



NATIONAL RESEARCH  
UNIVERSITY

MINISTRY OF ENERGY  
OF THE RUSSIAN FEDERATION



# Current Renewable Energy Priorities in the Russian Federation

presented by

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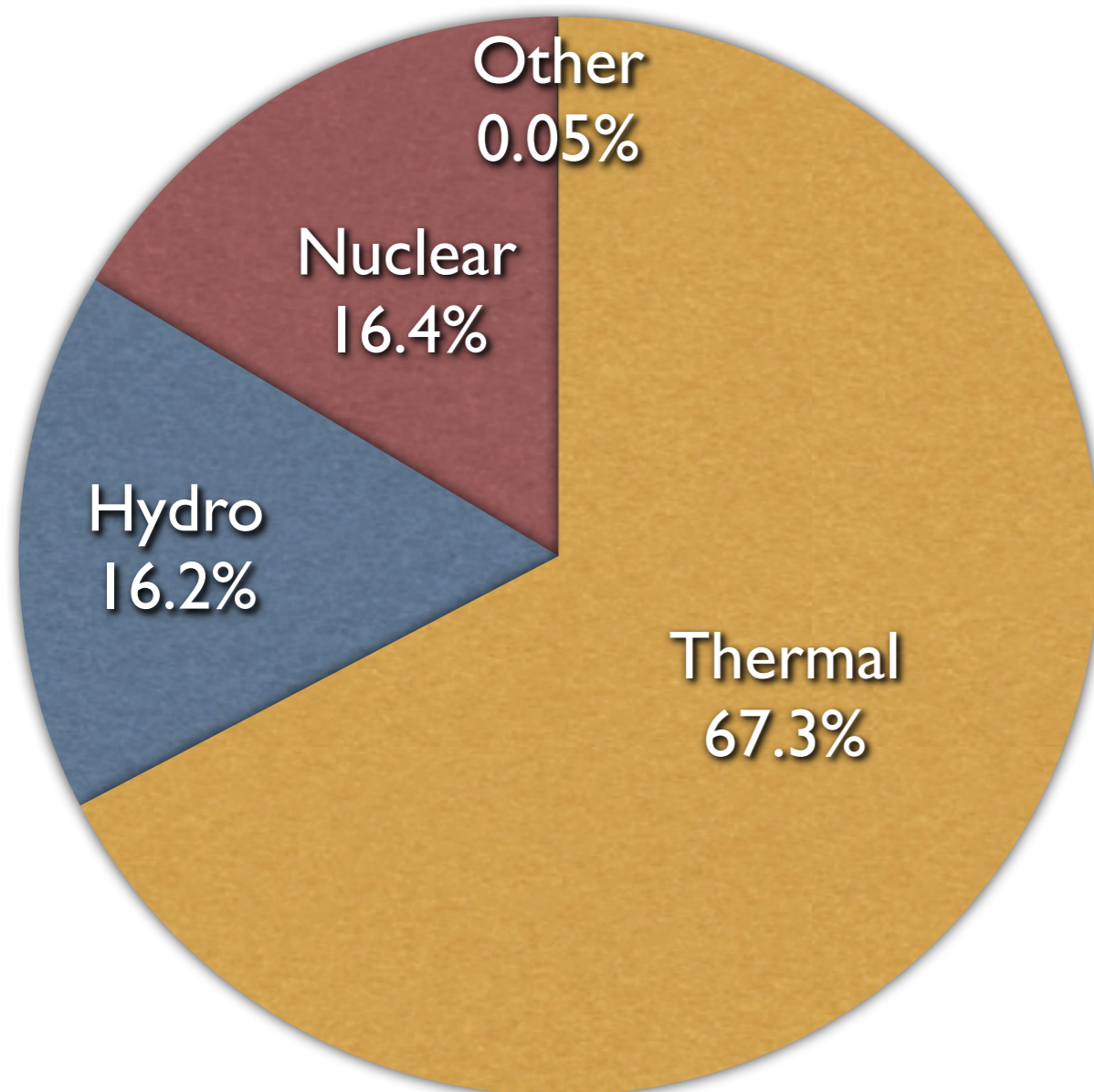
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## Energy Generation in the Russian Federation, by Type of Power Plants, 2010



- *Other* power plants = *Renewable* energy, 0.5 MWh or 0.05% of total electricity output in 2010
- With small hydro plants (not exceeding 25 MW) included, *Renewable* energy accounts for ~ 1% of total electricity output

Source: Federal State Statistics Service, Russian Federation



## Role of renewable energy in Russia

- Traditionally, Russia paid little attention to developing renewable energy
- Certain considerations have recently prompted Russia to adopt a pro-active policy towards green and renewable energy:
  - need to support enhanced energy efficiency of the Russian economy;
  - requirement to better protect the environment by reducing emissions and fighting adverse climate change;
  - uptake of advanced technology and promotion of innovation in energy generation, facilitated by international cooperation.
- Current overarching policy objective is to raise the share of renewable energy in total energy output:
  - to 2.5% by 2015;
  - to 4.5% by 2020.



