Chemical Information Resources for East Europe and CIS

CIREC MONTHLY NEWS

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

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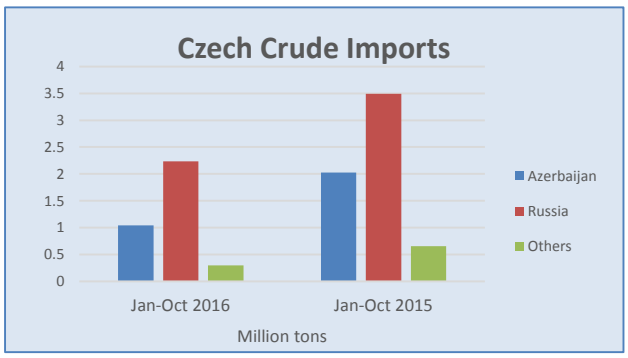
CENTRAL & SOUTH EAST EUROPE

Unipetrol-crude supplies from Adriatic pipeline

Unipetrol and the Adriatic pipelines (JANAF) signed an agreement in late 2016 that could provide an alternative of crude to the Druzhba and IKL. The contract allows the transport of oil through the Croatian section of the Adria pipeline. JANAF has stated that it can supply oil by pipeline to the refineries at Litvinov and Kralupy.

The JANAF pipeline starts at the Omisalj Terminal on the Croatian Island of Krk and runs through Croatia, northwards to Hungary and Slovakia where it connects to the Druzhba pipeline at Šahy storage terminal, and eastwards to Bosnia and Herzegovina and Serbia. The transportation conditions with JANAF were concluded by Unipetrol for a period of three years. Unipetrol believes that the contract could be concluded during 2017.



Russia provides the dominant share of crude imports into the Czech Republic, volumes overall were down in 2016 due to the repairs being undertaken at both Litvinov and Kralupy. Regarding Russian sources, PKN Orlen signed an annex in December 2016 with Tatneft Europe AG to the agreement for crude oil supplies to Litvinov. This provides the extension of contractual period and increases the possible maximum volume of the crude oil delivered. According to the annex, Tatneft will deliver to Litvinov refinery a crude oil in the quantity from 1.620 million tons to 3.960 million tons in a contract period running from 1 January 2017 until 31 December 2019.

For Plock, PKN Orlen is taking 1 million barrels of crude oil Iranian Light in January which will be delivered to Gdansk Naftoport. 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 petrochemical trade, Jan-Oct 2016

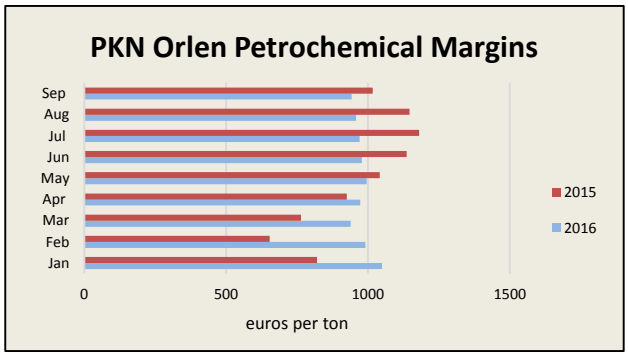
The Czech deficit balance for petrochemicals started to fall in October as the Litvinov cracker gradually returned to production. Exports of ethylene amounted to 1,048 tons in October, taking the total for the first ten months in 2016 to 1,187 tons. The main recipient of Unipetrol's ethylene exports in October was Slovnaft which purchased 1,023 tons. Imports continued in October at higher than normal rates, amounting to 8,879 tons nearly all of which came from Germany. Imports of ethylene totalled 124,200 tons in the first ten months in 2016 against 23,400 tons in the same period in 2015.

Czech Petrochemical Imports (unit-kilo tons)

Product	*Jan-Oct 16*	*Jan-Oct 15*
Ethylene	124.2	23.4
Propylene	121.0	24.7
Butadiene	48.0	24.2
Benzene	68.1	73.2
Ethylbenzene	50.9	7.0

In October 2016 Unipetrol signed an agreement with the insurer on payment of $90 million under the fourth tranche of the insurance for losses due to fire at the steam cracker at Litvinov on 13 August 2015. Thus, the company regained total expenditure incurred for the restoration of damaged installations and a small part of the losses incurred due to lost revenue as a result of shutdowns and substantial reduction in crude oil processing at the refinery at Litvinov. Financial, lost revenues as a result of the forced downtime, has been estimated at zl 1.4 billion. Therefore, PKN Orlen

expects to recover the amount from insurers about zl 2 billion. Unipetrol announced that the amount of $90 million will be included in the company's financial statements for the third quarter of 2016.



PKN Orlen refining margins

PKN Orlen's model petrochemical margin rose to €943 per ton in November after falling to €912 in October. The average for the period January to November for Orlen was €968 per ton, 1% more than in the same period in 2015 (€965.3 per ton). Unipetrol's refinery model margin in November rose to $4.9 per barrel, close to the highest level in 2016 although 12.5% lower than in November 2015.

South East European petrochemical plants

Ownership and direction questions prevail over plants in South East Europe. In Serbia, Petrohemija is encumbered with large debts of around €650 million of which €254 million is owed to NIS and €105 million to Russia. Petrohemija owes money to Serbian companies NIS and Srbijagas, and also Lukoil. Petrohemija still receives raw materials from the NIS refinery at favourable prices, partly as the government has stated it is ready to assume responsibility for 25% of the debts.

Serbian Chemical Exports (unit-kilo tons)

Product	*Jan-Sep 16*	*Jan-Sep 15*
Polyethylene	88.9	66.5
Polypropylene	11.4	14.4
SBR	10.2	9.1
Methanol	93.7	0.7
Acetic Acid	57.4	1.0

In Romania Chinese investors are in the process of taking a majority stake in Rompetrol Rafinare. Last year the company China Energy Company Limited (CEFC) announced that it had signed an agreement with KMG for the purchase of 51% of Rompetrol.

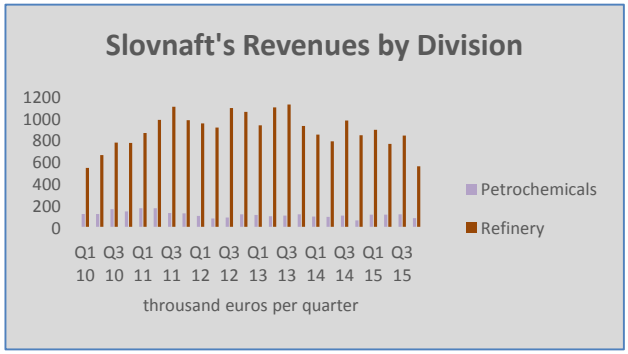
Oltchim Sales Packages, 23 January Non-binding bids

- ***Caustic Soda***
- ***Polyols***
- ***Oxo alcohols***

Investors interested in buying Oltchim the pieces must submit offers non-binding by 23 January 2017, and those qualified for the next stage will receive access to the data room, i.e. a series confidential information about the company. Thus, the timing provides supply its completion this year. In August last year, the company announced that it would launch a competitive process for the sale of assets, grouped into nine packages, replacing the previous method of privatisation, through a special purpose vehicle SPV.

Accordingly, the new packages include the caustic soda plant, oxo-alcohols, polyols, PVC processing, petrochemicals, phthalic anhydride, etc. Investors must submit separate bids for packages. It has been argued that the only viable packages comprise caustic soda, polyols and oxo-alcohols, which currently represent around 94% of sales. In the first three quarters in 2016 Oltchim achieved a net profit of 16.1 million lei (€3.6 million) compared with a loss of 15.7 million lei (€3.5 million) reported in the same period last year. PCC is the largest minority shareholder of Oltchim, holding 32.34% stake in the plant.

Slovnaft investing €500 million in ethylene cracker



Slovnaft has announced plans to invest $500 million by 2020 to upgrade its petrochemical unit at Bratislava in order to diversify away from fuels, where demand is expected by MOL to decline. The investment is part of MOL's strategy to invest $4.5 billion in petrochemicals by 2030. Slovnaft stated that it aimed to increase the share of non-fuel production to 50% from the current 10-15%. Slovnaft sees the demand for fuels falling by up to 15% by 2030, and should be concentrating more on polypropylene and polyethylene. Slovnaft launched a new $323 million low-density polyethylene unit in 2015.

MOL SSBR plant 2017

MOL aims to complete the construction of the SSBR plant at Tiszaujvaros in 2017. The plant location is well placed to meet demand from the large tyre producers in West Europe and to address markets in Central Europe, Russia and Turkey. The SSBR plant follows the start-up of the butadiene extraction plant at Tiszaujvaros in November 2015, which currently concentrates sales on export markets.

MOL's Butadiene-SSBR Chain

- Butadiene plant capacity, 130,000 tpa
- SSBR plant, 60,000 tpa

PDH Poland-Grupa Azoty Police

The Board of PDH Poland SA is conducting another tender for the construction of installations for the production of propylene at Grupa Azoty Police. PDH Poland SA is a company established by the Grupa Azoty Police SA for the construction of the flagship investment. The general contractor will be entrusted in the execution of the installation itself in addition to the infrastructure, port facilities, and facilities for storage of propane and electric power station.

Offers received under the previous tender only related to installation of the base and turned out to be ineffective due to the very demanding assumptions concerning the execution time of the investment. Thus the investigation was closed without choosing the winner. The previous formula posed too far-reaching restrictions on the conduct and implementation of the project.

Due to the possible extension of an integrated investment into the production of polypropylene, the planned timing of the PDH plant start-up has been pushed back to the beginning of 2021. Accordingly, PDH has already completed the design part of the process plant and ancillary infrastructure. Work also continued on the PDH-based propylene production project.

Grupa Azoty estimates the total value of its project to build a propane dehydrogenation (PDH) unit at more than zl 700 million ($2.693 million). The value has been estimated with the assumption that 30% will be financed by own capital and loans and 70% by lending. The final capital expenditure will be known after the contractor is selected.

