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Securing the Future
RUSSIA'S GREEN AGENDA: ECOLOGY FOR SUSTAINABLE GROWTH
Round Table

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In cooperation with Deloitte

Moderator:

Alexander Lyubimov, General Director, RBC TV

Panelists:

Vasily Belov, Executive Director of the Energy Efficiency Cluster, Skolkovo Foundation

Sergei Donskoy, Minister of Natural Resources and Environmental Protection of the Russian Federation

Vsevolod Gavrilov, Head of Projects Management Department in Energy Saving & Nature Management, Sberbank

Elena Lazko, Partner, Oil and Gas Practice Leader, Deloitte CIS

Alexei Poleshchuk, General Director, Federal Energy Agency (Rosenergo)

A. Lyubimov:

The Forum organizers have done everything in their power to make sure we met at this junction: the day, the time, the tragic symbol of the anniversary of war. Everything is stacked against us. Still, many of us are here, and I hope our discussion will be engrossing, interesting. I want to ask you to hold your questions until the end of our discussion. I do not want to ruin your day and have to extend our meeting into the scheduled breaks, so we will deal with questions for all speakers at the end.

I invite Alexander Malyshevsky, Chair of the Public Council within the Federal Service for the Oversight of Natural Resources, to set the tone for our discussion.

A. Malyshevsky:

Thank you. I am very grateful to the organizers for the opportunity to take part in this discussion. Thank you all for coming.

This is a crucial problem. If we examine ecology from the perspective of sustainable growth, this is an all-encompassing issue. We can talk about personal responsibility, because we live in a certain environment; we can talk about raw materials, because the economy cannot grow without them; and so on, and so forth. But the St. Petersburg International Economic Forum has somewhat sharpened definitions: now we talk about new industrialization, rather than certain vague philosophical concepts related to specific modernization issues (which is very important in terms of economics and clarity of perception).

The second important Forum event was the Russian President's speech clarifying the economic model. Consequently, we have to transition from a demand economy to a supply economy. This will change stimulus indicators: whereas we used to incentivize consumption, today we must incentivize innovation potential. Today's discussion has taken on an economic character. Ecology in an economic context is probably the most important issue before us today.

Do we have good reason for this? Absolutely. Russia is already structurally incorporated into the global economic process, and the environmental aspect of the

economy will certainly affect some companies. I will give you two examples. After a media announcement that the Federal Service for the Oversight of Natural Resources was set to audit Yakutugol, the company's shares plunged 6%. Therefore we cannot examine the environmental component of the supervisory and auditing process, without taking into account the economic impact of this. This is an important point, because as we join more international frameworks, the importance of this perspective will grow. The second example I wanted to mention is that it would seem that Russia has 15 rating agencies that, with no basic methodology, are in some way involved in assessing environmental aspects. Now, after one of these bodies concerned with environmental ratings published information about the Kondopoga Pulp and Paper Mill, showing it in 100th place, investors from Germany – where the environment plays a significant part in the political process – began pulling out of the company. So we can see that ecology is a very important issue.

What are we lacking in this area? It is not enough to proclaim a new paradigm: we must figure out whether we have the right conditions within our country to meet this challenge. We have practically none of them: if we examine the current economic conditions, they fall desperately short of proposed environmental policies. The only exception was the precedent set by the President, then still in the position of Prime Minister, in the supervisory and auditing sphere.

One well-known company with a long history of environmental problems is Norilsk Nickel. Supervisory and auditing measures showed that this company cannot continue to exist due to its potential to pollute. But this is a company with a long history that cannot be expunged by any environmental rating. So the Prime Minister agreed to allow the Federal Service for the Oversight of Natural Resources to sign an agreement with this company to perform quarterly evaluations of modernization measures aimed at improving its environmental impact and emissions in general. This is an important point: for the first time, we have certain economic incentives. This is related to settlement agreements, where we understand exactly how funds paid for negative impacts on the environment are used. We now have an opportunity to conclude settlement agreements and create a mechanism for

genuine social pressure and the ability to involve public institutions in improving and modernizing Norilsk Nickel. This should, technically, be followed by certain economic action. We even had a letter from the Government of the Russian Federation to the effect that it would be a good idea to conclude similar agreements with all companies connected in any way with Russia's metallurgy industry. Civil society and the government must be informed quarterly of measures taken in this sphere. This is an important point, because by 2015 the fines are expected to grow tenfold. If we also take into account the accumulated environmental damage, for some companies these amounts jump from 10 to 60 billion. And would you believe it, not a single company was willing to go this route. On the contrary, all companies in this industry united to voice their categorical dissatisfaction with this idea. So then what?

First of all, I see conflict, which arises from the legislation. The methodological basis of the environmental legislation relating to the industry is completely wrong. It is completely disconnected from future economic development and corresponding incentives. Our industry legislation languishes in the administrative field. Each time, we must discover a violation and punish those responsible. This compensatory legislation will lead to nothing good. If we are going to propose certain innovations, then we must incentivize innovations in areas of the economy directly related to ecology. This is precisely the kind of evaluation measure that indicates the direction in which our economy is moving. Compensatory law is, in effect, a road to nowhere. When we examined enforcement of industry legislation, we realized that in practice, only 10% of legislation is actually enforced. So why do we need so many structures of every sort that do not really function? We must change the methodological basis of enforcement. Ecology and enforcement must be economic in nature.

But then we need completely different foundations. First of all, we must consider environmental risks. However, our current legislation is constructed in a way that requires us to conduct environmental evaluations in which all we do is check compliance of a presented documentation package with the legislation. What does this have to do with what is happening in the country today?

The second very important model is environmental insurance. Rather than expecting the state to take part in settling disputes, businesses must take part in disputes. If the government was to evaluate environmental risks using the country's intellectual potential, particularly Russian ecologists and civil society, while businesses got involved in the environmental insurance system, then we would have the third economic factor: an environmental auditing system that works in everyone's interests.

None of these factors are currently in effect, because we still continue to evaluate completely the wrong things. Any positive new economic or economy-related environmental policy must be supported by comprehensive solutions to the challenges facing us. Until we understand this, we will never be able to solve the problem of accumulated environmental damage.

Today, the biggest problem related to environmental safety is solid household waste (SHW) and industrial waste. We stand on the brink of ecological disaster. But when we look for economic solutions, we realize that there are none: even waste treatment has no financial incentives, once we take into account various current prices.

