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Russia's New Horizons

RUSSIA'S GREEN AGENDA: A SUSTAINABLE APPROACH TO DRIVE RUSSIAN PRODUCTIVITY AND COMPETITIVENESS

Panel

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Moderator:

Elena Lazko, Partner, Deloitte

Panellists:

Alexander Chuvaev, Executive Vice President, Fortum Corporation, Russia Division

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

Andrei Elinson, Deputy Chief Executive Officer, Basic Element; Chairman of the Board, Basel Aero

Natalia Khanjenkova, Managing Director for Russia, EBRD

James Rosenfield, Cofounder, IHS Cambridge Energy Research Associates (IHS CERA); Senior Vice President, IHS

Evgeny Schwartz, Director of Conservation Policy, WWF Russia

Isaac Sheps, President, Baltika Breweries; Senior Vice President Eastern Europe, Carlsberg Group

Front row participants:

Michael Akim, Director for Strategic Development, ABB LLC, Russia

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

Aleksey Shevlyakov, Acting General Director, The Federal State Budget Organization “Russian Energy Agency” of the Ministry of Energy of the Russian Federation

E. Lazko:

Only responsible people would come at 10:00 in the morning on a Saturday to talk about the environment. But seriously, today I want to talk about Russia's green agenda. What does this mean? What do 'green economy', 'green industry', 'green energy', 'green innovation', and 'green ideology' mean? I will present our members in the order in which they sit. Sergei Donskoy, Minister of Natural Resources and Environmental Protection of the Russian Federation; Alexander Chuvaev, Head of the Russia Division of Fortum Corporation; Isaac Sheps, President of Baltika Breweries; James Rosenfield, Cambridge Energy Research Associates; Natalia Khanjenkova, the European Bank for Reconstruction and Development (EBRD), Managing Director for Russia; Andrei Elinson, Deputy Chief Executive Officer of Basic Element, who will talk about what the Russian Union of Industrialists and Entrepreneurs (RUIE) is doing in terms of the environment; and Evgeny Schwartz, who will talk about the position of World Wildlife Fund (WWF). Other participants in the debate are sitting in the front row. I will introduce them during the course of the meeting. Let us start with Sergei Donskoy. Sergei, this year is the Year of the Environment in the Russian Federation. What does this mean for you, for the Ministry? Thank you.

S. Donskoy:

Hello, colleagues, friends. I would also like to welcome all those who have come to the discussion today.

The Year of the Environment is, after all, a short period of time, during which we, of course, will try to focus on this theme and attract more attention to it. But the environment is a topic that should be considered for more than a year. We will continue, we will develop it further, and attract more and more people to solve environmental problems.

The whole world is concerned with the topic that we are discussing today. Russia is no exception. Therefore, I am glad to see both representatives of the business community and environmentalists, as well as colleagues from the banking sector. The future of our country, our citizens, and our children depends on how well we understand each other with regard to such a fundamental issue as the protection

of the environment. These are not just words. A basic principle of a stable long-term economy today is the ability to improve the environmental culture within society. Every citizen of Russia must eventually come to the realization that our vast resources and unique ecosystem gives us a huge competitive advantage over other countries. In addition, the diversity and abundance of natural resources can have an impact on global processes, including environmental processes. These two factors place more responsibility and certain obligations on the Government and its public institutions. This is the direction in which we are heading.

We believe that the current economic model presupposes that the intensive development of various industries necessary for sustained economic growth simultaneously leads to an increase in the consumption of natural resources and to a negative impact on the environment, which has a detrimental effect on the health of the population. In this context, the main objective is to break the link between economic growth and environmental impact. The solution to this problem involves political action, the adoption of measures to create space for environmental modernization of outdated ‘dirty’ technologies, and the promotion ‘green’ investments in industry.

To ensure a comprehensive solution to this problem, a process of reforming environmental legislation was initiated in Russia. Last year, the Government adopted the Basic Principles of State Environmental Development Policy of the Russian Federation through to 2030, and an action plan has been developed for the implementation of this strategic document. A government environmental protection programme covering the period through to 2020 was also adopted, as well as government programmes on reprocessing natural resources, developing the forestry industry, enhancing the competitiveness of domestic industry, and improving energy efficiency. This year, the President also approved the development strategy for the Arctic zone.

The documents listed provide the Ministry with a road map for environmental legislation reform. At the initial stage, our efforts are concentrated in three main areas: the elimination of past environmental damage, the creation of a reprocessing and recycling industry, and the implementation of an environmental

modernization programme for businesses through the introduction of the best available technologies. Work is also underway to establish a system for obtaining reliable information on the condition of the environment. Here we are talking about improving legislation and practical implementation of specific projects in the regions. The Law on Technological Regulation and Economic Incentives is an important step towards the greening of the Russian economy. This initiative by our Ministry is designed to make the environmental regulation plan transparent, remove unnecessary administrative barriers, and create the economic conditions necessary for the large-scale modernization of production facilities in the country. The bill provides for the introduction of an electronic system for recording businesses' emissions. With this system, we will be able to see the full environmental history of a facility and assess the environmental efficiency of its operations and the work of monitoring and enforcement agencies. It is no secret to anyone that the fate of the bill is turning out to be quite complicated. However, in my opinion, delaying its adoption will lead to a deterioration in the environment and quality of life. As for the rational aspects, the lack of a mechanism that forces users of natural resources to modernize their businesses threatens to weaken the Russian Federation's position in global economic markets in the future.

Another priority, as I said, is to create a system of safe waste management. Today, a critical situation has developed where the level of waste greatly exceeds the ability to process it. If we do not take decisive measures, Russia will be like a giant trash heap in a few years. Understanding this, we set an ambitious but achievable goal: to increase the proportion of neutralized manufacturing waste consumption from 11% to 80%. For this, it is necessary to actually create an industry focused on treating solid waste What do we propose to do first? Given the considerable amount of preparation that went into the draft law on waste production and consumption, amendment of the legislation should be carried out at the level of the President. Very recently, in April of this year, it was announced that the adoption of this document should occur no later than spring 2014. The bill will encourage bringing waste into a closed cycle and minimize the loss of mineral resources. This is exactly what the whole world is striving for.

A federal programme for the protection of Lake Baikal and the development of the adjacent areas was also adopted last year as part of the environmental policy. There is no doubt about the significance of this document: everyone was waiting for it, and the regions were very happy when this programme was adopted. It is now being implemented. One of the results of its implementation should be the rehabilitation of 80% of Baikal's natural territory, which has suffered significant pollution. By 2020, about RUB 60 billion will be allocated for implementation of the Federal Target Programme (FTP), of which 80% comes from the federal budget.