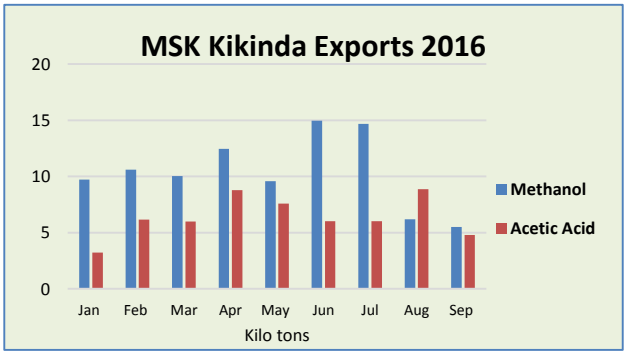
Grupa Azoty Police sees the PDH project as a key strategic development for the group. Raw material access for the plant at Police in northern Poland is straightforward, whilst the plant location is close to numerous waterways, which means that the products can be easily exported. Grupa Azoty Kedzierzyn is the most likely destination for domestic sales.

Czech Methanol Imports (unit-kilo tons)

Country	*Jan-Oct 16*	*Jan-Oct 15*
Germany	28.1	33.0
Russia	35.5	42.3
Serbia	7.3	0.0
Others	0.4	1.0
Total	71.3	76.4

Central European methanol & derivative market

Czech methanol imports totalled 71,300 tons in the first ten months in 2016 against 76,400 tons in the same period in 2015. Russia supplied 35,500 tons in January to October 2016 against 42,300 tons in the previous year, whilst Germany reduced shipments from 33,000 tons to 28,100 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 on a lower price of gas, accordingly at $220 per thousand cubic metres, production was restarted by MSK in late 2015.



MSK established a target at the start of 2016 to produce 129,000 tons of methanol and 95,000 tons of acetic acid. Production this year allowed MSK to export 88,241 tons of methanol in the first

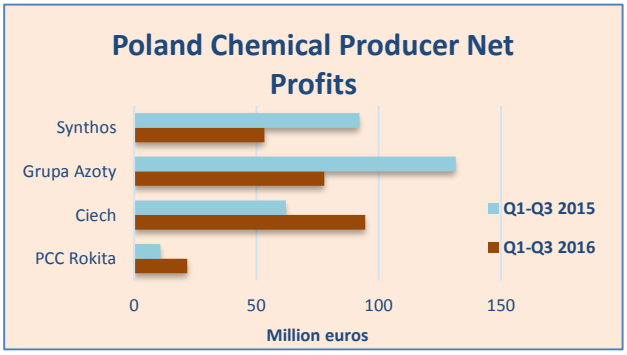
Polish Acetic Acid Imports (unit-kilo tons)

Country	*Jan-Jun 16*	*Jan-Jun 15*
China	0.0	11.4
Serbia	7.2	0.5
UK	11.0	23.0
US	0.0	2.2
Germany	2.4	6.5
Netherlands		0.6
Austria	0.3	0.5
Belgium	0.6	0.9
Others	0.3	0.7
Total	21.8	46.5

eight months in 2016 against almost nothing in the same period in 2015. MSK undertook a shutdown in September which ran until November. As the plant is now active, various investors have shown tentative interest in buying MSK, including Gazprom, Kronospan (Austria) and AzMeCo (Azerbaijan).

Another regional methanol plant still capable of operating, but facing an uncertain future, is at Lendava at Slovenia which was acquired by the United States Methanol Corporation in 2015. The Aliso Viejo, California-based company acquired two wholly owned subsidiaries, Metanol and Rezervoarji.

MSK also exported 52,610 tons of acetic acid in the first eight 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. Domestic production



Other Polish chemical industry news

PCC Rokita has agreed to purchase shares in IRPC Polyol Company Ltd. in Bangkok, a manufacturer of polyurethane systems and polyols. PCC Rokita is interested in Thailand due to the fast rate of growth. PCC Rokita remains the smallest of the four main Polish chemical companies, although its rate of growth is the highest.

Air Products and Grupa Azoty ZAK signed a long-term contract in November 2016 for the delivery of oxygen and nitrogen. The agreement will remain valid until the end of 2035 and extends cooperation between the companies which dates back to 1997.

Polish Chemical Production (unit-kilo tons)

Product	*Jan-Oct 16*	*Jan-Oct 15*
Caustic Soda Liquid	260.3	245.0
Caustic Soda Solid	58.2	56.0
Soda Ash	1029.9	895.0
Ethylene	380.6	452.3
Propylene	284.7	326.7
Butadiene	46.2	50.0
Toluene	13.2	10.9
Phenol	32.7	29.6
Caprolactam	136.4	136.5
Acetic Acid	7.7	9.1
Polyethylene	270.2	313.0
Polystyrene	48.0	34.0
EPS	79.8	71.1
PVC	216.7	272.9
Polypropylene	201.8	204.5
Synthetic Rubber	182.5	159.3
Ammonia (Gaseous)	2133.0	1100.0
Ammonia (Liquid)	79.2	1108.0
Pesticides	23.7	24.6
Nitric Acid	1914.0	1956.0
Nitrogen Fertilisers	1588.1	1628.0
Phosphate Fertilisers	388.2	392.0
Potassium Fertilisers	322.0	316.2

Under the contract, Air Products will provide oxygen and nitrogen gas to the Kedzierzyn plant, as well as liquid oxygen and nitrogen to other customers in Poland. The project will be based on an upgraded Air Products' production facility which, with a capacity of approximately 2,000 tons per day. Industrial gases supplied by Air Products are used by Grupa Azoty ZAK for the production of ammonia, oxo alcohols and in auxiliary processes. Nitrogen is also used to ensure the safety of production facilities on-site.

Grupa Azoty is to complete analysis in February on the possible construction of a coal gasification plant at Kedzierzyn-Kozle. The investment decision will depend on the economics of the project, and is crucial not only for Grupa Azoty's new products and raw materials, but also the Polish mines in finding a major customer for several million tons of coal per annum. The main problem is finance as the project value of zl 2.4-2.5 billion represents a major investment for Grupa Azoty. Other projects underway for Grupa Azoty include polyamide and nitrate fertiliser units at Tarnow, both scheduled to come online in 2017. Projects underway at Police include upgrade of the ammonia unit, work on flue gas desulphurisation, and upgrade of the CHP plant (zl 11 million).

RUSSIA

Russian Chemical Production (unit-kilo tons)

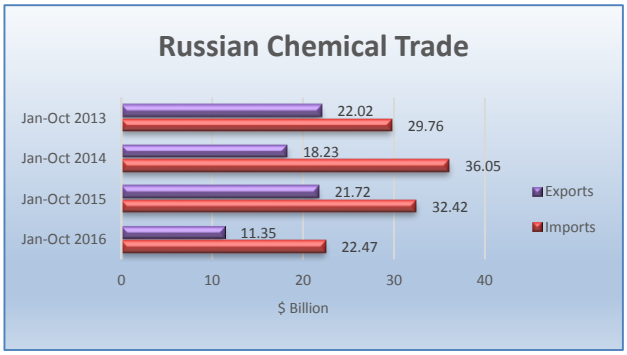
Product	*Jan-Nov 16*	*Jan-Nov 15*
Caustic Soda	1,044.0	1,010.0
Soda Ash	2,783.9	2,811.0
Ethylene	2,537.2	2,516.0
Propylene	1340.0	1482.5
Benzene	1,123.8	1,106.7
Xylenes	517.2	495.7
Styrene	627.7	602.5
Phenol	202.7	206.179
Ammonia	14,700.0	13,600.0
Nitrogen Fertilisers	8,660.0	7,830.0
Phosphate Fertilisers	3,182.0	2,940.0
Potash Fertilisers	6,999.0	7,338.0
Plastics in Bulk	7,056.0	6,590.0
Polyethylene	1,933.0	1,624.0
Polystyrene	493.5	484.0
PVC	737.3	714.3
Polypropylene	1,236.2	1,224.7
Polyamide	142.4	130.0
Synthetic Rubber	1,342.7	1,327.1
Synthetic Fibres	138.1	118.1

Russian chemical market overview Jan-Nov 2016

Russian bulk plastics production rose 6% in the first eleven months in 2016 against 2015, despite the extended shutdown at Sayanskhimplast. Production in the Russian chemical industry rose by an aggregate of 3.6% in period January to November 2016 although consumption levels has trended lower close to GDP levels. The lower rouble has provided a mild stimulant to growth in application areas across the industry but overall the gains have been modest and some areas of consumption are yet to see growth.

The Russian trade deficit in chemicals remains largely unchanged from 2015, although the amount spent on both exports and imports has fallen. Imports have fallen in the past three years due to budgetary constraints from the government and the devalued currency, which has prevented companies from buying as much as before. At the same time exports have fallen at least in value due to seismic changes in oil and gas pricing.

Although there were slight declines in the value of import shipments for polymers and organic chemicals in the period January to November 2016, imports of pharmaceuticals actually showed an increase over the same period in 2015. Volumes though still remain insufficient to meet the demand from hospitals and the domestic manufacturers have thus far not been able to replace much in the way of imports.



Pharmaceutical production in Russia rose by around 8% in 2016, but this is not fast enough in terms of both quantity and quality to comply with the government's ideas of import substitution. In certain areas where Russia may be 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 Petrochemical Projects

SIBUR-Silk Road Fund

- Sale of 10% in SIBUR to the Chinese institution Silk Road Fund approved in December
- Deal could require FAS examination to ensure rules have not been breached
- In December 2015, Sinopec bought 10% of the Russian company for an estimated $1.338 billion.
- The Silk Road Fund has also bought 9.9% in Yamal LNG.

SIBUR-Amur Gas Chemical Complex

SIBUR continues to evaluate proposals for the Amur Gas Chemical Complex (GCC), but stresses that it is not in a hurry to reach a decision. The group is still in the process of evaluating proposals for licensing, both in polymer technology and in the field of pyrolysis technology.

The gas chemical complex is intended to process fractions isolated from natural gas produced at the Chayanda field in South West Yakutia and the Kovytka field in North-East Irkutsk, which will be delivered through the Power of Siberia into the Amur region and on to the Chinese border. The Amur Gas

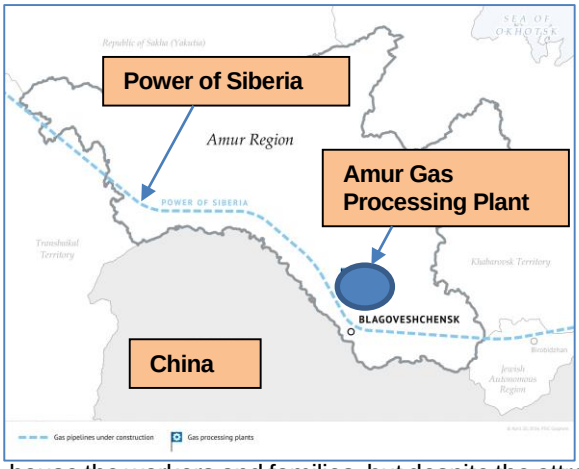
Processing Plant (GPP), which is under construction at present at Svobodny, will offtake the gas and will provide the ethane feedstock for the gas-chemical complex.

