the report actually says.

The Executive Summary is quite simple in its architecture, as it is split in two parts: the "hard truths" about energy over the next 25 years, and their policy recommendations. So I'll follow their structure and comment each of their "hard truths" and their recommendations.

The hard truths

The report notes five main truths:

Coal, oil, and natural gas will remain indispensable to meeting total projected energy demand growth.

The hard truth here is that overall demand for energy is expected to keep on growing significantly over the next 2 decades. What is left unsaid, but made obvious, in the Executive Summary, is that we will have very little control over that demand: the OECD's demand, which makes up 56% of world demand, is predicted to grow by 10% in their central scenario (from 245 quads to 275 quads), whereas demand from the rest of the world is expected to **double**, going from 44% to 60% of total demand (and from 200 quads to 400 quads).

The report mentions later that it is impossible to treat energy as a national issue - it is a fully global industry, and we will be impacted by what happens elsewhere. Well, the first, stark, lesson, is that whatever happens on the demand side, as a whole, will be decided, to a large extent, elsewhere.

I've been writing a lot about how we should focus energy policy on demand, which we control, rather than on supply, which we do increasingly less. Well, a major proviso of that is that we certainly do not control *global* demand anymore. That does not make our domestic efforts irrelevant, quite the opposite, but it shows that any sane policy should focus on the demand in other parts of the world, something that will require a lot more cooperation and diplomacy than

The second part of that "hard truth" is that it's pretty likely that we will overwhelmingly continue to burn hydrocarbons to satisfy that growing demand - because that's what we already do, and because a lot of that demand comes from sectors that overwhelmingly use hydrocarbons: transport (with skyrocketing car use in the emerging world) and electricity generation (where burning coal, gas or oil is the default choice).

The world is not running out of energy resources, but there are accumulating risks to continuing expansion of oil and natural gas production from the conventional sources relied upon historically. These risks create significant challenges to meeting projected energy demand.

This is the point that has led to many headlines and was discussed in my earlier diary. Depending on how you look at it, it can be seen as either an acknowledgement of peak oil (*significant challenges to meeting demand*), or a dismissal of it (*not running out of energy resources*). Coming from the NPC, it does seem to be an unusually candid effort at acknowledging the increasing tensions on the supply side that are chronicled on places like [The Oil Drum](#) or my "Countdown to \$100 oil" series.

In fact, the Executive Summary includes a half-page summary of the debate on peak oil, which can be described to be reasonably fair in the presentation of arguments, and their supply scenarios include those prepared by the ASPO (Association for the Study of Peak Oil), one of the main peak oil groups.

So I'd chalk this report as a major step forward in the acknowledgement that there is indeed a supply problem for both oil&gas. This [article this morning in the Independent](#) has a good round up of quotes and comments on this.

The age of cheap oil is gone. That point long made by the peak oil advocates is essentially acknowledged.

To mitigate these risks, expansion of all economic energy sources will be required, including coal, nuclear, renewables, and unconventional oil and natural gas. Each of these sources faces significant challenges--including safety, environmental, political, or economic hurdles--and imposes infrastructure requirements for development and delivery.

That's probably where the report is most disappointing. It essentially says that we'll be able to respond to the challenge by producing (or rather, extracting) more energy, even if it's getting more difficult. The order in which these sources are listed shows that the industry is still expecting to work on the same model as before, with more big utility centralised production. There is no mention of the need for energy demand (it is elsewhere in the report, but not here, where it matters), and an essentially upside down order of priority. As I have said many times, we should focus our efforts first on energy demand reduction, then renewables, then nuclear, then hydrocarbons.

The only notable point is that unconventional oil&gas is last in that list. And the Executive Summary includes an explicit acknowledgement that these sources are unlikely to provide any significant relief by 2030.

"Energy Independence" should not be confused with strengthening energy security. The concept of energy independence is not realistic in the foreseeable future, whereas U.S. energy security can be enhanced by moderating demand, expanding and diversifying domestic energy supplies, and strengthening global energy trade and investment. There can be no U.S. energy security without global energy security.

With energy being one of the most internationalised and globalised industries, this may sound like a pretty basic fact, but in the context of the US political debate, and the regular mention of the words "energy independence" in various politicians' programmes or speeches, it is quite useful that this reminder be included here. There will be no autarchic solution, and no way to avoid an energy crisis coming from elsewhere even if the US were self-sufficient - because prices are set globally, and reflect the global supply and demand balance. It should also act as a warning that there will be no possibility for any isolationist foreign policy in the foreseeable future, and no way to avoid the ripples from what happens in the Middle East, the main exporter of energy sources worldwide.

A majority of the U.S. energy sector workforce, including skilled scientists and engineers, is eligible to retire within the next decade. The workforce must be replenished and trained.