In addition, another FTP is being implemented to conserve water in Russia. The programme is related to the development of water infrastructure, and the amount of financing involved is about RUB 50–60 billion. This is the amount that will be spent by 2020.

I would now like to change topics and provide a description of the situation with regard to the elimination of past environmental damage. This is one of the most significant issues in the context of greening the economy. It was brought up in the President's speech, and in the Prime Minister's report on the main areas for long-term development of the country between now and 2018. Why has it arisen? We are well aware that by the end of 2011, Russia had accumulated more than 31 billion tonnes of waste associated with past economic activity. Furthermore, this amount is increased by one billion cubic metres of waste rock each year, and the area occupied by such waste is increasing by hundreds of thousands of hectares. The Ministry is currently completing the development and approval of a draft FTP for the elimination of accumulated environmental damage. This programme will be implemented before 2025. The list of priority projects has almost been completed, and it covers 45 regions of the Russian Federation. The total amount planned for allocation from the federal budget towards implementing this project is RUB 121 billion.

Through a phased implementation of environmental policy, the total flow of investment into the environmental sector should at least double over the next 10 years. To achieve these results, we have to clearly define the areas of responsibility of the Government and business, and focus our efforts on the

implementation of a public–private partnership. This will improve the effectiveness of public investment, and thus give us the opportunity to contribute additional resources to the environmental sector from extra-budgetary sources.

In conclusion, I would like to come back to the idea of environmental culture as a basic condition of green growth. Very recently, on June 5, World Environment Day, at the initiative of our Ministry, the Zero Negative Impact campaign was conducted for the first time. Its essence lies in the short-term voluntary suspension by businesses of operations that have a negative impact on the environment. Twenty-two regions and several hundred companies declared their willingness to support our initiative, among the largest of which are Norilsk Nickel, Gazprom, Russian Railways, and ALROSA. I think this is really a very good result, with not only regional authorities, but also entrepreneurs demonstrating their interest and involvement in the environmental agenda. Next year, we plan to carry out a similar campaign, but on a larger scale.

However, we must recognize that the general level of environmental awareness in the country is still poor. According to recent polls conducted by the Russian Public Opinion Research Centre (RPORC), the rules of environmental behaviour are *de facto* acceptable, and they are supported by the vast majority of Russians. But only a third of our country's citizens are ready to participate in activities to protect the environment. Meanwhile, the process of developing an environmental culture is actively underway around the world, and is essential to ensure the sustainability of the global system of economic and social relationships. We believe that only a common focus on ‘going green’ will allow us to take effective steps to escape the global economic crisis that has occurred during recent years. This will provide new impetus and momentum for growth around the world. Thank you.

E. Lazko:

Thank you, Sergei.

Andrei, you are a representative of manufacturing and of a large business. I know that there is a certain position that has developed as to what should

happen with the environment in our country. It will be interesting to hear your opinion.

A. Elinson:

Thank you very much for giving me the floor.

As a member of the Environmental Committee of the RUIE, I will provide comments and assessments on the issues that Sergei addressed, but only insofar as these relate to industrial policy.

First, I will talk about the Law on Technological Regulation and Economic Incentives, and about the programme for the transition to the best available technology. We believe this programme is absolutely right and necessary. The bill has resulted in a stormy debate in the form in which it exists now. Very recently, I had a lively discussion about this issue with some of other people participating in today's panel, during a meeting as part of the Open Government initiative headed by Dmitry Medvedev. This is a very important indicator for me. On the one hand, I would like to thank the Government for engaging in a dialogue on this complex issue. In fact, for now, we do not agree on all of the points, but we do have an active dialogue, and the Open Government initiative helps a great deal. This type of new mechanism for the discussion of such complex legislation is basically a new dawn in the legislation of the Russian Federation. We participated in this process with great interest, and we are seeing a lot of positive things. The country's top leaders support this kind of legislative reform. If we are able to arrive at a really good solution, we can say that our approaches are changing, and civil society, about which so much has been said, is making quite active efforts in this process.

Now I will talk about the problem. The law itself, as I said – the modernization programme and the environmental legislation reform programme – is very important to us and well understood by us as representatives of industry and entrepreneurs, and we believe it is necessary. When the Ministry of Natural Resources and Environmental Protection sent us one of the first drafts of the Law on Technological Regulation and Economic Incentives, we as participants in the process started to carefully analyse the document, and came to the conclusion

that from the point of view of industry, the proposals that are in the document are correct. They aim to motivate industry to modernize. However, from the viewpoint of industry, they will not be effective in the form in which they are proposed within the context of the existing system of environmental legislation. The RUIE has created an independent group that consists of more than 70 experts. It has been working for about six months to analyse the current system of environmental legislation. As you know, many of our branches of law (civil law, tax law, customs law) have come a long way from the Soviet command and control system to the codification of a system in which many branches of law now operate. When we started to look at the Law on Technological Regulation and Economic Incentives, and analysed where the idea of modernization belongs, we came to the conclusion that today's legislation, with roots dating back to the Soviet command and control mechanism, is so mixed up that this proposal cannot be implemented in practice. At the very least, we will have difficulties in achieving the result that the legislation is intended to bring about. When we looked at how our businesses are operating now, we saw that for the average business, obtaining one permit in today's system can take between a year and eighteen months. You know this yourselves. A business (preschool, school, or industrial giant) must fill out more than a hundred volumes of documents in order to obtain permits for discharges or emissions. Many concepts, such as that of ‘damages’, are not defined at all.

It turned out that when they started to reform the various other blocks of legislation, each group and each ministry developed its own set of documents relating to the environment. And they use these documents. Many of these documents are used based on the principles of business practices to a greater extent than as a formal indication of following a particular law. More than 1,500 regulatory documents: that is a long roll of paper! I did not bring it with me, but we fully analysed it. It is as long as this table, and it describes the system of the relationship between the legislative acts of the upper, lower, and middle document levels (more than eight), which regulate this system. I will not go into the details; otherwise, we might get into a long discussion about the merits and deficiencies of the law. This is not the main agenda of today's meeting.

We, as representatives of industry, unconditionally support the move towards modernization and more environmentally friendly development. Naturally, we believe that the main driver of this development should be competition. Companies will strive to be competitive: today, this is not just about compliance with environmental regulations, but also the availability of credit, a high-quality workforce, and so on. As we can see, in the West, many businesses are already moving towards environmentally friendly manufacturing, not only because it is necessary to comply with the law or because it is right, but because it is the way they hold on to their competitive niche, because consumers demand completely different standards from all of the businesses with which they work. We believe that this will always be the main driver behind the modernization of our economy in any case, no matter how good the legislation is.