Petrochemical Projects-East Siberia & Far East

- Svobodny, Amur Oblast
- Nakhodka, Primorsky Kray
- Sayansk, Irkutsk Oblast
- Boguchany, Krasnoyarsk Kray

Regarding markets, the Russian Far East may provide moderate opportunities for selling products from the Amur Gas-Chemical Complex, but China is likely to provide the main focus for polymer sales. Infrastructure developments and investments are key to allowing products to be transported efficiently from Svobodny to the Chinese market.

Potential licensors for the Amur Gas Chemical Complex include CB & I, KBR, Technip, Linde and Sinopec. According to statements made by SIBUR, a decision on the project including capacities and a scheduled timetable could be taken by the end of 2017.



Amur Gas Processing Plant

Construction of the Amur Gas Processing Plant at Svobodny in the Amur Oblast started in the second half of 2016, and is expected to make significant process in 2017. Cargo for the gas processing plant is being delivered partly by rail and partly by river transport using the Zeya River. NIPIGas is the main contractor for the project whilst Linde is providing the technology for the plant including the helium extraction facility.

Residential areas have been under construction to house the workers and families, but despite the attractive wages under offer it has been difficult to lure people to the region. Feedstock for the gas processing plant is to supplied from the Power of Siberia, which is currently under construction in Yakutia. The gas processing plant thus can only start when the Power of Siberia reaches Svobodny, as there are no local hydrocarbon resources.

Amur Gas Processing PlantSvobodny

- Capacity 42 billion cubic metres per annum
- The GPP will include the world's largest helium production facility
- Cargo delivery in 2017 to arrive on Zeya River

Rosneft-Nakhodka VNKH petrochemical project

Rosneft is expecting in 2017 to see significant progress on plans in the Primorsky Kray to construct the Eastern Petrochemical Company (VNKH) at Partizansk in the Nakhodka region of the Primorsky Kray. In 2016 Rosneft agreed participation in the project with ChemChina, taking a 40% stake and defining a timetable for FEED and training infrastructure.

The Partizansk complex is being designed to include a capacity to refine 24 million tpa of oil and 6.8 million tpa of petrochemicals. A workshop was held in December to consider infrastructure construction of the petrochemical complex and construction of the residential district, which is intended for the company's employees. Participants of the meeting in December discussed a number of operational issues, related to the construction of the residential district, the construction of a highway bypass over Nakhodka and the water main intake from Nakhodka to the processing complex. In the early part of 2017 the process of transfer of documents is to begin for state examination.

In December 2016 Transneft criticized the plans of Rosneft to create the VNKH complex. The feasibility of the project, according to Transneft, seems questionable, as it will require an expansion of the pipeline East Siberia-Pacific Ocean (ESPO) which may prove economically unjustifiable. At the same time the head of Rosneft has pledged to Putin to resolve the issue of gasoline supply in the Russian Far East by 2020, an indication of how many different angles interest groups can influence a project.

Bashkortostan petrochemical cluster & Federal support

Following the acquisition of a majority stake in Bashneft by Rosneft, the federal government in Moscow has stated it will allocate funds to support the development of a petrochemical cluster in the republic. The relevance of the Rosneft takeover is that Moscow has been allowed to attain some control over Bashkortostan which was hitherto not possible.

Financial contributions to the development of the cluster will increase productivity at its plants by more than 20%, the number of patents will increase three-fold. The petrochemical territorial cluster is located on the territory of the three municipalities, including Sterlitamak, Salavat and Ishimbay. Its members include Gazprom neftekhim Salavat, Bashkir Soda Company, Sintez-Kaucuk (Sterlitamak), Sterlitamak Petrochemical Plant, and Ishimbay specialized chemical catalysts plant.

Major petrochemical projects for Bashneft

- Ufaorgsintez ethylene expansion
- Ufaorgsintez cumene modernisation
- Ufaneftekhim-paraxylene expansion

As part of the development of the petrochemical cluster the Republic has been working to increase consumption of raw materials base, including construction of product pipeline West Siberia-Ural-Volga region. Until now the idea of the pipeline has been shown no interest from the federal government but the emergence of Rosneft as the main owner in Bashneft may ultimately lead to some financial support for the project.

Projects in Tatarstan-Linde

TAIF and Linde held a meeting in late 2016 on new and ongoing investment projects in Tatarstan. These included projects for the application of Alpha-Sablin technology for alpha olefin production at Nizhnekamskneftekhim and completion of the hydrogen project at Nizhnekamsk. The license for Alpha Sabin technology was signed by Nizhnekamskneftekhim in 2012 and supports the plant with a capacity of 37,500 tpa. The new technology allows the production of 1-butene and 1-hexene which can be used for polyethylene copolymers. However, the alpha olefin plant has not yet reached full capacity and has encountered problems.

Regarding the new cracker for Nizhnekamskneftekhim Linde is developing the design schedule and FEED outline for the first of the two 600,000 tpa units. For Kazanorgsintez TAIF is negotiating with Gazprom over the increase in butane supply for ethylene production. Linde has also been asked to prepare a feasibility assessment for an isocyanate project at Nizhnekamsk.

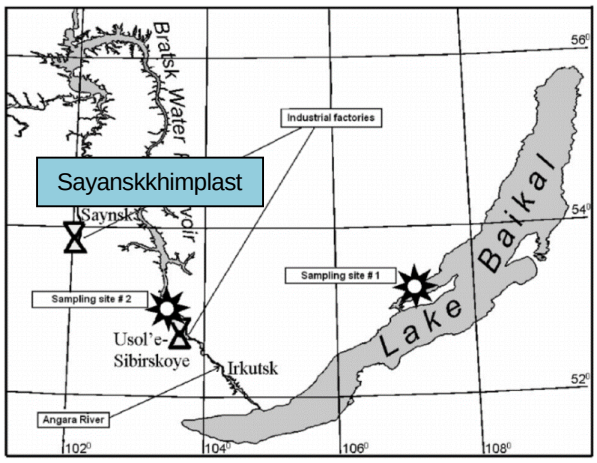
Gazprom-Astrakhan polyethylene project

Gazprom resumed work in November on the creation of a polyethylene project at the Astrakhan gas processing plant. This is an old project idea previously shelved and based on an ethylene plant of 280,000 tpa using ethane feedstocks.

According to provisional talks, about 30% of polyethylene production could be bought by Russian company Metaclay which could be used for polymer coatings for pipes. The intention is to use technology supplied from Skolkovo in Russia for ethylene production rather than rely on imported technology. Questions remain over the polyethylene license.

Sayanskkhimplast-ethylene

In late 2016 Sayanskhimplast reached a provisional agreement with Technip for the construction of a 200,000 tpa ethylene plant. The intention is to reduce the dependency on Angarsk Polymer Plant for ethylene supplies by pipeline. The supply problems in 2016 between Sayanskkhimplast and Angarsk Polymer Plant, coupled with the ongoing dispute over pricing, has culminated in Sayanskkhimplast being almost forced into trying to construct its own plant or feedstock source.



In 2016 the Irkutsk administration was in talks to sign a contract with Chinese companies to establish a gas-chemical complex at Sayansk, but the project did not progress beyond the paper stage. Sayanskkhimplast has now revived a previously considered project, dating back to 2004, with Technip in the construction of an ethylene line. The plant was intended to be launched in 2005, but the project was never undertaken. Technip is now considering the construction of a gas processing plant at Sayanskkhimplast for 2020. The plant is not expected to meet all of Sayanskkhimplast's requirements, and supplementary ethylene may need to be bought from Angarsk.

SIBUR-ZapSibBeftekhim

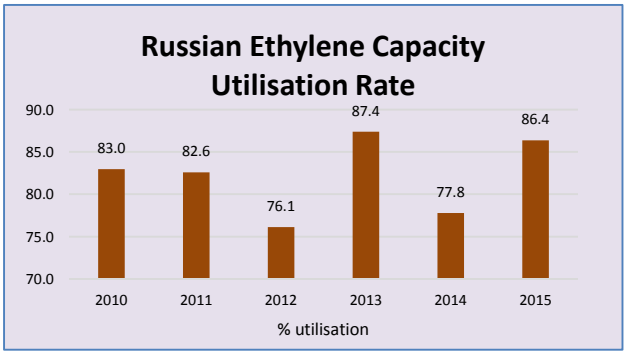
NIPIGas completed an important number of tasks for the ZapSibNeftekhim project at Tobolsk by the end of 2016 and aims to increase the rate of construction sharply in 2017. The target is to fully develop the complex on the 400-hectare site by 2020. NIPIGas is responsible for the construction of common facilities complex including eight dormitories, two dining rooms, etc. which are already in operation. In the future the site will be able to comfortably accommodate more than 9,000 staff, providing facilities for sports and other leisure activities. In total the company plans to build 39 facilities for supporting the staff engaged in the project.

ZapSibNeftekhim Investment Breakdown

- 96.7 billion roubles invested Q1-Q3 2016, 5.3 times up on 2015
- 2016-2020 SIBUR plans to invest $7.2 billion in project
- Russian National Welfare Fund provided $1.75 billion
- Project completion achieved 16% by mid-December

By the end of 2016 oversized equipment installed included 19 columns, one reactor, three compressors and accessories. Large volumes of work were carried out on the device communications, arrangement of platforms, roads, crossings for the delivery of equipment, etc. In late last year SIBUR concluded a number of contracts with Russian contractors and suppliers of equipment for the construction of ZapSibNeftekhim at Tobolsk in excess of 220 billion roubles. Deliveries of materials are being sourced from 35 regions of Russia.

Construction of ZapSibNeftekhim had reached 16% by mid-December 2016, with the main peak of construction and installation scheduled for the second half of 2017, all of 2018 and the first half of 2019. Mechanical completion of the complex is scheduled for August 2019, when cold commissioning will start, and production is expected to start in 2020.



Russian Petrochemical Markets

Russian olefin market, Jan-Nov 2016

Ethylene capacity utilisation in Russia has generally averaged in the mid-eighties percentage points over the past few years, and has fallen below 80% when the Stavrolen cracker was down for long term repairs in both 2012 and 2014. In 2016, the Angarsk cracker

endured a five-month outage due to an accident in early February and together with a number of longer planned plant turnarounds meant that utilisation rates dropped to about 82%.

