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Statement

by

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at

Russia Energy Week

Panel: “Electric Power: Global Challenges and Opportunities”

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Your excellencies, ladies, and gentlemen,

On behalf of the UN Economic Commission for Europe (UNECE), I am very pleased to participate in this session on the global challenges and opportunities for electric power.

At UNECE we have just held the 30th session of our Committee on Sustainable Energy. One of the key themes was “Electricity as a Driver for Transformations”. So the topic of this session is very relevant. Our Committee explored how we might leverage a future electricity system involving widespread expansion into non-traditional end-uses for electricity, such as mobility, industrial processes, and space heating.

The Committee called out several fundamental realities:

- i. Not all countries take the same view of nuclear power, fossil energy even with carbon capture, hydrogen, and storage. All can provoke unending debate.
- ii. Electricity is shaping energy system transformations, both because electricity demand is growing, and because electricity generation is the source of most greenhouse gas emissions.
- iii. The power system needs to deliver demand flexibility given the growth in intermittency and the emergence of distributed generation.
- iv. Achieving real transformations will require a holistic approach involving accelerated deployment of a range of approaches – one size does not fit all!

Since the late 1960's, growth in electricity demand has outpaced growth in the use of other forms of energy, and a greater share of primary energy has gone into electricity generation. The underlying reason is quite simple. Most new uses of energy are electric, and most new services demanded by customers are best provided through equipment that uses electricity.

Infrastructure for electric mobility is being established: charging stations, battery factories, electric vehicles. They are considered important parts of the solution set. However, going electric will not necessarily reduce the carbon intensity of transportation, unless and until electric generation is decarbonized. The same logic holds for industrial processes and space heating. Decarbonization will involve emphasis on low- or no-carbon energy sources such as renewables, nuclear power, or fossil with carbon capture. Affordability, reliability, and resilience remain priorities for energy markets, and yet we must address the climate challenge.

The result of today's trends, however, is a very strong growth in demand for electricity. This will impose greater dependence and stresses on electric infrastructure. Digitalisation and electrification will put a huge burden on resources, notably for critical raw materials. This highlights a need for sustainable resource management and circular economy.

I would like to raise several themes that I consider to be important.

- i. We must remain:
 - agnostic on technology,
 - pragmatic in our policy deliberations,
 - and sensitive to the social dimensions of transformation.
 - ii. UNECE is working to develop certificates of origin for hydrogen, so that purchasers can be assured of its sustainability credentials. The same approach could be applied equally to other energy forms.
 - iii. We are exploring concerns related to subsidies: Not only fossil, but all forms of production and consumption subsidies. While the rationale for instituting subsidies might be at the outset, often, subsidies are badly conceived and implemented. Inevitably, they endure beyond their initial premise. Reforming the pricing of greenhouse gases and subsidies would contribute to the long-term
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goal of an effective and transparent global framework for energy markets.

- iv. Finally, I would like to mention a fallacy in the world's energy statistics. Everyone “knows” that electricity is at the origin of a significant share of greenhouse gases. What is often missed is that most electricity is used in buildings. UNECE has developed principles for “high performance buildings”. These allow us to reduce buildings' energy requirements to a point at which they can be met with low- or no-carbon energy sources. We seek country commitments to achieve superior performance in buildings.

I would like to thank you for your kind attention and invite you all to engage with the activities of our energy sub-programme.