About two thirds of our businesses currently have rates of depreciation for their fixed production assets of more than 60–70%. The availability of credit today, as you know, is quite limited. Liquidity in the world and in this country has decreased. It is unlikely that we will see 100% modernization within the main group of major companies during a seven-year period. However, we have seen examples of companies that are moving full steam ahead and that are finding such resources, doing this in a natural way, which is recommended.

What are we proposing in order to support our Government's initiative, and to somehow bring industry and civil society together? We believe that the move towards the modernization of environmental legislation is a very good idea. We suggested to the Prime Minister and to the Ministry of Natural Resources and Environmental Protection that our independent expert group do some exploratory analysis. We propose a planned transition to the Environmental Code, which would allow us to gradually remove absurdities from the law: the defects identified by the working group (there are about 40 pages' worth). This could be the first step. Then, the reconciliation group, which is already working, could begin a quick programme, a road map for environmental legislation reform in our country. I will end on this. Later, perhaps, there will be questions, and other speakers will also comment on what I have said. Thank you.

S. Donskoy:

Thank you very much. It was nice to hear that our position is still moving closer, even though it is complicated.

I think our colleagues will add more, but I would still like to repeat: this Tuesday we met at the Open Government meeting under the leadership of the Prime Minister, and we have met many times before that. I have personally conducted dozens of meetings of the Open Government working group under this law. In fact, it is quite a big job. We are looking for a compromise, and we will find it.

Colleagues, I have a big request: when we are having a discussion, let us more clearly define what we are going to do. After all, when we talk about the absurd – the timeframes, the investment needed to upgrade – we are talking about specific numbers and other things that accompany this reform. As a matter of fact, I talked about this on Tuesday at a meeting with the Government: all the measures being proposed in respect of the road map that the RUIE has prepared will be implemented after the adoption of the law. We are talking about payment, the deadlines for the adoption of resolutions, the simplification of administrative procedures, the transfer of powers to the regional level, and the simplification and identification of groups of businesses which have a minimal impact on the environment, or even no impact, where there is no interaction with the supervisory authorities. Preschools, for example. With them, everything is clear: there should be no supervisory authority as such; they operate normally, and there is no problem here.

The seven years, during which, as we said, we are going to modernize, is not enough to complete the modernization process, and we are well aware of this. The seven-year period has only been established as a time to prepare for the beginning of modernization: that is, the evolution of the business, and the opportunity to carry out all the necessary procedures. That is all there is in the bill.

With regard to investment, we are open to finishing work on the economic tools, and we are also offering incentives for loans, tax breaks and subsidies, and depreciation. Let us think of something more. We understand that it is difficult for businesses to collect that kind of money, especially here in Russia. But in

principle it is possible to discuss ways of attracting investment from the outside, i.e. from abroad, as well as a variety of other schemes. I think that a discussion about this will happen again today. We are open.

Colleagues, the most important thing is not to delay the procedure. If we continue to delay, we will find ourselves in a situation where hundreds of billions of dollars can no longer be effectively invested and implemented from the point of view of economic modernization. We will lead the country into that situation. We should not do that. I said this on Tuesday; I am saying it now, and I will continue to talk about it. I am a little emotional. I am sorry, but sometimes it is just hard to talk in plain language, because the words may not be heard. I do not know how else to explain it. We understand that this should be done no matter what. If we put it off for another 10 years, our children will deal with this, but I would not want to pass this problem on to our children. We have to decide here and now. So, I am sorry for being emotional and talking for too long. Thank you.

E. Lazko:

Thank you, Sergei. I want to give the floor to Isaac Sheps of Baltika, who will talk about some specifics. There are concrete examples in specific regions of our country. It is clear that for Baltika, the main point is container reuse. Around the world, it is good practice to reuse bottles eight times. In some regions of Russia, we are lucky if we reuse them two and a half times. Baltika is leading the way in this initiative. I would like Isaac to tell us what is being done in this area by specific representatives of the industry.

I. Sheps:

Thank you very much. I will start by saying that as part of the Carlsberg Group, Baltika Breweries shares your emotional approach to the environment worldwide. For us, environmental and social responsibility is not just a PR flag. It is part of our strategy; we strongly believe that to have sustainable success, companies nowadays have to meet the expectations of all interested parties, one of them being the society in which they operate. Of course in every society, the environment is a crucial point. We want to produce what we produce but to leave

after us a clear land and enough resources for our children and grandchildren to reuse and enjoy life and, of course, also to enjoy beer, which is part of the fun of life.

So we not just talking: very briefly and directly, here is what are we doing in Baltika Breweries in Russia, for example. We looked all over the world about our total production cycle and the use of our products, and we used our carbon impact in order to analyse where our main impact is. We found out that 45% of whatever we do is very much related to packaging. Therefore, we decided to focus on packaging as a main priority. We deal with packaging using a model which has four Ps—sorry, four Rs; it is a P in Russian. I do not speak Russian, but I learned the alphabet.

One is to reduce: to try to reduce the packaging weight, the use of packaging, and this is of course one of the first things. The other one is to reuse, and this is where I refer, for example, to returnable bottles as one of the ways they can be reused. We are actually the leader in using returnable bottles, which we successfully collect in the market. Yes, it is still very far from our Danish standards. In Denmark, for those who do not know, 100% of packaging is reused and recycled. This is, by the way, also an exception in Europe, but of course, it took many, many years, and it happens to be that there are not so many Danes to teach. It is quite a small nation, but we can do it in every country and will do it here too. The third R is about recycling: actually all of the packaging materials can be recycled and reused in the production of new packaging.

Last but not least, we also have a scientific centre in Copenhagen that we have had for years, 160 years of research. We really think about this fourth R as racing to see what type of packaging is better, what can be done differently, innovative packaging and so on. By the way, we do a lot together with our suppliers. We created something we call the “brewery way of sustainability.” It was also presented recently to Prime Minister Medvedev of Russia; he endorsed it, and we are trying to do one main thing and then to commit to the environment though another programme.

One of the things we are looking we are looking at is to create clusters of industry around our industry, especially with Russia, which is really such a big country.

The transportation of goods and materials from one point to another has a big environmental impact, because we are talking about thousands and thousands of kilometres. We have a brewery in Khabarovsk in the far east. I have been there twice already, but the first time I went there, I understood that Russia is so big that I had to fly eight hours from Moscow to get to my brewery, seven hours difference from here. So it is a huge country.