Russian Propylene Domestic Sales (unit-kilo tons)

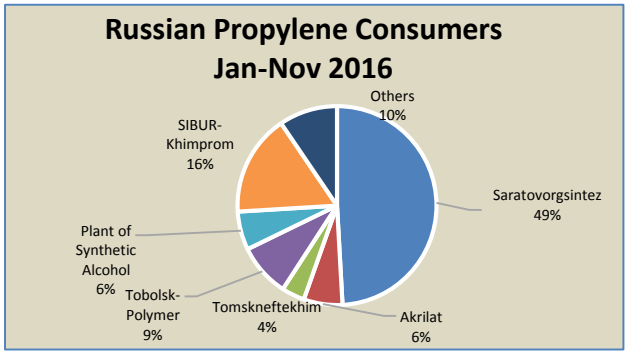
Producer	*Jan-Nov 16*	*Jan-Nov 15*
Angarsk Polymer Plant	37.1	58.7
Omsk Kaucuk	2.4	4.1
SIBUR-Kstovo	94.1	80.7
Akrilat	0.4	3.7
LUKoil-NNOS	176.7	175.9
Tomskneftekhim	1.7	0.1
Gazprom neftekhim Salavat	3.3	15.5
Nizhnekamskneftekhim	0.0	2.0
SIBUR-Khimprom	0.0	0.0
Stavrolen	0.7	4.2
Tobolsk-Polymer	1.8	11.0
Ufaorgsintez	0.0	5.0
Total	318.4	360.9

Ethylene production rose 6% in the period January to November 2016, whilst propylene production rose 12%. Shipments of ethylene in the Volga-Urals region increased from 530,000 tons in the first eleven months in 2016 to 631,000 tons in 2016, helped in particular by increases in production at Salavat and Kstovo.

The Privolzhsky region, including Tatarstan and Bashkortostan, provide the main bulk of ethylene merchant sales the Volga-Urals represents the main region for shipments, by virtue of the 644 km ethylene pipeline.

Also included in this region at the western edge where SIBUR-Kstovo is based, and is linked by pipeline to the nearby RusVinyl plant and by a 60 km pipeline to Dzerzhinsk where ethylene oxide and glycols are produced.

Propylene sales on the domestic Russian market amounted to 31,937 tons in November, preceded by 23,300 tons in October. Sales rose in November due largely to the resumption of purchases from Saratovorgsintez which increased purchases by 1.9 times to 17,800 tons. In addition, Angarsk Polymer Plant increased the shipment of products to domestic consumers by 23% to 7,500 tons.



In the period January to November 2016 sales on the domestic market totalled 319,300 tons which was 11% down on the same period in 2015. Sales of propane-propylene fractions, by contrast, rose 18% to 166,800 tons.

Russian Domestic Monomer Prices (euros per ton)

Product	*Nov-16*	*Oct-16*	*Annual Average*
Ethylene	472.0	427.9	353.8
Propylene	407.4	470.6	395.5
Styrene	792.5	791.0	747.7

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. 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.

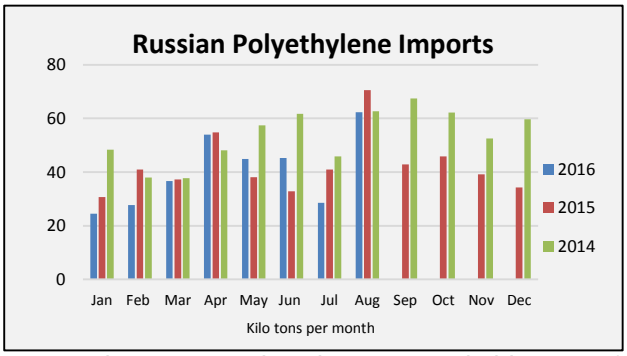
Russian Styrene Production (unit-kilo tons)

Producer	*Jan-Oct 16*	*Jan-Oct 15*
Nizhnekamskneftekhim	249.5	248.1
Angarsk Polymer Plant	16.8	29.7
SIBUR-Khimprom	112.3	105.6
Gazprom n Salavat	145.7	130.9
Plastik, Uzlovaya	43.3	37.8
Total	567.7	552.1

Russian styrene, Jan-Oct 2016

Russian styrene production totalled 567,700 tons in the first ten months in 2016 against 552,100 tons in the same period in 2015. Styrene sales on the domestic market amounted to 8,120 tons in November, 5% down on October. Gazprom neftekhim Salavat shipped 4,420 tons in November, followed by SIBUR-Khimprom with 1,740 tons and Angarsk Polymer Plant with 1,420 tons. In the period January to November 2016 Russian sales of styrene on the domestic market totalled 89,710 tons which was 4.4% down on the same period in 2015.

Russian HDPE Production (unit-kilo tons)		
Producer	***Jan-Nov 16***	***Jan-Nov 15***
Kazanorgsintez	439.9	424.5
Stavrolen	248.9	166.2
Nizhnekamskneftekhim	117.9	137.6
Gazprom neftekhim Salavat	100.0	87.6
Total	906.7	815.9



Bulk Polymers

Russian polyethylene production, Jan-Nov 2016

Russian HDPE production increased 11% in the first eleven months in 2016 to 906,700 tons. Kazanorgsintez produced 439,900 tons, 4% higher than in January-November 2016, whilst Stavrolen increased production to 249,900 tons versus 166,200 tons. Nizhnekamskneftekhim produced 117,900 tons which was 7% down and Gazprom neftekhim Salavat increased production to 100,000 tons from 87,600 tons.

LLDPE production amounted to 57,700 tons in January to October 2016 against 39,500 tons in 2015. LDPE production totalled 512,200 tons in the first ten months, 2.2% down.

Russian polyolefin imports, Jan-Nov 2016

Russian HDPE imports dropped 22% in January to November 2016 against the same period in 2015, falling to 137,500 tons from 177,000 tons. Higher domestic production and weaker demand for pipes were among the main reasons for the fall in imports. Russian polypropylene imports totalled 154,900 tons in the period January to November 2016 against 138,400 in the same period in 2015. Homopolymer imports rose from 54,100 tons to 68,500 tons, whilst block copolymer imports rose from 26,600 tons to 28,800 tons. Random copolymer imports dropped from 33,500 tons to 31,200 tons.

Russian Polypropylene Imports (unit-kilo tons)		
Category	***Jan-Nov 16***	***Jan-Nov 15***
Homopolymers	68.5	54.1
Block	28.8	26.6
Random	31.2	33.5
Other	26.4	24.1
Total	154.9	138.3

Russian polypropylene production, Jan-Nov 2016

Russian polypropylene production increased by 8% in the eleven months in 2016 over 2015 and totalled 1,251 million tons. Tobolsk-Polymer produced 415,400 tons against 343,400 tons in January to November 2015, Polyom produced 185,600 tons against 174,100 tons and Nizhnekamskneftekhim increased production by 2% to 198,300 tons. Other producers recording increases included the Kapotnya refinery where production rose by 12% to 119,300 tons and Stavrolen which increased production slightly to 103,200 tons against 102,600 tons. Producers recording falls included Ufaorgsintez which produced 111,700 tons in January to November against 115,900 tons in 2015 and Tomskneftekhim which was 6% down to 117,700 tons.

Russian Polypropylene Production (unit-kilo tons)		
Producer	***Jan-Nov 15***	***Jan-Nov 15***
Ufaorgsintez	111.9	115.9
Stavrolen	103.3	102.6
Neftekhimya	119.3	108.0
Nizhnekamskneftekhim	198.4	194.5
Polyom	185.6	174.0
Tomskneftekhim	117.3	124.0
Tobolsk-Polymer	415.4	343.4
Total	1251.2	1152.1

Russian PVC market, Jan-Nov 2016

Imports of PVC into Russia totalled 123,900 tons in the period January to November 2016 against 90,800 tons in the same period in 2015. China accounted for 95,700 tons of imports in 2016 against 51,100 tons in the previous year, whilst imports from the US rose from 18,300 tons to 19,600 tons.

In the final month of 2016 imports were reported to have declined sharply due to full production by Russian producers and low

Russian Domestic Polymer Prices (euros per ton)			
Product	***Nov-16***	***Oct-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

domestic demand. Exports of PVC totalled 51,800 tons in the first eleven months in 2016, a third more than in the same period in 2015.

Russian PVC Production (unit-kilo tons)		
Producer	***Jan-Nov 16***	***Jan-Nov 15***
Bashkir Soda	226.0	220.2
Kaustik	80.4	87.4
RusVinyl	275.1	210.9
Sayanskkhimplast	119.8	193.2
Total	701.3	711.7

In the first eleven months in 2016 PVC production in Russia totalled 701,200 tons, 1% down on 2015 from 711,600 tons. RusVinyl produced 29,500 tons in November of which 2,000 tons was emulsion grade. For the eleven months RusVinyl produced 275,000 tons against 210,900 tons in the previous year. RusVinyl plans to launch a new brand of emulsion PVC in 2017, which can be used in the manufacture of vinyl wallpaper. Currently, the company produces seven brands of emulsion and suspension PVC.

Bashkir Soda produced 226,000 tons in January to November 2016, which was 3% up on 2015 whilst Kaustik at Volgograd reduced production by 8% to 80,400 tons. Four people were injured in a fire at Kaustik's PVC plant at Volgograd at an accident on 24 November. Sayanskkhimplast produced 119,800 tons of resin against 193,200 tons in the period January to November 2015, the fall due to a lack of ethylene.

PX-PTA-PET

Russian paraxylene projects 2017

Paraxylene projects in Russia are expected to progress in 2017 at Nizhnekamsk and Ufa, the former representing a new plant and the latter representing the modernisation and expansion of an existing plant. The capacity of Taneko's new plant at Nizhnekamsk is being designed to produce 250,000 tpa whilst the Ufaneftekhim plant will be expanded from 165,000 tpa to 260,000 tpa. Taneko's paraxylene plant is connected to the installation of primary oil refining CDU-AVT-6 unit at Nizhnekamsk, where construction started in autumn 2015. The project is scheduled for completion in 2018, increasing refining capacity to 14 million tpa. Investments into the project are estimated at 196 billion roubles.

Paraxylene Projects in Russia

- Nizhnekamsk-Tatneft
- Ufa-Bashneft, Ufaneftekhim

Regarding Ufa, Glavgosexpertiza approved the project documentation and results of engineering studies for the reconstruction of the Bashneft-Ufaneftekhim complex for the production of aromatic hydrocarbons. After reviewing the submissions, the experts concluded that the results of the engineering survey and design documentation comply with the requirements of technical regulations and other statutory requirements. Reconstruction of the aromatics complex at Ufa not only aims to increase paraxylene capacity to 260,000 tpa but also benzene to 100,000 tpa, whilst orthoxylene capacity will remain unchanged.

