

Questions for Claude Mandil
Interview December 7th at the OECD
To be aired at the Lunch December 14th
at the Global Gas Flaring Reduction Forum

1) As the international community is debating issues related to climate change, clean energy and sustainable development, how important is it to address gas flaring reduction around the world (400 MTCO₂ eq/year)?

The G8 have given a strong lead on the combined problems of climate change, clean energy, and sustainable development at their summits in Gleneagles in 2005 and St Petersburg this summer. They have given the IEA a major role, with the World Bank and other participants, in this Plan. The G8 asked us to advise on scenarios and strategies for a clean, clever and competitive energy future, to identify “best practice” for energy efficiency, to work on cleaner fossil fuels and CO₂ capture and storage, to promote renewable energy and to enhance international co-operation on energy technology.

This focus is critical - in the absence of new policies, global energy-related CO₂ emissions will continue to increase rapidly. In the World Energy Outlook 2006, CO₂ emissions increase from 26 billion tonnes a year in 2004 to 40 billion tonnes in 2030. Even including policies only under consideration, not committed to, only lowers CO₂ emissions 16% below the Baseline level in 2030. This need not be the outcome and we do not expect that it will be the outcome but, at present, it is the path we are on.

By accelerating the deployment of energy efficient and low-carbon technologies we can bring CO₂ emissions back to around their current levels by 2050. We can make savings of liquid fuel demand of more than half today’s consumption, and reduce the growth in oil demand between now and 2050 by more than a half. Energy efficiency measures can reduce electricity demand by more than a third below business as usual levels in 2050. This can be done by following a route to meeting the growing demand for energy services, in developing and developed countries, in a more intelligent and less costly way.

The biggest savings are attributable to demand-side energy efficiency and in the de-carbonisation of power generation. Improved energy efficiency alone saves about 15 billion tonnes of CO₂ emissions in 2050, equivalent to 60% of current emissions.

Reducing the volumes of gas flared globally is another way to moving our energy path to a more sustainable one. Again it is not revolutionary – but evolutionary. What our analysis shows is that in many cases a cubic meter saved in Russia (for example) can be more economic than one produced – given the increasing development costs.

Last July, the IEA released a book entitled Optimizing Russian Natural Gas. A key conclusion the book highlights is the potential for reducing the annual wastage of at least 30 bcm (or 20% of the annual volumes Russia exports to Europe). This is broken down – about half from gas leaks along Russia’s gas transmission and distribution networks and another 15 bcm from reductions in gas flaring. Even more than this is possible, given the uncertainty of the actual volumes flared in Russia. IEA rough estimates places the

volumes of gas flared in Russia in the order of 60 bcm – 4 times more than the official Russian number. I must stress though that the study used to estimate this much higher number is very uncertain. I understand and welcome the news that more analysis has been undertaken based on this preliminary IEA analysis – in conjunction with the expertise and know-how of the US NOAA and the GGFR.

2) In this new energy context, what are some of the major challenges and opportunities ahead for oil & gas producing countries and international/national oil companies (including gas flaring and gas utilisation, but NOT only that. In other words, the bigger picture)?

Gas resources are more than sufficient to meet projected increases in demand to 2030. But reserves are concentrated – similar to oil – in the Middle East and in former Soviet Union countries. In fact, close to 56% of all the world's remaining reserves are found in just three countries: Russia, Iran and Qatar. Gas reserves in OECD countries represent less than a tenth of the world total.

A concern is whether the high rates of increase in exports projected for some regions, especially the Middle East, are achievable in light of institutional, financial and geopolitical factors. A small number of countries are expected to provide the bulk of the gas to be exported, mainly as LNG. If problems were to arise within these countries or between these countries and importers, it would be less likely that all the required investments in export-related infrastructure would be forthcoming. The availability of LNG carriers and trained crews may also constrain investment in LNG chains.

Another big worry is the future rate of investment in Russia's gas industry. The bulk of Russia's gas production comes from three super-giant fields which are declining at a combined rate of 20 bcm per year. Production at a fourth super-giant, Zapolyarnoye, which came on stream in 2001 is matching the decline at the current Big-3 but will not be able to continue to do this in the long run. Gazprom has announced the commissioning of smaller fields – in 2006 a field producing in the order of 20 bcm/y was announced. However, enormous investments are going to be needed to develop new fields in deeper strata and/or in the Arctic region and other regions where reserves are expensive to develop – simply to continue to compensate for the depletion at the old supergiants. The development of the Shtokman field (although surrounded by much uncertainty given the Russian intent to develop it without partners – and the international communities assessment that Russia does not have the technological wherewithal to develop such a complex offshore arctic structure without international expertise) in the Barents Sea and the Bovanenskoye field in Yamal, announced in October 2006, are welcome announcements – but production will only begin more than 5 years from now.

Gazprom, which produces 90% of Russia's gas, recently announced an increase in its capital spending to almost \$13 billion per year this year and increasing to levels of about \$20 billion in future. This is in line with the IEA's World Energy Outlook projections. Our concern though is that the focus of this investment is not solely directed to the upstream. A lot of Gazprom's spending is being directed at foreign acquisitions and export infrastructure, rather than the domestic network and the upstream sector. One

relatively low-cost option for augmenting supplies would be to allow oil companies and independent gas companies, which could sharply increase their marketed gas output, to gain access to Gazprom's network – for both associated gas volumes which are now flared and for the oil companies' own gas fields. One must remember that over 25% of gas reserves are in the hands of Russia's independent gas producers and oil companies and as the domestic gas market reforms are implemented and domestic gas prices rise – the domestic market will become increasingly an interesting market for suppliers. Reducing waste in domestic consumption would free up more gas for export. A key focus of work the IEA plans over the coming years is an increased focus on energy efficiency potential in Russia – and on the ways to reduce wastage and losses in the gas sector and in terms of reducing the flaring of associated gas – through more reliable third party access to Gazprom's gas transmission network.

