



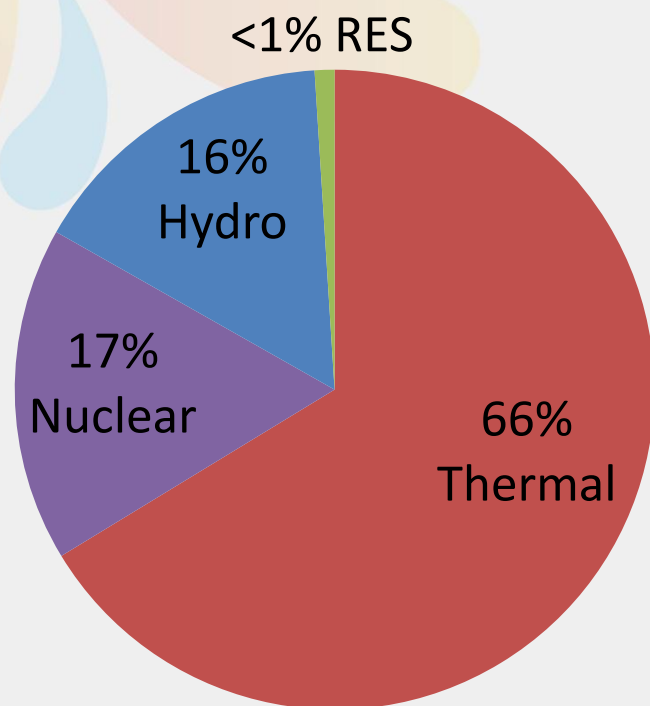
Российское
Энергетическое
Агентство

Renewable Energy in Russia: Current Progress and Development Perspectives

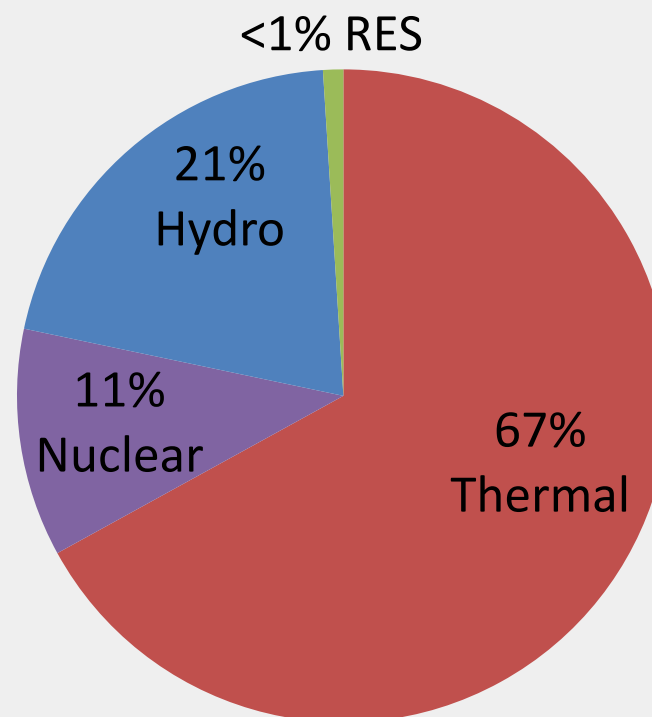
6th September 2012

Structure of Russian Capacity and Generation, 2011

Structure of electricity production



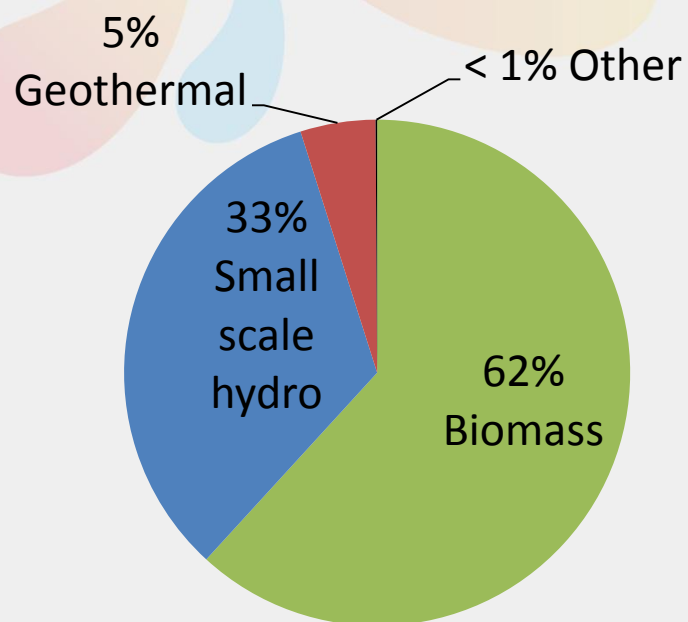
Structure of installed capacity



■ Thermal ■ Nuclear ■ Hydro ■ RES (including HPP up to 25MWe)

