Chemical Information Resources for East Europe and CIS

CIREC MONTHLY NEWS

Chemical Industry News for Central Europe, South East Europe and Eurasia

Edited by Andrew Sparshott | Tel +44 (0)20 8669 5126 | Email enquiries@cirec.net | Web www.cirec.net

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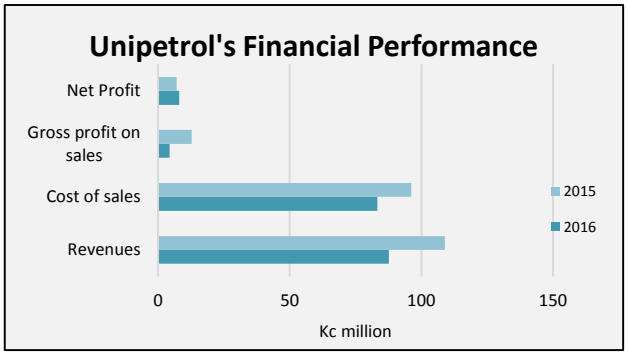
CENTRAL & SOUTH EAST EUROPE

Unipetrol 2016

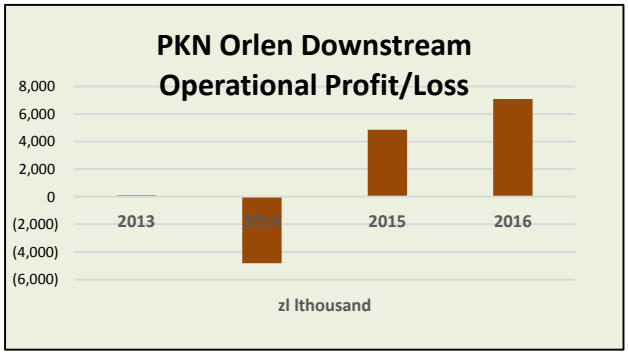
Unipetrol's downstream division posted an operating profit of Kc 11.136 billion in January to December 2016, 9.5% up on 2015. Payments from insurers for the cracker repairs worth Kc 7.9 billion and the increase of the asset value had a positive impact on the results, but at the same time financial results were negatively affected by production limitations in refining and petrochemical production. In October 2016, Unipetrol resumed production of the steam cracker at Litvinov-Zaluzi and restored full operation of its refinery at Kralupy nad Vltavou.



Unipetrol invested Kc 10.8 billion (€390 million) in 2016 in the modernisation and reconstruction of production technologies, particularly in the construction of the new polyethylene unit at Litvinov. Construction started in June 2016 and project completion is scheduled for 2018. Total costs of the PE3 project have been estimated at Kc 8.5 billion (€310 million).

Unipetrol announced in February that it had undertaken preventive maintenance for the ethylene cracker for 9-10 days.

Unipetrol achieved an operating profit of Kc 12.037 billion in the fourth quarter in 2016, Kc 1.159 billion higher than in the fourth quarter in 2015. The net profit rose by 13% to Kc 7.975 billion, helped by payments from insurance for the property damage at the Litvinov steam cracker. Conversely, the financial results were affected by operating limitations in petrochemical and refining production.



PKN Orlen 2016

PKN Orlen posted a record-high EBITDA of zl 9.4 billion (€218 million) in 2016. During 2016, PKN Orlen progressed with its key projects, including the metathesis unit at Płock and the polyethylene unit at Litvinov which are both entering the construction phase. Last year, it also significantly enhanced and diversified the structure of feedstock supplies for its refineries, including the conclusion of the first ever long-term contract with Saudi Aramco. It also secured natural gas supplies under a five-year contract with PGNiG.

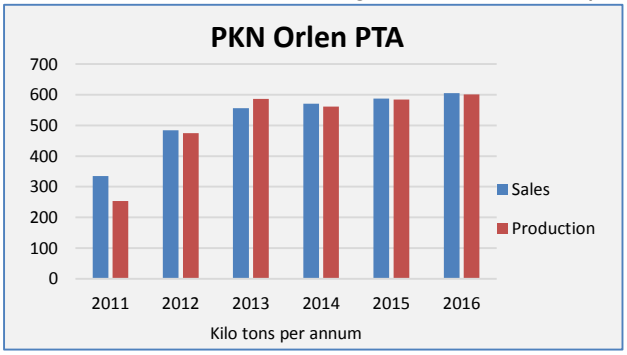
PKN Orlen Group Chemical Production (unit-kilo tons)

Product	*Jan-Dec 2016*	*Jan-Dec 2015*
Monomers	680	836
Polymers	283	439
Aromatics	249	355
Fertilisers	1158	1147
Plastics	371	472
PTA	601	584

Orlen's EBITDA grew by zl 0.8 billion in the fourth quarter last year to zl 2.65 billion, led by a combination of higher sales volumes, wider retail margins on fuel and non-fuel products, and compensation received for fire damage to the steam cracker at Litvinov. However, positive factors were weighed down by the negative impact of tighter margins on refined products. The model downstream margin remained in the range of $12/bbl in the final quarter, based on an average crude oil price of $49/bbl.

The resumption of the steam cracker at Litvinov in the fourth quarter, and an associated rise in sales, meant that Orlen's EBITDA for the downstream division came in at zl 2.3 billion, up zl 0.7 billion on the same period in 2015. Crude processing rose 7% in the Czech Republic, allowing rises in sales of diesel oil (up 13%), polyolefins (up 32%), fertilisers (up 12%), and PVC (up 5%). Orlen's downstream divisional performance was further supported by the zl 0.3 billion in compensation received for fire damage to the steam cracker at Litvinov, as well as zl 0.2 billion in net effect of inventory revaluation (NRV) and lower margins on refined products. Downstream performance was, however, dragged down by narrower petrochemical and fertiliser margins coupled with lower sales of gasolines (down 3%), olefins (down 38%), and PTA (down 2%).

In Q4 2016, PKN Orlen made further headway on its power generation projects. As part of the CCGT project in Wloclawek, assembly work after repair of the gas turbine is currently in progress. The CCGT unit is scheduled for re-commissioning in Q1 2017 and is planned to come on-stream in Q2 2017. In the similar project run in Płock, where the unit is expected to be placed in service in Q4 2017, all process modules were delivered to the site and intensive assembly work began.



Orlen-crude supply

PKN Orlen received delivery of 1 million barrels of crude oil Iranian Light in January, delivered to Gdansk Naftoport, before being sent on to Plock. Orlen's cooperation with the National Iranian Oil Company (NIOC), is part of the diversification strategy of oil supply into various types of oil from the Persian Gulf (Iraq, Iran & Saudi Arabia). In November 2016 the Orlen group concluded an agreement with Saudi Aramco for 2017 and combined with supplies from Iran, it helps to Orlen to reduce dependency on Urals crude. Currently, around 40-60% of oil at Plock is sourced from Rosneft, amounting to 500-700,000 tons per month, whilst an additional 15% comes from Saudi Arabia.

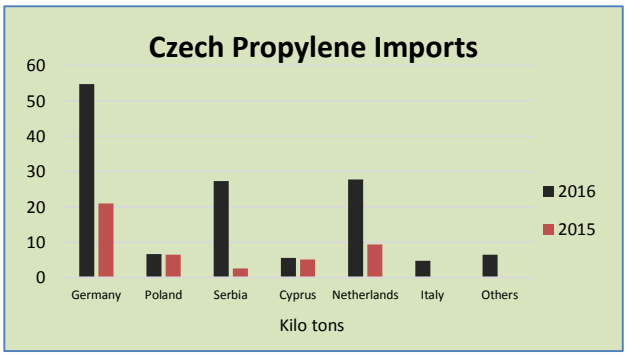
Czech Polyethylene Trade (unit-kilo tons)

Exports	**2016**	**2015**	**2014**
LDPE	64.7	66.0	62.1
HDPE	100.4	215.4	258.5
EVA	1.0	1.4	0.7
Other	20.7	19.7	20.0
Total	186.9	302.4	341.4
Imports	**2016**	**2015**	**2014**
LDPE	158.1	156.7	133.3
HDPE	131.2	114.8	92.5
EVA	9.8	8.8	9.7
Other	31.2	33.1	23.0
Total	330.2	313.3	258.4

Spolana expansion of product portfolio

Spolana is undertaking an expansion of its product portfolio in its fertiliser division including the production of ammonium sulphate.

In its polymer division, Spolana is currently preparing to launch alternative technologies for PVC production due to the need of shutting down the mercury chlorine plant by the end of 2017. At the end of last year, K-Protos was chosen to undertake construction and technical works of the new production method. Employees of the supply company are currently working intensively on the modification of storage and transport capacities within the plant that are necessary for launching the PVC production from externally supplied feedstock.



The process is in line with Spolana's priorities is to minimize the impact of its activities on the environment. The company is also engaged in reducing the emissions of trichloroethylene. Last year Spolana succeeded in reducing the values of all emitted substances by nearly 5%. Spolana is an asset of strategic importance for the Unipetrol Group allowing improved coordination within its value chain in particular for ethylene.

Czech petrochemical trade 2016

Ethylene imports into the Czech Republic slowed to a trickle in the fourth quarter last year as the Litvinov cracker resumed production after the year-long maintenance and modernisation process. Imports of ethylene into the Czech Republic totalled 124,400 tons in 2016 against 41,900 tons in 2015, whilst propylene imports rose from 43,800 tons to 133,200 tons in 2016. Propylene imports were sourced mostly from the EU, including Germany, the Netherlands and Poland, whilst outside of the EU imports came from Petrohemija in Serbia and amounted to 27,264 tons in 2016 against only 2,603 tons in 2015.

Czech Petrochemical Imports (unit-kilo tons)

Product	***Jan-Dec 16***	***Jan-Dec 15***
Ethylene	124.9	41.9
Propylene	133.2	43.8
Butadiene	54.0	32.8
Benzene	84.2	90.6
Ethylbenzene	56.5	20.8

Rompetrol Rafinare 2016

Rompetrol Rafinare, member of KMG International, recorded a consolidated operational EBITDA of $182.5 million in 2016, up by 62% on 2015. The net consolidated profit in 2016 dropped by 23% to $49.8 million. The operational results achieved records for the Petromidia and Vega refineries following the upgrade of production installations. In 2016, the Petromidia refinery 5.4 million tpa, 9% up on 2015. Propylene production at Petromidia's refinery totalled 125,000 tons in 2016, whilst MTBE production totalled 41,000 tons. Rompetrol Rafinare exported 2.5 million tons of refinery and petrochemical products in 2016, up by 3.7% over 2015, and shipped mainly to the partners from the Black Sea region.

Polymer processing for Rompetrol Rafinare rose 5% in 2016 to 149,524 tons. The company is the sole producer of polypropylene and LDPE in Romania, and whilst producing most of its own propylene it remains 100% dependent on ethylene imports for polyethylene production.

Ethylene exports from the Czech Republic have restarted in recent months, although in relatively modest volumes. In other areas of trade, Czech exports of plasticizers totalled 30,836 tons in 2016 against 25,503 tons in 2015, whilst phthalic anhydride dropped to 14,932 tons in 2016 against 16,089 tons. Spolana exported 39,377 tons of caprolactam against 42,898 tons in 2015.

HIP Petrohemija

Serbia's parliament passed a law for the restructuring of €254 million of debt owed by HIP Petrohemija to oil and gas company NIS. This means that the Serbian government will convert €105 million of the liabilities of HIP Petrohemija to NIS into state debt and will repay it in six instalments until June 2019.

HIP Petrohemija owns petrochemical plants in Pancevo, Elemir and Crepaja. It specialises in the production of high- and low-density polyethylene and other petrochemical products. The Serbian government owns 54.89% of HIP Petrohemija's share capital, while NIS controls 12.72%. Azeri companies have recently been linked with an interest in buying Petrohemija.