Russian PTA Imports (unit-kilo tons)		
Country	**Jan-Oct 16**	**Jan-Oct 15**
Belgium	41.3	23.3
Brazil	3.4	8.2
China	37.5	37.6
South Korea	61.0	57.3
Poland	29.9	5.6
Thailand	1.0	0.0
Portugal	0.0	1.0
UK	0.2	0.0
Total	174.3	132.9

SafPet-Nizhnekamsk

SafPet is considering the financing structure for the PTA and PET projects, and more information is expected to become available in the first quarter this year. According to current estimates, investment in the project will amount to about $356 million or 22 billion roubles. SafPet is working with different financial institutions in order to attract financial resources, including Tatneft. SafPet has attracted PwC, which will help in the elaboration of a financial model and by December the company hopes to have all the components ready for investment.

Safpet Project & Options

- PTA-210,000 tpa

Option 1

- PET bottle grade 250,000 tpa

Option 2

- PET food grade 200,000 tpa
- PET fibre 87,500 tpa
- PET film grade 25,000 tpa

The project is broken down into three phases which includes the internal infrastructure, financing and plant construction. The aim is to launch the PET plant by the third quarter of 2019 and to be synchronized with the commissioning of the aromatic and paraxylene operations at Taneko. PET production is targeted for start-up around three months after start-up of the PTA plant.

Aside finance, others issues faced by SafPet include the problem of human resources in finding trained specialists for the new plant. Environmental issues in the Nizhnekamsk region are also a concern, the Communist Party in Tatarstan has been active against the project, largely on environmental grounds. The Nizhnekamsk project to build a plant for the production of PTA and PET is planned for completion in the third quarter of 2019, and the output at full capacity is expected by 2020.

Ivanovo Polyester Complex-Uhde Inventa

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.

In February 2017 Ivanovo Polyester Complex expects to submit all the documents for state examination, which if approved would mean that construction of the new facilities can start in the first half of 2017.

Ivanovo Polyester Complex-Raw Material Estimates

- PTA requirements, 155,000 tpa, imports
- MEG requirements 65,000 tpa, domestic sources

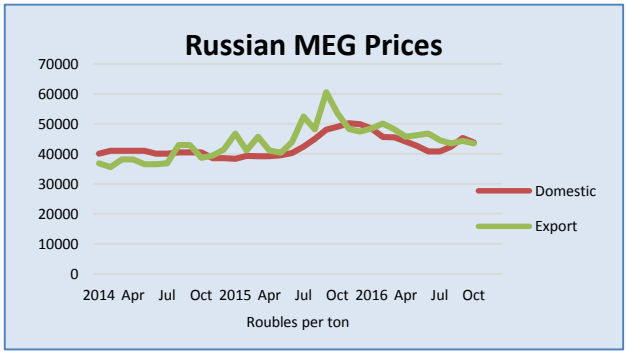
Ivanovo Polyester Complex (IPK) expects that the Supervisory Board of VEB will consider an application for fund raising to the end of 2016. Capital investment in the project amount to 354 million euros, of which 287 million euros will be allocated to finance the contracts with foreign contractors. Ivanovo 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.

Nizhnekamskneftekhim-ethylene oxide

Nizhnekamskneftekhim completed the set of measures to replace the basic process control system at the ethylene oxide plant. Microprocessor control systems have been introduced that make it easier to manage the ethylene oxide plant, whilst requiring less staff to assess performance. In the first ten months of 2016 Nizhnekamskneftekhim produced 154,000 tons of ethylene oxide and 114,000 tons of glycols.

Russian MEG market, Jan-Nov 2016

MEG sales on the domestic market amounted to 8,500 tons in October, 13% up on September. Nizhnekamskneftekhim, supplied 4,800 tons in October, SIBUR-Neftekhim 3,600 tons followed by Kazanorgsintez with 54 tons and small traders 21 tons. Polief purchased 6,300 tons in October, 28% up on September, whilst Obninskorgsintez bought 1,700 tons which was three times higher. Small companies, consumers and traders bought 455 tons (-48%).



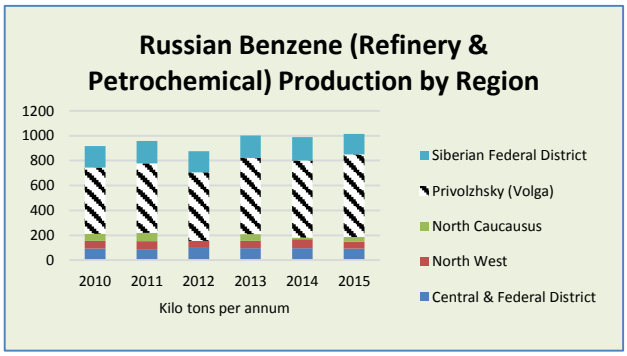
Domestic prices have remained stable and follow the same trend as export prices. In November domestic sales increased by 29% over October to 11,000 tons. SIBUR-Neftekhim shipped 8,610 tons, whilst Nizhnekamskneftekhim shipped only 2,190 tons and Kazanorgsintez 116 tons. Polief bought 7,410 tons in November, BaltTechProm 1,200 tons, and Obninskorgsintez 1,150 tons. In the first eleven months in 2016 domestic sales of MEG totalled 121,370 tons of MEG, 19% less in than in the same period in 2015.

Aromatics

Russian benzene market, Jan-Nov 2016

The export duty on aromatic hydrocarbons dropped by 2.4% in December against November to $36.1 per ton from $37. In order to avoid an uncontrolled increase in prices of petrochemical raw materials in the

domestic market mechanism was introduced tax deductions of amounts of excise duty when purchasing certain petroleum products, including aromatic hydrocarbons for petrochemical plants.



Benzene production totalled 1.150 million tons in Russia for the first eleven months in 2016 against 1.140 million tons in the same period in 2015. Benzene from petrochemical plants and refineries provide the bulk of production, with the Privolzhsky region accounting for roughly 60-65%.

Benzene sales on the Russian domestic market totalled 666,600 tons in the first eleven months in 2016, against 669,700 tons in the same period in 2015. The composition of purchasers tended to change in 2016 in that reduced purchases of benzene for caprolactam was primarily driven by Kuibyshevazot and to a lesser extent SDS Azot at Kemerovo.

Leading Russian Benzene Consumers (unit-kilo tons)

Consumer	*Jan-Nov 16*	*Jan-Nov 15*
Kuibyshevazot	115.3	139.2
SDS Azot Kemerovo	83.8	93.5
Shchekinoazot	49.4	42.1
Kazanorgsintez	65.2	59.2
Nizhnekamskneftekhim	37.8	58.0
SIBUR-Khimprom	86.7	70.1
Uralorgsintez	59.7	65.4
SANORS	40.9	53.6
West Siberian MC	45.4	42.8
Others	37.2	14
Total	525	567

Kuibyshevazot purchased more phenol in the first half of 2016, although that trend slowed down in the second half of the year. SIBUR-Khimprom was the only consumer to report a significant rise in purchasing in 2016. Shchekinoazot and Rosneft have come to an agreement on the supply of benzene from the group refineries, including Ryazan. Shchekinoazot purchased 35,200 tons of benzene in the first three quarters in 2016 against 34,900 tons in the same period last year.

Regarding suppliers, the Atyrau refinery in Kazakhstan supplied 3,000 tons of benzene to Kuibyshevazot in the period September to November. Most consumers do not rely on one source and purchase from a range of sources. Kuibyshevazot buys benzene from most of the large producers, taking 115,300 tons in the period January to November 2016 against 139,200 tons in 2015. Atyrau is relatively close to Kuibyshev in the Samara region, 775 km, compared to some of the Russian suppliers such as Kirishinefteorgsintez (1,694 km) and West Siberian Metallurgical Complex ((2,805 km).

SDS Azot at Kemerovo purchases benzene also from the West Siberian Metallurgical Complex in addition to Angarsk Polymer Plant and Gazprom Neft at the Omsk refinery. In the western parts of Russia, Shchekinoazot buys benzene from Ryazan, Yaroslavl, Budyennovsk and Kirishi. Most of the petrochemical and refinery based benzene producers in Russia are located in the Privolzhsky region which covers Tatarstan and Bashkortostan.

Russian orthoxylene sales, Jan-Oct 2016

Domestic deliveries of orthoxylene amounted to 13,520 tons in November, 8% higher than in October. Gazprom Neft shipped 5,950 tons, Ufaneftekhim 5,240 tons, and Kirishinefteorgsintez 2,330 tons. Kamteks-Khimprom purchased 8,160 tons in November, accounting for 60% of shipments, whilst paint manufacturers purchased 1,730 tons and manufacturers of agrochemicals and pharmaceuticals purchased 1,820 tons. Domestic sales totalled 122,040 tons in the period January to November 2016, virtually unchanged from 2015.

Russian Orthoxylene Exports (unit-kilo tons)

Producer	*Jan-Oct 6*	*Jan-Oct 15*
Gazprom Neft	39.1	49.0
Kirishinefteorgsintez	42.7	32.3
Ufaneftekhim	26.8	29.1
Total	108.6	110.4

Russian orthoxylene exports, Jan-Oct 2016

In October, exports of orthoxylene from Russia amounted to 7,400 tons which is 36% less than in September. Kirishinefteorgsintez shipped 3,110 tons of orthoxylene, 2.9 times higher than in September whilst Bashneft reduced exports by 4% to 2,480 tons and Gazprom Neft

reduced volumes 4.7 times to 1,670 tons. Finland accounted for 4,690 tons of exports in October, and the Netherlands 1,990 tons. Export shipments totalled 89,030 tons which is 46% up on 2015.

Russian toluene sales, Jan-Nov 2016

Toluene sales on the Russian domestic market amounted to 15,080 tons in November, 76% higher than in October. Gazprom Neft accounted for 59% of sales comprising 8,880 tons, Slavneft-Yaroslavnefteorgsintez 21% (3,120 tons). Kirishinefteorgsintez 14% (2,190 tons), and Severstal 3% (420 tons). Over the month, explosive manufacturers purchased 11% more toluene than in October and totalled 1,910 tons. Companies producing paints, increased volumes of purchased raw materials by 35%, to 2,920 tons (19%). Manufacturers of motor fuels and additives increased their purchases of toluene more than 5 times, up to 3,850 tons (26%). Toluene sales totalled 164,810 tons in the first eleven months in 2016, 35% up on the same period in 2015.