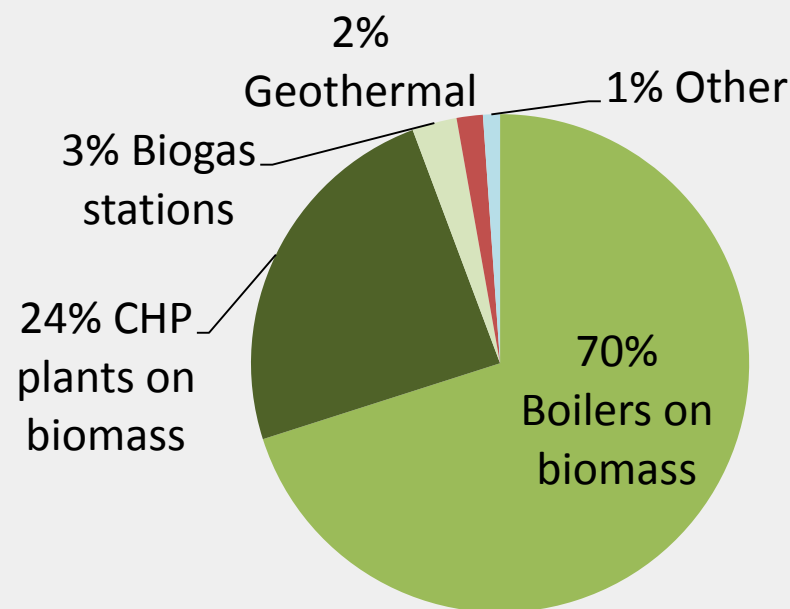
Structure of Electricity and Heat Production from RES in Russia

Structure of electricity production from Different RES in Russia, 2010



■ Biomass
■ Small scale hydro
■ Geothermal
■ Other

Structure of heat production from Different RES in Russia, 2010



■ Boiler houses on biomass
■ Biogas stations
■ Other
■ CHP plants on biomass
■ Geothermal

Renewable energy development factors:

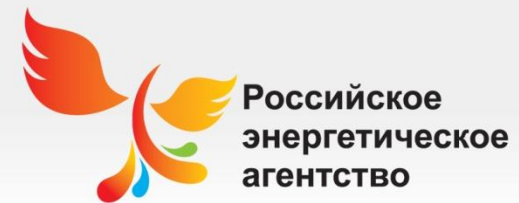
- Aging of the existing centralized electricity and heat supply system
- Low level of electric power and heat supply infrastructure in the remote areas
- Absence of a centralized gas-pipeline system on the whole territory of Russia
- Increase of tariffs on gas, electric power and connection to the grids and gas distribution networks;
- Necessity of handling of ecological issues (including waste utilization)



Development of RE
on the basis of local resources in a form of distributed generation

- Increase of security and quality of energy supply
- Exploration, technical and social development of remote areas
- Economy of state expenditures for high cost mazut
- Diversification of energy sources in the regions of Russia
- Synergy from handling ecological issues (including implementation of waste-to-energy technologies)

Key Milestones of Legislation Development in the field of RES



November 2007 – Federal Law No. 250-FZ introduced amendments to the Federal Law No. 35-FZ “On the electric power industry”. **Notion “renewable energy sources”** is formalized. The main principles of the RES support are stipulated.

January 2009 – Resolution of the Government of the Russian Federation № 1-p “On the guidelines of the government policy for enhancing energy efficiency of renewables-based electricity for the period up to 2020” implies **the increase of renewable energy sources share to 4.5% by 2020**.

November 2009 – Federal Law No. 261-FZ “On Energy Saving and Energy Efficiency Improvement” is aimed at setting up a legal environment to promote energy efficiency and foresees **increase of the number of generating facilities using RES**.