Serbian Chemical Exports (unit-kilo tons)

Product	*Jan-Nov 16*	*Jan-Nov 15*
Polyethylene	107.6	78.8
Polypropylene	16.1	17.4
Styrene Butadiene Rubber	12.4	10.0
Methanol	104.7	5.2
Acetic Acid	61.5	1.9

Oltchim 2016

Another attempt to sell Oltchim is underway whereby offers submitted will be selected based on the amounts obtained by the company's creditors. Although previous efforts to sell Oltchim have proved unsuccessful, the renewed performance of the chemical company in the past two years gives hope that this is a plant possesses a future. The bidders that move to the second stage will be able to carry out a due-diligence process in February, according to a document drafted by AT Kearney Management Consulting.

Oltchim's turnover increased by 12.43% in 2016 to 754.82 million lei from 742.39 million lei in 2015. Oltchim recorded a net profit of 11 38 million in 2016 against a loss of 48.47 million lei in 2015. Exports comprised 73% of sales revenues last year whilst the pre-tax profit EBITDA increased over the same period by 85.80% to 75.34 million lei from 40.54 million lei in 2015. It remains unclear whether Oltchim will be sold as single entity or in separate parts. It has been argued that the only viable packages comprise caustic soda, polyols and oxo-alcohols, which currently represent around 94% of sales.

Oltchim Sales Revenues (€ mil)

	Jan-Dec 16	*Jan-Dec 15*
Petrochemicals	107.5	110.3
Chlorine division	37.4	31.8
Finished Products	4.8	5.1
Materials for construction	0.0	0.6
Oxo alcohols	19.5	17.5
Other	2.4	3.5
Total	171.6	168.7

In 2016, the Romanian state put up for sale nine asset packages in Oltchim. The company's reorganisation plan provides the sale of the plant for at least €307 million. The consultant AT Kearney said Oltchim potential buyers of assets that, according to the collective agreement at Oltchim, the company must pay compensation to any employee made redundant.

PCC Rokita-Thailand & Malaysia

At the end of 2016 PCC Rokita acquired a 25% stake in the Bangkok chemical company IRPC Polyol Company Ltd. IRPC is a manufacturer and distributor of polyols in Thailand and south east Asia. The jv company will deal with the sale of polyols and polyurethane systems, currently in the company's portfolio IRPCP. In addition, IRPCP will be produced on the company's jv on new products based on licensed technology from PCC Rokita.

Polish Chemical Production (unit-kilo tons)		
Product	***Jan-Dec 16***	***Jan-Dec 15***
Caustic Soda Liquid	307.7	329.0
Caustic Soda Solid	69.7	63.3
Soda Ash	1159.3	1074.8
Ethylene	380.3	545.0
Propylene	279.2	391.0
Butadiene	54.7	60.8
Toluene	15.9	13.5
Phenol	40.0	35.4
Caprolactam	164.4	165.5
Acetic Acid	8.8	9.9
Polyethylene	269.3	376.0
Polystyrene	57.2	48.7
EPS	89.9	82.3
PVC	259.3	321.4
Polypropylene	193.4	245.0
Synthetic Rubber	221.7	192.0
Ammonia (Gaseous)	2623.0	1339.0
Ammonia (Liquid)	95.9	1379.0
Pesticides	31.7	31.0
Nitric Acid	2367.0	2385.0
Nitrogen Fertilisers	1970.1	2003.0
Phosphate Fertilisers	470.5	469.0
Potassium Fertilisers	388.2	379.0

Malaysia is another Asian country where the PCC Group wants to establish a presence. PCC subsidiary's Elpis signed a framework agreement in February 2017 with Petronas Chemicals Group Berhad. It concerns the production of chemical compounds and detergent intermediates in Malaysia.

Under the agreement, the parties will work together to implement the project, in particular, it will be the activity associated with obtaining financing, obtaining required approvals of relevant authorities and institutions, ensuring the necessary assets and management, and securing supplies of raw materials and services. Ethylene oxide is the key raw material for the proposed production which Petronas would be responsible for managing.

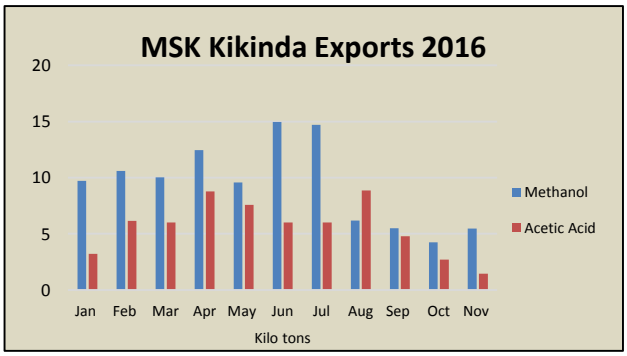
Ciech Sarzyna

Ciech subsidiary Ciech Sarzyna intends to introduce to its portfolio in the area of plant protection agents approximately 50 new products by 2021. This consist mainly of herbicides and fungicides, as well as new insecticides. Ciech Sarzyna recently doubled the export of its products in the agro industry and plans further international expansion. In 2016, the company registered its products in eight markets: including Spain, UK, Netherlands, Slovakia, the Czech Republic, Macedonia, Slovenia and Iran. In 2017 Ciech Sarzyna plans to introduce into the Polish market two new herbicide products Chwastox Complex 260 EW and Labrador Extra 50EC.

Czech Methanol Imports (unit-kilo tons)		
Country	***Jan-Dec 16***	***Jan-Dec 15***
Germany	36.0	38.5
Russia	42.0	51.5
Serbia	9.4	0.0
Others	2.2	1.3
Total	89.6	91.3

Methanol & derivative markets

Czech methanol imports totalled 89,600 tons in 2016 against 91,300 tons in 2015. Russia supplied 42,000 tons in January to December 2016 against 51,500 tons in 2015, whilst Germany reduced shipments from 38,500 tons to 36,000 tons. A new supplier in 2016 was found in Serbia where MSK Kikinda restarted methanol production in late 2015 after four years of non-activity. After reaching agreement with Gazprom Neft on a lower price of gas, accordingly at $220 per thousand cubic metres, production was restarted by MSK in late 2015.



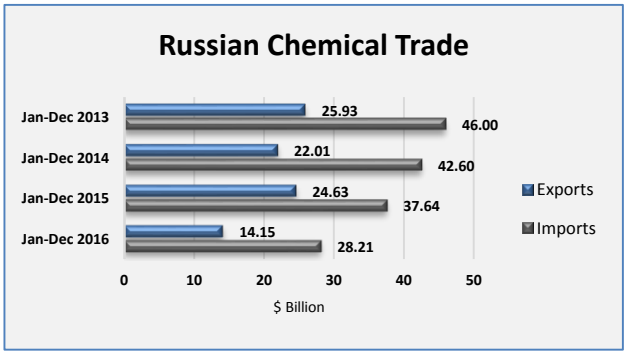
On 22 February 2017 Serbia's government stated that it plans to maintain its strategic partnership with Gazprom Neft, which should ensure raw material supply continuity for MSK Kikinda.

MSK established a target at the start of 2016 to produce 129,000 tons of methanol and 95,000 tons of acetic acid. Production allowed MSK to export 104,691 tons in the first eleven months in 2016 against 5,175 tons in 2015. MSK undertook a shutdown in September last year which ran until November. MSK also exported 61,434 tons of acetic acid in the first eleven months in 2016, some of which went to Poland. In the Polish domestic market, acetic acid is used by PCC Rokita for neutralizing non-ionic surfactants and for monochloroacetic acid production. PKN Orlen uses acetic acid in the production of PTA.

RUSSIA

Russian Chemical Production (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*
Caustic Soda	1,134.0	1,115.0
Soda Ash	3,050.9	3,084.0
Ethylene	2,689.7	2,642.0
Benzene	1,240.8	1,215.0
Xylenes	568.5	548.0
Styrene	682.7	674.5
Phenol	222.2	244.2
Ammonia	16,100.4	15,200.0
Nitrogen Fertilisers	9,517.0	8,648.0
Phosphate Fertilisers	3,473.0	3,219.0
Potash Fertilisers	7,729.0	8,056.0
Plastics in Bulk	7,735.0	7,222.0
Polyethylene	2,104.0	1,786.0
Polystyrene	537.3	536.0
PVC	824.6	847.0
Polypropylene	1,363.2	1,331.0
Polyamide	155.5	145.0
Synthetic Rubber	1,488.7	1,442.0
Synthetic Fibres	138.1	128.1



Russian chemical production 2016

Chemical production in Russia rose in total by 1.1% in 2016 over 2015, with the largest rises recorded in polyolefins. Ethylene production rose slightly to 2.690 million tons from 2.642 million tons in 2015, whilst benzene rose 0.2% tpa 1.241 million tons. Xylene production, including orthoxylene and paraxylene, totalled 568,500 tons in 2016 which was 3.5% up on 2015.

Russian bulk plastics production rose 5.4% in 2016 against 2015, despite the extended shutdown at Sayanskhimplast. Production of films and sheets of unreinforced polymer increased 4.6% in 2016 to 958,000 tons. Sheets of porous polymer increased by 2.9% to 245,000 tons, whilst sheets of non-porous polymer rose 11.1% to 305,000 tons. Production of pipes, hoses and fittings comprised 546,000 tons in 2016, 2.9% up, whilst fibres rose 10.5% to 173,200 tons.

The Russian trade deficit in chemical industry products has narrowed in recent years as the weak economy has impacted on imports.

The main fall was seen in 2015 when the gap between imports and exports fell to $13.01 billion against $20.60 billion in 2014. In 2016 the deficit rose again slightly over 2015 to $14.06 billion, mainly as the economy tended to stop declining and there was some stabilisation. At the same time export values dropped in line with lower oil and gas prices. The recent lift in oil prices has strengthened the rouble, which even if only a temporary trend, helps to make imports more competitive.

Although there were slight declines in the value of import shipments for polymers and organic chemicals in 2016, imports of pharmaceuticals actually showed an increase over 2015. In certain areas where Russia remains dependent on imports, such as raw materials for the textile industry, the Ministry of Industry and Trade is considering the reduction of import duties to overcome supply chain problems. Russian chemical producers can be expected to continue trying to replace imports this year, in areas such as polymers and acrylates (where new production is available). The competitiveness of imports will largely be determined by oil prices and rouble exchange trends.

Russian Petrochemical Projects

Amur GPP-logistics

The logistics platform for the Amur Gas Processing Plant (GPP) has witnessed important progress since the start of 2017, keeping the project to schedule. A berth for cargo delivery has been established in the Svobodny area on the Zeya River in order to support the construction of the plant, allowing the delivery of heavy and large pieces of equipment by barge. Deliveries start from Pacific port of Sovetskaya Gavan and then traverse the rivers Amur and Zeya to the construction site near the village of Chernigovka. Dredging is necessary to create the berth operating area which will resume in May.

The berth capacity of 32,000 tons is being built specifically for the construction of the Amur GPP, it is not clear yet if the same berth could be used for the Amur Gas Chemical Complex.

Berthing facilities are designed for columns, heat exchangers, absorbers, parts of furnaces, gas turbines, etc. Projected construction should provide unloading equipment weight of one place up to 1,200 tons.

In addition to deliveries by water, rail deliveries are necessary and for this purpose construction of a railway bridge over an estuary of the Amur River has begun. The bridge will consist of eight poles and seven superstructures, with a length of 252 metres linking the Amur GPP with the Trans-Baikal Amur railway. At the same time other structures are being built linking the two railway stations Factory and Factory 2 at Svobodny with Blagoveshchensk, whilst construction of an overpass that will allow road deliveries of large pieces of equipment.

Svobodny TOR-1 March 2017

The Amur GPP and possible SIBUR's gas chemical complex are to constitute the key residents in the Svobodny TOR (territory of priority development) which is to be put into operation from 1 March 2017. The three anchor project players in the Svobodny TOR include Gazprom processing Blagoveshchensk, SIBUR and the Svobodny administration. The advantages of the Svobodny TOR include huge tax incentives for at least ten years whereas for other TORs in the Far East the advantages and benefits last normally for five years.

The Amur GPP includes nine plants, six for gas processing, and three to isolate helium and nitrogen. The capacity comprises a total of 42 billion cubic metres of gas per annum and 60 million cubic metres of marketable helium. The EPCM-contractor of the project is NIPIGas. China Petroleum Engineering & Construction Corporation, an affiliate of CNPC, may take part in the construction of the Amur GPP. The company could be used in the construction of a booster compressor plant and a gas dehydration.