To give you some understanding, we have virtually succeeded in convincing a glass manufacturer in Russia to build a glass factory in Khabarovsk near our brewery. Now, we bring glasses from Novosibirsk; it is 4,000 kilometres away. Then, when we return glasses, we have a project of collecting returnable glasses. So when there is broken glass in our train wagons that we own, we carry it all the way back to Novosibirsk for free to be recycled in the factory. It is not simple to have such a factory near us.

Our next project is to convince a can manufacturer. Now, our empty cans are travelling all the way from Chelyabinsk, even further away. So this is putting together these clusters. In some other regions, we are talking about helping with special varieties of seeds to try to grow grain so we have barley, and we can have more talks again. So this idea to put together will also have an impact on the environment.

To not keep it too long, last but not least, as leaders of our brewing industry in Russia, and also actually being the second largest fast moving consumer good company in Russia–the first, biggest one is this company Pepsico. Thanks to their hospitality, we are number two. We really believe we have to be modern, so we committed to a special programme with UNIDO, the United Nations Industrial Development Organization, for a five year plan of RUB 1 billion that we will invest in different environmental projects. Actually, following their advice and their expertise, we are going to really focus on a few areas. One of them is water. Of course, even in countries where we have a lot rain or snowfall, we will find there could still be a water scarcity for different reasons. Of course, we will work on different projects and technologies on saving water and energy.

In Baltika Breweries in the last five years we succeeded in reducing the use of energy and water by 15%. For those who do not know, in the production of beer,

we use more water than you have in the bottle. So actually, we can reduce the total consumption of water, and we are doing it constantly to save us energy.

There are new technologies, and we started already to use part of the alternative renewable energy sources in some breweries: when we treat waste water, we are actually creating biogas that we use for energy, and this is one of the ways that you can really help the environment. Of course, all the projects are related to agriculture also, because we are using agriculture as a source for our product. We are very much involved in the big agro project that we are leading with agriculture in order to ensure that we grow robust, sustainable barley in Russia that we can use properly. So this is one of our commitments.

Altogether, we are, I think, doing very much the best that we can as an industry to be responsible. Yes, we are also involved in open discussion about the new waste flow, and I am sure that together, we can find the right solution that we can commit ourselves to as industries. I have to say that following our lessons from the world and Europe, the best waste law should be a law which puts responsibility on the producers, and the producers will take quotas to recycle, to reuse. This is done in Europe, and that way you will create the right responsibility to ensure that there is less waste material in Russia. Thank you very much.

E. Lazko:

Thank you, Isaac.

Alexander, as I understand it, Fortum has experience in green projects, and not just in Russia. Are you employing some of these initiatives in Russia, and how are you developing them? In particular, I believe that you are associated not only with energy efficiency, but also with green initiatives.

A. Chuvaev:

Fortum is a Finnish energy company, part government owned, and it is one of the greenest energy companies in the world. It is green because a large share of its portfolio of assets is made up of hydropower, nuclear power, and the use of waste to produce heat and electricity. For example, Fortum heats the city of Stockholm with its power plants, and it does not just supply heat: there is also

central air conditioning. That is, the cold water is pumped into homes in the summer and cools them, and this is all fuelled by solid waste. There is combined cooling, heat, and power. The production of heat and electricity are based on solid waste. There, it is done in such a way that companies obtain profit from it, and people are willing to pay, because any recycling costs money. Even going to throw out rubbish on the street, for example, costs resources. Any green initiative and any form of energy efficiency costs resources, costs money. The population should understand what they are paying for, and should realize that nothing is free.

With regard to Russia, there is a completely different situation here. The heat-recovery tariff for solid waste should be about RUB 2,000–2,500 to justify building a waste incineration power plant. In Moscow, the tariff is close to RUB 2,000; in the regions, it is about RUB 100–150. Of course, at those tariff rates, no one will invest any capital, and no one will build. Here at the round table on energy efficiency, and especially on industry, everyone has said that it is time for us to kick the oil habit. I asked the question: what does it mean to stop being dependent on oil? If we reduce oil dependence, should energy be expensive or cheap? The answer was that the energy must be expensive. Our energy is too cheap – I am talking about natural gas – for it to pay economically to shift to a new technology. Yesterday it was announced that the increase in natural gas prices will not exceed the rate of inflation (although before this year, the increase was 15%, to achieve equal profitability with Europe, and equal profitability with Europe, taking transport into account, means the price of gas is half the price it is in Europe). This drew about RUB 1 trillion of investments out of the energy sector between now and 2030. All these investments should have been in green technology. Current steam power technology gives us about 10 times more nitrogen oxide pollution and six to seven times more greenhouse gases (carbon monoxide, carbon dioxide) than a modern fleet using gas technology. The market should provide a market signal, and for this, energy must be expensive. And ‘expensive’ in Russia does not mean that our industry will not be competitive. Now, our gas costs about 30–40% more than gas in the United States, despite the shale revolution; it is two to three times more expensive than in Europe, and

six times more expensive than in Asia: in Japan, for example. So when we say that natural gas – and about 60% of the gas is used to generate electricity – has to be expensive, we are talking about the fact that it will still ensure the competitiveness of our industry in the global market.

I will now say a few words about what the world is doing about renewable energy. As you know, technology is slowly but surely arriving at a revolution. This is especially true of solar energy. Over the next seven to 10 years, solar energy will become competitive with traditional forms of power generation, especially in southern countries. The competitiveness of traditional forms is evaluated in terms of fuel. We always have to start from the cost of energy. Therefore, ending my brief speech, I want to ask that we ensure that the Government and its regulating body have the political will. I am sure that both the population and industry will adopt this with great enthusiasm so that, ensuring Russia's competitiveness in the global market, we provide energy efficiency and green energy in Russia. Thank you.

E. Lazko:

Thank you, Alexander. All of the initiatives taken by companies, governments, and ordinary people are in need of money. A good deal is said about green banking and green investments. The EBRD is one of the institutions involved in green projects. I think Natalia will talk about projects, not only in Russia but also abroad. I want to hear what kind of suggestions you have for further development.

N. Khanjenkova:

The EBRD is more of a development organization than a financing organization. We have a mandate on environmental issues, and energy efficiency is priority, so we are actively looking for projects that have a positive environmental impact, that reduce power consumption, in order to provide them with investment resources, primarily long-term in nature.