Russian Toluene Market

- Domestic sales up 35% in Jan-Nov 2016 to 164,810 tons
- Main consumers include explosive manufacturers, paints, etc.

Russian Caprolactam Production (unit-kilo tons)

Producer	*Jan-Oct 16*	*Jan-Oct 15*
Kuibyshevazot	161.9	144.8
Shchekinoazot	48.9	45.5
SDS Azot	81.4	77.4
Total	292.1	267.7

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.

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

Producer	*Jan-Nov 16*	*Jan-Nov 15*
Novokuibyshevsk PC	41.6	45.4
Kazanorgsintez	11.9	13.0
Ufaorgsintez	60.8	39.8
LUKoil-VNPZ	0.4	0.8
Borealis	3.2	3.8
Total	117.9	102.7

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). Kuibyshevazot produced 161,900 tons in the first ten months in 2016 against 144,800 tons in the same period last year.

Russian phenol, Jan-Nov 2016

The Industrial Development Fund (EDF) will provide soft loans GC Titan on the implementation of the project on reconstruction of production phenol-acetone in the amount of 300 million roubles. Total investment in the project will amount to more than 1 billion roubles.

Russian Domestic Aromatic Prices (euros per ton)

Product	*Nov-16*	*Oct-16*	*Average 2016*
Benzene	498.9	530.7	472.3
Xylenes	543.1	502.5	469.7
Toluene	470.5	473.2	385.8
Phenol	959.0	944.6	763.6

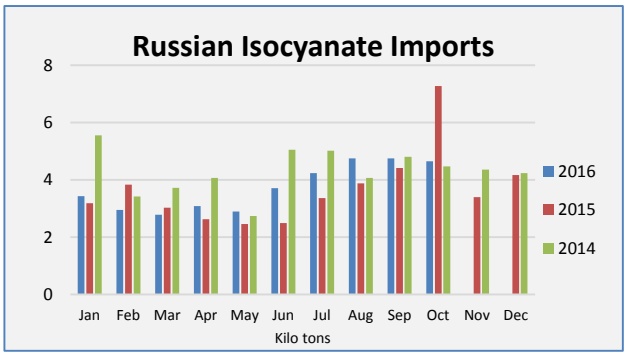
Production of phenol-acetone at Omsk Kaucuk was decommissioned in early 2014 due to a major accident. Modernisation includes an increase in the production capacity of acetone-phenol by 1.5 times. At the Omsk Kaucuk site it will be possible to produce 90,000 tpa of phenol, 55,800 tpa of acetone and 160,000 tpa of cumene.

Reconstruction will also improve the quality and reduce production costs by increasing energy efficiency. Complete reconstruction and launch of the production of phenol and acetone units at Omsk Kaucuk is scheduled for completion in the third quarter of 2017 and is expected to start commissioning the fourth quarter. The project provides for an increase in capacity in addition to the introduction of new technologies the alkylation of benzene, thereby increase production efficiency. The transition to the zeolite catalyst will allow Omsk Kaucuk to reduce costs in the production of phenol and acetone. Further company development plan involves the development of new products, including bisphenol-A and polycarbonate.

Russian MDI-TDI projects

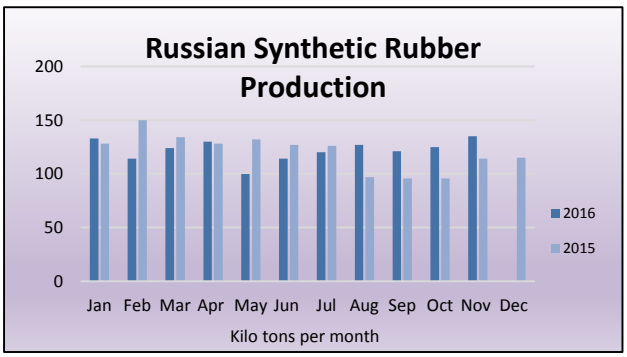
Russian engineering institute GIPROIV has recently started to revive isocyanate technology which was previously developed, but not completed in the Soviet period, with the aim of constructing a plant of around

80,000 tpa. Other MDI-TDI projects in Russia have also been announced in the past two years, at Novocheboksarsk, Chapayevsk, Volgograd and Nizhnekamsk. Khimprom at Novocheboksarsk is conducting a feasibility study at present, and based on market size there may only be room for one plant in Russia.



As part of the olefin expansion at Nizhnekamskneftekhim benzene capacity is being increased to 270,000 tpa and this has created interest for Nizhnekamskneftekhim in the production of isocyanates, either TDI or MDI. TAIF recently requested Linde to provide a proposal over a route into the production of isocyanates which are not produced in Russia.

In 2015, Russian imports of isocyanates amounted to 43,258 tons, 24.3% less than in 2014. The market has stabilised in 2016 with imports totalling 30,600 tons in the first three quarters against 29,290 tons in the same period in 2015. The market volume of isocyanates in Russia for the period from 2010 to 2012 rose but in 2013 the market began to decline rapidly. In 2015 the market showed the lowest figures for the previous six years despite a record volume of 7,270 tons in October. Volumes in 2016 have stabilised, imports totalling 37,200 tons for the first ten months against 36,600 tons in the same period in 2015. The Russian market is dominated by suppliers from Germany, Hungary and the US including producers Huntsman, Dow Izolan and BorsodChem.



Synthetic Rubber

Russian rubber production, Jan-Nov 2016

Russian synthetic rubber production totalled 1.343 million tons in the first eleven months in 2016 against 1.327 million tons in the same period in 2015. C4 purchases on the merchant market were lower in 2016 than in 2015 mainly due to reduced usage by Omsk Kaucuk. The two largest rubber producing plants Nizhnekamskneftekhim and SIBUR Togliatti (Togliattikaucuk) both increased purchases of C4s slightly over the previous year.

Russian Domestic Synthetic Rubber Prices (euros per ton)

Product	*Nov-16*	*Oct-16*	*Average 2016*
Synthetic rubber	1287.2	1244.1	1078.2
SKMS	1058.9	1013.1	851.8
Butadiene rubber	1208.4	1158.6	966.2
NPR	1742.5	1638.2	1448.5
Isoprene rubber	1305.4	1264.9	1105.1
Other synthetic rubber	2317.8	2371.6	2100.4

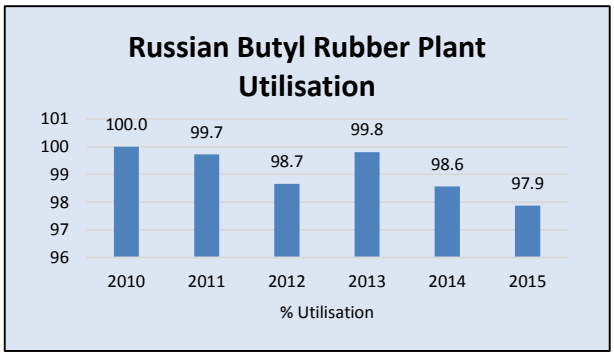
Domestic rubber prices tended to end the year higher and were in most cases at levels above the average for the whole year.

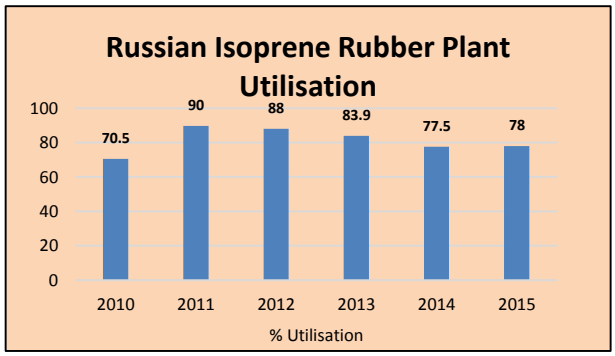
Russian C4 Purchases (unit-kilo tons)

Consumer	*Jan-Nov 16*	*Jan-Nov 15*
Omsk Kaucuk	48.8	72.2
Nizhnekamskneftekhim	132.9	126.9
SIBUR Togliatti	131.0	129.4
Sterlitamak Petrochemical	2.4	4.6
Total	315.0	333.1

Nizhnekamskneftekhim has been engaged in developing a dehydrogenation catalyst for isobutane as part of its feedstock base for synthetic rubber production. Catalytic dehydrogenation of isobutane by Nizhnekamskneftekhim is used in the production of isoprene monomer.

At the end of 2016 Nizhnekamskneftekhim put into operation installation for the production of isobutylene, and completed the reconstruction of isoprene production. As a result of the production of isoprene rubber capacity of SKI-3 modernisation will increase from 280,000 tpa to 330,000 tpa. Nizhnekamskneftekhim, is al so expected to complete the project to increase the capacity of butyl rubber plant in February, rising to 220,000 tpa.





Regarding other Russian producers, Omsk Kaucuk s 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 has resumed production of latex and wants to try to set up production to 2,500 tpa, although the capacity exists to produce 5,000 tpa.

SIBUR Togliatti-modernisation isoprene monomer

SIBUR Togliatti completed another phase of modernisation of the isoprene monomer plant, aimed at improving equipment reliability, efficiency and safety in production. The project updated 41 units of equipment, including heat exchangers, columns, pumps, electrical, and HVAC systems, instrumentation and automation. One of the most significant tasks involved the installation of a new distillation column and a new mass transfer device mounted needed to separate raw materials into components. Modernisation is not only directed at improving the efficiency and reliability of equipment, but also on the growth of industrial safety and addressing environmental issues.

SIBUR's synthetic rubber revenues rose 11.4% in the first three quarters to 29.596 billion roubles, attributed to higher revenue from sales of commodity rubbers and thermoplastic elastomers. Prices for thermoplastic elastomers were positively affected by cancelled discounts applied for premarketing sales in 2015.

Sterlitamak prosecutors and employees of Rostekhnadzor inspected the synthetic rubber plants Sterlitamak Petrochemical Plant and Sintez-Kaucuk and discovered that the companies had not complied with the requirements of technical regulations. Violations could result in damage to engineering structures and injury employees of enterprises. According to the agency, the officials were fined 20,000 roubles, violations are eliminated.

Russian rubber exports, Jan-Oct 2016

Russian exports of synthetic rubber increased from 790,400 tons in the first ten months in 2015 to 808,000 tons in the same period in 2016. The biggest fall was recorded in SBR volumes, which declined from 61,500 tons to 45,000 tons whilst the largest rise was seen in isoprene rubber from 216,300 tons to 229,400 tons.