I would like to offer one more example. An Austrian company opens a waste treatment facility in Moscow. The Moscow government turns around and closes it down, despite the fact that the project involves international investments. When we try to figure out what happened, we get the following explanation: let Moscow Region deal with it by opening new landfills. So why should Moscow city bother to take care of it? And that is how things work around here.

A. Lyubimov:

Thank you very much for such biting opening remarks. And here I thought the film and television industry had problems. I had no idea.

I give the floor to Evgeniy Schwartz, Head of the Russian branch of the wonderful World Wildlife Fund. I hope as a representative of the community, he will escalate our discussion even further.

E. Schwartz:

Thank you very much, Alexander.

Could you please show the first slide? One of the biggest problems facing us, as the Chair of the Public Council said, is collapse. Not in stairwells and toilets, but in our heads. A few days ago, the Russian President spoke at the G20 Summit and said that environmental measures should not be used as protectionist instruments. I think this statement stems from a deep failure to understand that ecology is a competition for consumers, and of the fact that any protectionist measures, be it the Lacey Act or the European Union's measures to stop importation of illegal stolen wood or timber or of aeroplane engines of inferior quality, are a response to the demand of mainstream companies. As soon as environmental swindlers – people who try to gain a competitive edge at the expense of investments and the environment – appear, companies who compete for ecologically conscious consumers demand that their interests are protected. And as a result, we unknowingly lose the very thing we need for economic development.

I updated this table just this morning. These are the figures for participation of Russian financial institutions in voluntary environmental responsibility mechanisms. By the way, since we often hear criticism of them, I must note that in 2010–2011, President Medvedev's orders mentioned at least three times that these strategies are of the highest priority. I have heard Vsevolod Gavrillov and his boss, Herman Gref, criticize these policies, saying that environmental protections based on highly corrupt state regulation only add another administrative hurdle. We thought that, as members of a working group within the State Council, we should suggest the use of voluntary measures in a bid to avoid corruption. But for some reason, our country is not interested. What is this all about? As I updated this table earlier today, for the first time in six months, I noticed that the biggest change lies in the number of financial institutions which signed up to the United Nations Principles for Responsible Investment (UNPRI). This is an indicator of competition for the cheapest and most long-term financing: financing that comes from private pension

funds. Meanwhile, few companies in our country are interested in competing for this type of financing. You know where this is headed? Look at the countries with similar numbers: Brazil, China, even Indonesia. I will tell you a story that will add the emotional factor to these figures. I know a young woman of Russian descent, the daughter of a famous Russian scientist, who has spent many years working at the UNPRI. I could not for the life of me figure out why we could never get her to come here and enlighten our investors. She says that she is so busy with Brazil and Indonesia: those are the countries competing for this opportune financing.

What is the reason for this attitude and for the various protectionist barriers erected in our path? Within seven years, China, which realizes that this is the only way it can fix its reputation, has made a leap from the eighteenth place to first. And I will let you in on a little secret: we also moved up a bit, reaching eighteenth place. But Brazil, India, and South Africa have already overtaken us, simply because they are competing for the end consumer.

For example, the UN Conference in Rio was focused on the green economy. Yes, we realize that our country must have a different national model of green economy. And of course if for South Korea and France green economy means cutting consumption of Russian oil and gas, then we should probably also come up with a different approach. Our model is probably to follow more rigorous environmental standards. You might ask why I singled out 2006. Because 2007 was the peak year, and 2008 was the year of the crash. In 2011, we had not yet returned to the 2007 levels, therefore I did not change the figures. So these are our successes: increasing exports by nearly 50% and growing from 2% up to 3% of the global market. Correspondingly, China, in which industrial logging was banned, made a fortune on processing our timber: approximately RUB 5 for every RUB 1 of our export growth. What will become of our logging industry when China's own forests, planted during these 10 years, grow to full size, is another question entirely. The main point is that China's success is due not to its low environmental standards, but to the fact that they make money on intensive processing.

If we want to enter foreign markets, we must abolish non-tariff barriers that limit our products, and demonstrate their environmental compliance. Of course regardless of whether the government supports strategies aimed at increasing environmental responsibility or engages in toxic dumping, the market dictates its conditions, and there is nothing we can do about it unless we want to fall to North Korea's level. We still have not eliminated legislative inconsistencies between voluntary certification and voluntary logging certification requirements, which are completely independent from any corrupt official. Still, independent third-party evaluations and auditors report that one in four hectares of Russian forests under long-term lease are already developed in compliance with the strictest environmental standards. You realize that the reason for this is not that we have deeply responsible logging companies, although they do exist: we love them and have an excellent, friendly working relationship. The primary reason for this is that this is what the market wants. We have no choice, unless we want to turn into a source of cut-rate resources for China's domestic consumption. If we want to compete for high prices in China, then it is easier to compete directly for consumers in Japan, Korea, the US, and so forth. I will not take up any more of your time. I have one more minute? We should probably ask ourselves what stops us from achieving better growth. The first factor is unfair competition between state and private companies. Two days ago, it was announced that Rosneft will begin construction of a new factory in the Moscow Region (probably in compliance with high standards). But Rosneft is the same company that managed to botch an opportunity to have clean air in Moscow. While all of Rosneft's competitors began producing petrol that complies with the Euro 4 and Euro 5 standards, and were ready to transition to an even higher standard as of 1 January 2011, the state-owned company lobbied the Moscow government to ban any movement forward. I must note that we will get nowhere in our modernization efforts unless we allow regions of the country where the population is more affluent and environmentally responsible to unroll stricter environmental standards ahead of other parts of the country, as has happened in the US with California. Why did TNK-BP and LUKOIL spend hundreds of millions of dollars, but get no economic

advantage in return? It seems Rosneft believes that it will not be affected by this the way logging companies are. But it will be affected, and it will feel it. Rosneft, which enjoys preferential competitive conditions, was the only company in the last two years whose utilization of associated petroleum gas fell by 10%. All other companies have to invest in modernization and comply with the 95% indicator established by the President and the government, while Rosneft's indicator fell to 53%.

Unfortunately, until we realize that ecology is pure economic competition, which is oriented towards the end consumer, we will continue to create more and more problems for ourselves.

