

The 26th St. Petersburg International Economic Forum

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**SODOM AND GOMORRAH ON THE ENERGY MARKETS:
WRATH OF GOD OR ORGANIZED CHAOS? SAVE YOURSELF
IF YOU CAN**

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Dear participants and guests of the Forum!

Changes in the global economy and in the energy sector which is its foundation are gaining momentum, and our Forum is becoming particularly important in terms of analyzing the changes that are taking place.

I am happy to welcome the participants of our today's discussion.

In the environment of unprecedented sanctions, we do not want to name all our partners who are present in this room (as is the case in security and enforcement organizations) – this is a joke, but nevertheless, I am asking you not to direct cameras into the room. I am kidding again. This will be our "Last Supper" if you like. And given the time, what is it - a morning service then? So I would like to begin by saying a special thank you to all the participants.

In particular I would like to welcome and thank Mister **Dai Houliang**, Chairman of the Board of Directors of CNPC and let me also introduce Mister **Govind Kottis**. Also, I am happy to welcome Dr. **Nobuo Tanaka**, Chairman of the Supervisory Board of ICEF (Innovation for Cool Earth Forum), a non-profit initiative of the Japanese government to develop low-carbon technologies and former Executive Director of the International Energy Agency (in 2007-2011), **Rovshan Najaf**, President of the State Oil Company of the Republic of Azerbaijan (SOCAR), **Jiang Peixue**, Vice President of one of China's and APR's leading Universities - Tsinghua University, and a Member of the Chinese Academy of Sciences, **Pedro A. Aquino Jr**, Chairman and CEO of Oil & Petroleum Holding International Resources (OPHIR), **Martin Wiewiorowski** as well as **Leparan Gideon ole Morintat**, Chief Executive Officer and Managing Director of the National Oil Corporation of Kenya, the powerful delegation of the Bolivarian Republic of Venezuela, headed by the CEO of the Central Bank. With us today are the sons of the legendary Nicaraguan president **Daniel Ortega (Laureano and Daniel)**, who work with their father for the good of their heroic homeland, distinguished delegations from China, Azerbaijan, Mongolia, Indonesia, Nicaragua and Brazil.

Separately, I would like to thank the moderator of our discussion, member of the Russian Academy of Sciences and President of the Institute

of World Economy and International Relations of the Russian Academy of Sciences, Alexander Alexandrovich Dynkin, and to express my hope for a fruitful discussion.

Before I begin the discussion, I must, of course, mention the limitation of liability in view of the evaluative and predictive judgments in my presentation.

Western civilization, whose prosperity was secured through such tools as **colonization, slavery, the inquisition** all the way up to the use of nuclear weapons against the civilians of Hiroshima and Nagasaki, which took the lives of over half a million people, has shown that the main method of interaction for them is coercion.

The attempted **utopia of a green transition** has already had disastrous consequences. **The actions of irresponsible regulators** have effectively **banned investment** in conventional energy. **Lacking clear-cut goals, sound technologies, and an understanding of the long-term consequences** of their actions, they set in motion a process that **spawned a crisis in the global energy industry, spinning inflation on global markets**. All this was exacerbated by the impact of the pandemic.

It should be noted that both global practice and our own experience show that disasters are caused by a combination of factors that were not taken into account, and some of them are simply impossible to take into account. To these fundamental causes a chain of unforeseen circumstances is also added.

From my own experience I can say that this is the case in all major human-caused disasters.

Let me remind you about Fukushima: JENERAL ELECTRIC's design included seismic protection of the plant and it withstood, but the tsunami factor was not taken into account - the plant is located on the coast of the ocean. This experience comes in hindsight - you cannot place such facilities on the coast in seismic zones. Another example is of the accident at Sayano-Shushenskaya hydropower plant during increase of vibration and a water hammer, and the risk of dam failure came from the subsequent flood; we managed to build a water diversion tunnel and a water velocity damping

system of the volume of two Niagars. We managed to commission it just a few days before the floods started. It was a horrific time.

A similar unaccounted factor in the global **markets decline that has already started** could be, and still can be the U.S. default.