Recent tests have stated that the construction of the Amur GPP is being conducted in compliance with environmental regulations. Linde is managing the project whereby the separation of ethane and installation wide fraction of light hydrocarbons (propane, butane, pentane, hexane) will be constructed within the first phase of operations.

Russian Far East

A Russian government sub-commission has approved the creation of two new territories of priority development (TORs) Petrochemical and Svobodny. The Petrochemical TOR is based at Nakhodka where the dominant resident is intended to be VNKH (Eastern Petrochemical Company). SIBUR's gas-chemical complex combined with Gazprom's Amur Gas Processing Plant form the cornerstone of the Svobodny TOR.

The VNKH complex is being located in the Partizansk district of Nakhodka. Rosneft and Gazprom are reported to have resolved their dispute over gas supply to the VNKH complex, as this issue threatened to thwart the project.

The refinery complex comprises a design programme to produce gasoline, diesel fuel, kerosene and bunker fuel. The products are intended partly for Asia-Pacific countries. The project is also partly being constructed to resolve the regional problem of fuel shortages and high prices for motor fuel in the Far Eastern Federal District.

In other parts of the Russian Far East Transneft has started construction of three pumping stations in the Khabarovsk Territory to connect the Komsomolsk refinery to the main pipeline system East Siberia Pacific Ocean (ESPO). Transneft is also currently preparing to extend the ESPO-2 pipeline, opened in 2015, under the Amur river into China.

Regarding the Amur oil refinery suggestions have been put forward to use raw material supplies from the Uyar railway terminal, which was previously used for supplies to the Khabarovsk refinery and is now used for deliveries to the Komsomolsk refinery. The refinery owners are still optimistic that crude will be available through an extension of the ESPO despite Transneft showing a lack of interest.

Taneko refinery-improved feedstock supply

Transneft-Kama started to work on a project to increase the supply of oil to the Taneko refinery at Nizhnekamsk where capacity is being increased to 14 million tpa. In 2016, the complex processed 8.710 million tons of oil against 8.650 million tons in 2015. In January 2017 the oil pumping station Kaleykino started installation of oil storage facilities with a tank capacity of 50,000 cubic metres, whilst starting the reconstruction of the pipeline Kaleykino-Nizhnekamsk. The completion of the Taneko construction is scheduled for 2018.

TAIF gas processing plant

TAIF is interested in a project to build a gas processing plant in Tatarstan with a capacity of 30 million cubic metres per annum. If built, TAIF will be able to provide the raw material for the ethylene complex at Kazanorgsintez. The plant could be designed to produce 2.2 million tpa of ethane and 1.5 million tpa of dry gas. This would be based on the deposits of Nadym-Pur in West Siberia. The gas plant of 30 million cubic metres per annum could meet the demands of 1 million tpa capacity of ethylene at Kazan.

Support for gas processing and gas-chemical production in Tatarstan has been endorsed by other Russian companies such as Gazprom Neft, Novatek, Gazprom and SIBUR.

Uralkhimmash-ZapSibneftekhim

Uralkhimmash (part of OMZ) has begun supplying spherical tanks to ZapSibNeftekhim. In June 2016 the two companies signed a contract for the manufacture and delivery of six spherical tanks of 600 m3 for the ZapSibNeftekhim (Tobolsk). Spherical tanks are used for intermediate storage of liquefied petroleum gas (C4 fraction butadiene) to a plant for the production of ethylene at Tobolsk.

The project for the construction of the railway bridge across the Amur River near the village of Nizhneleninsk in the Jewish Autonomous Region and the Chinese city of Tongjiang has received another $110 million in funding. This means that the problem with the financing of the construction of the bridge on the Russian side has been resolved.

TAIF-Nizhnekamskneftekhim

TAIF has entered the final stage of selection for the licensor of the olefin complex to be built at Nizhnekamskneftekhim. Most of the key questions have been decided and a decision could be expected soon. The process of license evaluation started in 2016. The new ethylene complex at Nizhnekamskneftekhim comprises a capacity of 600,000 tpa which could be ready by 2020-2021, and a second plant will then be targeted for 2025.

The first stage includes facilities to produce 300,000 tpa of polyethylene, 180,000 tpa of polypropylene and 200,000 tpa of polystyrene. Monomer capacity includes 163,000 tpa for propylene and 110,000 tpa for ethylene. Second stage projects include 600,000 tpa of polyethylene, 180,000 tpa of polypropylene, 200,000 tpa of polystyrene, 93,000 tpa of MDI and 155,000 tpa of propylene derivatives.

SIBUR-ZapSibnefteKhim

Work on the installation of product connecting pipelines and storage facilities for NGLs has started on the ZapSibNeftekhim complex at Tobolsk. In late January ZapSibNeftekhim started conducting a test run of a water conduit length of around 50 kilometres. Around 15,000 tons of polyethylene pipes were used in the pipeline, supplied by Polyplastik. NIPIGas plans to soon complete the work on a number of common facilities in ZapSibNeftekhim, including four storage tanks for fire and service water. Industrial test facilities are planned for April 2017.

SIBUR and Cryogenmash (part of OMZ Group) have signed an agreement on the construction of the production of industrial gases for ZapSibNeftekhim. Industrial gases, nitrogen and compressed dry air, will ensure the operation of all key sites for ZapSibNeftekhim, starting with the main process units and ending with common facilities. After entering the installation into operation Cryogenmash-Gas-Tobolsk will provide operational management and installation to supply industrial gases to ZapSibNeftekhim on a long term basis. The design capacity of the new production will be up to 37,000 Nm3/h of nitrogen and up to 28,000 Nm3/hour of dry compressed air.

Russian petrochemical producers & markets

Russian Ethylene Production (unit-kilo tons)		
Producer	***Jan-Dec 16***	***Jan-Dec 15***
Angarsk Polymer Plant	122.1	181.4
Kazanorgsintez	477.7	538.5
Stavrolen	278.7	210.7
Nizhnekamskneftekhim	607.6	585.7
Novokuibyshevsk Petrochemical	62.7	67.9
Gazprom n Salavat	340.0	285.8
SIBUR-Kstovo	369.0	328.3
SIBUR-Khimprom	70.9	51.2
Tomskneftekhim	235.3	255.4
Ufaorgsintez	125.7	137.1
Total	2689.7	2642.0

Russian olefin production 2016

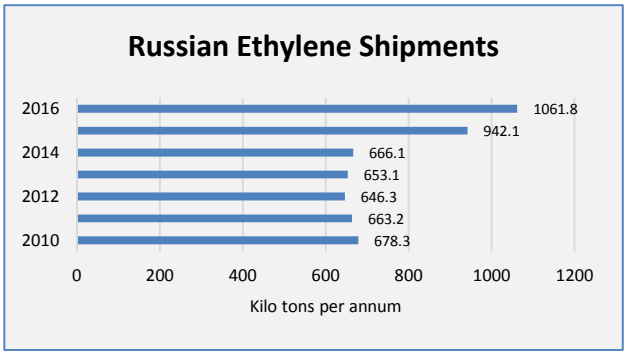
Ethylene production amounted to 250,900 tons in December, including 17,600 tons at Angarsk Polymer and 23,500 tons at Tomskneftekhim. In December Stavrolen monomer decreased production of 8% to 24,900 tons. Russian ethylene production totalled 2.690 million tons in 2016 against 2.642 million tons in 2015.

Ethylene production in Russia was restricted in 2016 when the Angarsk cracker endured a five-month outage due to an accident in early February. Together with a number of longer planned plant turnarounds it meant that utilisation rates for Russian plants dropped to about 82% in 2016 from 84% in 2015. Propylene production in Russia amounted to 156,600 tons in December, taking the full year total to 1.5 million tons which was 13% down on 2015.

SIBUR's production at Nizhniy Novgorod

SIBUR increased ethylene production at Kstovo in the Nizhniy Novgorod region to 369,000 tons in 2016 against 328,300 tons in 2015. The company also recorded a 10% rise in MEG production at Dzerzhinsk to 259,390 tons and 6% in ethylene oxide to 259,390 tons.

The increase in ethylene production was made possible following the completed reconstruction of the Kstovo cracker. Technip Benelux BV was responsible for the expansion, including an upgrade of six gas furnaces. The project has been synchronized with the reconstruction at SIBUR-Neftekhim's ethylene oxide and glycol units which were each expanded by 13.6% to 300,000 tpa. Reconstruction of the Kstovo cracker guarantees supply of raw materials for the production of the PVC complex RusVinyl whilst supplying additional volumes of ethylene to the EO/MEG plant at Dzerzhinsk.

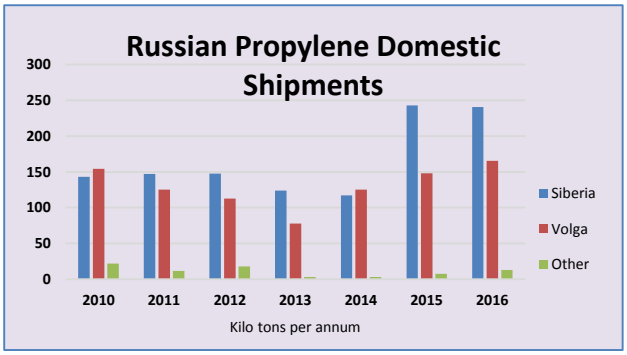


Russian ethylene merchant sales

Ethylene merchant sales on the Russian domestic market totalled 1.062 million tons in 2016 against 942,000 tons in 2015. Around three quarters of shipments were made in the Volga region where the 644 km ethylene pipeline connects Kazan to Salavat, and the Lower Volga region where the 60 km ethylene pipeline from Kstovo to Dzerzhinsk supplies the ethylene oxide plant at Dzerzhinsk and locally at Kstovo supplying the RusVinyl PVC complex.

Over the past few years' merchant sales have increased largely due to the construction of the VCM-PVC facilities at Kstovo, and the increased usage of ethylene for ethylene oxide production at Dzerzhinsk. The Privolzhsky region, including Tatarstan and Bashkortostan, provide the main bulk of ethylene merchant sales.

Ethylene sales in Siberia were affected last year by the enforced five-month shutdown at Angarsk which restricted shipments to Sayanskhimplast. This year Angarsk Polymer Plant will undertake a planned cracker shutdown in June and July. The company is to carry out repairs on the production of pyrolysis EP-300, and also on the production of styrene, polystyrene, ethylbenzene, polyethylene. There will also be conducted routine inspections and repairs capacitive, column, reactor and heat exchange equipment.



Russian propylene merchant sales 2016

Russian sales of propylene on the domestic market totalled 418,000 tons against 398,000 tons in 2015. Saratovorgsintez remained the largest buyer in 2016 in the Russian merchant market for propylene. SIBUR-Khimprom, which uses propylene for oxo-alcohol production, is the second largest buyer in the Russian market. Propylene production totalled 1.5 million tons in 2016, 13% less than in 2015.

Other buyers of merchant propylene include Akrilat at Dzerzhinsk, for the production of acrylates, Samaraorgsintez for cumene, and the Plant of Synthetic Alcohol which uses propylene for the production of isopropanol.

Russian Propylene Domestic Sales (unit-kilo tons)

Producer	*Jan-17*	*Jan-16*
Angarsk Polymer Plant	7.7	1.9
Omsk Kaucuk	1.0	0.0
SIBUR-Kstovo	6.3	10.2
Akrilat	0.0	0.0
LUKoil-NNOS	22.6	19.6
Tomskneftekhim	0.0	0.0
Gazprom neftekhim Salavat	0.0	0.2
Nizhnekamskneftekhim	0.0	0.0
SIBUR-Khimprom	0.0	0.0
Stavrolen	2.0	0.0
Tobolsk-Polymer	0.0	0.0
Ufaorgsintez	0.0	0.0
Total	39.6	31.9

Russian propylene sales, Jan 2017

Propylene sales on the domestic market amounted to 39,600 tons in January, against 31,900 tons in the same month in 2016. Angarsk Polymer Plant increased sales by 20% to 7,700 tons, and Lukoil-NNOS by 13% to 22,500 tons. Lukoil-NNOS increased propylene sales to Neftekhimya at the Moscow refinery for polypropylene production. SIBUR-Kstovo reduced propylene sales on the domestic market dropped 20% to 6,300 tons.