We must realize that we need the same modernization mechanisms used in the rest of the world. With all due respect and sympathy for Alexei Kudrin, I must note that it is one thing to manage the federal budget when oil costs USD 12–20 per barrel; and it is quite another to do so when the price is USD 90. Unfortunately, until we have a system of 'earmarked' pollution fines that do not disappear, and do not go towards reinforcing the federal budget, but are used directly to pay for the hospitals treating victims of environmental pollution; until we have a financial tool for investing in modernization of production; unfortunately we will not be able to move forward. Still, we are counting on the fact that from talk of modernization and crisis management ideology, we will move to strategic development. Thank you.

A. Lyubimov:

Thank you very much. As far as order or collapse in our heads is concerned, I will tell you a personal story. I really wanted to buy myself a Bentley. One day, I am stuck in a traffic jam in Rublevka, and right in front of me is a Bentley. And once I saw its owner throw an empty bottle out of the window, I lost all desire to buy a car like that.

Our next speaker, Vasily Belov, represents the Energy Efficiency Cluster of the Skolkovo business school. Please go ahead.

V. Belov:

Good afternoon, colleagues. I will focus most of my remarks on the energy aspect of the green development paradigm.

I really liked the question asked at the start of our discussion: do we have foundations for building a new paradigm? While we were discussing this question, I outlined four main areas of questions I believe we must answer in order to formulate the answer to the bigger question.

Naturally, the foundation for this process and the first step is regulation and establishment of appropriate standards. We have already talked about this, so I will skip the subject that lies in the direct purview of those present here. The second very important question is whether we have accessible and reliable technologies that are fully ready to be implemented, and most importantly, are capable of solving the challenges facing us? This is especially crucial in the energy industry. Today, technologies that provide the necessary level of reliability cannot be designed by hand in a small power plant: they must define the necessary output of product or energy resources within the new green paradigm. The third aspect is the economy. And what is important here is not only the economic aspect of those technologies and the technical foundations we discussed earlier, but also the presence of corresponding economic incentives. In the oil industry, this is the price structure. Germany, for example, currently has a special green rate for consumers. We are not talking about government subsidies for the wholesale market. We are not just talking about the fact that producers of green energy can sell it at higher rates. No, Germany went even further: it has green rates for consumers. People have an opportunity to set their own level of 'green pricing': for example, pay higher prices for 20% of their energy consumption to cover the higher cost of renewable energy production. The latest estimates show that today, up to 25% of German consumers use this special rate for part of their energy expenses.

Now, let us move on to the fourth component, which has already been mentioned by the other speakers in their remarks. This is the social aspect, the social environment. Why do these 25% of Germans choose these higher rates and

volunteer to pay more? Why do they need this, what do they get out of it? State policy plays an important role in this, and its corresponding promotion of the green way of life. This is obviously a long process, and it makes sense to begin investing in it right now.

A recent public opinion poll returned very interesting results. It would seem that Russia's youth is less invested and less interested in environmental issues. But the polls show that energy efficiency is much more important to young people than to the older generations. This fact is associated with things like iPads and online app downloads. These people are ready to pay more simply because they consider this, if you will forgive the lingo, 'cool'. If we can make the green paradigm 'cool' at the state level, a much larger segment of our population will be willing to pay green rates and fill their tanks with higher-quality fuel at petrol stations. This will augment top-down regulatory pressure and corresponding state policies with bottom-up demand for these innovations.

In conclusion, I would like to focus in more detail on the issue of technological solutions for the energy industry. Five to seven years ago, everyone expected a boom, a period of explosive growth in the sphere of renewable energy sources. Forecasts mapped out decreases in necessary investments per fixed kilowatt of energy and ways in which water, wind, and solar power would soon begin to displace carbon-based energy to a large degree. Time went by. It is true, the share of renewable energy did grow significantly. Today, in addition to traditional hydroelectricity, we find two notable trends on a global scale: wind and solar power. In recent years, solar power has been growing very rapidly, and solar panels have become considerably more efficient. But overall, this still amounts to only about a quarter of the existing wind power capacity. We do consider solar power to be a clean, green technology. But we must not forget that the production of a solar panel is a very energy-intensive process. Considering the natural conditions in which they operate, an average of the first three years is spent using all energy produced by the solar panel to replenish the traditional carbon energy expended on producing it. We spend three years' worth of energy from traditional sources, then we spend the

next three years simply replenishing it. And we have plenty of similar examples. This is not criticism: I simply want to demonstrate the differences between various trends in this sphere, and how much we need a comprehensive analysis of the issue. We keep predicting increases in the price of carbon-based resources, oil, and gas (we thought we had precise forecasts before the emergence of shale gas). These resources will go up in price; the unit price of solar power will continue to drop; and shale energy will dominate. In reality, due to high per-unit energy consumption, it turns out that even if technology continues to develop, if oil prices increase, solar panel prices will also increase because a certain amount of oil equivalent energy must be expended to produce them. Considering that energy resources are interchangeable, it does not matter whether the oil or gas prices are increasing: on average, the market has its own balance.

What methods will presently work in Russia, and when will Russia have the necessary economic stimulus to introduce green energy? Various forecasts show that this will not happen soon: sometime between 2015 and 2020. For the majority of technologies, which are currently being introduced en masse, we will see a surfeit of indicators such as total cost of ownership in terms of traditional and renewable energy assets. This will be driven by the increased performance of new technologies and the heightened cost of primary, carbon-derived energy resources. All in all, we do not have long to wait.

We estimate that today, we already have several economically promising trends. It is no secret that Russia is virtually the only country in the world in which municipal and regional systems alone have more than 4,000 boiler plants that use fuel oil. The first thing regional and particularly municipal governments tell us is that these boiler plants are located in distant, difficult-to-access areas where no other fuel can be delivered. In reality, two times out of three, this is not the case. Operational difficulties are not the problem. What is more, we have 20-gigacalorie sites that cannot even heat one small place. At least half of them can easily transition to environmentally-friendly wood-based fuels: timber waste or timber itself. The cost of retrofitting these boiler plants will be recovered within two to three years.

There is a large set of questions connected with treatment of solid household waste. In Russia, this waste is still not considered as a source of energy. We are seeing the first steps in this direction, but this is a complicated issue. Today, rather than pay to utilize rubbish, we pay to ship it out. As long as we keep paying for transportation without caring whether we are transporting or utilizing waste, it will not be seen as a source of energy.

