

**“Petroleum’s Bright Future:  
Why Conventional Resources Will Continue Occupying Center  
Stage”**

**Twenty Years of the Modern History of Russian Oil:  
Gains, Challenges and Outlook Conference**

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Your Excellencies; Dr. Alekperov; distinguished guests:

*доброе утро (dobroye ootro).*

Good morning. Thank you for the opportunity to take part in this  
conference.

This event’s coinciding with Lukoil’s 20<sup>th</sup> anniversary makes today’s  
gathering even more special.

Saudi Aramco has been privileged to work closely with Lukoil in our frontier gas exploration program, and we have experienced first-hand the professionalism and skill of the Lukoil staff.

I would add that we have witnessed up-close, and with admiration, Lukoil's distinctive drive as a company that makes bold decisions and acts accordingly – a confident, focused, even daring approach that also serves to position Russian business enterprises favorably around the world.

On behalf of Saudi Aramco, I extend my warmest congratulations to Lukoil on attaining this 20-year milestone.

As this conference examines the achievements, challenges and prospects of Russia's oil industry, my own perspective is that 20 years on, this nation is poised to take advantage of a bright future for petroleum, a parallel that I also draw for us in the Kingdom of Saudi Arabia.

This positive outlook is the postscript to a mistaken public image of petroleum as a “sunset industry.” This perception of scarcity is not new, as it gathered steam in the early 1970s, when the Club of Rome warned of petroleum’s imminent exhaustion by the early 1990s.

Ironically, the issue goes back even further to the first Pennsylvania oil discovery that launched the American petroleum industry in the 19<sup>th</sup> century, when it was believed that the *first* oil discovered there was also the *last*. The recent Peak Oil debate demonstrates just how perennial this issue has been. Yet today, petroleum rightly occupies center stage in the world-energy arena, driving economic prosperity at both the national and global levels.

What has changed?

Essentially, concerns over oil and gas supply tightness have been replaced with a new enthusiasm about resource abundance.

It's true that petroleum resources have been plentiful enough, thanks to *conventional* oil and gas, and the impact of groundbreaking technologies continuously introduced by the industry since its early days. This phenomenon of increasing rates of new resource discovery and rates of ultimate recovery is a subject I'll come back to later. In fact, today the reserves are growing even further, thanks to *unconventional* oil and gas.

And while unconventional oil and gas may dominate the news because of their vast, game-changing potential, my emphasis today will be on the conventional side, and the implications for Russia, Saudi Arabia, and other nations blessed with large conventional resources – and the positive prospects, in turn, for consumer nations with growing populations and economies whose prosperity depends on this energy.

Ladies and gentlemen, I believe that there are three undisputable facts that point toward a bright future for petroleum, and specifically, for conventional supplies.

Let me elaborate.

*The first undisputable fact is that economic growth around the world is driven by energy in general, and by oil in particular.*

Increased energy consumption and economic growth are inescapably linked. And for more than 100 years, oil has been energy's work-horse, fueling modern transport and industry as the keys to global economic prosperity. Ample, secure supplies of oil have come to be synonymous with not only economic growth, but also national security; no other form of energy can make that claim.

The benefits that accompany economic growth are desired by all nations, yet the gap in living standards between developing and developed nations underscores the extreme disadvantage of the energy "have nots."

Over the past 20 years, about a billion people in developing countries have obtained access to electricity.

However, despite this impressive advance, roughly 1.5 billion people, over one-fifth of the global population, still have no access to electric power. When it comes to fuels within homes, 2.4 billion people are still burning primitive biomass, with devastating health and environmental implications.

Energy poverty thus remains a major concern for many poor countries, where a better quality of life hinges on what I have sometimes referred to as the Three A's of sustainable energy: availability, affordability and environmental acceptability.

With energy demand dramatically rising as the center of gravity of economic growth is shifting from north to south and west to east, the call on resources meeting those Three A's will intensify.

Over the years, petroleum has always delivered.

Indeed, with continued economic expansion around the world, oil demand has shot up 85 percent, from around 50 million barrels per day in the early 1970s, to about 90 million barrels per day at present.

And as developing nations gain a better living standard, their greater mobility will be enabled by petroleum, which is likely to be a key source of growth in oil demand.

Studies suggest that the 800 million light-duty vehicles currently on the world's roads will more than double to about 1.8 billion vehicles by 2050 – and the overwhelming majority of those are likely to be fueled by petroleum.

As the world's population grows from 7 billion to 9 billion by 2050, and this great wave of human development seeks the well-deserved, better living standards that come with economic growth, it is fair to ask whether the petroleum resources are there to realize these rightful aspirations.

