

# RENEWABLES INTERACTIVE MAP

## COUNTRY PROFILE: Russian Federation

### 1. SUMMARY

1.1 Country Overview	
Country size	NA
Population	NA
GDP	1 857 770 000 000
Energy production	1 253 922 ktoe/year
Energy consumption	435 516 ktoe/year

1.3 Policies Overview Table									
Financial Incentives			Public Financing		Regulatory Policies				
Capital subsidy, grant, or rebate	Tax incentives	Energy production payment	Public investment, loans, or	Public competitive bidding	Feed-in tariff	Utility quota obligation	Net metering	Obligation and mandate	Tradable renewable energy certificate
✓				✓					

1.4 RE Status Overview (non-technology specific)						
	Primary Energy	Final Energy Consumption	Electricity Production	Heating/Cooling Production	Transportation	RE Installed Capacity
Share			2.5 % 2020			47 GW 2010
			0.8 % 2013			0.05 MW 2009
			15.8 % 2011			
			15.0 % 2010			
			17.8 % 2009			

\* = Conflicting data exists (see respective table below)

### 2. Renewable Energy Policies

2.1 Capital subsidy, grant, or rebate					
Sector	Technology	Value	Description	Year	Reference
Non-Sector specific	Non-Technology specific		Capital subsidies exist.	2013	Global Status Report (GSR) 2014. "Country Profile Russian Federation"
Electricity	Solar PV	2.64 billion USD	Renewable energy investment.	2013	Solar Server. "Russia to introduce bidding program for 1.2 GW of PV by 2020," 10 June 2013.

Non-Sector specific	Non-Technology specific		Capital subsidies exist.	2012	Global Status Report (GSR) 2013. "Country Profile Russian Federation"
Non-Sector specific	Non-Technology specific		A law has been signed in December 2010, introducing amendments to the Federal Law "On Electric Power Generation", which allows companies to be part of long-term sale-and-purchase agreements to buy or sell at special, wholesale market prices.	2010	Bellona. "Renewable Energy Globally and in Russia in 2010"

## 2.2 Public competitive bidding

Sector	Technology	Value	Description	Year	Reference
Non-Sector specific	Solar PV	496 MW	Targeted solar PV capacity contracted.	2014	Renewable Energy World. "Russia Sets Renewable Energy Auction Dates," 10 April 2014
Non-Sector specific	Wind	1645 MW	Targeted wind power capacity contracted.	2014	Renewable Energy World. "Russia Sets Renewable Energy Auction Dates," 10 April 2014
Electricity	Solar PV	496 MW	Solar PV capacity contracted.	2014	Renewable Energy World. "Russia's State-supported Renewable Auction Heavily Favored Solar," 11 July 2014
Electricity	Wind	1,645 MW	Wind power capacity contracted.	2014	Renewable Energy World. "Russia's State-supported Renewable Auction Heavily Favored Solar," 11 July 2014
Electricity	Hydropower	415 MW	Hydropower capacity contracted.	2014	Renewable Energy World. "Russia's State-supported Renewable Auction Heavily Favored Solar," 11 July 2014
Non-Sector specific	Non-Technology specific		Public competitive bidding exists.	2013	Global Status Report (GSR) 2014. "Country Profile Russian Federation"
Non-Sector specific	Solar PV	399 MW	Solar PV capacity contracted.	2013	PV Magazine. "Russia offers first ever subsidies for renewable energy," 1 October 2013
Non-Sector specific	Wind	105 MW	Wind power capacity contracted.	2013	PV Magazine. "Russia offers first ever subsidies for renewable energy," 1 October 2013

## 3. Renewable Energy Targets

### 3.1 Electricity

Sector	Technology	Value	Description	Year	Reference
Electricity	Wind	7 GW	Targeted installed wind power capacity.	2020	PricewaterhouseCoopers. "Renewable Energy Brazil," April 2013.
Electricity	Wind	235 GW	Targeted installed wind power capacity.	2020	PricewaterhouseCoopers. "Renewable Energy Brazil," April 2013.
Electricity	Non-Technology specific	2.5 %	Targeted share of electricity generation from renewables.	2015	Russian Ministry of Energy.