New risks bring about the necessary decisions to be taken to minimize them. **These include the formation of new payment mechanisms, moving away from the dollar and creating new secure supply chains to access new markets.**

Now the APR countries have started to gain the advantages that Europe used to have, and those were the basis for the competitiveness of the European industries.

Lockdowns and barriers to trade and investment have led to **stagnation**; cooperation has been replaced by **fragmentation and regionalization**.

Everything that we used to think of as **signs of liberal democracy and free markets is ceasing to exist**. What is happening is the destruction of the foundations of the international law, in particular, the contract law, the destruction of the arbitration system, the destruction of all the institutions of a market economy.

Investment cycles, which in our industry have a duration of 30 to 50 years, became subordinated to short-term electoral cycles. Long-term investment tasks are replaced by short-term **opportunistic goals and political demagogy**. All of this is spinning the **flywheel of chaos that is heading for collapse**.

It is also a fact that any increase in resources today is more expensive, and we need more and more of them. It is also necessary to take into account that all intentions, ambitions and plans for radical changes are limited by the enormous inertia of the economy, and to overcome this inertia we need additional costs and this does not guarantee the desired result.

Let's see what awaits us and what we have to get ready for.

I. GLOBAL WARMING AND ENERGY TRANSITION

1. Climate has been changing throughout the Earth's existence

The climate has been changing throughout the Earth's history, including periods of both global cooling and warming - an objective **cyclical process**.

The sun is the main source of heat on the planet. The Earth is first and foremost a planet, a cosmic body in the solar system. **Cycles of solar activity as well as distancing from and approaching of the Earth to the Sun cause the temperature to rise and fall.** All the efforts of the scientific community should be focused on studying the nature of these very phenomena, in the course of an open and unbiased discussion.

At the same time, climate change, the so-called global warming, is an obvious fact already now. But there is **no scientific consensus** about the nature, causes, speed, and long-term trend of climate processes. The concepts on which the green transition policy is based - an **absolutization of the man-caused factor** - are not supported by objective scientific research.

A near example is the main scientifically recognized cause of the Little Ice Age (the 14th-19th centuries) - a significant decrease in solar activity (the so-called Maunder Minimum), which led, in particular, to crop failures throughout Europe in the early 17th century and to the freezing of the Bosphorus, Thames, and Adriatic Sea. In Russia, by the way, it is the crisis of the Time of Troubles - 3 consecutive disastrously bad harvest years (1601-1603) under Boris Godunov.

2. The Arctic gets warmer the fastest

A significant increase in average temperatures is also an undeniable fact. At the same time, temperature changes occur unevenly in different regions. For example, global warming in the Arctic is 4 times faster than in other parts of the planet, which creates **additional** risks for the Arctic Ocean seashores, including those associated with flooding.

A study published in the influential scientific publication NATURE COMMUNICATIONS indicates that by the middle of the 21st century, the Arctic will be "virtually" ice-free until September, and by the end of the

century there will be no ice even in October, which would significantly **expand the navigation window** for shipping. Thus, **plans for the development of the Northern Sea Route** are based on real climatic dynamics.

With climate change also come **new opportunities** related to access to the resources of the Arctic area, and where the resources **already discovered** by our Company alone amount to about 20 billion tons of oil equivalent.

3. Global warming adds to the stimulation of the energy demand growth

Global warming is another significant factor in the growth of energy consumption.

Ventilation and air conditioning already accounts for about 10% of the world's energy production, and by 2050 global demand for indoor climate could triple, surpassing the US and the EU together in terms of total energy consumption.

4. Energy transition is not backed up with resources and technologies

Unfortunately, the declared energy transition is not backed by the necessary technologies. We are faced with the fact that “renewable energy” is in fact not renewable.

The global economy does not have the metals, rare earth minerals, energy, time or money to make this transition. As Guillaume Pitron, author of the book titled “Rare Metal War: The Dark Side of the Energy Transition and Digitalization”, wrote: *“In striving to free ourselves from fossil fuels and turn the old order into a new world, we are in fact placing ourselves in a new and stronger dependency”*.

Moreover, the authors of the green transition, unilaterally imposing certain standards, have not yet understood that their rules need to be coordinated with those who have the production capacities and the appropriate resource base. **Significant portion of equipment manufacturing capacities** for renewable energy is located **in China**, which

has concentrated in its hands the entire production cycle of solar panels - 79% of global production of polysilicon, 97% of plates, 85% of cells and 75% of panels, thereby providing 85% of global production of solar panels.