As far as strategies that have good implications for a country of Russia's size, we at Skolkovo are currently concentrating on bioenergy strategies. These are technologies used to process timber and related waste, as well as special crops. We have pretty interesting projects, and I believe this could be a very promising solution for our country. Thank you.

A. Lyubimov:

Thank you very much, Vasily.

Our next speaker is Vsevolod Gavrilov from Sberbank, Russia's greenest bank.

V. Gavrilov:

Thank you, Alexander. I already mentioned that money loves silence, and big money loves deathly silence. Therefore I will be more conservative in my remarks, and will try to continue the discussion along the path set by our speakers.

Colleagues, industrialization and re-industrialization mean the country's competitive edge; they mean product quality; they mean our country's positioning on the global stage.

The subject of our roundtable today is green development. Do we have any future, and in what areas can we take the lead? I will try to examine two dimensions of this issue: two areas, two dimensions.

Of course we must modernize existing companies; in other words, we must re-industrialize using modern technologies.

What do we see? Evgeniy keeps trying to drag me into a heated discussion, but I will maintain a more professional and collected tone. We can clean up the

emissions and dumping from existing factories, but let us examine how the bankers deal with this. This requires huge additional expenses. Of course we must follow the law and comply with regulations, but it costs a great deal of money. But if we transition to new technologies that have much lower negative environmental impact, then we will not need all this expensive construction. This is a win-win situation: a saddle point that establishes technology costs which do not carry a significant negative impact. In his opening remarks, Alexander correctly noted that we must define an environmental policy that would give our esteemed companies the incentive to look for these saddle points. We can keep endlessly cleaning up emissions and dumping produced by the manufacturing process, or we can change the process itself. When we look at our clients' corporate portfolios, knowing what is going on in other financial organizations, we can see that these organizational processes are already under way. These companies experience additional internal cash flow: the so-called performance effect, the conservation effect, the economy effect. This can be capitalized.

There are hundreds of projects like this. But will they be enough for our economy and our industry? No, they will not. We must find comprehensive solutions which combine the technology accessibility factors mentioned by Vasily, the financial comfort which concerns financial organizations, and the competitive edge mentioned at the very beginning of our panel. Then we can at least expect to improve our position on the world stage.

Many people talk about the second dimension. This is domestic, municipal ecology, the environment within reach. It includes clean tap water; waste management; green lawns; and ultimately, environmentally-responsible behaviour. In this respect, we find ourselves in an interesting situation. To prepare for this roundtable, I analysed a few materials, and a very mixed picture emerged. There are a great many good examples: almost all new agricultural facilities are now built in a way that allows them to use agricultural waste, at the very least, as furnace fuel. There were other new projects that I did not even see; this has already become the norm. Now,

many municipal governments are considering augmenting traditional fuel with 5–10% compacted waste without changing virtually any existing technologies.

I agree with the previous speakers that we have many other examples as well. What does this mean? Let us try to navigate the existing regulatory machine. Let us stop complaining and do something ourselves. We can see that when the municipal governments and local official bodies, supported by the regional government, are truly intent on developing small and medium-sized technology companies, they are successful: everything works, everything fits. Now, it is time to evaluate our decisions. We must look for best practices and replicate them.

People always ask me: is there anything that absolutely must be reported to the regulators; is there anything that absolutely must be done? I cannot really think of an answer: I just want to say, “Let’s solve the pricing situation”, but then I stop myself. We have examples of successful application within existing pricing strategies. Maybe we simply need to be more active, more practical. We must analyse the situation, figure out where and why we are failing; we must design and promote replicable model decisions to benefit small and medium-sized companies at the municipal district level. Domestic ecology translates into business, into money, into salaries, and into jobs. The most important factor in these projects is a well-developed risk management system. Then we can work in relative comfort. That is what I wanted to say. Thank you.

A. Lyubimov:

Thank you very much. Colleagues, we have two more speakers, and we want to end on time. Please get your questions ready. Now, I give the floor to Alexei Poleshchuk, who represents the Federal Energy Agency, a Federal State Budgetary Institution. Please go ahead.

A. Poleshchuk:

Thank you. Good morning.

We have set an excellent tone for a discussion of practical ways to help green growth. The entire global community believes that energy efficiency is a fundamental catalyst of green growth. First of all, the energy industry is one of the main sectors that negatively affect the environment. Secondly, energy efficiency is a culture of consumption. All energy efficiency projects have an environmental performance indicator. Many countries have already combined these two things: even their state support strategies have parallel approaches.

A few words about the energy approach to green growth. The first trend is energy efficiency itself. We see this trend here and in developed countries. For the first time in recent history, per capita consumption in Europe and the USA has stabilized. The International Energy Agency predicts that by 2035, despite overall economic growth, consumption in developed countries will increase by literally 1–2%. But this increase will be much more drastic in developing countries. Energy efficiency is a direct economic stimulus. We can talk about environmental awareness; about Russia's large territory or the Russian mentality; about the absence of serious fines or the lack of practice; but increased energy efficiency translates into real economic benefits for consumers and for energy generating, producing, distribution, and retail companies. This fact should serve as a direct incentive.

The second trend is the development of renewable energy sources. Here, unfortunately, Russia finds itself in the position of an outsider. Take the European Union. Today, 10% of its energy production already comes from renewable sources, and by 2020 this number will reach 20%. In the US, these figures are 7% and 14%, respectively. By 2035, China will be getting up to 15% of its energy from renewable sources. In Russia, the current figures are at most 0.1%, not counting major hydroelectric power stations. We also lag considerably behind in speed of development. Renewable energy is more than environmental awareness: it is also a huge accelerator of economic development, because it comes with new markets, new jobs, new equipment, modernization, and so forth.

The third trend is utilization of waste, bio waste, and solid household waste to produce energy. All developed countries have programmes that require landfill

disposal to reach zero by 2020–2030. Unfortunately, we have no such programmes. We have huge regulatory problems in this respect and a complete lack of incentives for household waste processing. So in this regard, we are also far from being in the lead.

The fourth trend is use of local resources. We all know about the growth of shale gas production in the USA. Everyone is trying to produce energy with an eye towards the logistic element: in other words, using sources that are close at hand. This includes peat, solar, wind, and all sorts of other energy. In developed countries, all these trends enjoy tremendous state support because they produce a number of effects simultaneously. In addition to the ‘green effect’, they drive industrial development, sharpen the competitive edge, and simply increase awareness and comfortable living standards. We must also move along this path.

