



Sustainable Energy
Development



International
Cooperation



Ecology & Climate



Energy Efficiency
& RES



Education



Publishing



Exhibitions

World Science Forum

Thematic Session “Renewable Energy for Global Sustainability”

Budapest, 6 November 2015

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International Sustainable Energy Development Centre
under the auspices of UNESCO

Sustainable Energy for All Initiative



SUSTAINABLE
ENERGY FOR ALL

- 1) achieving universal access to modern energy services
- 2) doubling the global rate of improvement in energy efficiency
- 3) doubling the share of renewable energy in the global energy mix

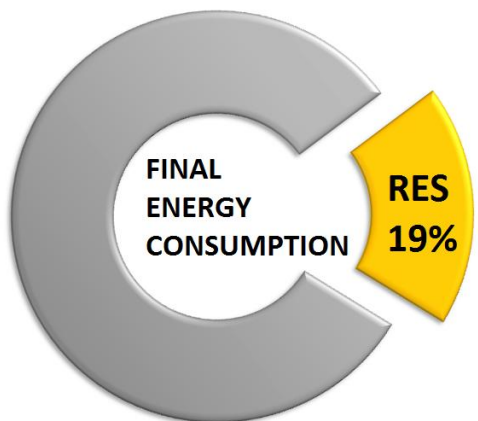
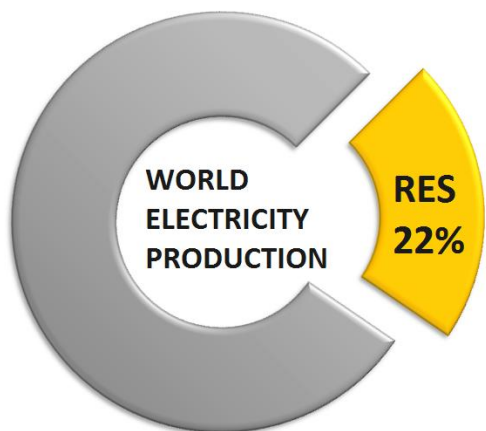


Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

By 2030, increase substantially the share of RE in the global energy mix



**SUSTAINABLE
DEVELOPMENT
GOALS**



2003 – 2013

the use of RES has increased in 4 times

140 countries
have formulated
target indicators for the development of RES
till 2020 and for the longer term

According to various forecasts, it is assumed that the total share of renewables in the global energy mix by 2030 will be from 25 to 35%

Factors of progress of RES development



relatively high (for that period) prices on traditional energy resources



the desire of importers to diversify their sources in order to enhance energy security



restriction of the environmental regulations



active promotion of policies and measures on expansion of renewable energy in a number of developed countries

Investment in RES development

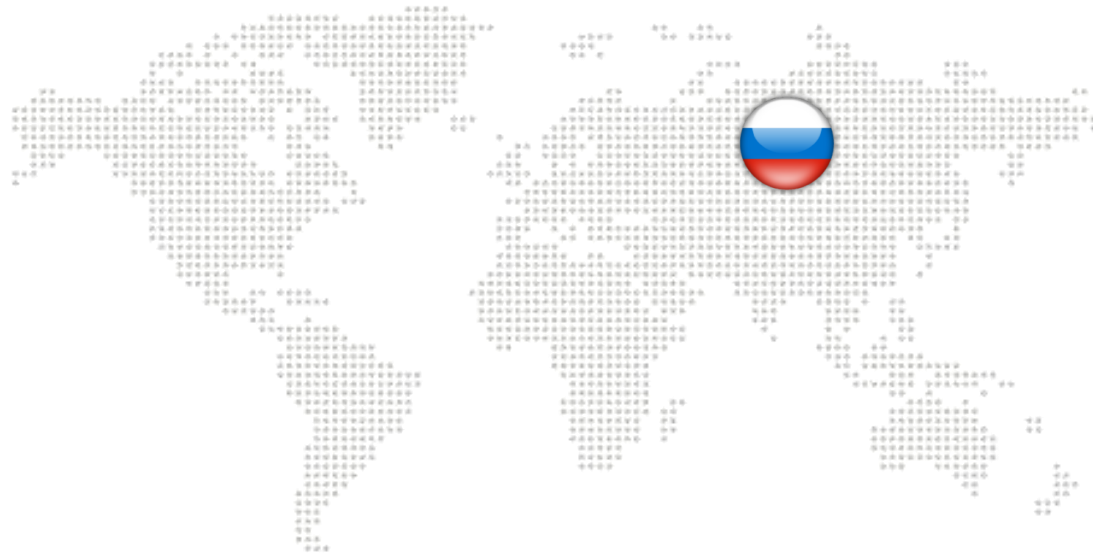
The cost of RE technologies is **in 3 or more times** more than the cost of traditional energy sources per **1 MW** of installed capacity

average cost of solar energy generation

last 5 years

↓ **3 times**

RES Development in Russia



State Plan of the Russian Government

2009 – 2020

Share of RES in total
electricity production
(excluding hydro over 25 MW)