5. Issue of the energy transition price

The key issue is the **price of the energy transition**. According to the assessment made by the IEA, by 2030 investment in “clean energy” should grow almost threefold from the current US\$ 1.7 trillion to US\$ **4.6 trillion per year**, that is, from 2% to **5% of world GDP**.

McKinsey estimates that **achieving Net Zero** will require at least US\$ **9.2 trillion in annual spending** until 2050 (which is US\$ 250 trillion) on major industries alone: energy, transportation, industry, utilities, agriculture and forest-climate projects, of which US\$ 3.5 trillion is for new low-emission assets and associated infrastructure.

6. Electric vehicles are still a privilege of a few countries

It should be noted that certain breakthrough technologies are emerging. From my point of view, these are the new developments of electric cars, which have gained popularity in certain countries.

We are seeing significant **growth in the share of new cars sales** - it has already reached about **25% in China and Europe**, and with hybrids, it's up to 35% and 38%, respectively. On average, worldwide sales have already reached about 14%.

Does this mean that a cure-all has been found?

7. Additional energy demand from electric vehicles

The **number of electric cars** has already exceeded **25 million** worldwide, but their **share in the total passenger car fleet is about 2%**, and even according to optimistic forecasts it will reach 20% only in a decade.

That is, electric cars **remain the privilege of a select few countries [China, Germany, USA, Japan and others]** that can afford huge investments in the corresponding infrastructure and generation.

The pace of electrification of the car fleet thereat will not only depend on the manufacture of electric cars and on subsidies - the growing number

of electric cars will certainly be a **serious risk factor for the global energy system and a real test of its sustainability**.

The problems associated with **high grid loads** due to the simultaneous charging of a large number of electric vehicles will be particularly noticeable at the local level in residential areas. For example, according to the IEA, in three thousand neighborhoods in the Netherlands, the **simultaneous charging load of more than a hundred electric cars could exceed the capacity of a typical neighborhood grid** by as early as in 2025.

The same IEA estimates that California, which is already experiencing high levels of blackouts, will need to increase its local electric distribution grid modernization program **fivefold** over current plans in order to accommodate the load from electric vehicles by 2030.

We are not even talking about regions where there are **no such grids at all**. It is logical to assume that the climatic sense of the electric car is to provide it specifically with green generation. Obviously, there is no point in buying an electrical vehicle if it runs on coal generation.

Therefore, it is critical to increase **investment in the generation and supply of green energy specifically**. In addition to the natural growth in demand for electricity, **green generation** will need to **increase by an additional quarter** by 2050 just to meet the needs of electric vehicles. The IEA estimates that **energy grid and related infrastructure costs** will need to **quadruple** by the 2040s, from about US\$ 300 billion per year to more than **US\$ 1.2 trillion** per year (in current prices).

Again, we cannot leave out of the equation the problem of the manufacture and disposal of the batteries themselves, the enormous amounts of raw materials needed for this and the corresponding increase in metal mining as well as their complete disposal. Unfortunately, such technologies are not available yet.

8. Current technologies will not ensure Net Zero by 2050 году

For a number of critical metals, investment growth should be even more significant. The BHP Company believes that **investments in copper mining** should increase **at least 13-fold** by 2030, from US\$ 20 billion to US\$ 250 billion, but only about US\$ 50 billion has been confirmed. For the remaining US\$ 200 billion of investment needed, according to BHP, it is

important to create attractive fiscal and regulatory conditions.

Attempts to replace some metals with other, more affordable ones in the manufacturing of batteries, will require new technologies that ensure at least the preservation of the required specifications.

In fact, **Net Zero is unattainable** on a global scale given the current pool of green technologies - many of the required technologies are still at the prototype stage.

At the same time, **petroleum technologies** are currently at the **peak of their development**, they have no equals in technical and economic efficiency, and in terms of physical indicators - energy density and heat of combustion - they can be surpassed only by hydrogen and thermonuclear fusion technologies, which are still undeveloped.