Now, a few words about the hurdles and, possibly, about solutions we might propose. We have passed through all these stages of energy efficiency. Despite direct economic incentives, our mentality, our approach, meant that three years ago, our country’s management of this industry was practically non-existent. Even though we explained that by taking certain measures and investing one rouble today, we would have two roubles three years later, this had no effect. Obviously, we must change awareness. If we combine the issues mentioned by Vsevolod Gavrilov – modernization, energy efficiency, fines, oversight, and so forth – we will see the economic effects. We must work in this direction. But I am not merely talking about an official statement or alignment of goals: we need aligned methodologies, monitoring, action, and some kind of joint management. Our regional and municipal governments do not even have an energy efficiency manager. The government spends billions of roubles without having a single person responsible for optimizing this budget spending. So you can imagine the state of the ecology, and ecology management. But we believe the energy efficiency foundations that are being laid today are the best platform for developing environmental awareness and ecology management. I would like to discuss this idea with our panellists. Thank you.

A. Lyubimov:

Yes, this is fascinating. Thank you.

Colleagues, we have come to the last of our speakers. Elena Lazko of Deloitte and Touche Regional Consulting Services, please go ahead.

E. Lazko:

First of all, thank you very much for attending our panel. I would like to thank all our speakers.

I will be talking about green money. I am quite surprised that no one has mentioned the fact that we are actually not doing so badly in terms of ecology. The government has approved our environmental policy until 2030: Evgeniy took part in developing it. To be honest, it is not very clear, but the first step has been taken. Instead of coming here, our Prime Minister went to Rio, where the green economy was discussed in great detail. The problem is that the green economy cannot exist without green money. In principle, we do spend money on the green economy. Over the last five years, investments in ecology have, on average, grown by 5.5% annually. This is the first issue. Secondly, in 2011, USD 2.9 billion was spent in Russia on environmental projects alone, while USD 243 billion was spent globally on renewable energy alone. This is a completely different level of investment. China alone spent USD 54 billion in 2011. What do we do with this money? Corporate money aside, state funds are spent in two ways: via funds, and via federal target programmes.

We will start with the funds. We do not have a purely environmental fund. At the same time, an environmental fund, much like the highway fund, brings nothing good to mind: people associate it with corruption and wonder how it will be managed. The federal target programme is great in theory, but it works best when applied to cleaning up accumulated environmental damage and to limited, somewhat rigid projects. State money around the world is also spent in two ways: via funds, like they do in Central and Eastern Europe, and via banks. Great Britain, Korea, and Norway do it via the banks. How is a bank better than a fund? First of all, it can offer

specific products. Banks can issue green bonds, green stocks, and all sorts of other useful tools to attract private investment. Banks have much wider co-financing possibilities, such as capital shares, direct co-financing, and so forth. Thirdly, banks can offer their expertise and consulting support. Alexei mentioned that we have a severe shortage of specialists. We have great bankers and great ecologists, but we do not have people who can manage large projects that bring together financing, ecology, and state regulation; no specialists who understand what is going on and know how to attract the funds. Because if you ask an average person what green technology is, you will not receive a coherent answer. Few people other than those gathered here today could even follow a conversation on this topic. But for investors, this is an unintelligible, complicated issue with a long recoupment period and considerable adjustments in the course of the project. These banking specialists can lower the risks and increase the profitability of our programmes.

Two more thoughts on the banks. We believe that the banks are the best model for the Russian Federation to follow. First of all, our state banks are pretty effective, while remaining more or less independent from the government. Secondly, banks control the funds much more stringently, simply because that is their fundamental function. Deloitte helped Britain's Department of Energy and Climate Change on issues of energy, climate change, and the creation of a green bank from scratch. The bank was initially expected to function as a branch of the Royal Bank of Scotland, but in the end it was decided to form a new bank. The incubation period lasted a year, and on May 17 the bank entered the first phase of its life. In fact, the first projects to be chosen were highly profitable projects, simply to demonstrate the bank's effectiveness as a strategy. Energy efficiency with immediate effects; renewable energy; waste management – these are also pretty obvious issues. Until 2015, all money will be coming from the government, and in 2015 the bank will begin attracting private investments. To illustrate the figures, two projects were recently put into effect, totalling GBP 80 million, and by the end of the year the bank will have GBP 3 billion. In other words, in Russia, a bank of this size would be in the top five.

Let me repeat: we must manage the money, and we believe that banks are the most effective money management tool. Thank you.

A. Lyubimov:

Thank you very much. We have had quite a rigorous discussion. I understand that with the assistance of banks, at the very least, we might be able to utilize waste, not just transport it. So far, I have been hearing conflicting opinions.

A. Reznichenko:

Good afternoon. Andrei Reznichenko, RIA Novosti.

I have a question for Alexei Poleshchuk and Evgeniy Schwartz. We know that green rates are the only reason Europe is able to develop renewable energy sources. What are the chances similar green rates will be introduced in Russia? We used to talk a lot about them, but in recent years they were all but forgotten. Thank you.

A. Poleshchuk:

I can answer that. This is my personal opinion, because neither the Federal Energy Agency nor the Ministry of Energy are regulatory bodies. Still, I will talk about trends.

Vasily Belov offered an excellent example of awareness and of green rates for consumers and for energy producers. If we propose an extra RUB 0.10 for ecologically clean energy, I am convinced no one will choose to pay it for one simple reason: the regulatory system and regulatory bodies are completely non-transparent, and no one will believe that this money will really be spent on green energy. This is what happened with the price structure in Belgorod. We tried to typify this case and fix the regulatory and legislative acts that establish procedures for linking to the grid and so forth, which are highly prone to corruption. For every good idea, we get 10 'practical' proposals on how to use this money 'wisely', how to make some cash on adding green energy to the grid and on pretty much everything else. This is, unfortunately, a tradition in our energy sphere and among our energy

administration as a whole. This greatly limits our potential. But of course we are not standing still. The Ministry of Energy and the Federal Tariff Service are systematically examining the issue of green rates. A state energy efficiency programme has been developed; the energy production development programme must be expanded, along with its special section on renewable energy sources: basic methodology, regulatory foundations, and state support tools. Government regulation is moving in this direction. Despite the scepticism inherent in the question, I believe that in a couple of years we will have such tools.