↑ from **0.8%** to **4.5%**

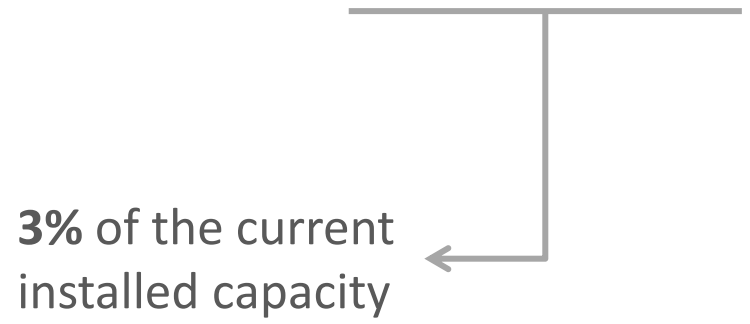
To achieve this target indicator, it was planned to put into operation RE facilities with a total capacity of about **25 GW**

Today, The Russian Ministry of Energy foresees:

total increase in capacity of RE facilities

2015 from 700 MW to 6000 MW by 2024

Motivation for RE development in Russia
need of power supply in hard-to-reach and remote areas, which are not covered by existing centralised power supply systems



RES Development in Russia

According to the results of the tender for construction of RE facilities there has been approved

- **76 projects**
- total capacity of over **1 GW**
- total investment volume > **\$1.7 billion**

Among the approved 76 projects:

65



in **18** regions of Russia

8






in **4** regions of Russia

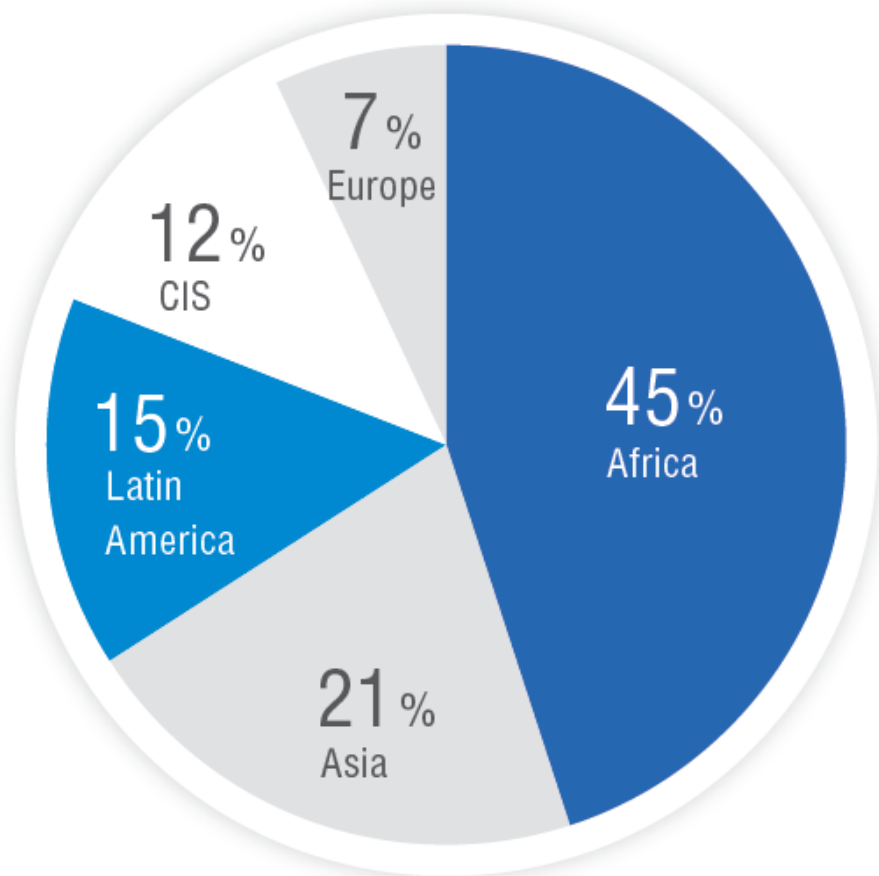
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in **2** regions of Russia

-  Promotion of national, regional and international networks of universities and other educational and research institutions involved in the training of specialists for RE
-  Implementation of joint educational programs
-  Exchange of information and practical experience

UNESCO/ISED Co-sponsored Fellowships Programme



Geography of Fellowships Programme
2008 – 2015

- for young specialists from developing countries and countries with economies in transition
- **9 educational sessions**
- **141 participants** from 77 countries

PURPOSE:

to create a multinational platform for development of international cooperation in the field of sustainable energy development; strengthening the international human capacity building in this area

Thank you for your attention!