This is, to some extent, a localised problem (as many other parts of the world have surpluses), but it is nevertheless a real one in the medium term, and it might have a very noticeable impact on other political debates - watching the Texas oil managers pleading for a more open immigration policy (as the report already does) might be entertaining - and offer the Democrats a real political opportunity on that topic.

Policies aimed at curbing CO₂ emissions will alter the energy mix, increase energy-related costs, and require reductions in demand growth.

The elephant in the room, and the embarrassment of the NPC on the topic is palpable, as this is presented last, with a warning that the report expresses no opinion on climate change. What is significant is that the industry essentially concedes defeat - while not acknowledging the reality of climate change, they note the inescapable *political reality* that something **will** be done to lower carbon emissions, and the report thus focuses on how to do this in what they see as the best way.

Again, a major acknowledgement.

Which brings us to the policy suggestions:

The policy proposals

Moderate the growing demand for energy by increasing efficiency of transportation, residential, commercial, and industrial uses.

While it is disappointing that they only mention a reduction in the growth of demand, and not a reduction of demand itself, it is, again, somewhat remarkable that their first suggestion is on the demand side. This should be noted.

However, their proposals end up being quite modest. As noted above, demand is not expected to grow much in the West, and indeed has not grown much in recent years. Focusing on limiting demand growth in the USA is thus a terribly unambitious goal. Reducing demand would be quite easy, and should be an explicit goal of any reasonable policy plan. As most demand growth will take place in the developing world, efforts to slow it need to be shared, which means, for the West, actual demand reduction - in significant volumes.

In that respect, the policy proposals in the report are extraordinarily timid. On the transport side, they support increases in CAFE standards, something that would be nice, but is dreadfully insufficient. A doubling of mpg for new vehicles means little more than business as usual and, as the only proposal on the table, completely ignores the debate as to how transport should take place, i.e. the central role of car transportation is not even mentioned, let alone criticized. Similarly, the otherwise sensible proposals for the construction sector (improve standards and enforce them) completely fail to acknowledge urbanisation policies that encourage the construction of far away suburbs and dispersed, low-density housing which both require car-based transport.

Frankly, despite the fact that this is their first point of action, it ends up being deeply disappointing, by refusing to touch the core factors underpinning our energy consumption.

Expand and diversify production from clean coal, nuclear, biomass, other renewables, and unconventional oil and natural gas; moderate the decline of conventional domestic oil and gas production; and increase access for development of new resources.

This has been discussed to some extent above: this order of priority is deeply disappointing. The report follows the "business as usual" line of the IEA and EIA which both severely underestimate the potential for renewable energies like wind and solar, and ends us with a wish list of subsidies for the domestic oil&gas industry, including the opening up of hitherto closed areas for exploration (ANWR is not mentioned, but that's the gist, along with Californian offshore and oil shales) and subsidies for small producers.

Integrate energy policy into trade, economic, environmental, security, and foreign policies; strengthen global energy trade and investment; and broaden dialogue with both producing and consuming nations to improve global energy security.

Beyond the fancy words, and the warning noted above that "energy independence" cannot exist, the subject is completely ignored in the Executive Summary. I'll try to dig into the actual report to see what is said, but I doubt I'll see any kind of criticism of current policies to support dictatorial but friendly regimes in oil rich countries and demonize inimical oil rich regimes. But I'll reserve judgement for now.

Enhance science and engineering capabilities and create long-term opportunities for research and development in all phases of the energy supply and demand system.

This is just asking for more subsidies to the industry to face some of the issues outlined above.

Develop the legal and regulatory framework to enable carbon capture and sequestration (CCS). In addition, as policymakers consider options to reduce CO₂ emissions, provide

an effective, global framework for carbon management, including establishment of a transparent, predictable, economy-wide cost for CO2 emissions.

This is the carbon emissions bit of the report. As I said, they acknowledge that it will be regulated, so they have switched the battle on how to do that. Therefore, the focus is on "predictability" (let's not change the regime once it's been swallowed by us), "global fairness" (let's make sure the Chinese and other industries have to cough up too), and favorable treatment for their pet peeves that will allow the industry to keep on working almost as before (subsidies for CCS, which will allow to keep on burning coal and gas, will be nice)

Again, you can see it as a good thing (the debate on whether it is necessary to reduce carbon emissions is over, and the industry has lost and moved on), or a bad thing (they're trying to make it possible for them to stick as much as possible to business as usual, without any real review of how things could be done differently to actual lower energy consumption).

So, overall, it's a mixed bag in absolute terms but a real step forward in political terms, and something that we should definitely use in the public debate on the topic, with regular use of the sentence "even the industry now acknowledges that..."

They have moved the outer limit of the Overton window back towards us, and we should certainly use that.



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