Russian Synthetic Rubber Exports (unit-kilo tons)

Category	*Jan-Oct 16*	*Jan-Oct 15*
E-SBR	22.0	26.5
Block	33.6	28.9
SSBR	7.5	6.2
SBR	45.0	61.5
Polybutadiene	197.5	187.8
Butyl Rubber	106.6	109.7
HBR	99.8	100.3
NBR	24.8	24.7
Isoprene Rubber	229.4	216.3
Others	41.8	28.4
Total	**808.0**	**790.4**

Prices for synthetic rubber exports rose gradually in 2016 in the second and third quarters, but still only averaged $1287 per ton for the first ten months against $1470 per ton for the whole of 2015. The highest value product category exported from Russia is halogenated butyl rubber (HBR), which averaged $1951 per ton in the period January to October 2016 against $2463 per ton in the whole of 2015.

Russian rubber market

SIBUR has confirmed its status by Bridgestone as a reliable supplier of tyre raw material suppliers in the production of rubber. Bridgestone has used isoprene rubber from Togliatti rubber for around eight years.

Ural Plant of Elastomers intends to invest 310.9 million roubles by 2019 for the development of the production of technical rubber products (RTI). The project involves the modernisation and expansion of facilities for the production of industrial rubber goods on industrial sites at Yekaterinburg and Mikaelovsk. The focus is on increasing capacity for the production of import-substituting products that can compete with the best foreign and domestic samples. This is primarily moulded products for mechanical engineering and agricultural sectors.

Production of thermal insulation materials made of foam rubber Armacell German company in the Moscow area came to a full load. It is expected that 2017 will be able to fully meet the needs of the markets of Russia and CIS countries in these types of materials. Production in the Moscow region was launched in early 2016. Construction lasted less than a year and was completed in 2015. Investment in the project exceeded 650 million roubles.

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

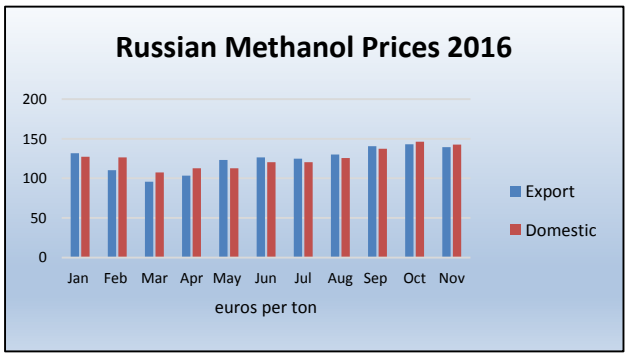
Tyre category	*Jan-Nov 16*	*Jan-Nov 15*
Car Tyres	323.0	295.2
Lorry tyres	312.0	293.9
Agricultural tyres	146.9	118.6
Total	781.8	707.7

The capacity of the company Armacell Lobnya is 46,000 cubic metres per annum. About 50% of the materials produced today is used in oil and gas and petrochemical industries. In particular, the company's thermal insulation used in the construction of the pipelines in the Arctic and for Sakhalin-2. These materials are designed for use in extreme conditions and have been specially developed for the Russian market on the basis of a multi-year study of the current demand.

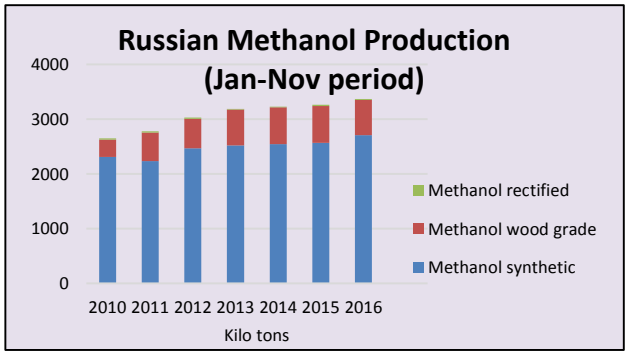
Methanol

Russian methanol, Jan-Nov 2016

Russian methanol production amounted to 315,000 tons in November after 303,000 tons were produced in October. Increases in October and November were noted for Metafrax and Shchekinoazot after completed maintenance whilst Sibmetakhim was still partly down in October for repairs. Domestic prices rose slightly in November and reached the highest level since February 2016, whilst export prices remain unchanged. Overall in the past three years even rouble prices have tended to soften, despite the significant depreciation of the currency. The lower prices of gas provided by Gazprom has been the main factor behind declining rouble prices for methanol, both domestic and export.



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. In 2015 Sibmetakhim achieved a record level of methanol production at 874,000 tons.



At the end of 2016 Metafrax has purchased 134 new tank wagons for the transportation of methanol. The turnaround of new cars usually runs up to eight years or 800,000 kilometres of transit. Each wagon can carry 73 tons. Metafrax also received 20 new tanks at the end of November for formaldehyde. The overall programme comprises 900 new tanks for the transportation of methanol and formaldehyde.

Shchekinoazot methanol expansion

Shchekinoazot announced a new methanol project in November, adding to the methanol and ammonia project already underway, which comprises the third methanol plant for the company raising total capacity to 1.5 million tpa by 2021. Shchekinoazot and Haldor Topsoe signed the license agreement on 10 November for the construction of a new unit of 500,000 tpa.

The current production plant M-450 was opened in 2011 and will be supplemented in 2018 by the launch of the methanol and ammonia project M-450/A-135. The main objective of the new project for the third methanol plant for the next two years will be the preparation of the construction site, engineering surveys, basic engineering and design documentation, etc. Construction will start when the current methanol and ammonia project are completed.

Shchekinoazot Methanol Capacity

- Current 450,000 tpa (2011)
- Second plant 450,000 tpa (2018)
- Third plant 500,000 tpa (2021)

Compressor equipment for the methanol and ammonia plants at Shchekino has been supplied by Mitsubishi from the ports in Japan and Korea. Also the company has received shipment of the primary reformer furnace from China. The general Designer of the new complex is the Severodonetsk company Orgkhim in East Ukraine. Working documents have already been issued to the customer. Consumption of natural gas in the second methanol plant will amount to 830 cubic metres per ton against 859 cubic metres per ton at present.

Russian Chemical Commodity Exports

	Jan-Oct 16	*Jan-Oct 15*	*Jan-Oct 15*	*Jan-Oct 15*
Product	***Kilo tons***	***USD Mil***	***Kilo tons***	***USD Mil***
Ammonia	3,129	744	2,901	1,114
Methanol	1,220	203	1,024	280
Nitrogen Fertilisers	10,361	1,789	9,179	2,151
Potash	7,532	1,527	10,329	2,750
Mixed Fertilisers	7,577	2,193	7,436	2,733
Synthetic Rubber	808	1,039	790	1,177

The company's management believes that, despite the complexity of the methanol market in Russia and in Europe, this project will have a reasonable payback period, primarily because of the benefits of building a new production at the Shchekinoazot site.

Sibmetakhim resconstructed formaldehyde plant and other plans

Reconstruction of production of formaldehyde and urea-formaldehyde concentrate plants at Sibmetakhim's Tomsk site has laid the foundation for expanding the range of products. The former production plant for formaldehyde and urea resins worked for almost thirty years, but had become outdated and required replacement. Sibmetakhim is now examining how to meet demand for the markets in the Tomsk area and the Far East from demand for resins and other chemical products in new woodworking industries, including the production of building materials (e.g. mineral wool, which are also needed binders based on formaldehyde). Sibmetakhim is also considering other possible technologies with a view to using methanol as a raw material for other products such as olefins and acetic acid.

Sibmetakhim Aims

- Demand from woodworking industries in Siberia
- Considering other areas for methanol processing including acetic acid and olefins

YATEC seeks Japanese support for methanol project in Yakutia

Yakutsk Fuel and Energy Company (YATEC) is in talks with Japanese companies on the design and construction of a methanol plant in Yakutia in the Russian Far East. The plant capacity could be designed to produce 1.5-2.0 million to be located at Nizhny Bestyakh in Yakutia-near the railway station which is linked to the BAM line and thus the Russian ports on the Pacific coast. The plant is also intended to be located close to the YATEC pipeline where around 2 million cubic metres of gas will be used per annum for the production of methanol. YATEC is the only company supplying gas central region of the Republic of Sakha (Yakutia). Besides methanol, other products that could be considered include propylene and ethylene but this seems unrealistic at present.

YATEC signed an agreement with Kawasaki Heavy Industries and Sojitz Corporation on 16 December 2016 regarding other projects the field of electricity and the power system. The agreement referred to the possibility of introducing Japanese gas turbine equipment at work sites for YATEC to improve the provision of electricity and heat to the settlements of Yakutia and operating industries.

Ammoni & National Chemical Group fertiliser projects

Ammoni in Tatarstan and the National Chemical Group at Nakhodka in the Primorsky Kray signed a number of agreements at the joint Russian-Japanese summit in December in relation to the fertiliser projects. Ammoni signed a memorandum of understanding with Mitsubishi Heavy Industries (MHI) and Sojitz Corporation to establish a second complex for fertiliser production in Tatarstan.

Fertiliser & Methanol Projects

- Ammoni signed MOU with MHI for new fertiliser project
- Japanese banks consider way round sanctions to finance Nakhodka project

Project financing remains unresolved although talks are underway with the Japanese Bank for International Cooperation. Japanese banks may be prepared to take the risk of providing credit despite US sanctions. That seems to be the case at least regarding the Nakhodka fertiliser complex which is being constructed by a consortium of companies led by Hyundai Engineering.

Fosagro Projects 2017

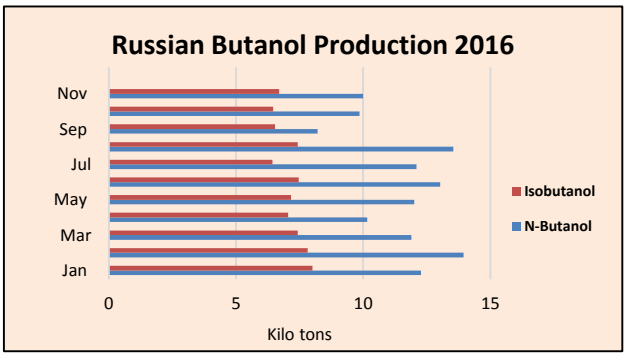
- Ammonia plant (760,000 tpa) to come onstream in July 2017
- Urea plant (500,000 tpa) to come onstream in September 2017

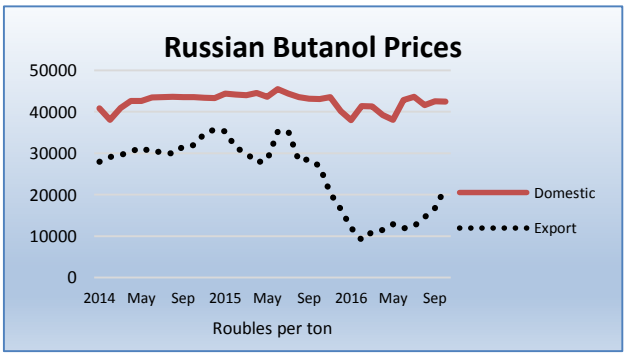
Fosagro-ammonia & urea starts in 2017

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.