Sales of propane-propylene fractions amounted to 13,100 tons in January, 12% down on December. The Ryazan refinery reduced sales by 29% to 6,700 tons whilst increasing exports 1.5 times and Slavneft-Yanos increased export shipments by 10% to 5,400 tons.

Russian propylene exports dropped 4% in January against December to 17,200 tons. Lukoil-NNOS shipped only 4,219 tons, down 40%, whilst SIBUR-Kstovo increased its exports by 19% up to 9,959 tons. Azerkhimya reduced the supply propylene to the Russian market in January by 16% to 204 tons, all of which went to Volzhskiy Orgsintez.

Russian Styrene Production (unit-kilo tons)

Producer	*Jan-Dec 16*	*Jan-Dec 15*
Nizhnekamskneftekhim	301.5	300.3
Angarsk Polymer Plant	23.3	49.1
SIBUR-Khimprom	125.8	130.0
Gazprom n Salavat	177.7	150.2
Plastik, Uzlovaya	54.4	45.0
Total	682.7	674.6

Russian styrene, Jan 2017

Russian styrene sales on the domestic market amounted to 6,540 tons in January, 8% down on December. Gazprom neftekhim Salavat shipped 4,050 tons, SIBUR-Khimprom 329 tons, Angarsk Polymer 411 tons and Plastik 734 tons or 43% less than in December.

In addition to exports, Gazprom neftekhim Salavat is the largest supplier of merchant styrene on the domestic market, most of which is shipped to Plastik at Uzlovaya which is the only non-integrated domestic plant for the production of styrene. Plastik was formerly part of SIBUR, and bought styrene from SIBUR-Khimprom but is now relying more on Salavat. Russian styrene exports amounted to 12,940 tons in January, 7.4% up on December. The main exporter of the product was Gazprom neftekhim Salavat accounted for 9,670 tons, followed by SIBUR-Khimprom 1,210 tons and Angarsk Polymer Plant 2,050 tons. Finland accounted for 9,460 tons of Russian exports, China 2,050 tons, Turkey 798 tons and other countries 626 tons.

Production volumes for styrene totalled 682,700 tons in 2016 against 674,600 tons in 2015. Gazprom neftekhim Salavat increased production from 150,200 tons to 177,700 tons, whilst Angarsk reduced production from 49,100 tons to 23,300 tons.

Bulk Polymers

Russian Polyethylene Production (unit-kilo tons)		
Producer	***Jan-Dec 16***	***Jan-Dec 15***
Angarsk Polymer Plant	50.4	64.6
Kazanorgsintez	639.6	653.5
Stavrolen	256.4	185.3
Nizhnekamskneftekhim	209.1	198.1
Gazprom n Salavat	146.9	133.3
Tomskneftekhim	192.3	253.9
Ufaorgsintez	108.8	96.3
Total	1603.5	1585.0

Russian polyethylene, Jan-Dec 2016

Russian polyethylene production totalled 1.604 million tons in 2016 against 1.585 million tons in 2015. Falls were noted by Angarsk Polymer Plant and Tomskneftekhim due to extended maintenance, whilst Stavrolen was able to increase production significantly due to mostly uninterrupted utilisation. Despite the five-month shutdown at Angarsk Polymer, LDPE production fell to 50,400 tons in 2016 against 64,600 tons in the previous year. LLDPE production was carried out in 2016 by one producer Nizhnekamskneftekhim and amounted to 73,500 tons against 46,000 tons in 2015.

Russian polypropylene, Jan-2017

Russian polypropylene production amounted to 122,100 tons in 2016 against 119,000 tons in January 2016 and 126,500 tons in December 2016. Tobolsk-Polymer produced 43,200 tons against 48,000 tons in December, whilst for the whole of 2016 the company produced 463,500 tons.

Russian Polypropylene Production (unit-kilo tons)		
Producer	***Jan-17***	***Jan-16***
Ufaorgsintez	10.8	10.0
Stavrolen	9.5	9.2
Moscow NPZ	9.6	10.0
Nizhnekamskneftekhim	18.4	18.8
Polyom	18.6	17.8
Tomskneftekhim	12.0	10.0
Tobolsk-Polymer	43.2	43.2
Total	122.1	119.0

Nizhnekamskneftekhim was the second largest producer in 2016, producing 216,700 tons, and produced 18,400 tons in January. Polyom at Omsk produced 18,600 tons in January against 17,300 tons in December; for the whole of 2016 the company produced 202,800 tons.

Ufaorgsintez produced 10,800 tons in January against 11,400 tons in December, and 123,100 tons for the whole of 2016. Stavrolen produced 9,500 tons of polypropylene in January against 9,200 tons in December, and 112,400 tons for 2016. Neftekhimya at the Moscow refinery reduced production in January to 9,600 tons from 11,300 tons in December, whilst producing 129,400 tons in 2016. Polypropylene imports into Russia amounted to 9,500 tons in January, 14% down against January 2016. Overall, imports amounted to 167,200 tons in 2016.

Russian PVC market, Jan-2017

Russian PVC imports dropped 40% in January against January 2016 to 1,200 tons. The total volume of imports of Chinese acetylene resin rose to 856 tons. Exports were affected in January by the stronger rouble, thus falling to 11,200 tons against 17,700 tons in December.

Russian PVC Production (unit-kilo tons		
Producer	***Jan-17***	***Jan-16***
Bashkir Soda	22.7	22.4
Kaustik	8.1	8.2
RusVinyl	25.3	23.5
Sayanskkhimplast	23.0	21.7
Total	79.1	75.8

RusVinyl increased production of suspension PVC by 28% in 2016 to 282,000 tons and 23,000 tons of emulsion PVC. Caustic soda production amounted to 200,000 tons in 2016. Ethylene for RusVinyl is supplied from SIBUR-Kstovo whilst rock salt is delivered by water transport from the Astrakhan region and rail transport from Belarus. Russian Railways has recently won the tender for the provision of transport and logistics services for RusVinyl, taking responsibility for transport organisation from the station Zeletsino.

Russian PVC production amounted to 79,100 tons in January against 64,000 tons in December. RusVinyl produced 25,300 tons of PVC, of which 2,000 tons comprised emulsion grade, whilst Sayanskkhimplast produced 23,000 tons. In 2016 Sayanskkhimplast produced 142,800 tons of PVC against 208,500 tons in 2015. Bashkir Soda Company produced 22,700 tons in January unchanged from December. Production totalled 248,700 tons in 2016. Kaustik at Volgograd produced 8,000 tons in January against 8,100 tons in December, after producing 88,500 tons in 2016.

Russian Domestic Polymer Prices (euros per ton)			
Product	*Dec-16*	*Nov 16*	*Average 2016*
Polyethylene	1169.5	1191.8	1091.7
Polystyrene	1204.9	1147.5	1139.0
PVC	776.2	819.8	712.8
Epoxy resins	2386.5	2327.4	2096.5
Polypropylene	1183.2	1139.2	1008.6
Silicone polymers	2594.2	2880.3	2615.1

Russian polycarbonate Jan-2017

Kazanorgsintez produced 6,600 tons of polycarbonate in January, 3.5% more than in January last year. The company continued to increase the proportion of injection moulding grades to 52% compared to 32% in December. In January 2017, exports totalled a record 3,800 tons against 10,600 tons in January 2016.

PX-PTA-PET

Russian PX Production (unit-kilo tons)		
Producer	*Jan-Dec 16*	*Jan-Dec 15*
Gazprom Neft	136.9	163.9
Ufaneftekhim	122.4	105.6
Kinef, Kirishi	66.6	58.5
Total	325.9	328.0

Russian PX Domestic Sales (unit-kilo tons)		
Producer	*Jan-Dec 16*	*Jan-Dec 15*
Gazprom Neft	61.6	85.2
Ufaneftekhim	107.5	110.0
Kinef	0.2	0.2
Total	169.3	195.5

Russian PX Exports (unit-kilo tons)		
Producer	*Jan-Dec 16*	*Jan-Dec 15*
Gazprom Neft	58.9	52.2
Ufaneftekhim	14.0	2.0
Kinef	48.7	58.8
Total	121.6	113.0

Russian paraxylene 2016

Russian paraxylene production totalled 325,900 tons in 2016 against 328,000 tons in 2015. Paraxylene sales on the domestic market amounted to 169,300 tons against 195,500 tons in 2015 whilst exports rose from 113,000 tons to 121,600 tons.

Etana PTA projects

At the start of February 2017, the Kabardino-Balkaria government met with the North Caucasian railway branch of Russian Railways to consider the infrastructure requirements for the Etana PET and PTA projects. These projects are being implemented by the government of Kabardino-Balkaria together with state corporations of China and includes three sectors, focused on polymer for the production of bottled drinking water and transport and logistics. The main destination route is intended to be China, both for raw materials and product sales.

The Etana project involves a total capacity of 1.5 million tpa, broken down into stages of 500,000 tpa by 2018 and the remaining 1.0 million tpa by 2020. Some reports have expressed doubts about the necessity of this project, noting that the entire demand of the Russian market of PET is less than 500,000 tpa. However, due to Chinese participation in the project most of the production is expected to be targeted on the Chinese market. The PTA project seems less certain and further news is awaited.

Russian PTA Imports (unit-kilo tons)		
Country	*Jan-Dec 16*	*Jan-Dec 15*
Belgium	56.2	30.3
Brazil	6.4	8.2
China	48.5	37.6
South Korea	64.0	66.8
Poland	30.9	8.1
Thailand	3.0	0.0
Portugal	0.0	2.5
UK	0.3	0.0
Total	209.2	153.5

The Chinese partners include China Petroleum Technology and Development Corporation (CPTDC) and China Kunlun Contracting and Engineering Corporation (CKCEC).

Ivanovo polyester

The construction of the Ivanovo polyester project is set to start in the middle of 2017 despite suggestions that the required environmental report for VEB bank financing was inaccurate. An independent review of the plant and its side-effects is likely to be undertaken, but in reality may have little effect. The plant will process a huge amount of highly toxic chemicals which is of concern to the local administration, although the project managers insist that the plant will not emit waste.

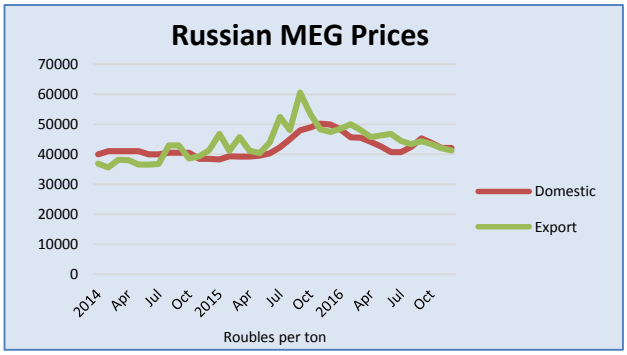
Ivanovo Polyester Complex (IPK) signed a contract on 1 December 2016 with Uhde Inventa-Fischer for the supply of equipment, installation and service for the PET project at Vichuga in the Ivanovo region. Earlier in

2016 a contract was signed with the Czech company Unistav for working documentation, supply of auxiliary equipment and construction, installation and commissioning works.

Ivanovo Polyester Complex submitted the documents for state examination in February, which if approved would mean that construction of the new facilities can start in the first half of 2017. Ivanovo Polyester Complex has already signed agreements for MEG supplies from SIBUR and. Nizhnekamskneftekhim of around 65,000 tpa. Import requirements of 155,000 tpa are expected to be met through imports.

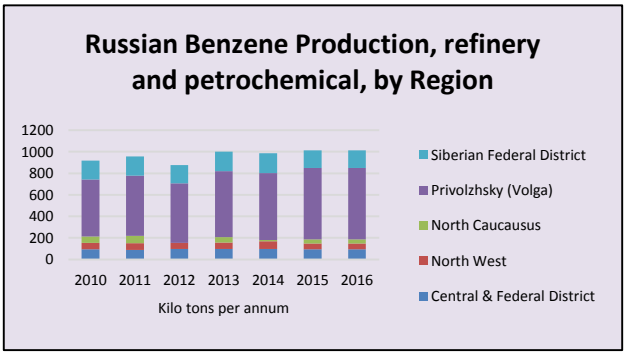
Russian MEG market, Jan-2017

MEG sales on the Russian domestic market amounted to 12,300 tons in January, 7.6% down on December. SIBUR-Neftekhim supplied 8,860 tons in January, Nizhnekamskneftekhim 3,390 tons, and Kazanorgsintez. Polief purchased 7,470 tons in January, Obninskorgsintez 2,760 and BaltTechProm 1,200 tons.