Electricity	Non-Technology specific	1.5 %	Targeted share of electricity generation from renewables.	2010	International Energy Agency (IEA). "Policies and Measures Database"
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### 3.2 Not specified

Sector	Technology	Value	Description	Year	Reference
Non-Sector specific	Non-Technology specific		Renewable energy targets exist.	2013	Global Status Report (GSR) 2014. "Country Profile Russian Federation"

## 4. Renewable Energy Shares

### 4.1 Electricity production

Sector	Technology	Value	Description	Year	Reference
Electricity	Solar PV	1.2 GW	Targeted added installed solar PV capacity.	2020	Solar Server. "Russia to introduce bidding program for 1.2 GW of PV by 2020," 10 June 2013.
Electricity	Non-Technology specific	6.0 GW	Targeted added installed renewables capacity.	2020	Solar Server. "Russia to introduce bidding program for 1.2 GW of PV by 2020," 10 June 2013.
Electricity	Non-Technology specific	2.5 %	Targeted share of electricity generation from renewables.	2020	International Finance Corporation. "Regional Renewable Energy Tariffs in Russia," 2013.
Electricity	Non-Technology specific	0.8 %	Share of renewables in electricity generation.	2013	Solar Server. "Russia to introduce bidding program for 1.2 GW of PV by 2020," 10 June 2013.
Electricity	Non-Technology specific	15.8 %	Share of renewables in electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Solid Biomass	0.3 %	Share of industrial non-renewable waste in electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Solid Biomass	0.0 %	Share of biomass in electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Geothermal	0.0 %	Share of geothermal in electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Wind	0.0 %	Share of wind power in electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Hydropower	15.8 %	Share of hydropower in electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Non-Technology specific	15.0 %	Share of renewables in electricity generation.	2010	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Non-Technology specific	17.8 %	Share of renewables in electricity generation.	2009	Observ'ER. "Worldwide electricity generation from renewable energy sources"

## 5. Installed Capacity

5.1 Installed capacity					
Sector	Technology	Value	Description	Year	Reference
Electricity	Wind	16.8 MW	Total installed wind power capacity.	2013	World Wind Energy Association (WWEA). "World Wind Energy Report 2013 - List of Countries and Regions using Wind Power in 2013"
Electricity	Ocean energy	1.7 MW	Total installed tidal power capacity.	2013	Global Status Report (GSR) 2014. "Country Profile Republic of Korea" provided by Simon Smith, International Hydropower Association (IHA)
Electricity	Hydropower	47 GW	Total installed hydropower capacity.	2013	Global Status Report (GSR) 2014. "Country Profile Republic of Korea" provided by Simon Smith, International Hydropower Association (IHA)
Electricity	Hydropower	1 GW	Added installed hydropower capacity.	2013	Global Status Report (GSR) 2014. "Country Profile Republic of Korea" provided by Simon Smith, International Hydropower Association (IHA)
Electricity	Hydropower	47.6 GW	Total installed hydropower capacity.	2012	International Hydropower Association. "2013 IHA Hydropower Report"
Electricity	Hydropower	2.9 GW	Added installed hydropower capacity.	2012	International Hydropower Association. "2013 IHA Hydropower Report"
Electricity	Ocean energy	1.7 MW	Total installed marine power capacity.	2012	International Hydropower Association. "2013 IHA Hydropower Report"
Electricity	Wind	16.8 MW	Total installed wind power capacity.	2012	WWEA. "2012 Annual Report"
Heating/Cooling	Solar heating/cooling	12.3 MWth	Total installed flat plate solar water collectors capacity.	2012	International Energy Agency, Solar Heating & Cooling Programme (IEA-SHC). "Solar Heat Worldwide. Markets and Contribution to the Energy Supply 2012," June 2014
Heating/Cooling	Solar heating/cooling	0.9 MWth	Total installed evacuated tube solar water collectors capacity.	2012	International Energy Agency, Solar Heating & Cooling Programme (IEA-SHC). "Solar Heat Worldwide. Markets and Contribution to the Energy Supply 2012," June 2014
Heating/Cooling	Solar heating/cooling	13.2 MWth	Total installed solar heat collectors capacity.	2012	International Energy Agency, Solar Heating & Cooling Programme (IEA-SHC). "Solar Heat Worldwide. Markets and Contribution to the Energy Supply 2012," June 2014
Heating/Cooling	Solar heating/cooling	4.3 MWth	Added installed flat plate solar water collectors capacity.	2012	International Energy Agency, Solar Heating & Cooling Programme (IEA-SHC). "Solar Heat Worldwide. Markets and Contribution to the Energy Supply 2012," June 2014