We are currently talking about the need for investment in waste recycling and energy efficiency. From the point of view of the scale of investment required, in

Russia the numbers are huge. Just raising waste recycling to about 40%, not to mention the problems of raising it to 80%, requires an investment of EUR 40 billion. Currently in Russia, two to three times more energy is consumed per unit of production than in the European Union. Our energy inefficiency is comparable with France’s entire energy consumption. That is, it will require about EUR 240 billion for Russia to reach its normal energy efficiency potential. It is clear that these amounts cannot be taken from the budget, and it is essential for the private sector to take the lead in investing in these processes. We are actively looking for private sector projects. I will give an example: in Turkey, we have a very important client, a Turkish manufacturer of glass bottles, Sisecam, which we are now trying to engage a in a joint project to reach a level of bottle recycling equivalent to the average level in Europe: 60–70%. This is very important, as it does not just solve the problem of waste management. Using 20–30% cullet reduces energy consumption in the production of new bottles. Sisecam works in Russia, and is now very actively considering participating in the recycling system. But in Russia, we have not been able to fund the project, because the cost of infrastructure for the collection and delivery of cullet negates all of the benefits of the savings that can be achieved using this glass. Here, of course, it is extremely important that legislation be adopted: we need a system of incentives. This means the introduction of deposits for containers and packaging, and the introduction of a plan for collecting different types of waste separately. It is important to conduct this work in cooperation with municipalities, because this kind of recycling reduces the pressure on municipalities to increase landfills and to address the problem of solid waste. We believe that these sorts of incentives can really encourage investment in recycling in Russia. Now that a system is being developed for waste management, and amendments are being made to relevant bills, it is important for there to be an open and transparent targeted use of recycling, and environmental duties that will be imposed on manufacturers. To encourage them to voluntarily participate in recycling schemes, it is necessary to take into account the manufacturers' investment in recycling when making calculations. We believe that it is specifically this kind of incentive for private investment that will really help to solve the problem.

Apart from the issue of waste, the energy efficiency projects that we fund are very important for us. In Russia, we have a lot of projects that are progressing well. In 2006, there were more than 100 projects aimed at improving energy efficiency, and we have invested more than EUR 2 billion in them. It must be emphasized that any private sector investment in energy efficiency is intended to increase competitiveness. Here, we are working with specific large companies. For example, we have a very interesting project with the MLK Group, which has led to a significant reduction in energy consumption.

A new area that it is probably very important to support is the development of energy service companies which will be able to get a return on their investments due to the energy savings they obtain as a result of these investments. In the past year, we have funded the company FENICE RUS, which implements such projects in Russia. It already has a third project with AvtoVAZ, in which it is investing and being paid entirely by the savings generated.

Private companies in the industrial sector probably have a real incentive: improving competitiveness. But the area that is now very important for us, and where it is important to move forward, is increasing energy efficiency in the public sector. With very small investments, schools, preschools, and hospitals can significantly reduce their energy consumption – by 40% or more. Here, the question is how to attract investment from energy service companies. The long-term budget cycle is important, and it is important for savings to be preserved so that investments can be returned. A lot of work is necessary here to improve the legislation in order to encourage these kinds of projects. We are very keen on supporting these projects, and we are willing to provide long-term resources for 10–15 years so that the burden on the companies that hold these investments is more uniform. But much remains to be done before these stimuli can be introduced.

E. Lazko:

Thank you, Natalia. In the wake of all the presentations, I want to give the floor to Evgeny Schwartz from the World Wildlife Fund. Russia has decided for some reason to demonize non-profit organizations. It is believed that they are doing

something that is isolated, related to specific forests and animals, but the WWF in particular has been providing support to analysts of environmental activities in general, so we would like to hear your position.

E. Schwartz:

Thank you, Elena. I will try to be brief.

It is extremely important to understand that the world and the economy are globalized, so if we are talking seriously about competitiveness, it is necessary to look at it on a global scale. If we look at Russian industries in terms of the environmental sensitivity of their external markets, we see a direct link. Take the forestry sector, which is heavily export-oriented, and which is the most environmentally sensitive. Between 20–25% of our forests are part of the forestry industry, and certified by the most rigorous standards. This is a competitive industry, and this industry fully supports the environmentalists. At the meetings, say, of the Presidium of the State Council over the course of the past eight years, they have felt the presence of the end consumer, and there are no fundamental conflicts: we help each other to find solutions. Why is it important to understand globalism? It is quite difficult for us to be located between environmentally sensitive Europe and the not always environmentally sensitive domestic market of northern and north-western China. Timber production in China is four and a half to five times more than the entire value of Russian exports, and the source of half of the 30–32 billion revenue of this industry in China is the Russian forest. Each year in China, the demands are becoming more and more stringent: we see how voluntary forest certification is being developed there; we see how orders come to us from there: do you have any honestly obtained timber that has not been stolen; can you help with companies who do not sell stolen forest resources? They want the rule of law, and the new EU directives are working on greening the end consumer.

It should be understood that even with respect to the oil and gas sector, this means access to long-term, low-cost financing. We conducted a study that was included in a report by the UN Development Programme (UNDP) this year on Russia's human potential. It is easily accessible on the Internet. I would simply

note that even in anti-environmental industries like oil and gas, 80–90% of our companies are certified to the ISO 14000 standard, and non-financial reporting is done according to GRI standards simply because otherwise loans will be shorter-term and more expensive for them. The Russian mining industry, which is sufficiently globalized, is currently in a transitional period. Only our energy industry is a little pumped up. The worst situation is in the financial sector, but since last year there has been a small breakthrough: the first Russian private bank to join the Equator Principles has opened up. I am not sure they understood what they were getting involved in, but nevertheless, the bank opened. Now we, in conjunction with the International Finance Corporation (IFC), are working seriously with Vnesheconombank to create standards similar to the IFC standards and the EBRD Environmental and Social Policy Performance Requirements.

We have seen how in the last three years, despite the fact that Russia is in the top 20 in terms of the increase in the number of ISO 14000 certificates, there has been a sharp turning point, and the number of certificates began to grow almost exponentially. We are still in 18th place, and this is normal in terms of the size of the economy, but, nevertheless, we can see that there has been a change in speed. It is all there in our publications.

