Promoting stable and effective use of renewable power in North-East Asia International cooperation and Russian experience

ESCAP-GTI Seminar on Energy Cooperation in North-East Asia:
Regional Power Trade and Connectivity in North-East Asia
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Russian Government Objectives for Green Energy

- Main directions of state policy in the field of **increasing energy efficiency** of the **electric power** industry based on the use of renewable energy sources (RES) have been **extended and adjusted until 2035**
- The document updated values of target indicators for the volume of production and consumption of electricity, as well as clarified target indicators for the export of renewable energy equipment
- Adjustments were required in connection with the earlier decision to **extend the state program for supporting renewable energy sources until 2035**
- By this time more than 12 GW of generation capacities based on renewable energy sources will be commissioned
- Total amount of **state support** for renewable energy projects until **2035** will reach **360 billion rubles (US$4899 million)**

Order of June 1, 2021 No. 1446-r Russia 2021
http://government.ru/news/42377/

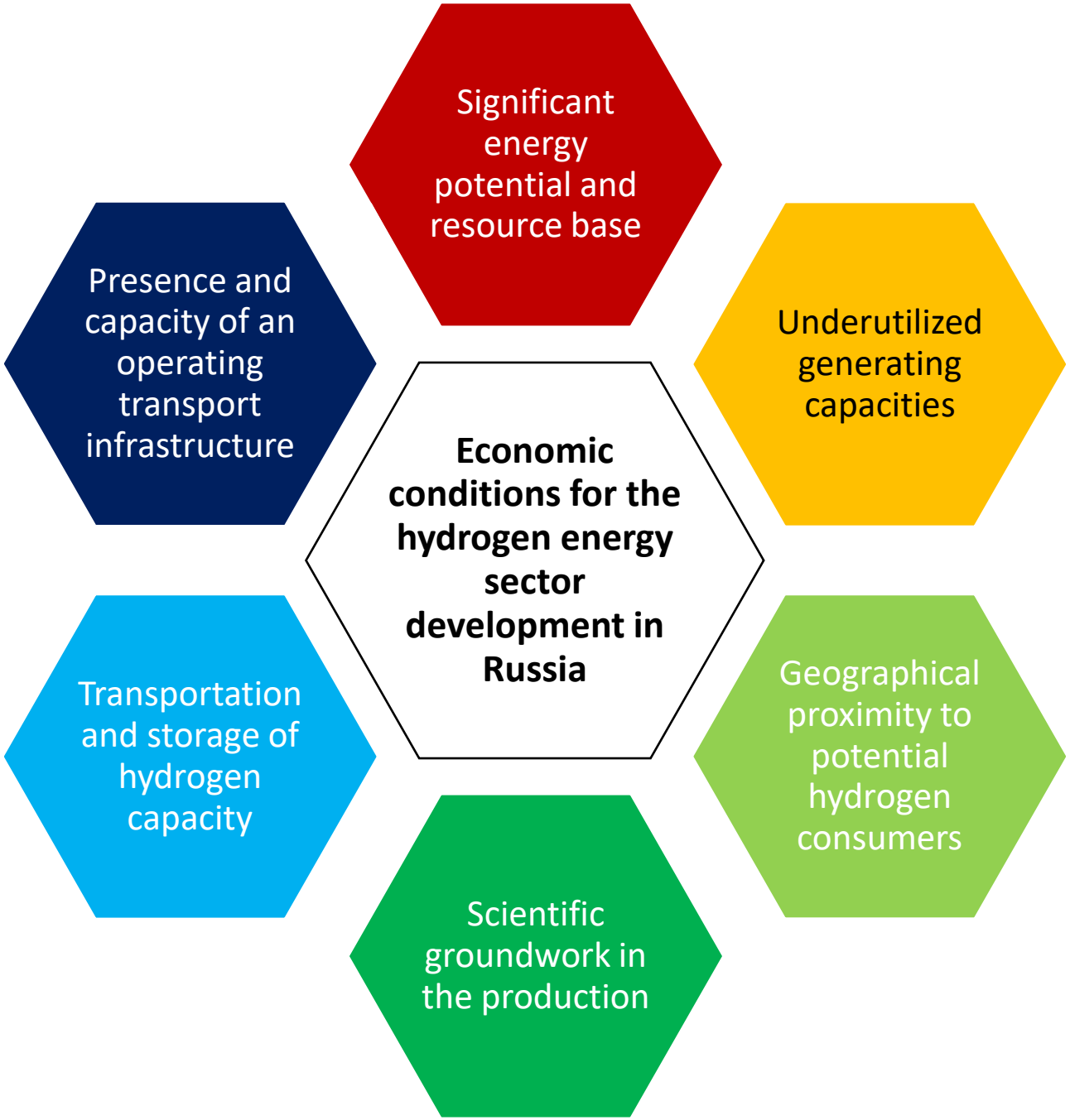




Russian Hydrogen Power Policy

- By order of the Government of Russian Federation of October 12, 2020 No. 2634-r, an action plan ("roadmap") for the development of hydrogen energy until 2024 was approved, aimed at increasing production and expanding the scope of application of hydrogen as an environmentally friendly energy carrier, and also the country's entry into the ranks of the world leaders in its production and export
- In Russia, the task of developing hydrogen energy is enshrined in the key sectoral strategic planning document - the updated Energy Strategy of the Russian Federation for the period up to 2035.

https://minenergo.gov.ru/node/19194, October 2020