MEG exports from Russia amounted to 9,700 tons in January, 18% up on January 2016 when volumes amounted to 6,910 tons. SIBUR-Neftekhim shipped 5,430 tons in January 2017 and Nizhnekamskneftekhim 4,200 tons. Belarus accounted for Russian exports of 7,840 tons. MEG imports amounted to 4,400 tons in January, 15.4% down on December, all being delivered to TD Ecopolymer. Saudi Arabia supplied all of the imports. Regarding Russian MEG prices, domestic and export numbers tend to correlate closely.

Aromatics



Russian benzene production, Jan-Dec 2016.

Russian benzene production totalled 1.238 million tons in 2016 against 1.218 million tons in 2015. Benzene from petrochemical plants and refineries provide the bulk of production, with the Privolzhsky region accounting for roughly 60-65%. Full production data by plant for 2016 is available on the Statistical Database on the CIREC website.

In recent production trends, benzene from refineries and petrochemical plants amounted to 110,300 tons in December. Kirishinefteorgsintez increased production by 25% to 5,900 tons, and Severstal by 31% to 3,100 tons. At the same time, Stavrolen reduced the production of benzene by 28%, to 5,100 tons, and Gazprom Neft at the Omsk Refinery by 24% to 7,300 tons.

Russian Benzene Exports (unit-kilo tons)

Producer	*Jan-17*	*Jan-16*
Altay-Koks	1.789	0
Chelyabinsk MK	1.417	0
Koks	1.228	1.025
Magnitogorsk MK	1.625	1.578
Moskoks	0.668	0.68
Novolipetsk MK	0	1.306
Kirishinefteorgsintez	2.854	0
Slavneft	2.511	0
Severstal	0.295	0
Uralorgsintez	0.999	0
Ural Steel	0.535	0.606
Total	13.921	5.195

Russian benzene sales, Jan-2017

Russian benzene exports totalled 13,921 tons in January against 5,195 tons in January 2016. Aside higher sales from the coke based producers, Slavneft and Kirishinefteorgsintez both exported large volumes in January (2,511 tons and 2,584 tons respectively).

Sales volumes of the Russian benzene for synthesis and nitration in the domestic market amounted to 55,300 tons which is 9% less than in December and allowing for extra availability for exports. SIBUR-Kstovo reduced sales by 2.7

times in January to 3,200 tons but Uralorgsintez increased by 34% to 5,600 tons. Despite the decline in domestic demand Kirishinefteorgsintez increased its supply of raw materials to domestic consumers by 1.8 times to 4,000 tons.

Russian Orthoxylene Domestic Sales (unit-kilo tons)

Producer	*Jan-17*	*Jan-16*
Gazprom Neft	5.7	6.2
Ufaneftekhim	8.1	3.7
Kirishinefteorgsintez	2.6	3.4
Total	16.3	13.3

Russian orthoxylene, Jan-2017

Sales of orthoxylene on the Russian domestic market amounted to 16,660 tons in January, 22% up on December. Ufaneftekhim supplied 8,190 tons, Gazprom Neft 5,880 tons and Kirishinefteorgsintez 2,600 tons. Kamteks-Khimprom increased its purchases of raw materials in January compared to December 2016 by 17% to 10,340 tons.

Gazprom neftekhim Salavat increased its purchase of raw materials by 35%, to 1,340 tons whilst Dmitrievsky Chemical Plant increased its purchases by almost 2.5 times to 690 tons. In addition, Russian paint producers increased their purchases in January by 25%, to 2,540 tons, whilst fuel manufacturers, agrochemical, pharmaceutical and other products bought 1,760 tons. Orthoxylene exports dropped to 1,550 tons in January against 7,510 tons in December. Gazprom Neft supplied 1,390 tons of the total.

Russian Toluene Domestic Sales (unit-kilo tons)

Producer	*Jan-Dec 16*	*Jan-Dec 15*
Novopiletsk MK	0.3	1.5
Slavneft-Yanos	22.4	26.3
Severstal	7.1	7.0
LUKoil-Perm	27.3	17.9
Gazprom Neft	87.0	47.0
Zapsib	2.9	3.6
Kinef, Kirishi	30.4	28.1
Gazprom Neftekhim Salavat	0.3	0.1
Others	0.0	1.3
Total	177.7	132.8

Russian toluene sales, Jan-2017

Russian sales of toluene on the domestic market amounted to 11,910 tons in January, 18% down on December. Gazprom Neft supplied 65% of shipments in January, or 7,880 tons, followed by Kirishinefteorgsintez with 2,850 tons, Severstal 350 tons, Lukoil-Perm (300 tons) and Slavneft-Yanos 120 tons.

Over the month, explosives manufacturers increased their purchases of toluene by 9% to 1,030 tons (9% of Russian consumption). Companies producing paints, reduced the volume of purchased raw materials by 19%, to 2,190 tons. Manufacturers of motor fuels and additives thereto toluene purchase reduced by 20% to 4,340 tons (36%). In addition, 0.42 tons of toluene (3%) were used as a solvent in the manufacture of rubber.

Russian phenol, Jan-2017

Phenol sales on the domestic market production in Russia amounted to 9,400 tons in January against 10,800 tons in January 2016. Resin manufacturer MetaDynea was the largest domestic buyer in January 2017, taking 3,236 tons mostly from Ufaorgsintez and Novokuibyshevsk Petrochemical Company. Kuibyshevazot has not bought phenol for caprolactam production in the past two months. Other large buyers in the January included Shchekinoazot, Uralkhimplast and Nizhnekamskneftekhim.

Russian Phenol Market Sales by Supplier (unit-kilo tons)

Producer	*Jan-17*	*Jan-16*
Novokuibyshevsk PC	4.3	4.5
Kazanorgsintez	1.0	1.3
Ufaorgsintez	4.0	4.9
Borealis	0.1	0.0
Total	9.4	10.8

The largest buyers in January came from domestic manufacturers of phenol-formaldehyde resins, whilst other buyers included domestic producers of alkylphenols (Nizhnekamskneftekhim) and antioxidants (Sterlitamak Petrochemical Plant). About 40% of the total sold in the Russian phenol market was delivered by trucks.

Kuibyshevazot 2017

Kuibyshevazot increased chemical; production overall by 7.6% in 2016. Ammonia production increased by 1.9% to 652,400 tons and ammonium nitrate by 4.7% to 612,300 tons. Ammonium sulphate increased by 13.4% to 502,500 tons whilst urea declined by 2.8% to 339,900 tons. The production of cord fabrics fell by 31% to 3,200 tons and technical cords by 6.9% to 12,600 tons. Production of caprolactam increased by 11.7% to 197,000 tons, polyamide 6 by 5.9% to 143,300 tons. Cord fabric production amounted to 10.9 million running metres.

Kuibyshevazot-Production (unit-kilo tons)		
Product	***Jan-Dec 16***	***Jan-Dec 15***
Polyamide-6	143	135.4
High Tenacity Tech Yarns	12.6	13.5
Caprolactam	197.0	176.3
Ammonia	652.4	640.0
Urea	339	349.6
Ammonium Nitrate	612.3	585.1
Ammonium Sulphate	502.5	443.0

Revenue amounted to 37.9 billion roubles in 2016, and net profit 4.1 billion roubles which was down from 5.5 billion roubles in 2015. In 2016, Kuibyshevazot launched the energy efficient production of cyclohexanone, and a joint venture with Praxair for the production of air separation products. It also began commissioning works on a line for nitric acid and an ammonia plant as a jv with Linde.

Kuibyshevazot spent 8.3 billion roubles for the construction and modernisation of in 2016, of which 2 billion roubles were spent for capital repairs of the factory facilities.

Russian Caprolactam Production (unit-kilo tons)		
Producer	***Jan-Dec 16***	***Jan-Dec 15***
Kuibyshevazot	197.0	176.3
Shchekinoazot	58.9	54.8
SDS Azot	91.9	95.9
Total	347.8	327.0

Kuibyshevazot polyamide expansion 2017

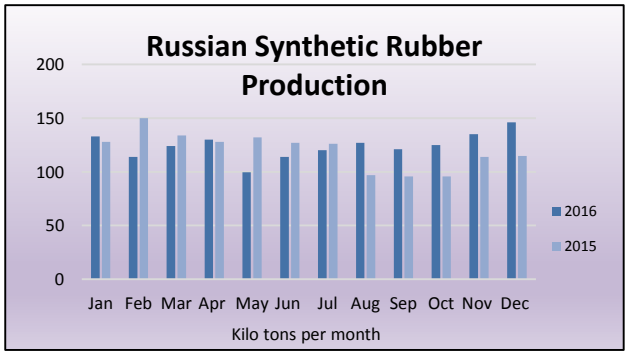
Kuibyshevazot took a loan from Sberbank of billion roubles, to be repaid prior to 29 June 2026 to support investment. In 2017 Kuibyshevazot is undertaking an expansion of the polyamide capacity, by adding another 55,000 tpa to raise the total 212,000 tpa. The new unit is expected to come onstream in the third quarter this year. The company also plans further expansion of polyamide capacity to 260,000 tpa by 2020, virtually eliminating the need for export activity. Part of the new capacity in 2017 will be distributed to subsidiary Kurskkhimvolokno which plans to expand facilities for moulding of technical yarns. The supplier of the new polyamide plant is Polymer Engineering (Germany).

Synthetic Rubber

Russian C4 Purchases (unit-kilo tons)		
Consumer	***Jan-17***	***Jan-16***
Omsk Kaucuk	4.5	2.2
Nizhnekamskneftekhim	17.1	17.0
Togliattikaucuk	14.8	13.7
Sterlitamak Petrochemical	0.0	0.0
Total	36.5	32.9
Source: Chem-Courier.ru		

Russian C4 sales, Jan 2017

C4 sales on the Russian domestic market amounted to 36,500 tons in January against 32,900 tons in January last year. The leading suppliers included SIBUR-Kstovo with 8,671 tons, Tomskneftekhim 7,476 tons and Stavrolen 6,594 tons. Angarsk Polymer Plant increased sales by 25% to 2,700 tons whilst Kazanorgsintez reduced shipment by 19% to 3,700 tons. The two largest rubber producing plants Nizhnekamskneftekhim and SIBUR Togliatti (Togliattikaucuk) both increased purchases of C4s slightly in January.



Russian rubber production, Jan-Dec 2016

Russian synthetic rubber production totalled 1.449 million tons in 2016 against 1.442 million tons in 2015. Domestic rubber prices tended to end the year higher and were in most cases at levels above the average for the whole year.

Omsk Kaucuk-rubber production

Omsk Kaucuk (included in Titan) produced 47,000 tons of SKMS rubbers in 2016, increasing its share in Russian production of methyl styrene butadiene rubber from 22% in 2015 to 26%. Omsk Kaucuk doubled its share of Russian exports of butadiene-methyl styrene rubbers from 7% to 15% in 2016. Omsk Kaucuk introduced energy-saving technologies in the past five years which has allowed nearly a one-third increase in plant productivity and a 40% reduction in consumption of heat and power resources. Omsk Kaucuk is currently modernising its plant for the production of butadiene. The project has included replacement of the heat-exchange equipment, and is expected to be completed in late 2017.

Russian carbon black

Russian carbon black production totalled 885,100 tons in 2016 against 822,700 tons in 2015. One of the largest producers Yaroslavl Technical Carbon Plant produced 322,000 tons of carbon black in 2016, 2.5%

higher than in 2015. Nizhnekamsk Carbon Plant (included in Tatneft) has implemented an energy project which will ensure sufficient heat and electricity for all production departments for Nizhnekamsk Carbon Plant. Previously the company was required had to buy electricity from Tatenergo before deciding to create its own energy resources. The project, which began several years ago, has already reached the full return on investment.