I would now like to comment on the discussion of the law on the best available technologies and the perspective of business. Those who know me know that I tend to be much more critical of the actions of the Government than of business, and I believe that business acts much more appropriately. But the situation is quite complicated, and businesses can be quite different. In principle, the problems that colleagues from the Russian Union of Industrialists and Entrepreneurs are talking about were known from the report on the state of governance in the field of the environment which was published by the World Bank in 2008. I was one of the experts working on the project, and its findings are well known. The idea of an environmental code was proposed, if I am not mistaken, by Alexander Ishkov, back when the director of the department was Yuri Trutnev. We hear about and completely understand the challenges businesses face, and it seems to me that the first advantage of this bill is that it

solves the problems raised by businesses. Firstly, it introduces categorization of projects. This is not to say that those who fall into category B and C do not need to verify this. You just need for access to the declarations to be public, so that corruption involving permits is not replaced by corruption involving selective verification. But the most important thing is that it is possible to move forward with the largest and most hazardous industries and projects. The second point is the assessment of the impact on the environment. We cannot ensure normal growth and intensification of Russia's economic development if we have not protected the interests of small and medium-sized businesses. A classic example is the Boguchany Dam. We have been in an open dialogue with Russian Aluminium, or RUSAL, for a long time, trying to make an assessment of the environmental impact in accordance with current law, and not with the materials from 1989, back in the Soviet era. We have not succeeded, and now we see that the Legislative Assembly of Krasnoyarsk Territory and the deputies who represent RUSAL there are asking us to work on the Ust-Ilimsk Pulp Mill, because its waste pollutes the Boguchany Dam. And given the scale of Krasnoyarsk Territory, that is a problem. This is true, but if there were normal, fair rules, the Ust-Ilimsk Branch of Ilim Group would have the time to create a closed cycle at the mill, and then all the subjects of the Russian Federation would have been acting under the same conditions. Moreover, they would have moved into the sphere of civil and legal relations. And if then the initiators and the owners of the project were forced to compensate Ilim Group for these expenses, then the project might either be on a different scale, or have been rejected. We are talking about a pulp and paper mill that is owned by a company responsible for 60% of Russian pulp exports. It is an extremely large, vertically integrated company. Its market capitalization is, in my opinion, much more than USD 3–4 billion. If that company cannot protect its economic interests, what do we want from the system for the protection of the interests of citizens, as well as small and medium-sized businesses?

I have one more point. It seems to us that people are saying all the right things about the outrageous amount of duplication of regulations. This needs to be solved, and we certainly hope that, in cooperation with the Ministry of Natural

Resources and Environmental Protection, we can take a significant step forward. But we must understand that it seems as if the real wish is to just postpone any change in the situation. I have clear facts. All projects carried out by the RUIE expert group, on the one hand, indicate that the amount of ‘informal payments and excessive influence on the business’ (a beautiful expression that means ‘bribe’) exceeds RUB 100 billion: that is, EUR 2.5 billion per year. Two new pulp and paper mills could be built with that amount of money. People also write that there is a proposal to close access to information about actual waste and emissions for the seven years during which the law is to be enacted. At the moment, RUB 100 billion is being paid annually, and this is being done because there is no information. Instead of adopting a decision about how to make sure that these funds are paid and that they go towards the creation of a green bank, the restoration of eco-funds, or another method of motivation, or so that they go towards technological modernization – instead of all this, we want to freeze the situation in its tracks. Apparently, everyone likes to pay bribes. It seems to me that in order to knock the ground out from under corruption and selectivity in law enforcement in reference to payments, we need to make information about pollution public and transparent, pursuant to Articles 41–42 of the Constitution. Only in this way can we ensure that these funds are going towards modernizing technology.

We are attentive to the business community. We often hear from businesspeople that it is very difficult to conduct environmental modernization with loans that carry a 16% interest rate. We phoned financiers for a week and talked with colleagues from the EBRD, the International Finance Corporation, and the World Bank. First, it appears that the average market price is slightly lower. Of course, you need to think about how to make sure there are government guarantees: in other words, the opportunity to get a loan from special financial institutions under government guarantees and establish lower lending rates in the form of loans from the World Bank or the European Investment Bank.

E. Lazko:

Thank you very much. The last report for today is from James Rosenfield of IHS CERA. Let us recall what Natalia said about the fact that Russia consumes two to three times more energy than any other country in the world. How does the Cambridge agency see this pattern according to their research?

J. Rosenfield:

Thank you very much, and it is a great honour to be here. We hear the urgency that Minister Donskoy expressed and the need to shift the mind-set into this environmental culture. I wish I could capture this, bring it back to the United States, and convey the sense of urgency that is being expressed by all the panellists here. It is clear that the path forward from this panel is going to be the right path, a Russian one that that is suited to the Russian unique conditions. What I would like to do is to offer some broad perspectives from what I see on a global scale and see what might be relevant and applicable to Russia.

I would like to start with the point that has been made by everyone here, which is that the cornerstone of Russia's clean energy strategy has to start with energy efficiency. The cleanest BTU is a BTU that is not consumed, and at CERA, we call this the fifth fuel, the energy efficiency. That fifth fuel provides flexibility and allows you to experiment and play with tariffs and with other renewable energy, so it is really foundational.

The second point I want to make is that the great energy and technology innovation contributions that we will be seeing in the future from Russia and the enthusiasm for that was very clear in the last two weeks I was at the Skolkovo start-up village. I was honoured and privileged to present on renewable energy and sat through 50 start-up pitches from these companies, and it was just overwhelming to see the enthusiasm and the level of technology that Russia has to offer the rest of the world when it finally sets its mind to this environmental culture. I was also impressed that Prime Minister Medvedev decided to come to that event and offer some thoughts and insights; the leadership for this has to start at the top. We are seeing that here, Minister Donskoy, we are seeing that here in general. I think it is a very critical insight that leadership has to start at the top.

You asked me to step back and look at the global trends and green energy and to put Russia into that perspective, and right now globally, green energy is in a great period of transition. The last decade, we have experienced what we call the great rebirth of green energy and renewable energy. The first wave was in the 1970s. It was in response to the oil shocks and was very much a US-centric small scale wave. The current wave over the last decade has been a global wave and has been on a much greater scale. Over the last decades, we have seen over a trillion dollars spent worldwide on renewable power since 2000. This has been accompanied by a massive worldwide build-up in manufacturing capacity, innovation, and establishment of modern supply chains, and it has resulted in some 550 gigawatts of capacity added primarily in Europe, the US, and China. Of that half of it has been in the EU, and of that, 40% has been in Germany, so Germany has really been at the heart of this rebirth. In emerging markets, it has really only been about 15% of new capacity from renewables and clean energy. Interestingly, about half of these trillion dollars has been invested in the last three years, so there has been acceleration, and a lot of that has been in the solar and PV area. As our data pointed out, we have seen a dramatic cost decline in solar as a result of that.

This wave that we now see has been driven by two concerns: primarily the concern over climate change, but equally, it has been how to meet growing demand. We see 35% growth in global energy demand between now and 2035, over the next two decades, and the strong perception is that we are running out of hydrocarbons; that is what really was behind this a decade ago. If you recall those fears over peat oil and peat gas culminating in 2008, not long ago, when prices peaked at USD 4,722 per barrel of oil. Well, there has been a fundamental change. What has changed, first of all, is that the financial crisis has led to the recession and a fiscal austerity that is unfortunately undermining support for renewables and the subsidy and the cost of renewables.