The fallacy of abandoning oil and gas is recognized even by oil and gas companies, which had previously staked on an accelerated energy transition, now postponing previously announced goals. For example, **BP** acknowledged in February of this year that the **world needed oil** and gas more than the company had previously expected and is investing additional \$8 billion in new production projects by 2030. This week **Shell revised its strategic targets** with a focus on long-term stability and maintaining production that provides shareholders with higher returns compared to “green” projects. **ENI** announced a 15% increase in investment over the 4-year horizon, mainly from oil and gas exploration and production. Same is true for Exxon.

To date, improving technology in conventional production has a greater effect in terms of real emission reductions than investing in immature “alternative” technologies. Thus, at the current stage of the green transition, the oil and gas sector itself should become a priority.

II. THE GLOBAL FINANCIAL AND ECONOMIC SYSTEM CONTINUES TO BE IN TURMOIL

9. Problem of US default: deferred bankruptcy

The United States has once again **avoided a so-called technical default**, that is, it has once again **temporarily abolished the so-called**

“**debt ceiling**” that allows the government to further increase borrowing. Let's pay attention to the collision that happened on the way to this decision.

During the tough bargaining between Democrats and Republicans, President Biden threatened to use the 14th **Amendment** to the U.S. Constitution, supposedly allowing the **budget to be guaranteed in spite of the debt obligations**. Let us recall, this amendment, adopted at the end of the American Civil War (in 1868), was intended to prevent compensation to slave owners in the Southern states for slaves freed by the 13th Amendment, because, the 5th Amendment guarantees the protection of private property and in case of its seizure by the state requires compensation by the state.

You have to agree - this is a vivid remark on the issue of the sources of the shaping of American prosperity.

The systematically repeated story with the debt ceiling and the threat of a technical default by the U.S. is perceived by many as a political circus. **In fact, at the heart of the problem is the real delayed bankruptcy of the US. The enormous debt cannot be repaid. And the further it goes, the more impossible it will be to service it at rising rates.**

Over the past 30 years, the U.S. national debt has soared **tenfold**, from US\$ 3 trillion to already **over US\$ 31 trillion**. This is twice as fast as economic growth, and the cost of servicing it can reach US\$ 1 trillion a year [which is 1/5 of the budget] and this figure is growing.

10. The era of the lowest interest rate in 5000 years is over

The era of low interest rates is over as the **Federal Reserve has started to raise the rates rapidly** to contain the inflation that resulted from the inflation of the liquidity bubble over the past decade and from the lowest interest rates in 5,000 years of the civilization development since the beginning of the Bronze Age. Consequently, **the year 2022 was the worst year in history in terms of global yields of government bonds** that have been issued since 1865.

Against this backdrop, Federal Reserve Chair Powell's latest remarks about a firm commitment **to suppress inflation at all costs and to be raising rates over several years**, despite the projected growth of the debt to \$51 trillion by 2030 shows the extreme severity of the problems.

11. Path out of debts: inflation, default or... war

What ways of solving it are we offered?

The first way is **sanctions** as usual. It seems that this remedy is about to be exhausted.

The second one is **inflation** as a way of devaluing the debt. And here, as evidenced by the Federal Reserve Chairman's recognition, the dangerous limit has already been reached.

The third path is the **default** as such. Or a partial default?

The fourth one is a **war**. Basically, the US default is already a war, just by economic means.

This slide clearly shows that the peaks of U.S. national debt always happen at the same time as the "big" wars that America wages. Judging by this graph, today the United States is fighting a war which is comparable to World War II, at least in the financial aspect.

Back to collisions over the debt ceiling. Recall that the Republicans originally proposed to raise the debt ceiling by only \$1.5 trillion. The difference between what the Administration planned and what the Republicans proposed is \$1.957 trillion. Do you know what that figure equals? **This amount coincides with the current investments of two countries in U.S. debt obligations with striking accuracy: Japan (\$1.088 trillion) and China (\$0.869 trillion). What a temptation for you?!** How easy it would be to solve the U.S. debt problem in a simple way by giving up the debt to these countries, as they did to Southern slaveholders 155 years ago.

12. Who are the principal holders of the American debt?

Who are the principal holders of the American debt? It is over them the main threat looms. They face the main risks. And it is obvious that the APR countries are under threat.