3) What would be the major outcomes you would like to see coming out of this Global Forum? (Commitment / zero flaring policy from new countries? Gas flaring issues to be a door opener in regional discussion on gas utilisation/gas supplies...? The World Bank to lend money?? Joint AIE/WBG actions??)

The G8 Communiqué on Global Energy Security specified reducing the flaring of associated gas as a key focus. This is one of the key deliverables focused on by the G8 during Russia's G8 Presidency. The IEA in its 3-year Gleneagles Plan of Action is very interested in supporting initiatives to reduce gas flaring.

An obvious outcome of the work of the GGFR and this Forum would be concrete steps to achieving tangible progress in reducing gas flaring globally. Perhaps a key country – such as Russia – can take the lead given its focus during its G8 Presidency.

As I understand, Russia is not part of the GGFR Partnership – only the autonomous region of Khanty Mansiisk is. Russia's entering into the GGFR Partnership could be a constructive signal to the private sector and state companies active in Russia's oil and gas sector.

Clearly, the IEA itself is not able to focus 100% on this issue – and our member countries would not want us to – given the focus of the GGFR initiative of the World Bank and our efforts not to duplicate but to support other international organizations work. The IEA is open to co-operation on this important issue which could and should go a long way to reducing the estimated global volumes of gas flared in the order of 150 bcm – the total exports of Russia to Europe. This is a clear win-win option – for the environment, for global energy security, for companies, for producers and consumers.

4) Since we are in EU today, what is the relevance of gas flaring issues in the EU/Russia dialogue in the energy sector (security of supply/ability for Russia to deliver its LT gas sales agreement to EU...)

Certainly in Europe, gas production looks to have peaked. So, the region will have to import more and more gas to meet its rising needs. We see EU gas imports growing by about half to well over 700 bcm in 2030 in our Reference Scenario. Import needs rise

more slowly in the Alternative Policy Scenario: they are about 90 bcm lower in 2030 than in the Reference Scenario.

Russia is the world's largest gas producer and exporter. Its role in the emerging global gas market will only gain in importance, as growth is projected both in Russian domestic demand and in international requirements. As the country's key producing fields decline, Gazprom's ability to increase gas production is critical to international energy security. In this context, the IEA is especially interested in expanded dialogue with the Russian Government and Gazprom on increasing transparency in the gas sector and promoting the needed energy sector reforms that would contribute to more efficient pricing and sustainable production of natural gas in Russia. As a Party to the Kyoto Protocol, Russia could find an additional incentive for reform in the synergies available between its climate policy goals and the natural gas sector.

The new IEA publication *Optimising Russian Natural Gas: Reform and Climate Policy* identifies such synergies by examining the potential to reduce greenhouse gas emissions in the Russian natural gas sector and to limit natural gas flaring by oil companies. The IEA estimates that at least 30 billion cubic meters – a fifth of the country's exports to European OECD countries – could be saved annually by the introduction of more advanced, available technology and the implementation of energy efficiency. Such investments would be all the more attractive as Russia would save an impressive amount of gas that could be used for export, thus raising the country's benefits. They would also generate reductions equivalent to 150 million tonnes of CO₂ that could be sold on the emerging carbon markets. Russia's ability to identify concrete projects that deliver greenhouse gas savings would furthermore be attractive to OECD countries seeking carbon trading opportunities.

Much still needs to be done in Russia to take advantage of these opportunities and to translate their potential into commercial transactions. We hope that this study will focus attention on these key energy policy needs, and foster a dialogue among Russian stakeholders, including government, domestic and international investors, Gazprom and gas consumers across Eurasia. In the spirit of the G8 Gleneagles Summit and in line with the focus of the G8 Summit in St. Petersburg, progress here would be a significant contribution to global energy security, economic growth and a cleaner environment.

5)As head of the International Energy Agency, what would you say to the countries and companies which have not yet joined the World Bank's Global Gas Flaring Reduction partnership? (Russia? More OPEC countries involvement?...)

As head of the IEA I can only encourage more co-operation by the international community – governments (including State Oil Companies) and the private sector to work more closely with the World Bank's Global Gas Flaring Reduction partnership. The goals of this partnership are completely in line with the G8 Communiqué on Global Energy Security – and actually promoted by the G8 and pointed to in terms of a key tangible deliverable of international co-operation.

I would hope that the GGFR had renewed momentum after the G8 St. Petersburg Summit – and that this will be promoted in EU-Russia Dialogue – EU-US Dialogue. In terms of our efforts at the IEA – this will be a central issue we will promote in all our outreach dialogue with oil producing countries. I refer you to the Angola Energy Review the IEA released earlier this year. Our focus is not only on Russia or the Middle East in terms of this gas flaring reduction issue.

The path the world is on – as we point to in our recently released World Energy Outlook – is not sustainable. We all have to work towards “bending the trajectory” of energy demand growth and CO2 emissions. We can do this together. There are low cost and no-cost options – if governments strengthen their policy resolve and if the right incentives through rational and forward thinking energy policies are developed, promoted and implemented. Much of the IEA work is dialogue and much is accomplished through peer reviews – and peer pressure. We have to set the right example. The increasing presence of NOCs is a new development in the grand scheme of things. Without shareholders there is perhaps less transparency and less urgency for types of investment that are central to the Major private oil companies. There should be a push – ongoing pressure – made based on the G8 and continued throughout the next G8 presidency’s – following the good examples established in Gleneagles and followed on in St. Petersburg. The time for continued dialogue is ever so important. But the time for action is now.