Secondly, as has been mentioned here, the unconventional revolution, which really started in the United States but is beginning to move globally, has had a powerful effect on the mind-set of this sense of scarcity. It has really shifted now from the sense of scarce hydrocarbons to a world of abundance, and that has

created a challenge for the green energy, clean energy, and renewable energy economy. Costs to the United States for natural gas, as you know, are now very low. Historically, it was under USD 5 per million BTU, and at the same time, there is a growing awareness of the fully loaded costs of renewables if you account for grid integration and intermittency.

How do we solve those larger problems, what we call the “green spread”, which is the gap between power generated from energy from fully loaded, integrated, renewable sources and the cost of energy from conventional sources? That spread, which was thought to eventually decrease, has actually widened over the past couple of years. That will eventually change, but right now it is changing the mind-set a little bit. There has been a little bit of a retrenchment and reconsideration in Europe and the United States of renewable energy as a result of that.

At the same time, there has been robust growth on the supply side, and in fact an oversupply of renewables. Solar and wind now have twice the capacity needed to meet demand, and we are now seeing a great rationalization and consolidation of the renewable energy industry on a global scale, with prices coming down in particular for solar. Interestingly enough, we are also seeing reconsideration by the Silicon Valley crowd and the investment crowd, many of whom underestimated the time horizons involved and the capital requirements for energy and clean tech. They thought this was Facebook, and it turns out that it is not Facebook, it is not Google, and it is actually going to be a multi-decade process.

In this context, what we are seeing is a very interesting good new shift, which is that global green energy is beginning to shift from the developed world to the developing world. Increasingly in the next decade, this is going to be a developing market story, as is evidenced from the conversation here. Like Russia, some 60 countries worldwide are adopting renewable portfolio goals, and a lot of these countries can now take advantage of the oversupply that we are seeing globally. Also, that USD 1 trillion infrastructure that has been built up can now be serving the developing world, and at the same time, it can be a source for foreign investment and a way to diversify your energy mix.

However, increasingly as we are hearing here, Mr. Elinson in particular pointed out the environmental issues being framed as an issue of economic competitiveness. We have seen wide disparities in industrial prices for power around the world; power really drives the economic competitiveness of industries in the WTO world.

Germany is a very useful case study; they set the very ambitious goal of 80% renewable by 2050, and the surcharge in energies last year to finance renewables, the consumer at retail prices have raised just for the subsidy to EUR 5.28 cents per kilowatt hour versus a wholesale price of EUR 4 cents per kilowatt hour. German households are paying something like two and a half times what their American counterparts are paying for residential energy, and there is an equal cost gap on the industrial side. This is resulting in distortions in the German power markets and an underestimation of the cost of grid integration, and ironically, they are now importing cheap US coal to cover the capacity. While the US is seeing a 12% decline in its CO2 footprint as a result of shale, Germany is now importing some of our coal and some of our CO2 problems. Now we are seeing very strong voices of concern from the German industrial community in the run-up to the 22 September election. It is going to be an increasing refrain that you will be hearing.

The net result in our view is that renewables are on track to reach about 10% of global capacity by 2025, where they are currently less than about 5% and in Russia less than 2%. So Russia is emerging now into this world, into this clean and renewable energy world where it plays a very small role but has a very high potential. We see the geothermal potential as over one terawatt hour per year, we see small hydro, wind, and tidal having major roles down the road. The biggest challenge is, of course, the energy intensity, as we have talked about here, even while the tariffs are lower.

Well, my big recommendations are the following. First, besides that cornerstone of efficiency, really start with the low hanging fruit. What we have learned in innovation technologies is to focus on the niche, remove off-grid applications where renewable power can compete with higher priced electricity; for example,

Vladivostok, as opposed to Moscow. Then build from the outside in, scale from the outside in; it is a classic pathway for disruptive technologies.

Secondly, rationalize and utilize your existing infrastructure. You have your CHP systems that have heat but no power, and it is an obvious and low cost leverage to bring those together, what I call low hanging fruit. Third, and we have talked a lot about this, is solid waste opportunity where you can solve two problems in one. You can solve your solid waste problem along with your energy, and we see that there are companies like Ford that have state-of-the-art technologies to do this. Those technologies can be brought in and brought to bear in Russia, and you can really leapfrog in some of these areas.

Next is to leverage your low-cost gas resource. There are lots of new applications for gas such as GTL, gas to liquids, and solid oxide fuel cells, a myriad of gas-enabling technologies that can help this clean energy story during this transition to a renewable energy future. Finally, Russia should really, as I mentioned earlier, leverage your competitive advantage in science and technology with targeted R&D. A lot of these technology-enabled green solutions are going to be using the kinds of technologies that Russia excels in: material sciences, biosciences, mathematical sciences, computer sciences. These are all part of the story and Russia has that in abundance.

Well, I think the green story in Russia is going to take some time to unfold, but when it happens, I predict it is going to happen very quickly, and I have two words of advice from wise Russians. The first: yesterday, we heard President Putin say that you need to balance priorities between the ambitious, strategic goals and the operational realities and tasks before us. The second is a quote from Leo Tolstoy who said, “The two most powerful warriors are patience and time”. So with patience and time, we are going to see a very different energy future for Russia. Thank you very much.

E. Lazko:

Thank you. We have some front row participants. Could I possibly ask you to talk for a minute or a minute and a half about the main theme?

V. Gavrilov:

Thank you for inviting me. Vsevolod Gavrilov, Sberbank. I was listening to Sergei, and I understood him very well. I deeply felt the intensity of what he said. It just so happens that I worked on something similar for about seven or eight years, but in the area of reforming water and forestry legislation, and I completely agree with Sergei. It seems, indeed, that we must find a solution quickly. Now I will come to the point. I represent an investment and financial group. We, the investors, are looking for places to allocate money and receive some return on our investment. Why am I here? Because I believe that a solution is being developed now from which we all can make good money. I am very pleased that I was not seated amongst the speakers, but here, because I am listening and watching.

We will come to a time when there will be an agreement between the Government and business. We see the world according to the principle of a traffic light: green, amber, and red. Where an agreement is reached, and where there is consensus, we will come, either noticed or unnoticed. We will come to Andrei; we will come to Alexander; we will come to Isaac; we will slip through the crack under the door and offer them our services. It is a competitive market. We are asking that you choose us, but we understand that competitors can get ahead of us.