That is, the problem with the biggest holders of U.S. debt is that Americans have a debt problem. As a famous quote of a Russian writer Ivan Krylov goes: "It's your fault that I'm hungry." Or, as the former U.S. Treasury Secretary John Bowden Connally noted back in the early 1970s, "The dollar is our currency, but your problem."

13. Dollar is losing ground

Thus, **the dollar becomes a problem** both as a reserve currency and as an instrument of international payments. At the same time, the dollar will remain the main settlement instrument and the main reserve currency for a long time due to the huge dollar-based system of financial instruments and mechanisms to influence prices, exchange rate policy etc.

Yes, the **dollar** is losing its position at an accelerating rate, but **it will be dying slowly**, and it is necessary to be saved urgently. And here a huge **role belongs to central banks** of the countries seeking to preserve their sovereignty, to organize a system of clearing, mutual settlements, swaps, financial data transfers, and new payment and settlement systems.

It appears crucial to separate two interrelated but not identical problems - an alternative reserve currency amid the slow weakening of the dollar, **and a rapid formation of alternative payment and settlement systems** between the countries and economies concerned.

The weakening of the global role of the dollar began more than a decade ago, and **the most significant step towards de-dollarization**, however paradoxical it may seem, was made by the United States itself **through turning the dollar into a tool of sanctions**.

14. Risks for the American banking system are still growing

Despite the apparent lull, **problems in the U.S. banking system have not gone away**, and regional banks continue to experience problems - about **[700-800] banks are facing problems with assets and capital**.

As a result, since the start of the banking crisis, the U.S. regional banks in the S&P index have lost about 25% of their value, while the entire U.S. banking system has lost only about 20%. At the same time, the S&P 500 index rose by 8%.

The international credit rating agency Moody's revised its assessment of the prospects of the U.S. banking industry: the outlook for the sector was lowered to negative. Further growth of interest rates will cause a new wave of bank bankruptcies.

There is no doubt that the U.S. monetary authorities are able to cap these problems to a certain extent. At the peak of the crisis in March, the

Federal Reserve injected about \$0.5 trillion into the financial system. However, at the same time, this limits the possibilities of fighting inflation.

Joseph Biden himself said the following about the banking crisis: "*That is how capitalism works. All deposits will be fully compensated, both insured and uninsured. Investors will not be compensated because they took their risks...*". **That's just it: that's not how capitalism works!!!**

The periods of high inflation occurred before, although they have been forgotten recently in the West, but they have never been accompanied by a debt crisis of such magnitude.

The agreement reached on temporary lifting of the US debt ceiling, in turn, means that the Federal Treasury will borrow about \$2 trillion from the market as early as this year. This could trigger a new outflow of deposits as the funds will be invested in new debt which will further weaken the banking system. In fact, we are witnessing a systemic crisis of the entire U.S. financial system.

It is important to note that debt issuance itself is a totally normal systemic way of economic development, and for many years the growth rate of debt in the world corresponded to the growth rate of GDP. However, in the last 20 years the so-called "developed" countries, and especially the U.S., started to clearly **abuse** their position in the financial sphere, having rapidly begun to build up debts and **inflate the value of assets**.

Amid this background, productivity growth in the G7 countries fell from an average annual rate of 1.8% which were typical in 1980-2000, to 0.8% in 2000-2018. This was especially pronounced during the pandemic, when "helicopter money" was handed out to the population through **increasing the debts** of governments, which were **bought out into the balance sheets of the central banks** of these countries. A large part of this money was channeled into stock markets, which created the conditions for the **inflation of bubbles**. The growth of "paper assets" relative to GDP has been highest in recent years, with \$3.40 of new debt for every new dollar of investment.

15. What is going to replace the dollar?

What can replace the dollar and how quickly? To qualify as a new reserve currency, a country must have a sufficiently **large** and stable

economy, and **free and barrier-free capital transactions** as well.

