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# GAIN Report

Global Agricultural Information Network

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## **Russian Federation**

### **Biofuels Annual**

### **Biofuels Sector Update**

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**Report Highlights:**

As one of the world's leading producers and exporters of oil and gas, biofuels have an insignificant share in the overall energy production matrix of Russia, with an estimate of only 1.2 percent, and biomass accounting for only 0.5 percent. Russia is unlikely to develop ethanol for fuel until the GOR has taken serious steps in supporting the industry by developing the regulatory base and policy measures to support local producers. Wood pellet production and exports will likely continue to grow, driven primarily by increasing demand from Europe.

**Post:**

Moscow

**Executive Summary:**

The Russian government has outlined as a national objective the goal of Russia becoming 40 percent more energy-efficient by 2020. While there have been previous attempts at the federal level to promote the production of biofuels, there are also a small but increasing number of activities at the regional level. The number of innovative projects aimed at production of alternative energies has increased in the past years, such as those from plant cellulose (including wood or oilseeds) and agricultural wastes, along with production of biofuel raw materials for export (including fuel pellets, rapeseeds, and rapeseed oil). The emerging Russian biofuels industry's export orientation is driven by continued growing demand from Europe and Asia. However, the production of biofuels still remains small and has almost no impact on Russia's overall domestic grain and oilseed prices.

Due to its abundance of petroleum and natural gas, Russia produces a small amount of biofuels and has minimal domestic demand. According to experts, Russian biofuel production will not be fully developed in the next 10 years, as the sector is not considered as a national priority. Different sources estimate that renewable energies, including biofuel, represent 1.2 percent of Russia's total energy production, with biomass consisting 0.5 percent. While there are no official statistics that measure what share of total energy production biofuels account for, it is estimated that biofuels make up 5 percent of Russia's heating energy and 1 percent of its electrical power.

The Russian Ministry of Energy reports that the volume of technically accessible renewable sources of energy in Russia is estimated at 24.2 Btoe. The share of electricity generated by renewable sources accounts for only 1 percent, while the share of thermal energy generated from renewable resources represents 5 percent or 3000 million Gcal. At present, Russia utilizes only 30 percent of its economically viable hydro-energetic resources.

The Russian Ministry of Energy also reports that there are no government-backed biofuel projects in operation at this time. The majority of biofuel ventures in Russia are supported by regional governments or financed by foreign investors. In most circumstances these projects are in the pilot phase and produce just enough biofuel to generate heat/electricity for their own facility, or for the production of organic fertilizer from agricultural waste. Currently, there is no industrial production of either bioethanol or biodiesel in Russia, except for several facilities that are operating in the regions and are supported by the regional administration or private companies.

**Author Defined:**

## **Oil and Gas Sector**

Russia's abundant resources of petroleum and natural gas (and subsidized natural gas prices) have removed most incentives for both more efficient use of fuel and any development of alternative energy sources. Russia owns 23 percent of global natural gas resources, 19 percent of global coal resources, and 4-5 percent of global resources of petroleum. According to the Russian Customs Statistics, in 2013 Russia produced 523 MMT of oil, including gas condensate, about the same as in 2012. Natural gas production has reached 668 billion cubic meters in 2013, a 1.5 percent increase over 2012. Companies of the Group "Gazprom" account for 73 percent or 487.5 billion cubic meters of the total gas production in Russia. International prices for oil and gas remain high, and as the world's largest exporter of crude oil and gas, there is little interest in developing the domestic biofuels industry.

In 2008 the Russian government adopted the Technical Regulation on Fuels. In 2011, the GOR amended the document in reference to the requirements for gasoline, diesel, shipping diesel, jet fuel and residual oil, and stipulates a smooth by stage transfer to production of oil products that will comply with world ecological standards.

In 2012, the highest rate of growth in petroleum production in Russia occurred in Eastern Siberia and Far East as well as European zone. The growth is the result of using modern technology in petroleum production. The most increase in production occurred by vertically integrated companies, which saw an increase in production of 12 percent.