December 2010 – State program on “Energy saving and energy efficiency improvement until 2020” defines the objectives, funding sources and budget in the field of energy efficiency as well as RES.

24 April 2012 – the Integrated Program “Development of biotechnologies in the Russian Federation till 2020” identifies bioenergy as one of the priority directions of industrial biotechnologies development.

30 April 2012 – the Basic Principles of State Policy in the field of Ecology till 2030 identified the strategic goal to increase the share of waste reprocessing with generation of supplementary products (heat, power etc.).

RES State Support Provisions: Federal Law No. 35 & Federal Law No. 261

Federal Law № 35 “On the electric power industry”

- mechanism of **surcharge to the average price** of the wholesale electricity market;
- **certificates**, acknowledging certain power generation volume produced from RES, with the following compensation;
- mechanism of the **compulsory amount of electricity consumption**, produced from RES, for the buyers on the wholesale electricity market (mechanism of capacity selling);
- **priority purchase of electricity** from RES by electric grid companies is approved, in order to **compensate their process losses**;
- subsidies provision as **compensation for costs of technological connection to the grid** for generation facilities with installed capacity up to 25 MW.

Federal Law No. 261 “On Energy Saving and Energy Efficiency Improvement” and State Program

- **Subsidies to the Regions** of the Russian Federation to implement the regional Programs of energy efficiency and energy saving, including RES, – only for **Public (Municipal) Projects**;
- Provision of **state guarantees** on the credits taken in order to implement projects in the field of RES;
- Various fiscal measures (tax allowance, tax credit, interest rate subsidies).

New legislative initiatives

✓ Development of the draft **State Program “Energy efficiency and development of energy industry”** with **Sub-Program No. 6 on Renewable energy**, that foresees:

- Development of regional programs on RES and provision of the subsidies to the regional budgets for implementation of the regional programs, including co-financing of pilot investment projects.
- Allocation of federal subsidies to companies investing in RES generation facilities in order to compensate part of expenses for design and construction, including interest payment;
- Fiscal measures (estate tax exemption for RES facilities put into operation (up to 5 years), submission of investment tax credit).

✓ Development of the **Set of Measures for Stimulation** of Production of Electrical Energy by the Generating Facilities Functioning on the basis of RES

- Introduction of the mechanism of compensation of losses in electrical grids of the grid companies by priority purchase of electricity produced by the qualified generating facilities functioning on the basis of RES
- Introduction of the mechanism of the mechanism of capacity selling provided by the rules of the wholesale market for the selling of capacity of the generating facilities.