The currencies backed by commodity flows, giving them weight and liquidity, become promising. Above all, it concerns the yuan. **The ruble is one of the most resource-backed currencies.** But there are at least two problems – a geopolitical pressure from the current hegemon and the risks associated with **the lack of the targeting of the ruble exchange rate, which does not enable it to support cross-border lending and prevents the ruble from becoming a regional settlement system.**

16. Death of the market economy. The state instead of the market.

We are witnessing the agony of Pax Americana, a painful process fraught with the most unpleasant excesses.

At the turn of the century (from 1899 to 1902), the U.S. Secretary of State John Hay outlined a new U.S. global strategy – which was named **Open Door policy** in his so-called three “Notes”. The basic principle is **ensuring an equal access to goods and markets.** That was the dawn of Pax Americana. Confident in itself and its competitive advantages, America sought the maximum removal of any barriers. And now we can say, **“Watch out, the doors are closing!”** America, having lost its competitive edge, is dismantling its Open Door policy in an effort to hold on to its elusive leadership.

In order to meaningfully discuss the fate of the global energy market and the economy as a whole, it is necessary to state a fundamental fact. **The market economy no longer works as the main mechanism of global regulation of capital flows.**

High inflation, high interest rates - that is the breakdown of global chains, the risks of shortages. Hence **the priority of security and the state as the main guarantor of security.**

The tasks of **reindustrialization, localization** of vital industries, **militarization** of the economy, assurance and replenishment of **commodity** stocks and **resource security** are all non-economic tasks that are beyond the power of private capital, even big capital, which now, if it can exist, then only in the mode of public-private partnership.

17. The USA succeeded in making Europe addicted to its gas, and is now facilitating the escape of energy-intensive operations from EU

Coming back to the gas topic. As a result of the rejection of Russian gas and the lack of other sources of LNG, an important **consequence** was the complete **dependence of European energy industry on energy supplies from the United States**. In fact, the European policy of gas supply sources diversification has completely collapsed. **Before the sanctions we were supplying 160 billion cubic meters of gas, while the U.S. increased its supplies in 2022 only to the level of 70 billion cubic meters.**

Due to rising energy costs, a number of energy-intensive industries in the EU have closed. In December 2022, **chemical production was down 18%**, and **iron and steel production was down 17%**, as compared with December 2021.

18. Lower gas prices are not helping to restore industrial growth in Europe

Lower consumption led to price falls, but consumption has never recovered ever since. At the same time, consumption dropped first and foremost in particular in the industrial sector.

In 2023, **demand** for January-March **averaged 17% below** the 2017-2022 average, **despite a significant drop in gas prices** in Europe.

Production in industries whose output declined significantly in 2022 showed little recovery in early 2023, with overall **industrial output** in March 2023 **down 3.5%** from December 2022. The trend is saddening.

Deindustrialization on the background of lower gas consumption led to **the beginning of the recession** in Europe's largest economy. For example, **German GDP** decreased by 0.3% in 1Q 2023 quarter-on-quarter, after a 0.5% contraction in the 4Q2022. Thus, the German economy entered a recession - the first since the pandemic.

The flight of energy-intensive industries from the EU will make the European economy even weaker and more vulnerable.

III. GLOBAL OIL DEMAND AND PRICES WILL CONTINUE TO RISE

19. Crude oil global demand continues to rise

According to the current forecasts of the **IEA and OPEC**, **global oil demand** will grow by 2.4 mbpd in 2023, setting a **new record of 102 mbpd**.

In the long term, **physical volumes of oil consumption** are estimated to grow by about 15 mbpd (+15%) by 2045, and oil, together with natural gas, will **continue to satisfy more than 53% of global demand** for primary energy.

20. Underestimating demand growth in Africa

An additional factor contributing to rising demand for energy is Africa's rapid population growth: according to the UN forecast, by 2050 **Africa's population will increase by 74%** (from 1.43 billion to 2.49 billion people), while in other regions the population will grow by an average of only 10% (from 6.55 billion to 7.22 billion people). Africa will account for 34% of the world's population, up from 22% today.

In terms of growth in **energy demand**, Africa is projected to grow at around **70-80%** by 2050. That is, the rate of growth in energy demand will be comparable to the rate of population growth.

This fact demonstrates an underestimation of the real potential of consumption growth in Africa, which faces the challenge of eliminating energy poverty. And meeting this challenge will lead to a **higher rate of growth in energy demand**, which **has yet to be realistically evaluated**.