Russian Synthetic Rubber Exports (unit-kilo tons)

Country	*2016*	*2015*
Belarus	34.6	37.8
Belgium	19.8	14.3
Brazil	27.9	57.9
Canada	16.5	19.8
China	132.7	94.6
Czech Republic	31.8	28.6
Germany	29.0	24.5
Hungary	71.7	74.8
India	108.7	86.7
Italy	7.0	10.6
Japan	19.9	33.7
Korea South	7.9	9.9
France	2.9	3.0
Lithuania	7.2	12.4
Mexico	31.2	1.4
Poland	131.0	120.1
Portugal	5.2	6.3
Romania	40.4	39.5
Serbia	16.6	14.4
Turkey	36.9	40.2
Ukraine	27.4	17.3
USA	61.8	56.4
Malaysia	3.6	4.9
Vietnam	10.9	12.9
Others	101.5	115.0
Total	984.3	937.0

Russian rubber exports, Jan-Dec 2016

Russian exports of synthetic rubber increased to 984,300 tons in 2016 to 984,300 tons from 937,000 tons in 2015. The largest category was isoprene rubber which rose from 275,900 tons to 252,700 tons. China increased its imports of Russian synthetic rubber in 2016 to 132,700 tons against 94,600 tons in 2015, whilst Poland increased shipments from 120,100 tons in 2015 to 131,000 tons in 2016. The most notable new destination for Russian exports in 2016 was Mexico where volumes totalled 31,400 tons against 1,400 tons in 2015. The highest value product category exported from Russia is halogenated butyl rubber (HBR).

Khimprom increases sales of rubber chemicals

Khimprom at Novocheboksarsk increased sales of rubber chemicals by 48% in 2016, helped by exports. This trend is continuing to grow, for example shipments of diphenylguanidine (DPG), used in the manufacture of tyres amounted to 89 tons in January 2016 but rose to 200 tons in January 2017. For the whole of 2016 Khimprom sold 1,914 tons of DFG against 1,290 tons in 2015. Diphenylguanidine is used as vulcanisation accelerator.

Khimprom-asetonanil

Khimprom (Novocheboksarsk) has completed the first phase of the project to expand the production of Atsetonanil. The capacity of the plant has been expanded by 25% from 875 tons a month to 1,100 tons. Investment in the project will amount to 75 million roubles. Atsetonanil is used as a stabilizer, and slows down the process of aging of tyres. This helps to protect the product from the thermal aging of rubber increases the resistance to cracking and oxidation.

Russian tyre market

Russian tyre exports rose 11.8% in 2016 by value to $1.08 billion. The Continental tyre plant at Kaluga increased its export share of production from 20% in 2015 to 30% in 2016, whilst total production increased by 50% up to 3 million tyres. Nokian Tyres exported about 70% of the production of its Russian plant at Vsevolozhsk.

Rubber used in Russian Tyre Industry (unit-kilo tons)

Tyre category	*Jan-Dec 16*	*Jan-Dec 15*
Car Tyres	41.0	38.0
Lorry tyres	7.5	6.8
Agricultural tyres	1.8	1.4
Total	50.2	46.2

Tyre manufacturer Kordiant believes that the market is entering a phase of pent-up demand in the sale of winter tyres has fallen for three consecutive years. The devaluation of the rouble severely reduced import volumes in 2015, reducing imports of car tyres by 31% compared to 2014 and totalled 13.76 million units. Production increased by 9% in 2015 to 36.5 million units, of which almost half went to export: mainly in Germany, Finland and the Czech Republic.

Nokian Tyres has started work on the modernisation of production at the Vsevolozhsk tyre plant in St Petersburg which will increase capacity by 10% to 17 million tyres per annum. The current capacity of Nokian Tyres account is for 15.5 million tyres per annum, based on 13 production lines. About 60% of output from the plant is exported.

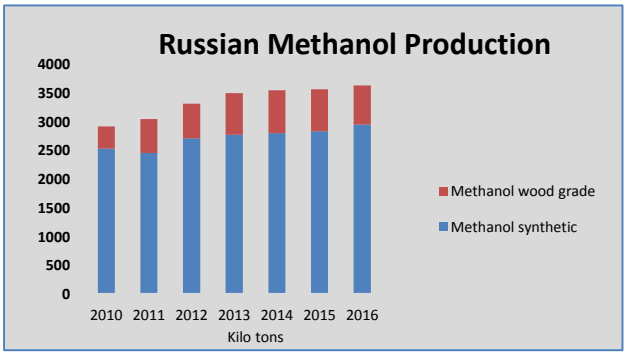
Methanol

Russian methanol market 2016

Russian methanol production totalled 3.647 million tons in 2016 against 3.571 million tons in 2015. Russian methanol merchant sales are evenly divided between exports and the domestic market. Russian methanol exports rose in 2016 whilst domestic merchant sales and captive consumption fell. Shchekinoazot and Metafrax reduced exports to concentrate on internal processing in the formaldehyde sector, whilst Sibmetakhim and Tomet came close to maintaining export volumes.

Russian Chemical Commodity Exports

	Jan-Dec 16	*Jan-Dec 16*	*Jan-Dec 15*	*Jan-Dec 15*
Product	***Kilo tons***	***USD Mil***	***Kilo tons***	***USD Mil***
Ammonia	3658.6	828	3,585	1,356
Methanol	1497.4	251	1,261	331
Nitrogen Fertilisers	12773.3	2,171	11,594	2,672
Potash	9486.1	1,856	11,185	2,958
Mixed Fertilisers	9241.8	2,608	8,857	3,221
Synthetic Rubber	984.3	1,293	937	1,377



Sibmetakhim sells about half of its production on the domestic market, following Metafrax and Tomet by volume. Formaldehyde production in Russia totalled 642,800 tons in 2016 against 675,900 tons in 2016. Russian production of acetic acid dropped in 2016 to 162,900 tons from 178,485 tons in 2015.

Sibmetakhim opened its modernised units for formaldehyde and urea-formaldehyde concentrate (UFC-85) in December, a project which began in 2013. The capacities of the plants comprise 15,000 tpa and 65,000 tpa respectively. Sibmetakhim is now investing 1.2 billion roubles into methanol production with a view towards expanding daily capacity from 2,500 tons per day to 2,800 tons by 2018 and to 3,000 tons per day by 2019.

Skovorodino methanol project

A feasibility study for construction of methanol plant at Skovorodino in the Amur region will be completed by the end of February, which will be followed by the active design stage. The proposed capacity of the Skovorodino plant is 1.2 million tpa, at an estimated construction cost of 38 billion roubles. The project, if approved, would become a resident in the Svobodny TOR in the Amur Oblast together with Gazprom and SIBUR. Skovorodino is located on the Power of Siberia gas pipeline which is currently under construction.

The feasibility study is being conducted by a company called ESN, which will also be responsible for building the plant. Investment in the project could create over permanent 230 new jobs.

The construction of a methanol and fertiliser chemical plant at Skovorodino was first considered by the National Chemical Group (NHG). However, NHG is now proceeding with plans to build a complex at Nakhodka in the Primorsky Kray. The advantage of Nakhodka is that it allows access to several markets including China, Japan, Korea, and South-East Asia whilst the Skovorodino plant will be forced to rely solely on the Chinese market.

Nakhodka fertiliser and methanol project

The Nakhodka fertiliser plant project (controlled by NHG) is expected to be included in the state programme for social and economic development of the Far East and the Baikal region. The project has already passed the preliminary selection of the sub-commission for investment projects in the region.

Investments in the construction of complex of mineral fertilisers, according to Minvostokrazvitiya, amount to more than 400 billion roubles.

The plant's capacities include 1.1 million tpa of ammonia, 2 million tpa of urea and 1 million tpa of methanol. The products are intended mostly to be exported to Asia Pacific countries, and only small volumes are envisaged for the domestic market. In December 2016, the Russian bank VEB and Japanese bank JBIC signed a memorandum of understanding to finance the construction of the fertiliser and methanol complex. In September 2015 National Chemical Group, concluded the 20-year contract to supply 3.15 billion cubic metres of gas to Gazprom Mezhregiongaz.

Akron 2016

Akron increased the production of mineral fertilisers by 19.8% in 2016. Urea production increased by 32% and ammonium nitrate by 15.3%. With the launch of a new ammonia unit at the industrial site Akron at Novgorod in 2016 production was 13.5% more than in 2015, while the production of fertilisers increased by 19.8% to 5.3 million tons.

In 2016 a new unit Ammonia-4 produced 371,000 tons whilst urea production rose 23.3% to 823,000 tons. Akron reduced methanol production by 11.4% in 2016 to 80,000 tons, whilst formaldehyde production fell 14.7% to 143,000 tons.

The EPC contract will enter into force after the organisation of project financing 28 February 2017. In September 2016 a contract was signed with Hyundai Engineering, Hyundai Engineering & Construction and Toyo Engineering Construction, design and service Toyo Engineering Corp. for the design, supply of equipment and construction of the complex.

Metafrax Jan-Dec 2016

Metafrax achieved a record level of methanol production in 2016 of 1.058 million tons. In the fourth quarter revenues for Metafrax amounted to 4.356 billion roubles and for the whole of 2016 17.14 billion roubles. Sales in the fourth quarter rose by 7% due to increased volumes of methanol production, hexamine, urea-formaldehyde concentrate, pentaerythritol and concentrated formaldehyde.

Metafrax tank wagons

Metafrax has purchased twenty tank wagons for the carriage of formaldehyde. The cars have a load capacity of 76.5 tons, and the service life is estimated at 32 years. In 2016 Metafrax bought 134 tank wagon for transportation of methanol. The turnaround of new cars up to eight years, the volume of the boiler is 88 cubic metres and a load capacity of 73 tons. In total, the rolling upgrade programme of Metafrax includes the replacement of 900 cars by 2019.

The share of exports for Metafrax in total sales in 2016 comprised 35%. The company stated that in 2016 there was a redistribution of supply of products, such as methanol, between the internal and external markets. This was due to lower prices and complicated by the economic situation in Russia. Key consumers in the domestic market remained Nizhnekamskneftekhim, which is expected in the coming years will increase the volume of purchases.

Metafrax has forecast production of methanol in 2017 of 1.090 million tons. Regarding projects, this year Metafrax intends to begin construction of the complex ammonia-urea-melamine, and run the installation of the partial oxidation of natural gas to ensure the production of 3,375 tons of methanol per day.

Fosagro Production (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*
Ammonia	1,198.6	1,111.4
Urea	1,036.1	978.1
Phosphate fertilisers	5,929.9	5,353.1
Nitrogen fertilisers	1,495.0	1,433.4
Ammonium nitrate	458.9	455.3
Aluminium fluoride	46.0	36.1
Phosphoric acid	2,261.5	2,170.1
Sulphuric acid	4,296.1	4,711.2
Sodium Tripolyphospahe	92.9	123.5

Fosagro 2016

Fosagro increased production of fertilisers by 9.4% in 2016. The production of phosphate fertilisers increased by 10.8%, and nitrogen by 4.3%. For the twelve months it was produced 7.4 million tons of fertilisers, of which 5.9 million tons comprised phosphorus fertiliser.

Fosagro increased sales increased by 8.8% over the year, reaching 7.2 million tons. In the group of nitrogen phosphorus fertilisers has been achieved an increase of 10.6% to 5.8 million tons of nitrogen fertilisers by 2.1% to 1.39 million tons. In the fourth quarter sales of nitrogen fertilisers dropped by 7.1% to 327,300 tons.

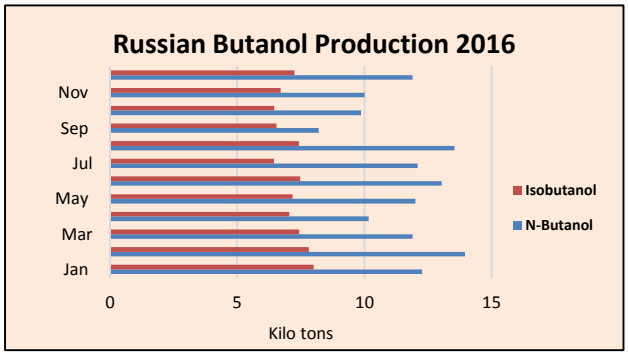
Sales volumes in the Russian market increased by 30% to 2.1 million tons. In 2016, the Russian market was one of the fastest growing in the world due to the rapid development of the agricultural sector which has been facilitated in the past couple of years since the establishment of counter-sanctions on food products.