**This brings me to undisputable fact number two: Petroleum resources are indeed plentiful, and this reassuring endowment not only positions oil to meet consumer aspirations – it proves that oil will be with us for a long time.**

Contrary to scarcity concerns I referred to earlier, petroleum is far from taking its curtain call. The earth's endowment of conventional oil is estimated at six to eight trillion barrels in place, with at least an additional seven trillion barrels of unconventional oil.

As for the world's proven reserves of conventional oil, they are far from declining, growing from 549 billion barrels in 1970, to about 1.4 trillion barrels today.

And this growth has taken place *despite* consumption of more than a trillion barrels over the same period.

Our own experience in Saudi Arabia bears out this plentiful endowment: we have produced about 120 billion barrels to date, yet our own reserves have continued to grow thanks to exploration and increased recovery driven by technology and best-in-class operating practices.

Ladies and gentlemen, make no mistake about it: demand is expanding, and conventional oil will continue to be the low-cost base load provider, while unconventional oils will serve as the marginal supplier, topping off the conventional base and thus setting prices. Conventional resources will also continue to hold a distinct competitive advantage in terms of supply potential due to field deliverability, production costs, and the environmental impact of production activities.

And while petroleum's proven sustainable-energy advantages mean it will continue to deliver for the world's economies, it will certainly be joined by the slowly rising contributions of renewables as they become technically mature and economically viable.

**This leads me to undisputable fact number three: *Technology has not only been the main driver for our industry in the past, it is also the key to our industry's future.***

Oil has achieved a lot in the past 100 years; advances have made it possible to derive ever-greater value from hydrocarbons – from enabling oil's vast contributions to industrial development and transportation, to its use in the many thousands of products derived from petroleum that make modern living more productive, more efficient, safer and healthier.

Thanks to the industry's innovation agenda, ground-breaking tools and techniques continue to dramatically enhance oil's availability and sustainability.

Recently, we have seen the power of innovation also unlock unconventional resources, such as the advanced technologies making unconventional gas in general, and shale gas in particular, accessible and economically feasible. Similarly, vast resources of extra heavy oil and tar sands have become economic.

Likewise, we have witnessed technology's ability to open frontiers that were unthinkable to develop in the past, such as deep sea and offshore Arctic. Lukoil's world-class projects in the harsh environment of western Siberia are a prime illustration of what transformative technology can make possible.

Ladies and gentlemen, given the achievements of the 20<sup>th</sup> century, the industry needs to take a visionary approach to technology and focus on the daring breakthroughs of the future. In other words, what we aspire to do tomorrow can be even better than the sweeping accomplishments of the past.

Certainly, Russia's innovation policy will be a linch-pin of its ability to continue developing its resources for the good of the Russian people, which will in turn benefit billions of people in developing nations reaching for a better life.

Russia has long been acknowledged as a scientific spring of pioneering research in basic sciences and mathematics, and a standout in contributions to aerospace, energy, and many other heavy industries. This technological leadership can be projected into oil and gas industry innovation, positioning Russia to play a leading role in discovering more petroleum, achieving higher recoveries, and making end-use applications cleaner, as well as more efficient.

Saudi Aramco likewise is accelerating innovation toward this aim, building on our current strong position with the strategic intent to become one of the world's leading technology players by the year 2020.

Let me return here to the parallel I drew earlier, between Russia and Saudi Arabia's common advantage of abundant conventional oil and gas that can be leveraged for the greater energy security and economic and social potential that ample resources afford.

Given our shared focus on energy technologies, I see good potential for joint R&D between Russian companies and Saudi Aramco.

Our mutual interest in promoting the responsible use of oil can lead to collaboration on groundbreaking future end-use applications, such as for transportation fuels with radical improvements in mileage efficiency, the lowest possible carbon emissions, and optimal post-combustion management. Cooperation can also involve the use of oil in developing more advanced petrochemicals and new futuristic materials.

Ladies and gentlemen, let me conclude by reiterating my conviction that these three undisputable facts position oil to build on its proud legacy to deliver a brighter tomorrow.

I firmly believe that our industry will continue to be the locomotive that pulls a growing and aspiring global economy toward prosperity.

On this forward-looking note, let me offer once more my heart-felt congratulations to Lukoil and the Russian government on these 20 years of remarkable success for the steady and strategic development of Russian oil and gas.

We look forward to the next 20 years, and beyond.

*Большое спасибо* (*bahl shoh ye spa SEE ba*), ladies and gentlemen –  
thank you.