E. Schwartz:

I would like to add that in the year before RAO UES ceased to exist, we conducted a joint study with Romir Research Holding, which showed that over 47% of Russian consumers are prepared to pay higher rates. But since we still have not solved the problem of connecting to centralized grids, we have not raised this issue yet. But we do hope to work on this together with the Federal Energy Agency.

V. Belov:

This is an excellent question. As a development organization, we definitely see green energy projects as one of our cluster's top priorities. One of our goals is to encourage development of new projects. Logic dictates that we must wholeheartedly support the fastest possible implementation of these price structures. But in addition to considering the issue from the ecology perspective, let us also consider who is going to pay for this, and where this money will end up. Currently, Russia does not manufacture a great deal of equipment used in green energy production. It follows that if we introduce special rates for energy producers or for consumers, we will basically (considering that in the green energy sphere the majority of the cost is made up of investment) be paying for imported equipment. Knowing that this technology is still in its development stages, we will basically be paying for foreign R&D, which will allow foreign manufacturers of this equipment to take another step forward. This money will be coming from consumers' pockets. I

am not against green rates. But we have to introduce them very carefully, considering the results along the entire added value chain, and keep in mind where this money is going.

The goal of RUSNANO, RVC, and our own fund is to support individual projects focused on manufacturing the necessary equipment. The mandates of all three development organizations include energy efficiency and green technologies. Once we have the manufacturing base capable of meeting the industry's demand, which should, it stands to reason, be subject to green rates, this will become a profitable and viable solution. But without this demand, we will be subsidizing major Western wind turbine and solar panel manufacturers.

E. Schwartz:

I would argue with Vasily, or at the very least I would like to ask him a question. We have a number of cutting-edge industries, including the satellite communications industry. Still, all forest fire operations use the databases of two American satellites. We bought the necessary module from Belarus. China is one of the world's leading solar panel and alternative energy producers, even though it did not develop these technologies. This is the chicken or the egg dilemma. If we complain that we currently do not have the necessary equipment, then we must create incentives for producing this equipment. First, we must create incentives that would bring this equipment into the country. And then, we can use market regulations to start up domestic production.

V. Belov:

I believe we are in agreement: I mentioned that we must make sure that this equipment's entire added value chain stays within the country.

A. Malyshevsky

I have literally one comment.

Where do you find companies which are prepared to pay higher rates for something, even if we do call them green? Considering the current pricing policy, our economy has a total lack of incentivizing principles. This question was raised two years ago at the Presidium of the State Council, and five corresponding items were added to the Prime Minister's order. Russia is 14th in terms of SHW, and 15th in terms of accumulated environmental damage. As soon as we got to the budgetary classifier that swallows up all environmental fines, the Prime Minister vetoed both items because they were impossible to enforce in the current economic situation. This is a whole set of questions, because the budget policy is constructed in a way that all fines are swallowed up. The budget does not have a single environmental section. The only funds that could be used to apply direct pressure are out-of-court settlements. All other money is sucked down three drains: local, regional, and federal budgets. None of it ever returns to be spent on environmental issues.

This is a very serious problem. It is not an isolated issue: we must consider it together with the others. When we implement new energy saving and energy production technologies, our country's monopolies immediately rear their heads. Not a single new waste processing plant has ever been allowed to supply electric or heating grids. In the Russian Federation, no cutting-edge technology has ever been allowed into a corrupt industry.

M. Zaitseva:

Good morning. I represent RBC TV.

I get a feeling that this SPIEF roundtable is characteristic of our country's attitude towards the environment. It is taking place, but at 10:00 on a Saturday, a setting which means it is most easy to miss. Officials from various ministries are conspicuous by their absence. In your opinion, on what level do we need to change this attitude? At the level of the country's leadership, or on the level of the business community, by explaining that ecology and economy are one and the same? Or on the level of the population, so they stop throwing empty bottles from their cars? This question is addressed to any of you who would care to answer.

A. Malyshevsky

I do not think this problem can be solved at any one level of society. First of all, the government must take an interest in this, because otherwise the official policy of ecologically incentivized economic growth will never become reality. But it faces a few important challenges. First and foremost, we must admit that we implemented completely ineffective administrative reforms. We linked supervisory bodies with industry ministries, which only compounded the problem. It took the Sayano-Shushenskaya Dam accident for Rostekhnadzor (the Federal Service for Ecological, Technological and Nuclear Supervision) to be transferred under the direct jurisdiction of the Government of the Russian Federation. It took Gennadiy Onishchenko's unique abilities to move it from the Ministry of Health and Social Development to the direct purview of the Government of the Russian Federation. What would have to happen in Russia before the Federal Service for the Oversight of Natural Resources was moved out of the Ministry of Natural Resources and Environment because a supervisory organ cannot be acting on official orders? It must serve the function of the eyes of the state: it must directly oversee the state of the environment and directly protect it.

The second significant issue is the business community. It is undoubtedly interested in this subject. As soon as we join the WTO, the ecology component will increase to 10%, and this factor has to reflect on our commodity volumes. The business community is ready to react to this and invest in the environment, in green manufacturing, in whatever. But it needs adequate economic incentives. The only method the business community currently backs is the so-called correction of payments for negative impact on the environment. In other words, companies invest in the environmental component of their business, but this amount must be returned to them. Today, this regulation has been left completely undefined, and no one in the country has the authority to perform the correction. We worked on this issue, because considering the current budgetary policy, we cannot repay funds spent on the environment to the companies. For example, during the last quarter, based on

the decision of the Krasnoyarsk Territory, Norilsk Nickel received RUS 1.5 billion in corrections, and this is now being investigated by the Attorney General's office because this action is illegal. If we come up with economic tools to stimulate business, the business community will react favourably.

The third important issue is technology. All cutting-edge technologies implemented by local governments in the Russian Federation, especially the process of vesting them with state powers, have a certain corruption element that arises at the selection stage. We get 20-year-old technologies dressed up as innovations. We get technologies for which we do not have a necessary foundation. In July, the Security Council's Interdepartmental Commission on Cutting-Edge Technologies will gather for a meeting. We must show the State Ecology Evaluation Administration and local governments which existing technologies must be implemented in Russia. Unless we do that, we will not be able to solve the corruption problem.

Another crucial issue here is the anti-monopoly policy. We can take various steps, but they must be backed by the Federal Antimonopoly Service, because any time we localize a process, we strengthen its corruption element. Arguments over whether we should treat waste or build new landfills are part of a corruption discourse, because the first option has no economic component within the present pricing strategies, and the second has a huge corruption element which involves various virtually uncontrollable arms of state power.