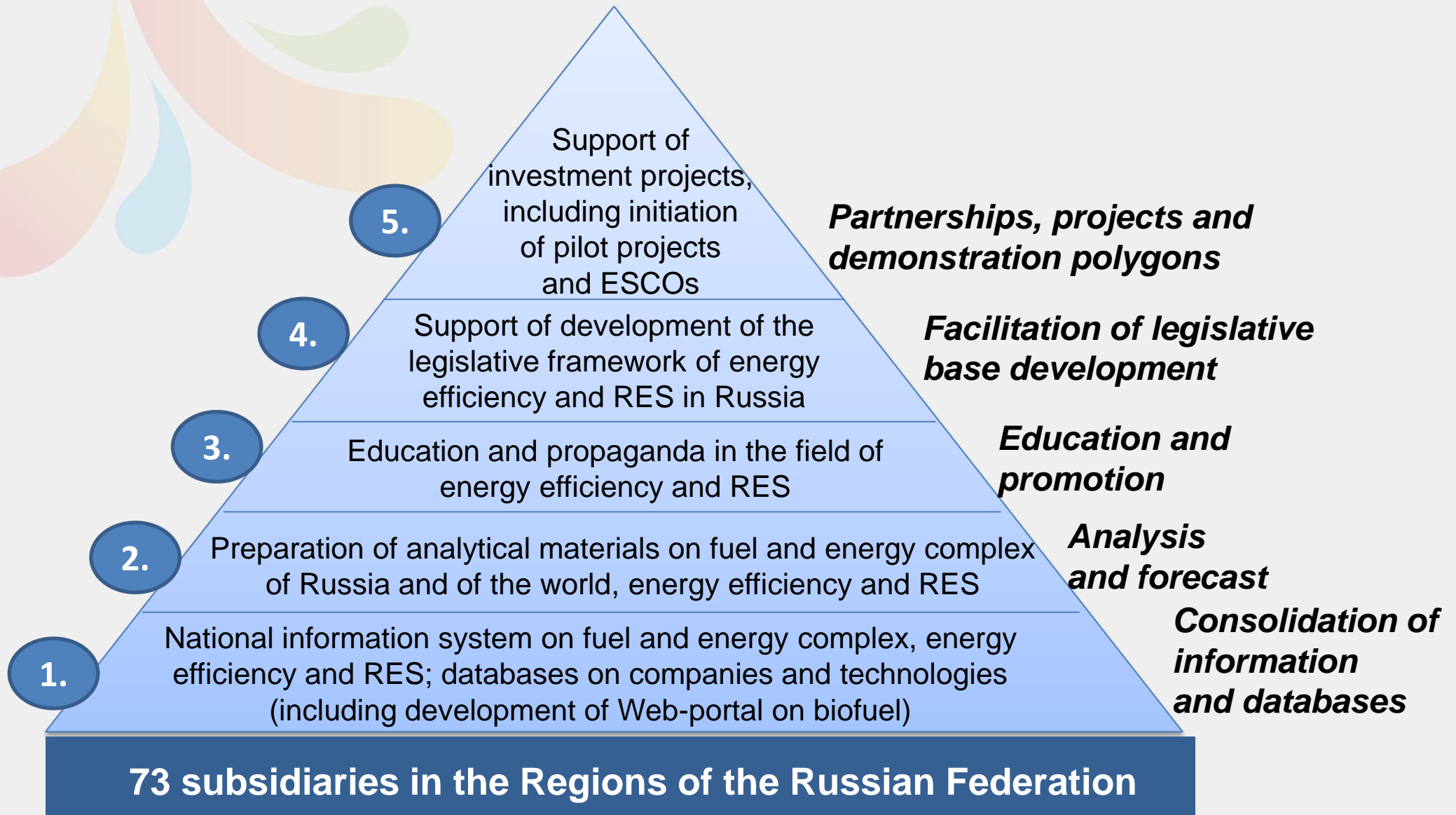
7 Challenges of RES Development in Russia

In the sector of RES in Russia there are the following challenges:










1. No trustworthy detailed statistical data;
2. Low awareness of the market stakeholders on the existing technological solutions;
3. Low level of legislative norms and procedures availability, no detailed standards for technologies and equipment;
4. Insufficient state support for RES;
5. Lack of standard technological solutions and replications;
6. Insufficient level of technical and economic expertise and lack of experience in the development of RES projects resulting in preparation of non-bankable projects;
7. No proper educational and training programs (capacity building) for **modern** expert knowledge: technologies, economics, finance specifically for RES projects

**Low market maturity vs. Huge potential
Large Room for Cooperation**

Russian Energy Agency: *five steps of RES development*



Concept of the Web-Portal “Investor’s Guide on RES in Russia”

	Solar Power 	Wind Power 	Minor Hydro-power 	Wave Power 	Geo-thermal Power 	Low Grade Heat 	Biomass 	Colliery Gas 
Investor’s Guide	<p><i>The main aims of the Web-Portal on RES creation in Russia – provision of up-to-date, reliable, relevant and complete information, statistical data and analytical materials on:</i></p> <ul style="list-style-type: none"> ▪ current state and technical, economic and investment potential of RES in Russia; ▪ federal and regional legislation in RES field in Russia, state support measures and programs; ▪ investment climate in Russia and investment potential of the Russian Regions; ▪ best available technologies of all RES types; ▪ successfully implemented projects (success cases), projects being implemented and planed projects in RES field in Russia. 							
Regions								
RES State Support								
News								
Events	<p><i>Target audience:</i> State and local governmental bodies, companies and organizations interested in RES investment projects implementation in Russia – potential customers, potential investors and technology providers for the projects in the field of RES in Russia, financial institutions</p>							
Education								

**THANK YOU FOR YOUR
ATTENTION!**

Olga Ulasevich

International Cooperation Division
Russian Energy Agency of
The Ministry of Energy of the Russian Federation

Tel.: +7 (495) 789 92 92, ext. 22 28
E-mail: ulasevich@rosenergo.gov.ru