The following reasons are attributed to increasing petroleum production in Russia in 2012:

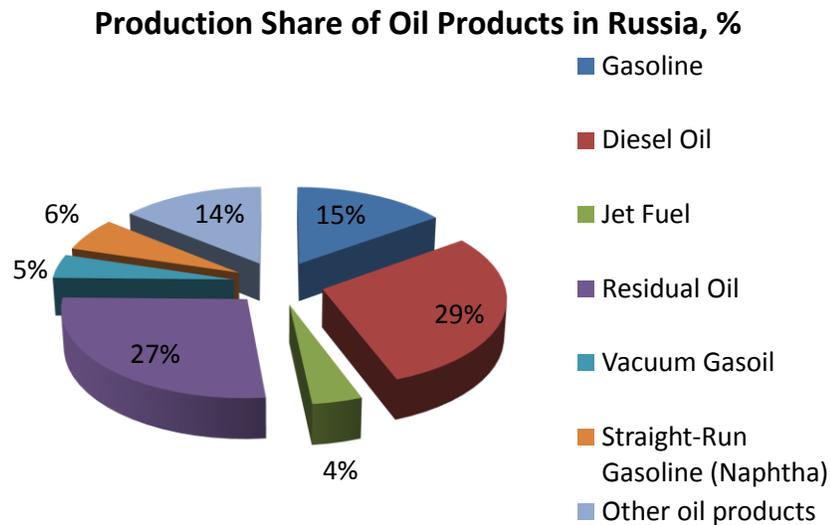
- Advantageous tariff tax policy for new perspective oil fields located in the Arctic part of continental shelf, eastern Siberia and the Far East;
- Advantageous tariff tax policy for oil fields with more than 5 MMT production capacities;
- Improving logistical infrastructure around new oil fields in the Far East and eastern Siberia;
- Continued high international prices for domestic oil.

Russia's oil processing sector continued to show stable growth in 2013 in all types of petroleum products, including diesel oil. The total production for processed oil products is estimated at 278 MMT, including gas condensate. It is a 2.7 percent increase in comparison with 2012. The processing rate (depth) has also gone up from 71.2 percent in 2012 to 71.4 percent in 2013. Continued economic growth in Russia facilitated growing demand for all types of oil in the domestic market. Thus starting from 2013, Russia no longer produces gasoline of Euro-2, and moved to more ecological grades of oil, such as Euro-5. According to the Russian Minister of Energy, Aleksandr Novak, consumption of Euro-5 in 2013 is estimated 60 percent from the total sales of gasoline in Russia. It is 1.5 times more than expected.

According to official statistics, in 2012 gasoline consumption increased by 4 percent and reached 35.1 MMT, jet oil consumption reached 9 MMT (unchanged from 2011), consumption of residual (bunker) oil reached 23.7 MMT (an increase of 1.7 percent), and consumption of diesel fuel fell to 28.2 MMT, a 10.8 percent decline compared to 2011.

Russian exports of oil and gas has been stable since 2011. In 2013, according to preliminary data of official statistics, exports of raw petroleum are estimated at 237 MMT, valued at \$174 billion and with

an average export price reported at \$100 for barrel. According to the Russian Ministry of Energy, the average increase in prices for oil in 2014 is estimated at average 6-7 percent. Natural gas exports in 2013 also increased and were estimated at 196 billion cubic meters, valued at \$67.2 billion, 10 percent higher than in 2012.



