

IGOR YURGENS

Scientific Director of MGIMO Centre for Sustainable Development and ESG Transformation

Valérie Ducrot, Executive Director of Global Gas Centre

I will now give the floor to Igor Yurgens, who will give us some highlights of what is going on in the Russian Federation. Thank you.

Igor Yurgens

Thank you very much. I represent Moscow University of international relations, so I will be talking more about educational aspects of the sustainable development rather than energy and environment. I would like to underline that after long period of reflection and hesitation Russian Federation committed itself to reach net zero by 2060. It presently adopted the national plan of decarbonization and major Russian public and private companies did the same. You can appreciate the challenge to accomplish such obligation when 60% of the foreign trade, 40% of the budget and 20% of the GDP of Russian Federation essentially consist of hydrocarbons. To accomplish such task will require the restructuring of the whole national economy.

After the beginning of the conflict with Ukraine 24 February 2022, one would expect major corrections in such plan. Surprisingly enough steady movement to reach the targets is still underway. The decarbonization plan was finally adopted by Russian Government in 2021 and it previews 70% reduction of the emissions from 1990 level. Then further institutional values followed: national green taxonomy, energy strategy until 2035, energy efficiency national plan, Federal law on emission regulation, hydrogen energy national roadmap, the Strategy of the development of the Arctic zone and so on.

I should also mention the active role of the Central Bank of Russia, which is empowered as the megaregulator of all financial markets. It introduced the concept of the annual non-financial reporting of Russian businesses for the purposes of promotion of the ESG standards, helped to organize Green Platform of the Moscow Stock Exchange and actively follows the recommendations of G-20, Global Sustainability Standards Board (GSSB), Global Reporting Initiative.

I should mention some large-scale decarbonization projects in Russia. One of them is the carbon neutral island of Sakhalin. The project started in September 2022 and will be carried until 2028. Carbon neutrality should be reached by 2025. 30% of the island energy should be produced by wind. Forestation should be increased by Carbon Capture and Storage Technology, CCS. By 2025 public and private transportation will use 10 000 electric cars and railway becomes hydrogen driven.

Similar plans are quite realistic in Kamchatka peninsula due to enormous reserves of geothermal resources.

In terms of business, surprisingly enough, despite of all the sanctions and the pressure on Russian businesses, private and public, an ESG alliance has been built up by the 30 largest companies. They are working hard on the non-financial reporting, on green financial instruments and on trying to clean themselves up in accordance with the sustainable development criteria. I can tell you that in most of those companies you can see a pretty sensible plan for decarbonization.

I would like to reiterate one thing: the restructuring of the Russian economy, which depends so much on hydrocarbons, on this scale would need extra efforts. The plan, which was worked out for the future is the production of green and blue hydrogen, both for domestic purposes and, since this issue, was mentioned, for export. On the island of Franz Josef, which is at the extreme north of the Russian Federation, they started production of the green hydrogen. The idea of using Nord Stream 2 as the pipeline, which would pump hydrogen to Germany, was widely discussed. Before the crisis, before the start of this tragic war, they really played with this idea, but we know what happened to Nord Stream. However, if I understand correctly, the technology exists.

Russia actually has to start renewables from scratch. We had such cheap gas, oil and coal that we didn't have motivation to use other sources. However, I would say that the prerequisites are all there. Yakutia, which is in the extreme north of Russia and which has temperatures of minus 40 degrees in winter, has more sunny days than France, for example. Russia is a pretty solar area. Winds are no problem at all and of course, plenty of water is available. From this point of view, 20% of the world production of hydrogen was the target for the Russian Federation according to this decarbonization plan.

Renewables – wind, solar and tides – I think account for no more than 2% of the energy balance in Russia at the moment. However, people are starting to do all of these pilot projects in big parks and, surprisingly enough, especially among the younger generation, people are very enthusiastic about it. I mentioned the ESG alliance, but we also have different initiatives, including a coalition for the sustainable development of Russia, a big organization of young people with bright eyes. In spite of everything else, they fight for their causes.

At MGIMO, my university, together with UNESCO, we introduced the program of ranking of Russian regions in the achievement of sustainable development goals. Top three are Moscow, Belgorod and Murmansk and the worst three are the areas with the lowest regional GDP. Therefore, the interlinking between poverty and richness is obvious in sustainable development, like elsewhere

We organized the Priority 2030 program of the sustainable development. This is a federal academic leadership program. MGIMO is in the center, but Rostov, a southern federal university in Russia, is dealing with agricultural aspects of sustainable development and St. Petersburg University is dealing with the Arctic area and with the hydraulic aspects of the permafrost.