Heating/Cooling	Solar heating/cooling	0.2 MWth	Added installed evacuated tube solar water collectors capacity.	2012	International Energy Agency, Solar Heating & Cooling Programme (IEA-SHC). "Solar Heat Worldwide. Markets and Contribution to the Energy Supply 2012," June 2014
Heating/Cooling	Solar heating/cooling	4.5 MWth	Added installed solar heat collectors capacity.	2012	International Energy Agency, Solar Heating & Cooling Programme (IEA-SHC). "Solar Heat Worldwide. Markets and Contribution to the Energy Supply 2012," June 2014
Electricity	Hydropower	46 GW	Total installed hydropower capacity.	2012	Global Status Report (GSR) 2014. "Country Profile Republic of Korea" provided by Simon Smith, International Hydropower Association (IHA)
Electricity	Hydropower	46 GW	Total installed hydropower capacity.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Wind	16.8 MW	Total installed wind power capacity.	2011	WWEA. "2012 Annual Report"
Non-Sector specific	Hydropower	840 MW	Total installed hydropower capacity.	2011	Troika Dialog. "Russia utilities atlas"
Non-Sector specific	Hydropower	32,847 MW	Total installed hydropower capacity.	2011	Troika Dialog. "Russia utilities atlas"
Non-Sector specific	Hydropower	884 MW	Added installed hydropower capacity.	2011	Troika Dialog. "Russia utilities atlas"

## 6. Energy Production

6.1 Energy production					
Sector	Technology	Value	Description	Year	Reference
Electricity	Hydropower	165 TWh	Total hydropower electricity generation.	2012	Global Status Report (GSR) 2014. "Country Profile Republic of Korea" provided by Simon Smith, International Hydropower Association (IHA)
Electricity	Hydropower	153.3 TWh	Total hydropower electricity generation.	2011	Russian Ministry of Energy. "Hydropower generation 2011"
Electricity	Non-Technology specific	166.7 TWh	Total renewable electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Hydropower	166.2 TWh	Total hydropower electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Geothermal	464 GWh	Total geothermal electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Wind	18 GWh	Total wind power electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Solid Biomass	38 GWh	Total biomass electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"

Electricity	Solid Biomass	3 TWh	Total industrial non-renewable waste electricity generation.	2011	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Solid Biomass	2.78 TWh	Total biomass electricity generation.	2011	World Bioenergy Association (WBA). "WBA Global Bioenergy Statistics 2014"
Heating/Cooling	Solid Biomass	119 PJ	Total heat generation from biomass.	2011	World Bioenergy Association (WBA). "WBA Global Bioenergy Statistics 2014"
Electricity	Hydropower	164.5 TWh	Total hydropower electricity generation.	2010	Russian Ministry of Energy. "Hydropower generation 2011"
Electricity	Non-Technology specific	155.9 TWh	Total renewable electricity generation.	2010	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Hydropower	155.4 TWh	Total hydropower electricity generation.	2010	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Geothermal	464 GWh	Total geothermal electricity generation.	2010	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Wind	15 GWh	Total wind power electricity generation.	2010	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Solid Biomass	36 GWh	Total biomass electricity generation.	2010	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Solid Biomass	3.8 TWh	Total industrial non-renewable waste electricity generation.	2010	Observ'ER. "Worldwide electricity generation from renewable energy sources"
Electricity	Solid Biomass	2.77 TWh	Total biomass electricity generation.	2010	World Bioenergy Association (WBA). "WBA Global Bioenergy Statistics 2014"
Heating/Cooling	Solid Biomass	120 PJ	Total heat generation from biomass.	2010	World Bioenergy Association (WBA). "WBA Global Bioenergy Statistics 2014"
Electricity	Hydropower	162.3 TWh	Total hydropower electricity generation.	2009	Russian Ministry of Energy. "Hydropower generation 2011"