Source: Ministry of Energy of the Russian Federation

## Oil and Gas Sector

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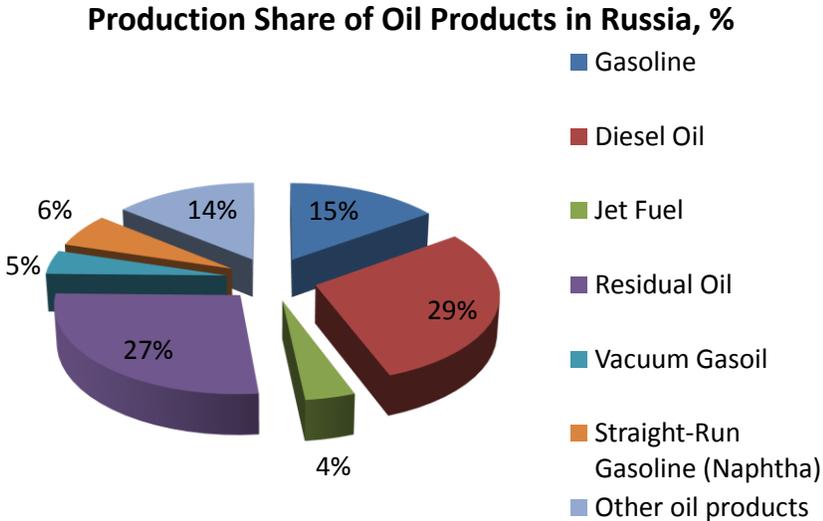
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Source: Ministry of Energy of the Russian Federation

**Policy and Programs**

Russia is still in the developing stage of establishing regulatory norms for bio-energy development and standards for biofuels. Trade sources indicate that without government support and other development policy measures the sector is unlikely to develop.

Currently the development of the Russian bioenergy industry is outlined in two basic documents:

- 1) Energy Strategy of Russia until 2030 (approved by Government resolution #1715-P dated November 30, 2009);
- 2) Federal Program of the Russian Federation “Energy savings and increasing efficiency for electrical power generation until 2020” (approved by Government resolution #2446-P dated April 8, 2010).

The table below provides targeted capacity indicators and power generation from various renewable energy sources in the Russian Federation until 2020.

Type of power station	Unit	2005	2010	2015	2020
Hydropower station (capacity up to 25 MWh)	Billion kWh/hour	2.8	3.5	10.0	20.0
	MegaWh	680	850	2430	4800
Wind Power Stations	Billion kWh/hour	0.0097	0.21	2.6	17.5
	MegaWh	12	120	1500	7000
Geothermal power stations	Billion kWh/hour	0.4	0.6	2.0	5.0
	MegaWh	71	90	300	750
Thermal power stations on biomass	Billion kWh/hour	5.2	13.5	22.0	34.9
	MegaWh	1413	2800	5000	7850
Tide power stations	Billion kWh/hour	0.00	0.00	0.024	2.3
	MegaWh	1.5	1.5	12	4500
Solar power stations	Billion kWh/hour	0.00002	0.00003	0.002	0.018
	MegaWh	0.02	0.03	1.5	12.1
Other types of power stations	Billion kWh/hour	0	0	0.08	0.5
	MegaWh	0	0	20	250
Share of renewable energy sources	%	0.0	1.5	2.5	4.5

Source: Institute of Energy Strategy, Russian Energy Agency

In 2012, the government made efforts to improve regulations relating to bioenergy, specifically related to production of renewable resource for generation electrical power and development of biotechnology.

In April 2012 Russia adopted the Comprehensive Program on Development of Biotechnology through 2020 (BIO 2020). The program envisages development of different branches of biotechnology, and classifies biofuels as one of these branches. The Program states the following targeted indicators for the development of bioenergy sector in Russia by 2020:

- 10 percent bioenergy share in generation of thermal power;
- 10 percent biofuels share in motor oil;
- 90 percent of fuel and energy facilities will use biodegradable sorbents for cleaning pollution from surface waters;
- 30 percent of utilization of solid household wastes and 90 percent utilization of wastes from poultry processing;
- 20 percent share of solid biofuels in the European market;
- 5 percent share of the world market of motor biofuels and its components;

Note: for more information on the Program see GAIN report [Program on Development of Biotechnology in Russia through 2020 Moscow Russian Federation 6-7-2012.doc](#)

Currently Russia makes use of only an estimated 3.5 percent of its potential of renewable energy resources. The share of renewable resources in total power generation in Russia does not exceed 1 percent, and accounts for 5 percent of the production of heat energy.

The Russian Government is also discussing a draft program on modernization of electrical energy through 2020. The Program outlined as its objective to make Russia 40 percent more energy-efficient by 2020 and to develop different types of renewable resources for electricity generation, including wind power station, electricity station on biomass, and small hydro power stations. This program's objective is to construct facilities with biomass utilization that by 2020 will generate 580 MWh electrical powers; and biogas facilities for generation 330 MWh. Experts from the Ministry of Energy estimate the potential market for renewable resources in Russia at \$20 billion.