The Russian position on the COP 27 was that gas is a transit energy and nuclear is a green energy. We try to develop methodology, technology and science in this field. In the nuclear field, academia works hard on such programs as mini nuclear reactors and on waste disposal and reprocessing. They have advanced pretty well. If you look at the research in the United States and in Russia on the same subjects you feel that people are going in the same direction at more or less the same speed.

We have our advantages. and the time will come when Russia will come back to the civilized world with its own ideas on the general balance of energy and with some results. Believe us, there are people who think about the future in my country regardless. Thank you.

Valérie Ducrot

Many thanks, Igor, for your comments and your honest presentation. Friedbert?

Friedbert Pflüger, Director of the European Cluster for Climate, Energy and Resource Security (EUCERS) at the University of Bonn, Founding Partner of Strategic Minds Company GmbH

Igor, I think that we all hope that this will come soon. I mean Russia is there and will remain there. It is a huge country and, as you said, it has many, many people who were not in favor of the war and who had great projects. I had a project with my company with Wolfgang Schüssel and Anatoly Chubais for greening Russia. I had a contract with Rosatom on how to treat used nuclear fuels in a way called transmutation and partition. Unfortunately, and this is the tragedy of this war, all of this got killed. All of this wonderful cooperation got killed. Now, as we just heard from Franklin Servan-Schreiber, it is European companies that have to do that. Rosatom was in the lead, but now others are coming in Europe with great speed.

Igor Yurgens

We should think about some academics, yes.

Friedbert Pflüger

The point, however, is not who is first and the competition. What is important is really to take nuclear, a new generation of nuclear, as a green energy source, and that is possible the moment we understand that there is a chance to get rid of large parts of these nuclear fuels, and there are technologies in the world to do so, and I think we should be much more open than the green movement all over Europe is today to nuclear, with the exception of France perhaps. In general there is still a lot of skepticism and I think we have to overcome that in the new generation.

Valérie Ducrot

Thank you, Friedbert. Igor, do you want to reply to Friedbert?

Igor Yurgens

Thank you very much. We started with Wolfgang Schüssel from Austria, an ex-chancellor, and Anatoly Chubais, who was a special representative of President Putin for sustainable



development. I was also involved. I know that your organization was involved. We met in Salzburg. It was very good meeting. I am not an engineer, but essentially if we talk about the nuclear waste, they made it reusable and then the waste goes to a depth of 150 meters, where uranium was found. That is to say, it reproduces itself in the soil. It is simply said, but very difficult to actually do it. We and the Americans were doing the same thing.

Valérie Ducrot

Thank you, Igor. Narendra, yes, please.

Narendra Taneja, Chairman of the Independent Energy Policy Institute of New Delhi, Founder President of the World Energy Policy Summit (WEPS)

I just have a small, brief question. You talked about mini reactors. Could you elaborate? Are the mini reactors being talked about being developed in Russia different from smart reactors being talked in the US and in the western part of the world?

Igor Yurgens

It is probably a different name for the same thing. You create a reactor which can take care of 500 houses or something like that for the supply of electricity. I do not know whether it is called smart or mini, but we call it mini in Russia. It is probably called smart in the United States.

Valérie Ducrot

Sir, yes, please.

Franklin Servan-Schreiber, Co-Founder and CEO of Transmutex

That is kind of my field and I am a great admirer of the Russian effort in nuclear. I would like to state that Russia is so essential to the nuclear world in Europe and in America that it is not under sanction. Rosatom is so essential it is not under sanction. What happened in Russia for small modular reactors – it is not really called smart, it is a small modular reactor, which is similar – is for heat they put it on a barge. It is so difficult to build in the far north of Siberia that they put it on a barge and then they drove it during the summer and it delivers heat. In fact, that is probably the best use of nuclear power, to deliver heat, which is 50% of our energy consumption. Everybody talks about electricity, but in fact we should talk about heat and nuclear is the best for that. Thanks.

Valérie Ducrot

Thank you for your insightful comment. Are there other questions? Please sir.

Bayu Krisnamurthi, Associate Professor in the Department of Agribusiness the Faculty of Economics and Management of the Bogor Agricultural University, former Vice Minister of Trade and former Vice Minister of Agriculture of the Republic of Indonesia

Much has been said about the production of energy, but we probably also need to talk about the consumption side. You mentioned about heat and of course electricity and transportation,



and the point about the demand side is it is very difficult to change because it is related to households, small enterprises, people in the village and so forth. I wonder, therefore, if all the panelists could maybe share how we see that, how we see the changing and how we should direct the changes in terms of the demand side of energy to become renewable.