We see today that there is already a practice of reaching these kinds of agreements. Associated gas: the decision has been made; the parties have shaken hands on it. I am now in constant communication with the oil companies. Yesterday, Sberbank signed an agreement with the Governor of the Khanty-Mansi Autonomous Area – Yugra, Natalia Komarova. Why? We want to be first in this market; we want to be the first to allocate money and get returns from this investment. We expect a quick solution to the issue and to other topics. The amber zone is a zone where we feel that a consensus will be reached soon.

If you can, ladies and gentlemen, today, single out those subjects on which you can already shake hands. We are willing to be with you, helping with solutions and moderating the possible ending of relationships.

The red zone is where positions are still being discussed and where possible areas of consensus are still not clear. Yesterday, there was a round table on energy efficiency, at which we discussed a number of issues. Maybe it would be really worthwhile to think about a combination of mechanisms to standardize the stringent requirements, along with elements of state support? There are cases like the ones James and Natalia talked about, in which the Government understands that it is not compatible with business decision-making, but something still needs to be done. In this case, the Government not only employs the stick, but also uses the carrot to a certain degree. For our part, we are of course ready to assist in the dialogue. We will not get involved in many things: this is not our objective, and the emergence of a third party may worsen the situation. But if you are close to a solution – and I hope that this is the case – then we will be the best indicator, standing at your door and asking for an appointment. That means that a solution has been found. Thank you.

E. Lazko:

Thank you, Vsevolod. Aleksey Shevlyakov, Acting General Director, Federal State Budget Organization ‘Russian Energy Agency’ of the Ministry of Energy of the Russian Federation. This is the main government body responsible for energy efficiency in Russia.

A. Shevlyakov:

Colleagues, I am very grateful to you for giving me the floor. I would like to note that I have enjoyed this panel very much, as the topic that was discussed here is the ‘sister’ of energy conservation. After all, the problems of energy conservation are the same problems that are related to environmental performance and environmental safety. In our opinion, this is due to the following aspects: we have been working very diligently on the development of various tools that could be used in practice for a very long time. We are studying international experience; we are developing all kinds of proposals for the Russian Federation, and we are implementing testing of these proposals. But the fact is that we are faced with system-wide problems. Our colleagues have spoken about these issues today.

They have talked about the fact that there is not enough open competition in our market, and that Russian businesses do not feel that there is only one way to survive and stay afloat in this competitive struggle. Therefore, we are faced with situations where we see that businesses are not very interested in energy efficiency. In some cases, they even want to have higher costs in order to reduce the tax burden on profits. The concern is that we are faced with an investment model of development. It has to be somewhat different in order to be responsive to the proposals that we are developing together. This is due primarily to the fact that when we say that energy conservation goes hand in hand with the environment and with resolving environmental problems, we understand that in other countries, it is possible to build a waste recycling plant at the municipal level, issue infrastructure bonds, attract the necessary funding from the market, and pay back the population for the extra-budgetary resources it has provided. We do not have these kinds of opportunities yet. Today, our stock markets and mechanisms for attracting extra-budgetary funds from the population do not actually work. This is the main problem, which is related to the fact that the entire financial system may require reform in order to strengthen, in particular, the municipal government and specifically the authorities in whose regions we observe today's massive pollution and serious environmental problems. This topic is very important because it is system-wide.

We need to create a future for our children; we should teach them intensively and consistently how to manage resources and how to treat the environment. This topic is also very important. We must consider our geography. It should be borne in mind that there are also areas of permafrost in Russia, where we are faced with problems not familiar to Europe or many other continents. When we talk about green energy, about enhancing the role of this resource in our economy, we must bear in mind that no matter how much we try to increase it, traditional sources will always remain key for us. I must stress that, when speaking in Hanover, the Minister of Energy said a very interesting thing: we do not want to remain on the periphery of this interesting area. We will actively engage in renewable energy sources, and we will make every effort, because without such energy conservation, we will have no environment. Smart homes and smart

networks are the areas that we now see as the main objects of focus, due to the fact that we understand that the existing formats are no longer able to provide the necessary growth for our economy.

E. Lazko:

Thank you. Michael Akim.

M. Akim:

Thank you. Here, the Minister has already mentioned the fact that this issue concerns the whole world. There are multinational companies in the Russian market. I am not speaking on behalf of ABB (Asea Brown Boveri Ltd.); I am speaking from the point of view of the community of international companies that are coming into the market and have brought this technology with them.

How do I see the problem? There is no system for studying the technology that these companies bring. If you look at the global trends – in fact, Russia is not unique – we can talk about urbanization, when 75% of the planet's natural resources are consumed in the cities, and when the 600 largest cities account for 60% of gross world income. This is clearly related to such things as buildings – which have already been mentioned – water, and transport. There is no need to reinvent the wheel here, because, for example, the highly respected company Fortum has implemented the use of biogas in Sweden ; we have developed and are implementing the use of an electric bus that is recharged at stations, and Mitsubishi is introducing electric vehicles. That is, the technologies exist, and they also come here through the Association of European Businesses. We need to create a platform for the study of these technologies. There should be the same thing from the Foreign Investment Advisory Council: there is a community of companies that exists in the market, but at this point there is absolutely no unifying platform to help reduce financial risks. Financiers will go where proven technologies are used. There is no need to duplicate technological platforms. There are European technological platforms, and there are Russian ones. If Fortum knows how to deal with solid waste, we should use their technology; it is not necessary to redevelop it. At the same time, of course, we need to study the

particular features of the country, because there are a number of technologies that are specific to Russia due to its geographical position. For example, there is micro-grid technology, the technology of independent generation: power generation directly at production sites. Let us create a single platform. Yesterday, people spoke about this in particular at the B20 session. We need to create a single technology bank. Thank you.

A. Chuvaev:

I would like to add something. We are talking about the micro-grid here, and about advanced technologies, but let us look at the space in which we live. In the words of James Rosenfield, our heat is generated by home-grown technology. On the basis of this heat, we can produce seven times more energy than we produce now. So, of course, all of these space-based technologies are very good, but let us look at what is happening at home.

With regard to money, I can say that the line of money is stuck. There are no clear long-term rules. People say that gas should grow by 15% by 2020, and everyone lines up for investment in energy; then they say that gas is expected to grow by 5%, and the power industry is left without money. That is, all we need is clear long-term rules from the Government: nothing more. Then the money will pour in; there is money all over the world.

E. Lazko:

Sergei, as the chief ecologist in our country, please summarize.

S. Donskoy:

This discussion was very interesting. The last remark should especially spur us to create clear rules. By the way, we are in favour of exactly that. Communicating with you, the representatives of business and science, we are now working these rules out. So, many thanks to all the participants. We are counting on your full support. Thank you.