21. Declining reserve replacement rate

Underinvestment occurs not only in production, but also in exploration, which has already led to insufficient production replenishment by the addition of new reserves (the replenishment is about 90%). The scope of exploration drilling has been steadily declining, and its focus has been on increasingly deep water areas.

Today the average size of discovered fields in the world is about **15 million tons of oil equivalent**, which is not comparable with the **giant discoveries of the 1970s (Saudi Arabia, Russian Siberia, USA)**.

22. Oil prices will be growing

Underinvestment will inevitably create a deficit in the market, leading to higher oil prices.

This is also noted by **Saudi Arabia**, which has announced a new production cut (already the third during the period of the Agreement) and is interested in both long-term market stability and elimination of speculative volatility and maintenance of the oil price at the level of **\$80/bbl. and its further growth**, for commissioning new oil production capacity and implementing projects intended to diversify the economy as part of the "Vision 2030" program. This program provides, inter alia, for the construction of Neom, the city of the future, and ultramodern Mukaab business district in the capital Riyadh, the total investment in which could exceed \$500 billion.

However, **OPEC countries are finding it more difficult to reach common solutions** because of differences in the structure of their economies and production dynamics. For example, the Middle Eastern OPEC countries are increasing production and diversifying their economies by developing the non-oil sector, while the African OPEC countries are steadily reducing production, losing their weight in the global oil market.

In some cases, oil in the domestic markets of these countries is replaced by other resources, which makes it possible to increase its exports. For example, a number of OPEC+ countries export up to 90% of their oil production, whereas Russia supplies to the market about 50%, which puts our country in a less favorable position under the existing mechanism for assessing influence and access to key sales markets. In this regard, it appears appropriate to **ensure monitoring of not only production quotas, but also the volume of oil exports, given the different sizes of domestic markets.**

While announcing the current voluntary production cuts, **Saudi Arabia is concurrently increasing its production capacity** and its **drilling rig count** could grow by **at least 25% in the next 2 years**, as evidenced by contractor companies and the scope of contracts signed for drilling and infrastructure development.

Consequently, **about 2 million bpd of new production capacity** will be commissioned in Saudi Arabia by 2025-2027.

Thus, notwithstanding the record reserves life in the Middle East (Saudi Arabia and the UAE reserve-to-production ratio is about 70 years, Kuwait and Iraq - about 100 years), the mankind will face the acute problem of production capacity shortage in the years to come, and **the OPEC countries will not be able to satisfy the growing demand any more.**

23. U.S. production is reaching the “plateau”

The main contribution to oil production development in the USA in general is made by the Permian basin, which is the largest by reserves and production of about 280 million tons a year (approximately 45% of all US production).

Production in other shale basins - Eagle Ford, Bakken and others - **has stabilized over the last three years and is not growing.** At the same time, negative trends in the development of oil production have also emerged in the key Permian basin - since 2021 there has been a decrease in the specific efficiency of new wells, **and marginal production growth over the last 6 months has halved.**

Even since 2020, the growth of shale production has originated largely through the active commissioning of drilled unfinished wells, and their stock has decreased by 73% in the Permian Basin since the beginning of 2020 and is now equivalent to less than 2 months of the current scope of well commissioning as compared to 6-7 months before the pandemic and is unable to support not only growth, but even maintenance of the current production amid the emerging stagnation of drilling activity. Thus, based on Baker Hughes data, **the number of horizontal drilling rigs** here has been **declining** since December 2022 and represents only 80-85% of the pre-pandemic March 2020 level.

At the same time, given the significant **increase of the Fed's prime rate**, which rose from about a zero level to 5.25% over the year, and **expectations of its further growth**, the cost of borrowing for shale operators has increased dramatically, which has become an additional **deterrent to investment.**

Thus, not only growth, but even **maintenance of the achieved production level in the U.S. is under question.**

24. Are there new projects?

Record **oil reserves in Venezuela**, exceeding those of Saudi Arabia, remain **under the strongest pressure from the U.S.** In this context, Chevron is working on obtaining exemptions from the sanctions regime and has resumed imports of Venezuelan oil only to the U.S., **to U.S. refineries.** **Country risks for Venezuela are still very high.**

Anticipating a global shortage and with no potential for its own production growth, **ExxonMobil is intensifying its control of resources in neighboring Guyana.** In 2027, oil production capacity there will increase from the current 400,000 bpd to about 1.2 million bpd.