Most specialists believe that the Russian government will achieve lower than its potential by 2020 for the following reasons:

- Higher construction costs of facilities producing alternative energy in comparison with fuel-burning power plants. The equipment for facilities producing alternative energy is imported (up to 80 percent) as domestic equipment production lags behind.
- Domestic electricity network is not adapted to support operation of the facilities for alternative energy.
- Lack of financial support from the federal government. The government is focused on developing programs for energy efficiency rather than biofuels.
- There are no official statistics in Russia on bioethanol and biodiesel production, consumption and trade. However, different sources estimate the share of biofuels production in overall energy production matrix of Russia at 1.2 percent.

A GOR resolution dated October 4, 2012 # 1839-P approved measures to try and stimulate production of electrical power by facilities that use renewable resources. The new resolution indicates a number of measures that are aimed at improving electrical power originating from renewable sources. Specifically, the measures include:

- Approved differentials on targeted indicators on each type of renewable resources;
- Improved procedure for formation of renewable resources scheme;
- Simplified registration procedure the facilities that operate on renewable resources;
- Approved methodology for calculation tariffs for electricity.

However, according to recent rules approved by the Government, in May 2013 the system of government financial support will be extended only to facilities operating on sun, wind and hydro. Both facilities of biomass and biogas will not get financial support at least until 2020 from the federal budget, since the Government feels that these technologies have not progress to an industrial scale yet, and as a result these support mechanisms would not be effective yet. This approach will make Russia fall even further behind in stimulating the biofuel sector as well as innovative technologies.

Future objectives for the gas and oil sectors are outlined in the Energy Strategy of Russia until 2030. The priority objective is modernization and reconstruction of the oil processing sector by increasing the

processing rate (depth) of crude oil from 75 percent in 2010 to 80 percent by 2020. The document stipulates that this is the major condition that will allow transfer the industry into a new technical level and will be able to supply Russia with local high quality oil including diesel, gasoline lubricants and other products for oil chemistry industry. The increasing efficiency in processing oil will allow an increase in exports of motor oils by 20 percent by 2020.

The Energy Strategy also foresees an increase in production of oil products from the current 200-210 MMT to 210-235 MMT by 2020. The Strategy has an increase in production of gasoline, diesel and jet fuel from 110 MMT up to 130 MMT by 2020.

The Energy Strategy also foresees a number of measures and targets for developing gas industry. The priority for the government includes developing infrastructure and competition in the local markets, support to development of independent gas producers, as well as cautious approach to rising prices for gas and developing law and regulation in the gas sector.

The Russian Transport Strategy until 2030 was approved by the government Resolution #1734-p dated November 22, 2008. The document establishes the objectives and priorities for the development of the transportation sphere in Russia as well as programs and financial support. According to the latest available data for CY2012 from Rosstat, the length of total railroad tracks in Russia is reported at 121,000 km, 1.444 million km of automobile roads, 101,000 km of internal water ways, 2,500 km of trolley tracks, 497 km of subway tracks.

<b>Fuel Use Projections (MMT)</b>									
Calendar Year	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Gasoline Total</b>	38	40	41	40	41	42	44	47	48
<b>Diesel Total</b>	37	34	37	39	39	41	43	47	47
On-road	5	5	6	6	7	7	9	10	11
Agriculture	5.5	5.2	5.8	6.2	6	6.3	7	7.4	7.5
Construction/mining	4.8	4.5	5.1	5.8	5.8	6	6	6.4	6.5
Shipping/rail	10	8	9.6	9.2	9	9	9	9.5	9

Industry	5.3	5	5.5	5.6	5.8	6	6	6.2	5.7
Heating	6.4	6.3	7	6.2	5.4	6.7	6	7.5	7.3
<b>Jet Fuel Total</b>	11	11	15	17	18	20	21	22	24
<b>Total Fuel Markets</b>	86	85	93	96	98	103	108	116	119

Source: Rosstat (Russian Federal Statistical Service), Russian Ministry of Energy, Russian Ministry of Transport, Industrial Union “Energy Efficiency and Savings”.