Togliattiazot 2016

Togliattiazot produced 2.856 million tons of ammonia in 2016 versus 2,845 million tons in 2015. Despite the slight increase in production volumes, due to technical improvements the company reduced consumption of natural gas by 5% in the production of ammonia (from 1.28 to 1.22). Urea production fell to 552,200 tons. The investment programme of the company, calculated to 2021, involves an investment in new projects worth 80 billion roubles. This includes the construction of the new transhipment complex at Taman with a capacity of 5 million tpa. Throughput of urea will be 2 million tpa and ammonia 3 million tpa. The capacities for Togliattiazot include 3 million tpa of ammonia and 960,000 tpa of urea.

Key export markets for Fosagro focus on Europe, Latin America and Asia. In Europe, sales rose by more than 20% and exceeded 1.5 million tons. In Latin America, sales fell by 10% to 1.3 million tons whilst shipments to Asia increased by 20% to 1.1 million tons.

Fosagro could launch a new production unit for ammonia at the Cherepovets site in July 2017, followed by the urea plant in September. The new ammonia unit (capacity 760,000 tpa) undertook tests in late 2016 before commissioning, whilst the last delivery of components and equipment for the urea were supplied before the end of the year. Capacity of the new unit for production of urea, which will be the third for the Cherepovets site, amount to 500,000 tpa. Construction work on the urea unit began in 2015.



Organic chemicals

Russian butanol production Jan-Dec 2016

Russian production of butanols totalled 225,300 tons in 2016, 5% down on 2015. N-butanol production totalled 138,900 tons and isobutanol totalled 85,700 tons. Russian butanol production amounted to 19,740 tons in December, 18% more than in November. Gazprom neftekhim Salavat produced 9,480 tons, SIBUR-Khimprom 7,910 tons, Azot Nevinnomyssk 2,000 tons and the Angarsk Petrochemical 360 tons.

Russian butanol sales, Jan-Dec 2016

Butanol sales on the domestic merchant market totalled 71,900 tons in 2016 against 71,800 tons in 2015. The two largest buyers remained Akrilat (SIBUR) at Dzerzhinsk and the Dmitrievsky Chemical Plant, which is located in the Ivanovo region.

Russian Butanol Consumption (unit-kilo tons)

Consumer	*Jan-Dec 16*	*Jan-Dec 15*
Akrilat	25.3	24.6
Dmitrievsky Chemical	22.4	23.8
Plant of Synthetic Alcohol	1.2	1.9
Volzhskiy Orgsintez	6.3	5.9
Roshalsky Plant of Plasticizers	1.5	0.0
Others	15.2	15.7
Total	71.9	71.8

Until now the butanol producers either sold product on the domestic market or exports, but internal processing was relatively small. That position changed at the end of 2016 following the start-up of the new acrylate complex. In view of the declining export opportunities in the Chinese market, the start-up of the Salavat project and subsequent switch to internal processing represents a major change for the butanols market.

Russian Organic Chemical Production (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*	*Jan-Dec 14*
Isopropanol	33.4	33.4	29.4
N-Butanol	139.0	147.9	145.4
Isobutanol	86.3	90.1	91.7
Propylene glycol	0.9	1.1	0.4
Phenol	221.9	225.4	240.8
Acetic acid	189.7	178.7	171.9
Butyl acetate	48.6	38.3	42.1

Russian butanol exports, Jan 2017

Butanol exports dropped in January 2.1 times against December to 1,450 tons, and were 46% lower than in January 2016. SIBUR-Khimprom shipped 980 tons to foreign markets in January and Azot Nevinnomyssk 450 tons. Another 200 tons was supplied from the Dmitrievsky chemical plant. Gazprom neftekhim Salavat did not export products in January due mainly to the start of operations at Acrylic Salavat in which n-butanol is used in the production of butyl acrylate. Ukraine was the largest destination for Russian exports in January, accounting for 48% of deliveries, followed by Turkey (31%) and the Netherlands (19%).

Butanol sales on the domestic market amounted to 4,640 tons in January, of which SIBUR-Khimprom supplied 4,180 tons, Azot Nevinnomyssk 270 tons and Gazprom neftekhim Salavat 190 tons. The introduction of the Acrylic Salavat complex has significantly affected merchant availability from Gazprom neftekhim Salavat where n-butanol is being directed to the production of butyl acrylate. It is expected that the supply of butanols from Salavat to outside customers will now be minimal.

Regarding recent consumption trends, Akrilat purchased only 1,200 tons of butanols in January, whilst Dmitrievsky Chemical Plant purchased 240 tons. Other buyers included Volzhskiy Orgsintez with 580 tons and Ural Plant of Plasticizers 180 tons. Moscow based Nefttorgservis purchased 1,980 tons of isobutanol in January.

Russian Phthalic Anhydride Production (unit-kilo tons)

Producer	*Jan-Dec 16*	*Jan-Dec 15*
Gazprom neftekhim Salavat	9.0	6.9
Kamteks-Khimprom,	75.3	86.9
Total	84.3	93.8

Other Russian solvents, Jan-Dec 2016

Acrylic acid production at Dzerzhinsk rose 8.4% to 32,240 tons in 2016 whilst butyl acrylate production rose 6.1% to 40,940 tons. Isopropanol production, carried out Orsk, was unchanged in 2016 at 33,400 tons whilst butyl acetate production rose from 38,300 tons in 2015 to 48,600 tons in 2016.

DOP imports into Russia amounted to 223 tons in December against 69 tons in November. All of the product in December was supplied by the Polish company Boryszew. Total DOP imports in 2016 into Russia amounted to 2,640 tons, which is 34% less than in 2015. The share of Boryszew in imports amounted to 89%.

Other Russian solvents, Jan-2017

Metafrax produced 2,050 tons of pentaerythritol in January against 2,100 tons in December. Phthalic anhydride exports from Russia amounted to 4,070 tons in January, 32% less than in December last year and 24% lower than in January 2016. The largest destination included Egypt (15% of total supplies), Poland (14%), China (13%), Pakistan (13%), Tunisia (10%), Finland (10%), United Arab Emirates (8%) and the United States (7%). Phthalic anhydride production totalled 84,340 tons in 2016, 10% less than in 2015.

Russian Inorganic Chemical Production (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*	*Jan-Dec 14*
Hydrogen chloride	1100.1	1018.9	1047.8
Boric acid	86.0	70.9	81.5
Potassium hydroxide	28.8	26.3	17.8
Magnesium hydroxide	3.3	0	0
Aluminium hydroxide	10.9	8.3	9.3
Calcium hypochlorite	33	32.8	13.2
Aluminium sulphate	319.5	314.3	338.4
Sodium sulphate	927.6	851.4	792.7
Cupric sulphate	72.7	78	68.7
Calcium nitrate	68	50.3	30.1
Soda ash	3233.6	3084.1	2547.5
Hydrogen peroxide	77.9	66.7	62.9
Sulphuric acid	11608.6	10395.2	9817
Other inorganic acids	50.7	43.1	32.8
Caustic soda	1152.8	1115.1	1069.9
Cyanides	210.8	202.7	164.3

Other products

Bashkir Soda 2016

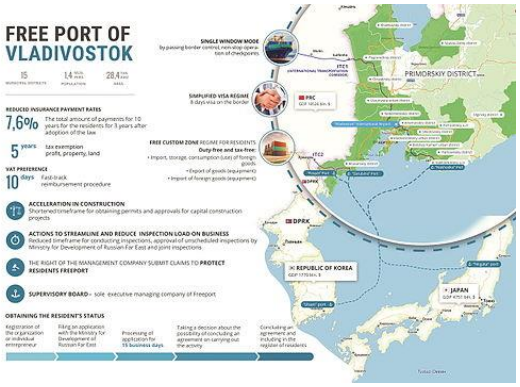
Bashkir Soda produced 1.6 million tons of soda ash in 2016 at its two plants Sterlitamak and Berezniki, 6.3% higher than in 2015. Liquid caustic soda production, undertaken at Sterlitamak, rose 8.5% to 204,000 tons whilst PVC also Sterlitamak rose 2.7% to 249,000 tons. Sodium bicarbonate production rose 5% to 137,000 tons.

Polyplastik

Polyplastik increased sales by 2.3% in 2016 although the domestic market dropped by around 3% in consumption. Sales were up in 2016 largely due to major orders from SIBUR, including a tender for 15,000 tons of pipes for water supply for ZapSibNeftekhim. The Far East is becoming more important for Polyplastik following the launch of a new plant at Khabarovsk in 2016.

Polyplastik plans to increase its gradually share of exports in total sales to around 30% by 2019. This year is expected to be difficult for manufacturers of plastic pipes rather difficult, as no new major projects are expected to be introduced. The major fall in pipe consumption took place in 2015 when sales from Polyplastik dropped by around 15%.

Polyplastik and BASF signed an agreement on cooperation in the framework of the implementation of joint projects for the automotive industry. Polyplastik and OOO PSMA Rus signed a new agreement for the supply of polymer composite materials to be used in the manufacture of parts for Peugeot and Citroen cars. The agreement was signed on 31 January at Kaluga.



Vostok Polikor-Vladivostok

Vostok Polikor, a resident of the Free Port of Vladivostok, has launched a small unit for the production of household chemicals and products from polyurethane raw materials. The project started in August 2016, and the necessary technological equipment was purchased in late 2016. The production line is the semi-automatic and automatic modules, on which the bottling of soft products in the packaging and rigid containers (PET). Production capacity of the new unit is about 40 tons of finished products per month which could rise to 200 tons per month.

The decision to open a plant in the Primorsky Kray is to promote product innovation in the market of the Far East. Tax preferences for residents are a cost-effective measure to support and significantly affect the economic performance. The company has also applied to the TOR Nadezhdinsk in the Primorsky Kray with the intention to build a new plant. In the future the investor plans to export up to 50% of its products in China and South Korea.

Belarus

CITIC-Belarussian petrochemical industry

Chinese company CITIC Construction expects to participate in the modernisation of the petrochemical industry in Belarus. One of the goals of includes the use of Chinese finance and modern technology for the modernisation of several plants. One of the main projects under consideration includes the construction of a new ethylene-propylene installation at the plant at Polymir.

Belarussian Polymer Imports (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*
PVC	24.8	25.7
Polypropylene	98.6	85.0
LDPE	85.0	54.4
HDPE	44.9	43.0
Polystyrene	67.6	64.1

Belarussian polymer trade, Jan-Dec 2016

Belarussian PVC imports dropped in 2016 to 24,800 tons. The main reason for the decline is a fall in export sales of finished products. Polypropylene imports into Belarus rose by 14.3% in 2016 to 98,600 tons. The largest increase occurred in the external supply injection moulding propylene copolymers, whilst overall the largest type of polypropylene imported was homopolymer which rose to 64,357 tons compared to 61,316 tons in 2015. In 2016, the import volume of propylene copolymers totalled 31,531 tons against 21,843 tons in 2015.

Belarussian PET Raw Material Imports (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*
Paraxylene	23.9	12.4
PTA	55.7	49.5
MEG	67.3	64.6

Polyethylene imports into Belarus increased by 26.3% in 2016 to 136,999 tons against 105,109 tons in 2015. LDPE imports totalled 69,178 tons against 45,850 tons in January to December 2015, whilst HDPE imports rose 12.3% to 37,395 tons. Exports of polyethylene from Belarus totalled 111,147 tons in 2016 against 122,124 tons in 2015, of which around three quarters were shipped to Russia. Regarding synthetic rubber imports, shipments totalled 42,084 tons in 2016 against 44,100 tons in 2015. Most of the synthetic rubber exports were sourced from Russia.