Significant energy potential and resource base
Underutilized generating capacities
Geographical proximity to potential hydrogen consumers
Scientific groundwork in the production
Transportation and storage of hydrogen capacity
Presence and capacity of an operating transport infrastructure
Economic conditions for the hydrogen energy sector development in Russia

Action plan for the development of hydrogen energy

- Development of domestic low-carbon technologies for hydrogen production by conversion methods, methane pyrolysis, electrolysis and other technologies, including with the possibility of localising foreign technologies
- Increasing the scale of hydrogen production from natural gas, as well as using renewable energy sources (RES), nuclear energy
- Developing and implementing measures of state support to create infrastructure for the transportation and consumption of hydrogen and energy mixtures based on it
- Stimulating demand in the domestic market for hydrogen fuel cells in transport, as well as for the use of hydrogen and energy mixtures for energy storage devices and converters to improve efficiency of centralized energy supply systems
- Creating regulatory framework in the field of hydrogen energy safety
- Intensify international cooperation in the development of hydrogen energy



Cooperation in the field of electricity and hydrogen technologies in Northeast Asia

The problem of integrating renewable energy sources into energy supply systems is associated with a number of limitations: the unpredictable mode of operation of these sources, need to maintain the balance of production and consumption of electricity, need for significant investments in the development of electrical networks, long-term storage of energy, etc.

This should trigger a wave of international initiatives related to mechanisms:



For ensuring **safety standards** in the energy sector at the stage of commercialisation of hydrogen technologies