## Bioethanol/Biodiesel Projects

Some industry analysts believe that bioethanol and biodiesel in Russia could become profitable in Russia if the government exempts production from excise taxes. However, this is not a priority for the government and some attribute this to the strong influence of the oil industry.

Industry analysts also attribute the limited presence of bioethanol in Russia to high wheat and grain prices worldwide, which makes biofuel production less profitable. Currently, Federal biofuels policy is not under the National Agricultural Priority Project. With the lack of government support, the sector is unlikely to develop. The major reasons for the government lack of interest include: high cost of biodiesel; inadequate regulations pertaining to the sector; limited domestic demand; higher availability of alternative energy sources and poor infrastructure (in particular machinery) that cannot be adapted easily to biodiesel use.

Experts believe that the production of ethanol from cellulose could be a possibility in the future. Currently the JSC “Corporation Biotechnology” in cooperation with State Corporation “RosTechnology” has a program on construction of bioethanol production facilities from cellulose. One of the plants under construction is located at the JSC “Eastern Siberian Biotech Plant” in Irkutsk oblast (former Tulunskiy Hydrolized Plant). The project foresees production of bioethanol from forestry processing wastes. The estimated project investment is \$20 million.

There is also vast potential for exploiting agricultural waste in Russia. However, there are only a few modern agricultural plants that can utilize agricultural waste efficiently. Experts estimate total annual agricultural waste in Russia at 640 million MT which is equivalent to 80 Mtoe. The programs for agricultural waste are supported by the regional budgets. Most of the resources could be used for biofuel production or be exported. However, to date, no government programs exist that would entice producers to utilize these wastes.

The denaturated (technical) ethanol industry is mostly concentrated in the Volga Valley region in Russia. The JSC “Neftekhimia” company is the dominant producer of this product accounting for more than 90 percent of overall denaturated ethanol production in Russia. Russia is self-sufficient in the production of this product and exports account for about 40 percent of production. In CY 2013, the major destination markets of HTS220710 Ethyl Alcohol, denaturated, of an alcoholic strength by volume of 80 percent is Latvia at 9.5 million liters, followed by Turkey, almost 9.4 million liters. Finland is Russia’s number one export market for HTS 220720 Ethyl Alcohol denaturated of any strength, from Russia accounting for 58 million liters. Analysts report that the production will continue to experience a stable growth in the mid-term as a result of strong demand from Europe and Baltic Republics. The growth of ethanol production in

Russia will be driven primary by the demand of the chemical industry rather than fuel production. Russia will unlikely be developing ethanol for fuel until the GOR has taken serious steps in supporting the industry by developing regulatory base and policy measures to support local producers.

<b>Ethanol Used as Fuel and Other Industrial Chemicals, 1,000 Liters</b>									
Calendar Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Beginning Stocks</b>	0	0	0	0	0	0	0	0	
Fuel Begin Stocks	0	0	0	0	0	0	0	0	
<b>Production</b>	63,000	72,000	71,000	68,340	80,000	85,000	89,500	93,000	94,400
Fuel Production	0	0	0	0	0	0	1	2	2
<b>Imports</b>	0	0	0	0	0	0	0	0	
Fuel Imports									
<b>Exports</b>	15,000	26,000	25,860	22,340	32,890	39,680	43,000	44,500	45,100
Fuel Exports	0	0	0	0	0	0	0	0	
<b>Consumption</b>	48,000	46,000	45,140	46,000	47,110	45,400	46,500	48,500	49,300
Fuel Consumption									
<b>Ending Stocks</b>	0	0	0	0	0	0	0	0	
Fuel Ending Stocks	0	0	0	0	0	0	0	0	
<b>Production Capacity</b>									
Number of Refineries	3	3	4	4	4	4	6	7	7
Nameplate Capacity									
Capacity Use (%)									
<b>Co-product Production (1,000 MT)</b>									
Wheat by-products							750	870	880
<b>Feedstock Use (1,000 MT)</b>									
Grain							2,400	2,780	2,950

**Source:** Rosstat (Russian Federal Statistical Service), Russian Customs Committee, trade sources, Information Agency “Credinform”.