This is the case with everything related to environmental policy. We cannot declare one thing, then switch it for something completely different. Our concept of environmental policy is not in line with the official position on economic stimulus. First, we should figure out the enforcement situation. No legislative change can be approved without an enforcement element. The reason 90% of Russia's industry-related legislation is ignored is not because all our people are bad, but because this legislation is not founded on contemporary legislative and social approaches. So in the end, what are we incentivizing? We need a different approach. Otherwise we will get another government staffed with industry insiders. I am not talking about the fields which require problem-solving, but a government that originates in the

industries. Every industry will have to find a way to survive and show that it is needed, that it functions perfectly in every way.

E. Schwartz:

I think I will have to disagree with you, or at the very least surprise you a bit. I would say that at the federal government level, the attitudes have changed, at least judging by quantitative data. The number of orders focused on environmental compliance of the country's economic development has grown in the last three years. This was not the case during the previous eight years.

The question is, why have we not reached a turning point? To my mind, the turning point depends on our population, on the middle class, because as soon as the end consumer is defined, he will get what he wants. This is why I mentioned that the country's local governments must have the ability to implement more stringent standards and solve these issues themselves. We cannot poison Moscow residents with Euro 2 grade exhaust fumes under the pretence of social protections for rural residents of the Penza Region.

Now, the second issue. I would like to see a different kind of business. Yesterday, Elvira Nabiullina said, "We are lucky to have a committee to evaluate regulatory impact!" Meanwhile, the Russian Union of Industrialists and Entrepreneurs blatantly uses it as a spanner to throw into the wheels of any reasonable measures implemented by the Ministry of Natural Resources and Environment. Yes, the Ministry's proposals are not always perfect, but this is easily fixed. If you do not like what a Ministry of Natural Resources and Environment official is saying about the best available technologies, then pass it on to the Ministry of Industry and Trade, or to the technology division of the Ministry of Economic Development: make the process public. My biggest gripe about the business community is that under the cover of criticism – as in, nothing is being done, we are not happy with the policies – this community, led by Norilsk Nickel, demands that all information about impact on the environment be restricted for five years, or else their market capitalization will collapse. The so-called coordinated limit time was implemented 19 years ago. Can

you name any technology with a longer cycle? How come it was easier to pay bribes for 19 years? The Russian Union of Industrialists and Entrepreneurs likes to blame China. Is China subject to the Aarhus Convention? No, but it has its own national convention. China's financial regulator and Investment Protection Management issue joint decisions on the so-called green credit policy. As a result, if you violate the environmental protection legislation, the state banks are required to increase your lending rate. Repeated increases make credit prohibitive. When companies realize that doing something is easier than bribing the Federal Service for Ecological, Technological and Nuclear Supervision, then we might be able to break this stalemate. One of our primary goals must be to develop green lending recommendations for state banks; at the very least, the Central Bank should be ordered to do this.

A. Malyshevsky

One comment in regard to Norilsk Nickel: on the Prime Minister's insistence, the company signed an agreement with the Federal Service for the Oversight of Natural Resources. All pre-2013 figures are published on the Federal Service for the Oversight of Natural Resources website; you can check them for yourself. This is a very important matter.

E. Schwartz:

I completely agree. However, this does not say when these figures reach the required level. I make sure to check this site every three months. It tells you by what percentage the numbers have improved over the year. But it does not say when the indicators required by the law will be reached. That is my main complaint.

As far as lobbying is concerned, as co-Chair of the Committee of the Ministry of Natural Resources and Environment of the Russian Federation, which wrote the foundations of our policy, I never saw more unbridled lobbying for the right to use the so-called assimilative capacity of Russia's landscapes to gain competitive edge. Never in my life have I seen such blatant attempts to pressure Ministry of Natural

Resources officials and such improper use of the Ministry of the Economy. We are lucky that the Ministry demonstrated such a high level of responsibility and firmness.

A. Lyubimov:

Thank you. Looks like Norilsk Nickel had enough for the Ministry, but ran out of money when it came to the courts, if the latest news reports are any indication. Colleagues, we have a few more remarks. I need to ask all our panellists to keep their answers brief.

From the audience:

In regard to the United Nations Development Programme, I would like to propose a few points and answer the last question. We spoke at length about various elements of environmental policy. It is true that the environmental policy must be strong; and most importantly, we need a body capable of implementing this policy. We cannot continue to marginalize the environmental policy as an afterthought to the economy or something that stands in the way of its development. To stop this marginalization, sustainable development must be a priority of government policy as a whole. To achieve this, we must work not only with the government, but with the public as well. I agree with Evgeniy that we must debunk this false conflict between economic growth and sustainable environmental development before we have a consumerist society on our hands. The European market offers pretty ordinary examples. Technology, business, and professional personnel go wherever demand and consumption lead them. This must be a joint process. In addition, we must not deny that situations across Russia's regions are specific and highly diverse. We will not be able to simply borrow practices, policies, and technologies from any country. We must get professional personnel up to the level of this issue.

Over the last 20 years, a great many good environmental and economic tools have been tested in various regions. But often, the pearls of this experience are lost in the ocean of old practices. We have spent the last 15 years implementing energy efficiency programmes in various parts of Russia, and we know some tools work

sustainably and some do not. It might be even more interesting to analyse Russia's unsuccessful experience in the context of Russia's conditions, because this will allow us to find the specific hurdles we must address. We are ready to continue this work. Currently, we are implementing a new long-term programme together with the Ministry of Natural Resources and Environment of the Russian Federation. This programme includes, among other things, bringing the energy producing sector into environmental compliance. We must work with demand and create direct business incentives.

A. Lyubimov:

Thank you very much for your comment. Please go ahead.

O. Shutkin:

I will be brief: I would like to revisit the subject of green rates. My name is Oleg Shutkin. I represent the Renova-Rusnano joint venture, and I also represent the Russian Association of Solar Energy.

We have already noted a transition from quantity to quality. We see business associations beginning to form: our Russian Association of Solar Energy, for example, as well as the Russian Association of Wind Power Industry. We have already begun developing constructive proposals on how to solve this situation; we have written letters; sent appeals to the President and to the Ministry of Energy. They are currently being considered, while the Ministry of Energy has held fairly productive discussions. In June, we invited Ministry representatives, including Deputy Minister Sentyurin, to the world's largest solar energy fair.