Florent Andrillon, Global Head of Sustainability Services at Capgemini Invent

We work a lot on energy demand and actually a good solution to that is high energy prices. So far, that is the best way we have found to make people care about energy and to try to decrease their consumption. We have been doing a lot of projects where we were trying to deploy apps for advice for energy retailers so that people share best practices and reduce energy consumption, but we have seen recently that actually the best lever to get people to reduce energy demand is that the price is high and they suddenly have to manage their energy very efficiently. Likewise, on the B2B side as consultants we have a huge number of requests from our clients, who suddenly are trying to be much more efficient and sober in energy and they ask us to completely revise their industrial processes, to deploy a lot of capture sensors to reduce or optimize their energy demand in order to reduce or optimize their bills a bit. There is an increase in all the technology around energy efficiency.

The latest topic is that of corporate PPA. There is an increasing demand for green energy. At first, it was to reach targets on climate change, renewable energy commitments that a lot of companies have taken, but a lot of players are also seeing this as a way to have part of their energy bill controlled, because when you sign a corporate PPA you sign it for 10, 15 or 20 years and you have a clearer view of the future on the electricity price or gas price of this sort of corporate PPA.

Valérie Ducrot

Thank you for your comment. Before I give you the floor, I just want to make a comment on what you said. When we are talking about reducing demand, again, it is a northern conversation. If we think of the South, there are billions of people who do not have access to energy and do not have access to electricity. In South Africa they are in blackout two hours a day, and there are many examples like this. We, therefore, have to be careful. If we want to live in a better world we have to increase our production of energy and electricity. That is the topic. For sure in Europe we live in the context that we are now in, but we have to be careful of the conversation globally.

Florent Andrillon

That comes back to the point. I agree with you. That is clearly a northern perspective. However, coming back to your point, not working on energy efficiency in Europe leads us to import energy and deprive it from where it should land in other continents. I think, therefore, we should not oppose North and South. It is a global perspective, keeping in mind that energy access is clearly a topic in most parts of the world.

Valérie Ducrot

I want to add something and make a comment on what you said. Yes, it is a northern conversation, but we have to be careful, while energy demand is decreasing, of the economy

and recession that could also be the consequences. Therefore, we have to be careful on this wording as well. Sir, do you want to add something?

Nicolas Piau, Co-Founder and CEO of TiLT Capital Partners

Yes, that is actually more my field and I think you are absolutely spot on, because I think when we are talking about the energy transition probably the biggest, I am not going to say fallacy, but probably the hidden spot is that we have all focused on energy production. The reality is that this transition means that we are having more distributed and intermittent energy. Coming back to Mr. Appert's point, this means that we need to manage the grid, and when I say the grid it is not only transportation, but it is distribution and low voltage. To your point, it is not a North or South issue. It is the market design and the way we run energy. That needs to be thought through all over again and very differently because if you are in a village, for example, and I have done a project like that in Africa, in Tanzania, building a microgrid is much more complicated than we think and much more complicated than just saying, 'Okay, we put a generation unit and we distribute and someone consumes', because you need to manage the consumption to be able to manage your grid to avoid having failures on it. I think you have a very spot on point on this element of demand.

Valérie Ducrot

Thanks for the comment. Yes, please, you have the floor.

Bayu Krisnamurthi

Yes, I learned from experience. Indonesia is an island country with more than 15 000 islands. A grid is out of the question for many of our islands. I think back to our colleagues from India, decentralization of energy in terms of energy production, as well as energy consumption, is essential. Listening to all of you, I can just imagine an island in Indonesia. We will jump from using wood maybe directly to the mini nuclear technology, just imagining things, because, again, that is something that really needs to be put in perspective. I am probably still dreaming, but that is probably the way.

Valérie Ducrot

I would add natural gas as well. You have a lot of projects in Southeast Asia and on floating LNG, which are very important. If I take the example of the Philippines and your country, that is an important topic we have not spoken about. However, natural gas has its role in energy transition and access to electricity is essential. Other questions? Yes, please.

Narendra Taneja

I just have two quick points. You see, when we talk of conservation there are two sides of conservations. One is of course what we can do in terms of true conservation, like in India only recently regarding bulbs. LED bulbs are supposed to help in the conservation of power, so the government came out with an initiative and this was initially subsidized across the country. The government was buying literally billions of bulbs and just passing them on to the consumers, heavily subsidized, and that really helped us to change a) the pattern, b) the habit

and c) the consumption, so LED bulbs, and today India is of course kind of a leader in LED bulbs.