## Biomass

The government of Russia has identified the development of Russia’s domestic forestry sector as a necessity, and production within this sector is expected to substantially increase by 2020. While not a priority, the Federal Forestry Agency considers biomass production as the main alternative for Russia’s developing biofuel sector. Russia has huge potential for biomass production, however, due to the large supply of high-value fossil fuels, only large wood processing facilities are interested in the commercial production of biomass.

Currently, biofuel production from biomass is estimated at 3 MMT in crude oil equivalent. Industry experts believe that it is feasible to increase this amount tenfold, if the government identifies the sector as a priority and includes biomass in the National Energy Strategy. Industry experts also agree that individual regional plans aimed at increasing biofuel production should be considered. The only industrial significant biomass factory is the thermal electricity station “Beliy Ruchey” operating in Vologda oblast. Its energy capacity is estimated at 6 MWh. The local administration in Komi Republic has stated that it is supportive of biomass development projects, and in 2013, International Co. Metso is reported to have supplied technological equipment for wood waste utilization to a processing facility in Syktyvkar. The project will start operating in 2014. The capacity of the electrical station is 4 MWh.

The Russian Forestry Agency sets total allowable cut at 670 million cubic meters, however only 22.4 percent of this amount was actually harvested in 2013. The total annual volume of wood waste from logging in Russia is estimated at 30 MMT, which is equivalent to 15-20 toe, while the wood waste from wood processing sector is about 75 million cubic meters. Today, the majority of wood waste occurs due to limited access to special equipment and modern technologies, as well as a lack of interest from the Russian government and foreign investors in further processing. Current resources of fuel wood is estimated at 90 million cubic meters, including firewood – 51 million m<sup>3</sup> (63 percent); crown, stumps, bark – 15 million m<sup>3</sup> (15 percent); wastes from sawmilling – 12.7 million m<sup>3</sup> (12 percent); wastes from veneer production – 4.1 million m<sup>3</sup> (5 percent); wastes from cellulose and paper production – 4.2 million m<sup>3</sup> (4 percent).

## **Biogas**

Experts from the Institute of Energy Strategy estimate that due to vast supplies of agricultural wastes, food processing wastes and municipal wastes 66 billion m<sup>3</sup> of biogas and 112 million MT of high value granulated fertilizer could theoretically be produced in Russia. Currently there is no government program to stimulate construction of biogas facilities in Russia. The main reason is high initial expenditures for an energy unit. So far there are four major biogas projects in 3 regions that are operating in Russia. The first biogas station, with a capacity of 600 KWh, has been in operation since 2009 at the livestock farm in Medyni, in Kaluga oblast. The project started in cooperation with the company Lipp, Germany. The thermal power capacity is 300 KWh /hour and electrical capacity is 200 KWh/hour.

In 2013, Kuryanov aeration station, the largest sewage treatment plant near Moscow, launched a minithermal energy station operating on biogas. It allows for reduced emissions of harmful substances into the atmosphere by 5,000 MT annually and generates 60 percent of needs for heat energy to the sewage treatment facilities. The annual biogas production at this plant is 28 million m<sup>3</sup>. Currently there are 2 biogas stations in Belgorod oblast. Belgorod is one of the leading regions in swine production with a large amount of agricultural waste. The first station “Baytsury” is a pilot project supported by the regional administration. The investments are estimated at 25-30 million Euros. The station capacity is 500 kWh with further plans to increase capacity to 1,000 KWh. Swine manure and corn silage are being used for biogas. The production is estimated at 4,133 m<sup>3</sup> per day. The facility annually produces of fertilizers 31,100 m<sup>3</sup>. Another biogas station in Belgorod is “Luchki” and has been in operation since July 2012. The station processes 42,400 m<sup>3</sup> of wastes from the meat processing facility “Agro-Belogye”, including meat processing waste, swine manure, sewage wastes and corn silage. The station annually generates 19.6 million kWh, heat energy of 182,00 Gcal, as well as 66,800 m<sup>3</sup> of fertilizers. The company is planning construction of greenhouse that will use heat generated from the biogas station.