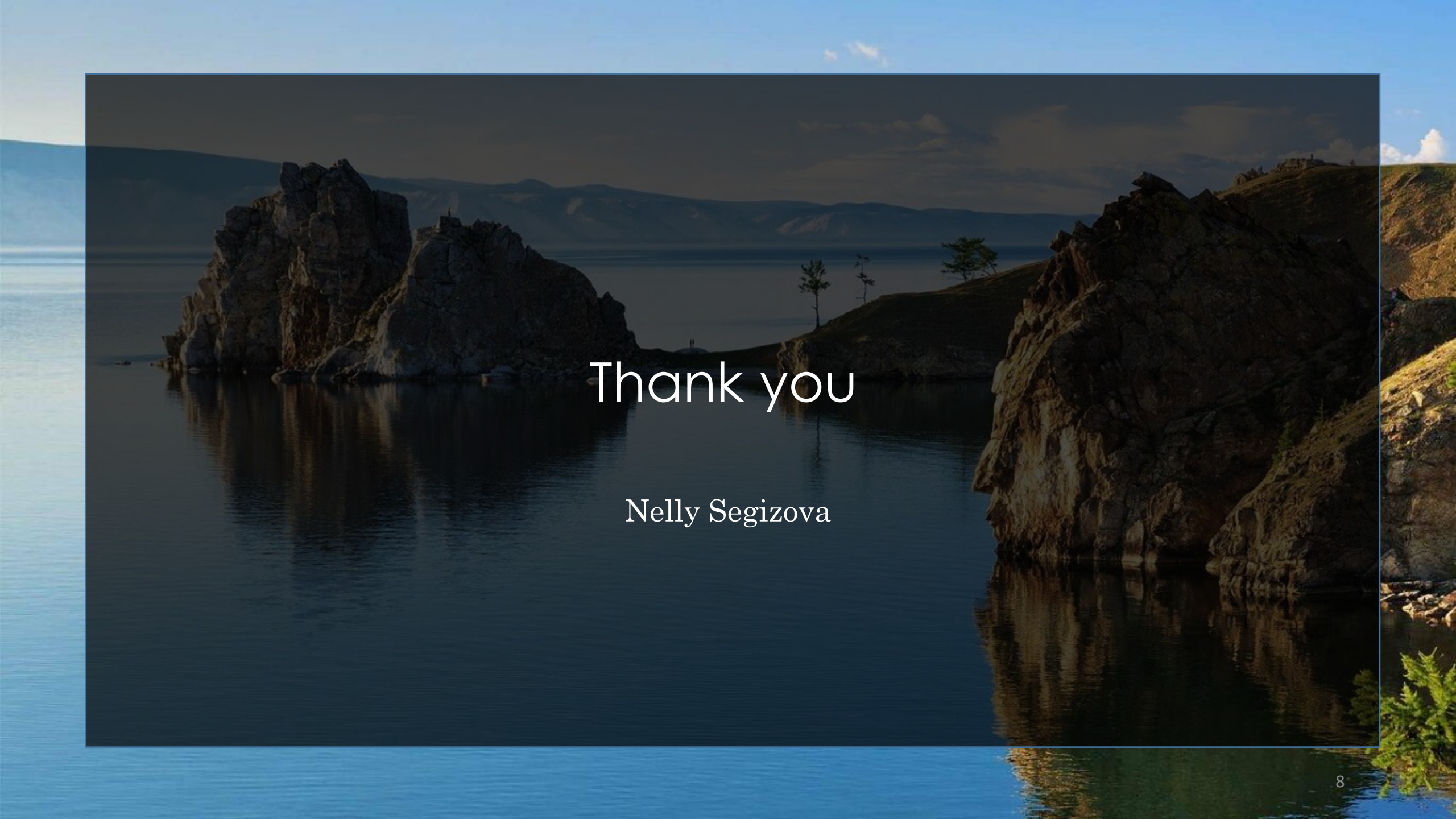
Overcoming challenges of **reducing the environmental impact** of energy systems, which are not limited to reducing greenhouse gas emissions



Achieving the goals of the **energy transition by increasing security** in the field of energy and reducing the negative anthropogenic impact on the natural environment

International cooperation in NEA

1. One international energy initiative can combine different goals, have several methods of achieving them and relate to different energy carriers.
2. Based on the technical possibilities of using hydrogen in the electric power industry, international initiatives already existing in Northeast Asia can consider these technologies as a means of seasonal energy accumulation and management of the operating modes of energy networks.
3. Certification procedures for "green" energy carriers (electricity, hydrogen) can be included in the agenda of existing initiatives and have areas of intersection.
4. Russia has accumulated significant practical experience of multilateral cooperation through projects of creating an international infrastructure for gas pipelines in the region. It is worth intensifying studies of Russia's possibilities to participate in the creation of electrohydrogen infrastructure in Northeast Asia, as well as to strengthen interaction at all levels and international communication with the countries of the region on the problems of energy transition.


Thank you
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