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U.S. DEPARTMENT OF ENERGY

BEFORE THE  
COMMISSION ON SECURITY AND COOPERATION IN EUROPE

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Chairman Hastings and members of the commission, thank you for the opportunity to appear today. It is an honor to speak to the Commission on Security and Cooperation in Europe about energy security and oil and gas infrastructure opportunities and challenges in the OSCE region.

Your hearing is particularly timely for several reasons.

First, the world economy currently relies on a global hydrocarbon-based energy economy which is experiencing high prices, high energy demand growth forecasts, limited space capacity, the need to reduce hydrocarbon emissions, and greater direct political manipulation of oil and gas resources worldwide.

Second, for the first time since the 1970s, there is a greater perception that this globally integrated energy economy is increasingly vulnerable to significant oil supply disruptions from either natural disasters or terrorist attacks on the energy supply system.

These developments and perceptions have prompted salutary responses: They include:

- a renewed investment in increasing energy efficiency;
- a commitment to deploying greater public and private resources to promote technological development and market penetration of clean and alternatively fueled vehicles and systems;
- a proliferation of bilateral and multilateral international cooperative strategies and programs among consumers and some producers to address these developments; and,

- a continued commitment to international economic cooperation within existing global institutions to ensure the widest possible scope of energy and investment collaboration among the international community.

To sustain the existing energy market until the important innovations noted above are effectively deployed requires continued investment in existing energy markets to improve the chances for a smoother transition.

### The oil market to 2012

High oil prices have had an impact on investment although the consequences may not be evident until after 2012. Upstream investment has risen. However, investment devoted to exploration has remained relatively flat due to a shift towards production as companies move to capitalize on higher prices. In addition, international equity investor's access to new opportunities is limited.

Between now and 2012, world oil demand could reach 100 mb/d which is equivalent to an increase of about 15 percent. This increased demand will be met by increased output from production in the Caspian region, West Africa, several OPEC countries, Latin America, and Canada.

Caspian producers are essential to meeting the world's increasing energy demand. The Caspian countries have shown remarkable success over the past decade in developing their resources and supplying international markets. Kazakhstan and Azerbaijan successfully developed their oil industry over the past decade by inviting private company investment. This investment was instrumental in developing both the resources and the local and regional transportation infrastructure needed to bring oil to markets.

Major producing fields either in production or advanced development include the ACG field in Azerbaijan, and the Tengiz and Kashagan field in Kazakhstan. The market expects additional development opportunities. However, the producing companies and the Caspian states will need to develop additional export capacity for the additional supply volumes.

Other producers will also contribute to the supply increase in this period. In numeric terms, OPEC members are forecast to add over 7mmb/d of production in the period to 2012, while non-OPEC countries are forecast to add over 4mmb/d.

Among OPEC members, large increments of increased production are forecast from Nigeria, Iraq, Algeria, Qatar, Kuwait, the UAE, and of course Saudi Arabia, the latter of which has embarked on a huge domestic and international investment program across the entire value chain.

Among the non-OPEC countries, the largest production increase is expected from Brazil, followed by Canada, Russia, and the Caspian countries.

There are several important messages in this short-term outlook. First with very few exceptions, most of these countries permit private equity investment in their oil and gas sectors. The exceptions are Kuwait, Saudi Arabia, and increasingly Russia, although Saudi Arabia has encouraged private equity investment in its natural gas sector.

Second, three of the largest increases come from the non-OPEC countries of Russia, Brazil, and Canada. While some of the OPEC members, Qatar and Algeria, experience substantial oil production gains related to increased natural gas production, Nigeria benefits from deepwater discoveries.

Third, it is important to note that these are point estimates for both supply and demand which will react to a variety of market and non-market-related developments such as changes in the broader world economy, greater efficiency gains, and other unexpected technological innovations.

Furthermore, the supply forecasts are also subject to substantial uncertainty including the pace of increase in Iraqi, Libyan, and Russian production.