In 2011, BiogasEnergostroy signed agreements in 27 different regions – including Belgorod, Voronezh, Orlov, Rostov among others – stipulating the construction of an additional 30 bioenergy stations that would use agricultural waste. The planned energy capacity of these stations varies from 350 KWatt to 10 MWatt, with total capacity equaling 120 MWh. Also the company “Agrobiotech”(Luxembourg) in cooperation with the Russian Academy of Agricultural Sciences and the All-Russian Institute of Agricultural Microbiology have selected 27 plant in Russia for further implementation of biogas projects. Currently the company is in initial stage to launch four pilot projects on agricultural waste processing based on biogas technologies: in the swine operation “Shelonskiy” in Pskov oblast, in JSC “Rassvet” in Leningrad oblast to process wastes from livestock facility and slaughter facility, JSC “Noviy Svet” also in Leningrad oblast to process swine production wastes, and at the poultry farm “Pavlovskaya” in Nizhegorod oblast.

## **Wood Pellets**

The growing interest from the European Union for biofuel, particularly wood pellets, will continue to be the major incentive for Russia to increase production of wood pellets. Currently, Russia is the second largest exporter of wood pellets to the EU after Canada. Recently, the European Union (EU) announced that the amount of renewable energy sources used in the production of electricity will increase to 15 percent by 2025, triggering substantial near-term growth in the global pellet market. Trade experts estimated that demand for wood pellets in the EU by 2020 will double and forecast at 24 MMT annually, including 11 MMT will be imported annually. Experts estimate the current world market capacity for wood pellets at 15 MMT. This number is expected to reach 45 MMT by 2020.

According to Rosstat (Russian Federal Statistical Service), Russia produced 415,000 MT of wood pellets in 2013, a nearly 8 percent decrease from 2012. This drop in wood pellet production is attributed to the temporary suspension of operation at Russia’s largest wood pellet facility - “Vyborgskaya Forest Corporation” - during the beginning of 2013. Trade sources report that this was due to an interruption in input supplies and legal issues. However, increased production at other wood pellet facilities such as JSC “Lesozavod-25”, and the coming online of new wood pellet facilities such as “Sibirskiy les” in Omsk oblast and LDK “Igirma” in Irkutsk oblast helped offset this decline. Currently the “Vyborgskaya Forest Corporation” is reportedly running back at its planned capacity.

Although Rosstat reported on production falling 8 percent in 2013, most analysts, however, believe that actual wood pellet production is at least three to four times higher than the official data, and that wood pellet production continues to increase (see PS&D table below). Although overall production is increasing, due to industry consolidation and rapid expansion in larger processors, the total number of processing wood pellets facilities in Russia has been shrinking recently. Trade sources report that the number of processing facilities in Russia in 2010 was 150, but it is estimated to have dropped to 100 plants in 2014. It is expected that larger businesses will continue to absorb small wood pellet producing facilities as the latter are cannot compete with the larger vertically integrated facilities that have permanent supplies of raw material and better understanding of the market. Experts believe that the small and medium pellet processing facilities will shrink as they are not cost efficient for producing wood pellets for export. Total annual production capacity is reported at approximately 3.0 MMT.

The majority of wood pellet facilities are located in the Northwest, Central and Volga regions of Russia. The North Western region is the leader in production, where 60 percent of the forests of European Russia

are located. The top ten pellet production facilities have 92 percent share of the total Russia wood pellet industry. The largest pellet producer is Vyborgskaya Forest Corporation (Vyborgskaya Lesnaya Korporatsiya) with annual production capacity at 1 million MT or more than 50 percent of total current wood pellet production. Reportedly in Russia, the company’s exports to the EU have decreased to 300,000 MT in 2013, versus 500,000 MT in 2012 as a result of a temporary production halt. Despite this decline in exports, other companies increased their shipments and overall exports rose again in 2013.