However, there is another side of conservation. I mean there are 3 billion energy poor on the planet. There are 1 billion energy poor just between Afghanistan and Burma. The majority of them are of course in India. What do I mean by energy poor? They are the people who have very limited access to electricity, maybe one bulb, a mobile charger, maybe a small portable or a small television set, and they spend half of their evening switching off half the world. When they move from one room to another the family makes sure that they switch that off and the family is all assembled in one room to save electricity because they cannot afford the bill. In India there is a power surplus today. We have 400 000 megawatts of installed capacity, so we call ourselves in power surplus, yet we have 700 million people who are energy poor because they do not have the means, money, to pay for it. That is the situation. There is a power surplus on paper, but with 700 million energy poor because they do not have money or paying capacity. That, therefore, is the dilemma.

For instance, it is like telling somebody who actually only has access to two pieces of bread to conserve bread. 'Come on, I am only getting two pieces, so what do I conserve?' I think it is extremely offensive to even talk about it for those 3 billion people on the planet. The same is true, for instance, when I talked about LNG earlier, a ship going to Bangladesh and being diverted. There was an argument given by one of the energy ministers from this part of the world saying that, 'Oh, that is not a worry. We have got long-term LNG contracts and 80% of LNG globally is actually shipped through these contracts'. I said, 'Fine', and I was in a conversation with the honorable minister, but the fact is that these contracts are not the Bible or anything. These can be renegotiated, and we have seen this with Qatar. Four years ago, when the LNG prices dropped, China insisted and Qatar agreed to renegotiate a 15-year contract. China put the pressure and Qatar agreed. You know what happened after that? We sent a delegation to Doha and we asked for the same thing. Initially they said no, but they agreed. This 80% of the global supply of LNG is through contracts. To say that these are sacrosanct, these are a Bible and they cannot be reopened, they can be reopened. If Germany, France, Europe or the North pays more money to an LNG-exporting country of course, by all means, they will be renegotiated. The price will also be renegotiated. That is the danger. That is where the question is of governance and that is where the question of ethics is.

Just a last point on nuclear, when we look at India's energy mix the share of nuclear power is 2%, and we have been working on nuclear power since we were born as an independent country in 1947. We had already set up a commission for nuclear power one year before independence, but still the share is only 2%. We collaborate with Russia. We have our own initiative, including one based on thorium. That is a fast breeder reactor based on thorium. We are working on it and we have got a small one already. We are now also buying from France. We are buying a 10 000-megawatt nuclear farm from Westinghouse in the US and so on and so forth. Yet there are many challenges: the fuel and nuclear waste and so on and so forth. Therefore, nuclear is probably the future. That is how I also look at it. I think 2060 and beyond – many of us will not be around – is all going to be about nuclear power one way or another. Why and how? Because my sense is that nuclear by that time would become more affordable,

for instance, and all of these complexities will probably be history. Then solar power would probably be more commercially viable and easier to operate.

There might be a few questions, like what my friend talked about with the minigrid, so distributed solar. Distributed solar is also a huge challenge in India. We have done very well in solar in the last five years, but it is mainly power we generate and put into the grid. We are still struggling when it comes to distributed solar, including minigrids. However, my sense is that in 2060 and beyond nuclear is going to occupy a substantial share of the energy mix. With solar it depends how you look at it. For the sake of fun, I can say that solar power is also nuclear power because the sun is a nuclear reactor. That is also indirectly nuclear power coming from a reactor created by nature.

Thirdly, of course there is hydrogen. However, like some of my colleagues pointed out, there is a lot of hype these days in India with regard to hydrogen and especially green hydrogen. I am not yet buying into it. However, even if it becomes a huge success in the global energy mix, hydrogen's share is probably not going to be more than 10%, but I may be wrong. I am no expert on that. However, the overall picture when it comes to this, if we move in that kind of direction, the chances are we will be able to eradicate energy poverty and there will be more energy prosperity around the world.

Valérie Ducrot

Thank you, sir. I give you the floor and then we will move on to the last speaker, Marc-Antoine. Yes, please.

Hervé Mariton, Mayor of Crest, Chairman of the Franco-British Council, Chairman of the Federation of Overseas Companies (FEDOM)

Yes, sorry, but Narendra's remark on nuclear as long-term energy is interesting with the perspective that, if I remember well, Europe so far in its taxonomy considers both gas and nuclear as transition energies.

Valérie Ducrot

That is absolutely right.