Finally, some important producers will no longer make major contributions to increased world oil production. Two that stand out are Venezuela and Norway, the former due to its nationalization decision and the latter to natural decline and other factors.

Even a large exploration success would be unlikely to materially affect these production estimates in the short term.

### The market from 2012-2017

The period to 2017 contains greater uncertainty. On the upside, private investors normally pursue additional investment in their heritage assets in an effort to stem natural decline, find and economically develop smaller satellite fields, or deploy new recovery technologies in existing and well-understood reservoirs. These practices have proven very successful for investors over the last few decades in part due to major advances in oil production and recovery technologies and could very well do so again.

At the same time, the need for additional supply to meet increased demand, at slightly over 5mmb/d, is significantly below the 12mmb/d increment needed in 2012. This suggests that producers and investors will hesitate to make large capital commitments until later in this decade.

However, one caveat that is central to this calculation is that six of the producers noted above may experience actual production declines and three are expected only to maintain production. That requires the nine remaining producers to provide an increase share of the increment required. Among those who are forecast to further increase production are Saudi Arabia, Russia, Canada, Iran, Iraq, Kazakhstan, and Brazil.

Some offshore producers, Angola for example, are expected to experience peak production primarily due to the nature of the producing reservoirs.

There are also non-production uncertainties already manifest in the market.

The risk profile of certain countries is increasing due to their pursuit of resource nationalism and other non-market practices such as non-competitive contracts. In addition, continued cost inflation can prove a barrier to investment.

While high prices encourage the development of alternative energy, they also embolden some producers to exploit the opportunity to unilaterally change investment terms to increase the government revenue take. For example, in several countries, and in spite of stabilization clauses in contracts signed between the host country and the private investors, governments have acted unilaterally.

In the Russian market in particular, current investors have recently faced unilateral renegotiation of terms, which have increased the risk exposure of investors and limited their returns. Through such practices as dividends, companies are limiting their exposure to these disruptions and repatriating earnings rather than retaining them for continued reinvestment in their existing assets.

Concerns over energy security are really in large part concerns over whether the necessary investments are being made for future production. There are several ways to do this. For example we need to make the market more liquid with more diverse sources of supply, so that it cannot be manipulated for political purposes. We need to encourage sovereign governments to withdraw from production and pricing decisions and encourage them to promote multiple sales options for producers.

While governments have the right to manage and control production, constraining, if not effectively removing, the private investor's discretion and production share removes both funds and incentives for the investor to continue to reinvest in the asset. Over time, absent a new investor or even if a government decides to invest its own money, production levels are likely to decline faster than otherwise would have been the case or not increase as forecast.

These consequences are not in the interest of any of the parties. Higher than expected government revenue is often diverted to increase domestic spending rather than longer-term investment. These governments often use the additional money to subsidize domestic prices, contributing to the onset of the notorious "Dutch Disease," reducing international competitive pressure on domestic prices, creating inflation, and raising currency valuations. Such consequences eventually lead to a correction that can be particularly painful to the domestic economy, the citizens, and, in some cases, political order.

The argument in favor of greater market-driven oil policies based on competition is based on support for privatization as opposed to nationalization. It is not a political issue but an international economic one which is essential to long-term sustainable development of hydrocarbon resources as well as whatever new fuels enter the market. Such an approach contributes to broader social and economic benefits. If adopted, it means the energy market would be transparent, financially disciplined, ownership driven, non-discriminatory, efficient, environmentally sound, globally integrated, and innovative.

International organizations can encourage and deepen initiatives such as the Extractive Industries Transparency Initiative (EITI) and the Joint Oil Data Initiative (JODI) that seek to make energy information more transparent, provide important data about resource production and supply, and contribute to a more efficient and competitive international energy market.

Mr. Chairman, members of the commission, I'm grateful for the opportunity to speak before you today, and I look forward to your questions.