Mogilevkhimvolokno PTA Imports (unit-kilo tons)

Country	*Jan-Dec 16*	*Jan-Dec 15*
Poland	23.8	31.1
Russia	4.8	3.2
South Korea	25.1	9.0
Portugal	1.0	0.0
Thailand	1.1	3.2
Total	55.7	46.5

PET exports from Belarus increased to 62,845 tons in 2016 against 47,084 tons in 2016. Exports to Russia rose to 45,661 tons in 2016 against 27,736 tons in 2015. The next largest market was Uzbekistan where

Belarus sent 5,374 tons in 2016. The average price for PET exports in 2016 amounted to $903 per ton versus $927 per ton in the previous year.

PTA imports into Belarus totalled 45,400 tons in 2016, against 44,500 tons in 2015. In 2016 imports from South Korea rose to 25,055 tons against 11,048 tons in 2015, whilst imports from Poland dropped from 32,033 tons to 23,796 tons. The average price per ton for Belarussian PTA imports dropped from $765 in January to December 2015 to $690 in 2016.

Paraxylene imports into Belarus totalled 23,937 tons in January to December 2016, against 12,444 tons in 2015. All of the paraxylene was sourced from Russia. MEG imports into Belarus totalled 67,438 tons in January to December 2016 versus 60,495 tons in 2015. Russian producers supplied almost all of the market requirements, whilst Saudi Arabia supplied smaller volumes.

Belarussian Acrylonitrile Exports (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*
Kazakhstan	0.0	0.5
Russia	2.9	2.4
Hungary	4.0	12.6
Iran	3.4	0.0
Netherlands	4.0	9.0
Romania	0.3	0.0
Turkey	22.6	14.1
Total	37.3	38.6

Belarussian chemical trade, Jan-Dec 2016

In the chemical division, acrylonitrile exports dropped slightly in 2016 to 37,329 tons against 38,613 tons in 2015. Turkey was the main destination for Belarussian exports in 2016, rising to 22,600 tons against 14,100 tons in 2015, whilst exports to Hungary dropped from 12,600 tons in 2015 to 4,000 tons. The average price for Belarussian acrylonitrile exports amounted to $875 per ton in 2016 against $1,078 per ton in 2015.

Belarussian Organic Chemical Exports (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*
Acrylonitrile	37.3	38.6
Caprolactam	6.5	32.9
Phthalic anhydride	21.5	24.1
Methanol	31.8	71.2

Phthalic anhydride exports totalled 21,549 tons in 2016 against 24,061 tons in 2015. The main destinations for Belarussian phthalic anhydride exports included Russia, Ukraine and Poland.

Caprolactam exports stopped earlier in the year so as to concentrate on more internal processing, whilst lower methanol production at Grodno reduced exports from 71,211 tons in January to December 2015 to 31,751 tons in 2016. The major destinations for Belarussian methanol exports currently consist of Ukraine and Poland.

Ukraine

Ukrainian Polymer Imports (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*
PVC	100.5	85.8
LDPE	68.6	52.4
LLDPE	58.8	45.0
HDPE	125.9	93.4
Ethylene Vinyl Acetate	13.6	9.9
PP	119.6	96.2

Ukrainian polyethylene imports

Imports of polyethylene rose in 2016 by 25% over 2015 to 266,600 tons from 212,800 tons in 2015. HDPE imports rose from 93,400 tons to 126,000 tons, whilst LLDPE imports rose from 45,000 tons to 58,800 tons. Imports of other types of polyethylene, including ethylene vinyl acetate (EVA) amounted to 13,600 tons against 9,900 tons in 2015.

Ukrainian polypropylene imports

Imports of polypropylene into Ukraine totalled 119,600 tons in 2016, 24% up 2015. The largest proportional increase in supply came from stat propylene copolymers (PP-random), rising from 9,500 tons to 13,600 tons. Homopolymer imports rose from 73,800 tons in 2015 to 90,900 tons in 2016, whilst block copolymer imports rose from 10,400 tons to 12,500 tons. The total volume of deliveries of other propylene copolymers in 2016 amounted to 2,500 tons.

Lukoil sells Karpattneftekhim

Lukoil has completed the sale of Karpatneftekhim in the Ivano-Frankivsk region of western Ukraine. This company was the last asset in Ukraine belonging to Lukoil. Karpatneftekhim's new controlling

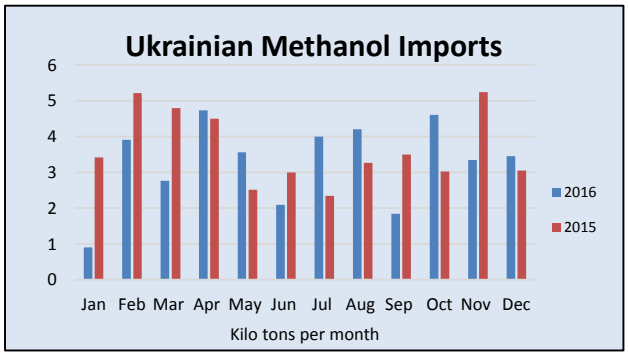
shareholder is expected to be the Ukrainian citizen Ilham Mammadov, former head of foreign investments for Lukoil, through Xedrian Holding. More than 25% in Karpatneftekhim is to be bought by Techinservice Limited (UK). Accordingly, the deal was worth around $25 million which is way down on the estimate of last year of at least $100 million.

Up to 2015, Lukoil had invested $543.4 million in the reconstruction of Karpatneftekhim. The design capacity for PVC for the Kalush plant comprises 300,000 tpa, caustic soda 200,000 tpa and polyethylene 100,000 tpa. The plant was shut down in September 2012 due to the unfavourable situation on the petrochemicals market, and still not running (except for a brief resumption in 2013). There are now prospects of a restart in the next few months. In August 2014 Lukoil sold its 240 gas stations and six tank farms to the Austrian investment company AMIC, and Karpatneftekhim remained its only asset in Ukraine.

Ukrainian chemical news

Ukrainian exports of benzene amounted to 180 tons in January which was 3.8 times less than in December. The only exporter was Zaporozhkoks. Azot at Cherkassy, part of the holding company Ostchem, resumed the production of urea and urea-ammonia mixture. After a three-month stoppage, Azot launched the production of urea on 31 January. Currently, the unit operates at full capacity, producing daily 2.050 tons of urea. Azot includes capacities of 962,700 tpa of ammonia, 970,000 tpa of ammonium nitrate and 660,000 tpa of urea.

Rivneazot, also part of the holding Ostchem, reopened the ammonia complex in February. The unit of synthesis gas is now running at maximum load, and produces more than 650 tons of ammonia per day. Rivneazot is the only producer of calcium ammonium nitrate and one of the two producers of adipic acid in Ukraine. Plant capacities include 420,000 tpa of liquid ammonia, 540,000 tpa of granulated ammonium nitrate, 470,000 tpa of calcium ammonium nitrate and 25,000 tpa of adipic acid.



Ukrainian chemical imports

Methanol imports into Ukraine amounted to 3,453 tons in December which is 3% higher than in November. Imports totalled 39,407 tons in 2016 against 43,864 tons in 2015. DOP imports amounted to 521 tons in December, of which Boryszew supplied 267 tons and Deza 253 tons. Imports of DOP into Ukraine totalled 4,670 tons in 2016, 3.6 times higher than in 2015.

Central Asia/Caucasus

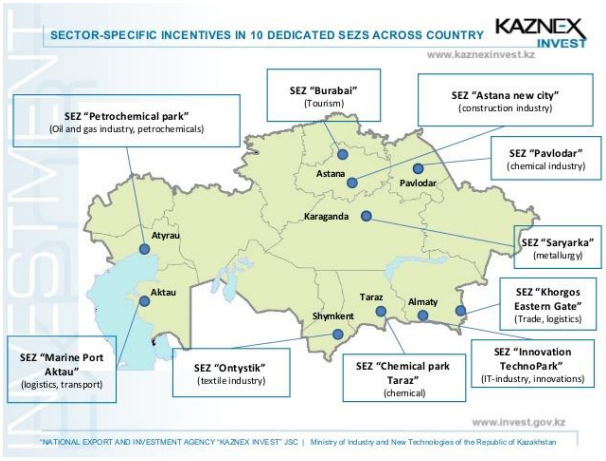
Kazakh Polymer Imports (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*
HDPE	73.3	67.2
LDPE	17.1	16.3
LLDPE	5.5	5.3
PVC	51.0	49.0
Polypropylene	24.5	22.5

Kazakh polymer imports, Jan-Dec 2016

Imports of PVC into Kazakhstan increased by 2% in 2016 to 51,000 tons from 49,900 tons in 2015. China is the main supplier of PVC to the Kazakh market. Imports of polypropylene into Kazakhstan increased by 17% in 2016 to 24,500 tons against 21,000 tons in 2015. Homopolymers increased from 9,600 tons to 17,500 tons. Export sales of polypropylene, on the contrary, decreased by 30% from 22,200 tons to 16,000 tons. The growth in demand for polypropylene has allowed Neftekhim at Pavlodar to reduce exports.

Polyethylene imports into Kazakhstan totalled 96,300 tons in 2016, 2% down against 2015. HDPE imports dropped 3% to 73,700 tons, whilst LDPE imports dropped 3% to 17,100 tons. The only increase was recorded in LLDPE imports, rising from 4,200 tons in 2015 to 5,500 tons in 2016.



Kazakh chlorine & soda ash projects

Chlorine and soda ash projects are under review in Kazakhstan designed to reduce the dependency on imported products. The main project comprises a plant including capacities of 40,000 tpa of sodium hypochlorite and hydrochloric acid with 3,000 tpa, 35,500 tpa of chlorine and 20,000 tpa of calcium chloride. This project is to be located in the territory of the special economic zone Chemical Park Taraz. Also, plans exist to produce up to 10,000 tpa of glyphosate and 7,400 tpa of ammonium sulphate.

In total, the Chemical Park Taraz plans to build 16 high-tech chemical plants with total capacity of more than 2 million tpa of finished products, including caustic soda, chlorine, glyphosate, ammonia, polyethylene, pesticides, and hydrogen peroxide. SEZ Chemical Park Taraz was created in 2012.

Regarding soda ash, the Kharkiv State Research and Design Institute of Basic Chemistry in Ukraine has developed a feasibility study for soda ash plant with capacity of 100,000 tpa to be located at Pavlodar in north east Kazakhstan. Preparing full documentation will take several months to complete and after this construction will last more than 2 years. At full capacity the plant will be operational by 2020. Current soda ash consumption in Kazakhstan is estimated at around 400,000 tpa.

Azerbaijan Chemical Production (unit-kilo tons)

Product	*Jan-Dec 16*	*Jan-Dec 15*
Ethylene	103.9	107.1
Polyethylene	98.3	103.3
Propylene	52.0	56.2
Isopropanol	9.0	11.4
Barium Sulphate	59.8	61.6
C4s	19.5	24.7
Methanol	117.9	95.8

Azerbaijan chemical industry 2016

The chemical industry in Azerbaijan reduced overall production by 12.7% in 2016. Declines took place in the production of argon, falling 15.5% to 197,800 cubic metres, iodine by 15% to 209.6 tons, barium sulphate by 2.9% to 59,800 tons, propylene by 7.5% to 52,200 tons, polyethylene by 5.1% to 98,300 tons, methanol by 23.1% to 117,900 tons, ethylene by 3.1% to 103,400 tons and isopropanol by 26.6% to 8,992.3 tons. Increases were recorded in the production of detergents by 12.5 times up to 1.047.4 million tons, and paint products by 57.5% to 667.600 tons.

In January 2017 SOCAR exported 7,015 tons of polyethylene, 696 tons of isopropanol, 3,107 tons of propylene and 2,741 tons of C4s. Azerkhimya produced 5,100 tons of propylene in January, 7.1% less than in December. Around 1,400 tons were used in processing into isopropanol. C4 production amounted to 2,900 tons in January.

Relevant Currencies

Czech crown. Kc. $1= 20.852. €1 = 27.444: Hungarian Forint. Ft. $1 = 229.253. €1 = 310.141: Polish zloty. zl. $1=3.016. €1 =4.14 Ukrainian hryvnia. $1 = 22.9 €1 = 24.9: Rus rouble. $1 = 65.2 €1= 73.70

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