## Strategies and policies

- 2009-2011: policy objectives and priorities set, legal framework updated
- Renewable energy policy priorities are often set in conjunction with energy efficiency and climate-related programs
- *Russia's Energy Strategy*: to be reviewed once every 5 years, current version of 2009
- *Guiding Principles of Government Policy to Raise the Efficiency of Electricity Generation Based on Renewable Energy Sources, until 2020* (adopted in 2009)
- *Government Program on Energy Saving and Enhanced Energy Efficiency until 2020* (adopted in 2010)
- *Climate Doctrine of the Russian Federation* (2009) and its *Implementation Plan* (2011)



## Russia's Energy Strategy until 2030

- 70 occurrences of “*Renewable energy*”
- The Strategy, in particular, states that:
  - increasing importance of renewable energy in addressing the public demand in energy represents an **essential trend in efforts to establish a more sensible fuel and energy balance**;
  - research and development in renewable energy is a **priority area of scientific and technical progress in energy sector**;
  - to meet the long-term objective for renewable energy generation it is necessary to put into operation new energy facilities with total capacity 25GW until 2020, including **small hydro plants, wind power plants, tidal plants, geothermal plants, thermal plants using biofuel and other types of power plants**.



## Guiding Principles of Government Policy to Raise the Efficiency of Electricity Generation Based on Renewable Energy Sources, until 2020

- Further elaborate government policy with a focus on renewable energy generation (objectives, target indicators, measures)
- Three types of measures required to achieve the target indicators:
  - **enhancing public governance in renewable energy sector**, including monitoring of target indicators, enhancing statistical reporting on renewable energy generation and consumption, updating the placement schedule of renewable energy generating facilities etc;
  - **government support to renewable energy producers**, including price margins, subsidies and compulsory purchases of renewable energy;
  - **infrastructure development**, including research, education, raising awareness and expertise in renewable energy.



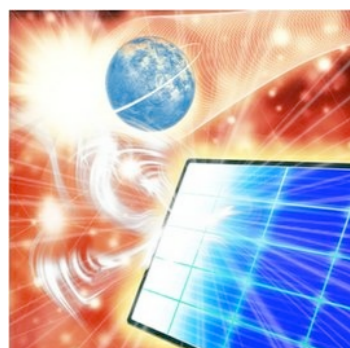
# Government support to renewable energy producers

- Government set up a Guidance on identifying the renewable energy generating facilities eligible for support measures
- Support measures include:
  - specific **margin on wholesale market equilibrium price** on renewable energy;
  - **compulsory purchases** of certain amounts of renewable energy by wholesale energy market participants;
  - **reimbursement of grid connection fees** to renewable energy producers and other financial support measures in line with the budget legislation of Russia.
- Support and incentive measures are key to successful commercial deployment of renewable energy - more to be enacted in 2011-2012



# Renewable energy for modernization

Renewable energy initiatives are a prominent feature of the modernization campaign in Russia:



- Renewable energy has been recently recognized as **one of the critical technologies of the Russian Federation**, according to a Presidential Decree on Priority areas of research and development and list of critical technologies (issued July 2011)
- Renewable energy as a part of energy efficiency activities is **one of the 5 priority areas of the Presidential Commission for Modernization and Technological Development**
- **Energy efficient technology cluster** in Skolkovo Innovation Centre







## Renewable energy by generation technology

- No clear preference in the Government programs for any particular type of renewable energy generation
- Traditionally, most popular types of energy generating facilities in operation are **hydro power plants and geothermal plants**, run by RusHydro Corporation
- Other types, **tidal and wind power plants**, are mostly experimental
- **RusHydro sees the largest potential** in wind and biofuel power plants
- **According to Skolkovo estimates**, the most feasible and attractive green renewables are solar energy and various types of biofuel



## Projected capacity of renewable energy generating facilities, by 2020, GW (RusHydro estimate)