We do see movement on this issue. I would like to add a comment to Alexei Poleshchuk and Vasily Belov's remarks: I do think the biggest effect of state support of renewable energy lies in incentivizing domestic production, plus the macroeconomic effect we could achieve with this support. This is not 2000, when these technologies were just beginning to emerge. We already have global players who will be able to fill any market that opens to them immediately. We have

successful examples of this type of support: I am talking about protection of local manufacturers, which has positive economic effects. Canada has also had successful projects, as well as Italy, which gives a 5% premium rate for solar modules manufactured in Italy. We must take this into account while developing state policies, and it would be great if all participants could unite in this. If anyone has any additional comments, I would like to discuss them.

A. Lyubimov:

I think one more comment, and then we will move on to the discussion.

From the audience:

I represent the Krasnoyarsk Independent News Agency. I would like to ground our academic discussion a bit, bring it down to earth. I will tell you about a certain situation and ask for your advice as far as what to do. We already mentioned Norilsk Nickel, but Krasnoyarsk has RUSAL, which also does not help make the air cleaner. Construction of a new ferroalloy plant will soon begin in Krasnoyarsk. We can imagine its effects on the environment. What is going on? How could this happen? In Krasnoyarsk, with a population of one million, 250,000 signatures were collected. That is a significant number. The governor openly expressed his protest. The territorial legislation issued a resolution prohibiting construction. The facility is being built by Chek-Su, a company with powerful connections: Russian Railways and a few other organizations. They bought USD 5.5 billion worth of equipment, and Putin himself gave the project his blessing in China. Yesterday, the city held public hearings. They went on until 23:00, with 93% of those in attendance supporting the resolution against the ferroalloy plant. And still, the plant will be built: built without violating a single law or regulation. So it seems that people in the region live in a world parallel to the region's economy, which has been taken to a different level. That is the situation. What green rates can we talk about? What corporate environmental awareness? And what can the population do about it? Thank you.

A. Malyshevsky

We have a certain legislative opportunity, and we must use it. Please forward hearing materials to our Public Council, because we have legislative norms for conducting a public review which we will consider as part of the corresponding state ecology evaluation and the Main State Evaluation Agency. Then we will really be able to help.

E. Schwartz:

Unfortunately this is not the only case: the same thing is currently happening in Voronezh. Unfortunately (this was clear from yesterday's discussions), in 2006 we got rid of environmental protection legislation. State ecology supervision does not exist: it is no longer needed. I will give you an example from Krasnoyarsk: The Boguchany Dam brings in deliveries, and companies whose interests are not being protected include a major corporation, 10% of which is owned by American shareholders. The water is swallowing up their timber and sources of raw materials. This is besides residents of coastal villages, who also have no protection. This is why we will never move forward without having a mechanism for coordinating and protecting the interests of those involved, the way the rest of the world does it. Otherwise we will continue to endlessly try to solve the budget shortage problem, only to spend the budget to resolve the same old problems.

A. Lyubimov:

Thank you very much.

In response to the audience's scepticism in terms of the ecology's marginal status, since we are meeting at 10:00 on a Saturday, I would like to note that today's remarks were of the highest quality. I want to thank all our panellists. We have managed to have an in-depth discussion of this topic, which is far from marginal. I am not an expert, so I can only say that environmental issues are characterized by the same symptoms we see in other industries. I would call this the 'Russian management model', in which some people have authority and others have

resources. People who have the resources do not have the authority, and vice versa: those who have the authority do not have the resources. Thank you. Evgeniy would like to close our discussion.

E. Schwartz:

I do not want to close the discussion; I just wanted to say that we are joined by Vladimir Grachev, who just flew in from Rio de Janeiro. Vladimir spent two terms on the Supreme Environmental Council of the State Duma Committee on Natural Resources, Environment and Ecology. Vladimir, would you like to say a few words?

V. Grachev:

Thank you. It is true: I came back from Rio de Janeiro just last night. Rio hosted a meeting of state leaders held once a decade: the Rio+20 Conference. It is a monumental event. As a representative of a non-governmental organization personally invited by the UN, I represented an international environmental organization. We gathered at a great number of events for an in-depth discussion of the final resolution. The draft consists of 283 items. It is hard to say what will be signed today, but we do expect some amendments. Non-governmental organizations are seriously concerned (and judging by the mood here today, I see that you know this as well) with the marked absence of positive movement towards sustainable development. Virtually all items of the Rio+20 declaration draft begin with the words “having acknowledged...” In 283 paragraphs, state leaders acknowledged pretty much everything. But what can be done? NGOs tabled a few cardinal proposals, such as to abolish subsidies for fossil fuel production, and to turn the programme into a truly powerful and effective tool rather than an extended, begging hand. There were other proposals, such as that of the G77 plus China group. They were very bold, but not all of them passed. They were discussed, and most of the so-called major groups voiced certain misgivings. The leader of our major group gathered 1,000 signatures. I must say that this is a huge event: 20,000 participants, at the very least. Our group leader spoke on the very first day, on June

20, along with the leaders of eight other major groups: the NGO Group; the Women's Group; the Farmers' Group; the Food Group; the Youth Group; and so forth. Most of them requested that the final resolution have a more constructive tone. That was the most important result.

I have taken part in many such events. The advantage of this forum was that it was conducted in conjunction with approximately 500 other events. Among them were green economy events and a great deal of events dedicated to Fukushima. I spoke at a few of them. They touched on diverse subjects and directions. Some of these forums were very significant. For example, several thousand people participated in the Clean Oceans Forum, which took place in the plenary hall. Several issues were defined in very grave terms, while some meetings were similar to this one, which is also extremely useful. Now, the results will be analysed. I took note of everything. There are plans to publish a Rio+20 book. Two international organizations, the Vernadsky Foundation accredited by the UN (on which I serve as President) and the International Ecological Public Organization Greenlight, will publish a book which will analyse the results of the Conference and include the final resolution. The event was undoubtedly useful, but some dissatisfaction remains.

A. Lyubimov:

Yes, as a certain high-society diva likes to say, "Life is terrible!" I would like to thank my colleagues. We had a wonderful discussion. Thank you for your attention, your remarks, and of course a special thank you to our speakers. Thank you.