Other large pellet producers are:

- Biogran in Karelia with annual capacity of 25-30,000 MT,
- DOK “Yenisey” and “Novoyeninskiy forestry processing facility” in Krasnoyarsk kray, with annual capacity of 40,000 MT each.
- “Lesozavod 25” in Arkhangelsk region with annual production and export capacity of 130,000 MT.

In 2014, the production of wood pellets is expected to rise due to mostly strong EU demand and increasing local production, as well as the Russian government’s call for increased efficiency in the forestry sector.

In the mid-term, domestic demand for wood pellets is forecast to increase at 10-20 percent annually. In the local market wood pellets are in demand by private heating stations and municipal housing, primarily in heavily forested areas where traditional sources of energy are not accessible. Production of wood pellets is, in most cases, cheaper than gas. However, lack of domestic standards for pellets, poor transport infrastructure, lack of warehouses, and the product’s seasonality will all negatively impact the wood pellet market’s development in Russia.

Starting from 2012, Russia used a separate HS code for wood pellets only - HTS 440131. This will make tracking trade in wood pellets easier, as before that, wood pellets products were under HTS 440130, which also includes sawdust, wood waste and scraps, briquettes, pellets or similar. Russian Customs report exports of wood pellets from Russia in 2013 at 740,000 MT, or 1.6 percent higher than in 2012. The leading export destination for these products was Denmark at 278,000 MT, followed by Sweden at 265,000 MT, and South Korea at 73,000 MT. Europe will continue to be the largest importer of Russian wood pellets.

Near-term foreign demand for wood pellets is likely to increase by 10-15 percent. Some EU experts estimate that Russia’s share of the EU’s total 2012 import market of wood pellets is 16 percent. Russia has export potential and European pellet demand will likely stimulate an increase in Russian production. However, Russia will require large investments in order to upgrade its facilities and expand its production capacity. Domestic demand can also absorb some of the increased, near-term production.

**Table 3: PS& D for Fuel Pellets**

<b>Wood Pellets (1,000 MT)</b>									
Calendar Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Beginning Stocks</b>		0	0	0	0	0	0	0	0
<b>Production</b>	830	980	1,150	1,320	1,590	1,900	2,070	2,275	2,380
<b>Imports</b>	0	0	0	0	0	0	0	0	0
<b>Exports</b>	630	760	890	990	1,220	1,470	1,560	1,780	1,850

<b>Consumption</b>	200	220	260	330	370	430	465	495	530
<b>Ending Stocks</b>		0	0	0	0	0	0	0	0
<b>Production Capacity</b>									
Number of Plants	65	70	97	120	130	120	103	98	95
Capacity Use (%)	72	75	75	75	75	78	80	85	87

Source: Rosstat (Russian Federal Statistical Service), Russian Customs Committee, Federal Forestry Agency, trade contacts, Forestry Forum “Green press”.

### **Rapeseed Market**

A significant amount of the rapeseeds exported from Russia and used in the EU to produce biofuels. For more information please refer to GAIN RS1418 Annual Oilseeds and Products.

[http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Oilseeds%20and%20Products%20Annual\\_Moscow\\_Russian%20Federation\\_3-31-2014.pdf](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Oilseeds%20and%20Products%20Annual_Moscow_Russian%20Federation_3-31-2014.pdf)

### **Notes on Statistical Data**

Bioethanol and biodiesel production in Russia is very small. There are no official data for these products in Russia. Russian official statistics on fuel use by industry sectors either are not available or differs from the data provided by trade sources and some energy companies and corporations. FAS based estimates on fuel projections on a number of sources, including Ministry of Transport, Ministry of Energy, Industrial Union “Energy Efficiency and Savings”, as well as trade sources and media. Production and trade data for wood pellets is based on GTA, Official Russian Federal Customs Service, and estimates of the FAS posts in EU. The trade data for wood pellets may not correspond to the EU data since Russia started to use the HS Code for wood pellets alone since 2012. Prior to that, it was subsumed under HS 440130. FAS Post based its estimates on figures of National Biofuels Association, sources from research, analytical institutions as well as agricultural trade sources.