However, the projected production growth in Guyana will be offset by production declines in Mexico, Canada, Norway and other countries.

Thus, only some OPEC countries, as well as Russia, actually have the potential for long-term growth of liquid hydrocarbons production in the world, as the **resource base of their new projects is comparable to the resource base of all new prospective production regions in the world.**

IV. ROSNEFT IS PREPARED TO FACE CHALLENGES

25. Rosneft is prepared to face new challenges

We are prepared to face new challenges.

As we know, Rosneft is distinguished by the lowest per unit operating costs, financial stability, and a high level of consolidation. As a result, the company's capitalization is showing decent dynamics despite the difficulties.

Against this background, **the corporate principles that Rosneft has always relied on are more relevant than ever: trustworthiness, long-term commitment, and respect for partners' interests!**

26. Issues and challenges

In conclusion, we would like to show our partners and colleagues our thoughts about a roadmap, the implementation of which would make it possible to increase the efficiency of the Russian energy sector and provide industry and household consumers with cheap and affordable energy. I'd like to emphasize that this is a corporate vision

and our proposals are of a discussion nature. I believe that the managers from Ministry of Energy and Ministry of Finance that are present in the audience today will pay attention to that. The format of the Forum, taking into account the previously stated reservation and its discussion nature, makes it possible to do this.

A year ago, on the eve of the expected flood in the energy market, we talked about the Ark of Salvation. We are quite successful in coping with the challenges associated with geopolitical risks and resisting to the economic war declared to Russia by our former “partners”.

Today, we are prepared for the challenges and our resilience, despite any pressure, is guaranteed, but nevertheless, there are issues which resolution will be essential for providing affordable energy to industry, housing, and agriculture.

- 1. It is, of course, urgent creation of a payment and settlement system independent of toxic currencies.** We cannot wait for the dollar to be replaced by one currency or another. This is a question addressed to the central banks of sovereign states and the domestic regulator.
- 2. Insurance, logistics and transport issues.** Support of the Central Bank is also needed here to develop an insurance system and inter-country cooperation. But active engagement of the market participants themselves is also important.
- 3. Availability of credit is the objective of the banking system's functioning.** The high cost of borrowing is the main obstacle to industrial development, and it is certainly one of the main issues of economic policy. It is necessary to focus the banking system on crediting the economy, subject, of course, to effective control of inflationary processes.
- 4. Systemic issues and pricing in the energy sector**
 - Over the past 10 years, a number of systemic issues have been accumulated in the energy sector, resulting in energy price increases reaching more than 200% over the past 10 years.
 - The increase in installed capacity over the same period exceeded the growth in demand by a factor of two, which led to a decrease

in the installed capacity utilization factor. However, all generation, including unused and inefficient generation, continues to be paid for capacity.

- A marginal pricing principle is applied in the market - all suppliers sell energy at the price of the last, least efficient generating company.
- It appears very important to exclude capacity delivery agreements for projects carried out with budgetary funds.

5. A few words about reconfiguration of the tax system: the thesis that comes from our financial authorities about the loss of oil and gas revenues seems incorrect because it was gas revenues that "fell out", and this has to be treated with understanding, so it is not a reason to shift the tax burden to the oil industry.

6. Development of the domestic gas market and gas infrastructure expansion as a response to the closure of the European market

- Construction of new gas pipelines heading east opens up the opportunity to tap into the vast resources of Eastern Siberia, where the reserves of independent producers exceed 4 trillion.
- It becomes possible to finally create **more transparent** conditions for all market participants in gas production, transportation and sales.
- Opportunities for the domestic gas market development are unlocked. The potential freed up should be used to stimulate domestic demand for gas and accelerate gas infrastructure expansion.

In summarizing our vision of the current catastrophic state of the energy market, - the global one above all, - and the challenges we face, I would like to quote the great dialectician Hegel: Der Widerspruch ist das Fortleitende – “Contradiction leads us forward”.