Fosagro will be able to increase the capacity for the production of urea by 50%, and ammonia by 70%. For financing, in November 2015 Fosagro attracted a loan of 73.5 million euros from UniCredit Bank under the guarantee of the Czech state insurance company EGAP for a period of twelve years. After completion of the urea and ammonia projects Fosagro plans to reduce the volume of capital investments in 2017 by more than 1.5 times.

Organic chemicals





Russian sales of butanols, Jan-Sep 2016

Sales of domestic butanols on the Russian market amounted to 6,120 tons in November, 16% up on October. The proportion of n-butanol in the gross sales volume was 92%, and isobutanol only 8%. SIBUR-Khimprom shipped 3,510 tons in September, Gazprom neftekhim Salavat 2,130 tons, the Angarsk refinery 220 tons and Azot at Nevinnomyssk 260 tons.

Akrilat purchased 2,410 tons of butanols in November, 5.5 times up on October Dmitrievsky Chemical Plant, reduced purchases in November by 32% to 2,070 tons. Other consumers in September included the Plant of Synthetic Alcohol at Orsk with 170 tons, Volzhskiy Orgsintez 490 tons and Roshalsky Plant of Plasticizers 170 tons. Overall, in the period from January to November 2016 sales of butanols on the domestic market totalled 67,530 tons which was 5% higher than in 2015.

Domestic consumption could rise significantly in 2017 after the start-up of the new acrylate complex at Salavat, which is expected at some stage. In view of the declining export opportunities in the Chinese market, the start-up of the Salavat project and subsequent switch to internal processing instead of exports represents a key factor for Russian butanol production.

Russian Domestic Organic Chemical Prices (euros per ton)			
Product	*Nov-16*	*Oct-16*	*Average 2016*
Plasticizer Alcohols	644.8	625.7	557.0
Butanols	634.9	634.1	546.4
MEG	648.0	653.8	578.2
Acetic acid	468.2	469.9	402.7
Butyl acetate	523.8	502.9	464.7
Acetone	501.3	468.6	395.5

Russian Organic Chemical Production (unit-kilo tons)			
Product	*Jan-Nov 16*	*Jan-Nov 15*	*Jan-Nov 14*
Isopropanol	29.3	29.9	26.2
N-Butanol	127.1	134.0	131.7
Isobutanol	78.5	81.4	82.9
Propylene glycol	0.9	1.0	0.3
Phenol	202.7	206.2	219.7
Acetic acid	172.1	164.3	164.3
Butyl acetate	44.2	35.2	38.9
Phthalic anhydride	101.0	117.0	121.4

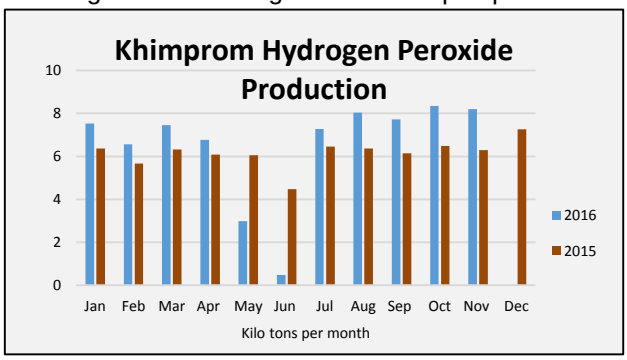
Russian acetic acid-VAM pricing

The Federal Antimonopoly Service has held a public discussion about the pricing of acetic acid and vinyl acetate production by Azot Nevinnomyssk. The main objective, as stated in the FAS materials is the development of the order of formation of the monthly prices of acetic acid and vinyl acetate (acetic acid + acetylene) to maximize the effectiveness of sales and establish a uniform approach in a transparent pricing system. Formula pricing is encouraged to apply to contracts concluded for a period of not less than one year for the purchase of at least 10,000 tons of acetic acid.

Khimprom launches isopropanol plan

Khimprom at Novocheboksarsk has launched the production of isopropanol, part of which will be used internally and part is intended for the export. The capacity of the isopropanol plant is 9,000 tpa in which the company has invested 10.7 million roubles and considers that the investment will pay off within six months.

The decision to construct a plant for absolute isopropanol was taken due to the possibility of producing at existing facilities and good demand prospects in areas such as freezing liquids, printing, food, timber-chemical, perfumery industry, etc. Khimprom has already signed contracts for the supply of IPA to major manufacturers of windshield fluid in Russia. Export possibilities are to be focused Belarus and Finland.



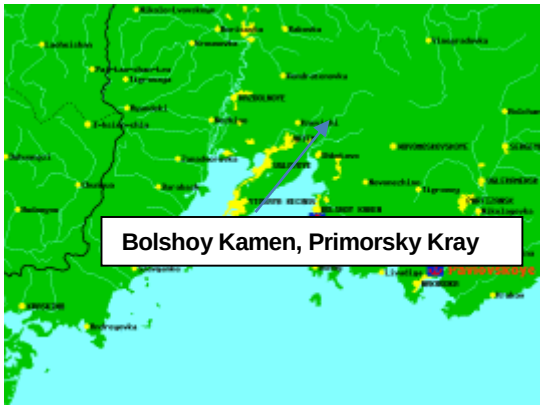
Other products

Khimprom, hydrogen peroxide production

Khimprom produced 70,900 tons of hydrogen peroxide in the first eleven months in 2016 against 66,668 tons in the same period in 2015. After plant modernisation Khimprom's priority challenges include increasing rouble prices on products sold on the domestic markets; to switch from imported raw materials and equipment to the domestic counterparts and to increase the share of payments denominated in foreign currencies ($, euros), as part of the marketing of products for export.

Rosneft-ChemChina jv on polymer coatings

Rosneft and ChemChina signed an agreement in December 2016 to establish a jv for the production of polymer coatings and paints in the Primorsky Kray. The materials from the jv are to be used in the protection of buildings and the Arctic marine vessels produced at the Bolshoy Kamen shipbuilding site at Nakhodka.



The capacity of the plant will amount to 50,000 tons of paints and plastics, whilst it is expected that the joint venture will become the leader of the domestic market for the production of special marine coatings. Rosneft and ChemChina are to conduct a feasibility study of the project and the necessary preparations for the creation of a joint venture.

Gazprom Khimvolokno raw material duties

Gazprom Khimvolokno has appealed to the Ministry of Industry with a proposal to reduce the number of duties for

Russian Inorganic Chemical Production (unit-kilo tons)			
Product	***Jan-Nov 16***	***Jan-Nov 15***	***Jan-Nov 14***
Hydrogen chloride	1005.3	923.3	958.8
Boric acid	79.5	63.4	74.8
Potassium hydroxide	28.8	26.3	17.8
Magnesium hydroxide	2.9	0.0	0.0
Aluminium hydroxide	10.9	8.3	9.3
Calcium hypochlorite	33.0	32.8	13.2
Aluminium sulphate	292.0	284.8	310.0
Sodium sulphate	846.8	787.5	722.8
Cupric sulphate	66.2	71.9	60.3
Calcium nitrate	57.1	45.4	27.0
Soda ash	2966.5	2822.1	2313.0
Hydrogen peroxide	70.9	66.7	62.9
Sulphuric acid	10505.4	9417.2	114.6
Other inorganic acids	46.5	39.0	47.2
Caustic soda	1044.2	1010.8	977.4
Cyanides	186.9	179.2	148.3

imported raw materials used in the production PET fibre and yarns. Gazprom Khimvolokno has been putting pressure on the Ministry of Industry for the past two years to abolish import duties on PET fibre. The Ministry of Industry has stated that duties are not necessary as Russia is constructing its own plant for PET fibre at Ivanovo Polyester Complex even if It will not be ready until 2020. At present the duty rate for PET fibre stands at 4%.

The amount of polyester cord fabric consumption in Russia amounted to 20.2 million running metres in 2015, of which imports comprised 17.9 million. Principal exporters of these materials include Korea (29%), and Czech Republic (19%). Demand for amid cord fabrics is estimated at 12 million running metres, of which 10.5 million is provided by imports, mainly from Turkey (44%). The demand for PET fibre in 2015 in the last year by Russian companies amounted to about 140,000 tons and mostly met by Chinese raw material.

Kuibyshevazot-Praxair

Kuibyshevazot opened a new industrial gas plant in November in a jv with Praxair. The project comprises production capacity of 1400 tons per day, and the estimated volume of sales of the company in 2017 should amount to 2 billion roubles. The jv will provide oxygen, nitrogen and compressed air plants growing needs of caprolactam, fertilisers and ammonia for Kuibyshevazot.

Azot Grodno Production (unit-kilo tons)		
Product	***Jan-Nov 16***	***Jan-Nov 15***
Methanol	63.7	77.2
Caprolactam	100.7	117.1
Polyamide primary	94.7	87.2
Polyamide filled	10.4	8.3
Ammonia	980.6	1002.1
Urea	932.9	956.8
Fertilisers	702.0	724.7
Fibres	33.9	28.0

Belarus

Belarussian chemical and polymer trade, Jan-Oct 2016

In the first ten months of 2016 Belarussian PVC imports dropped 20% and totalled 12,800 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 the first ten months to 79,223 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 51,180 tons compared to 50,126 tons in 2015. In January-October 2016, the total import volume of propylene copolymers amounted to 25,186 tons against 17,918 tons in the same period in 2015.

Polyethylene imports into Belarus increased by 26.3% in the first ten months of this year to 111,973 tons against 86,441 tons in 2015. LDPE imports totalled 69,178 tons against 45,850 tons in January to October 2015, whilst HDPE imports rose 12.3% to 37,395 tons. Exports of polyethylene from Belarus totalled 96,399 tons in the first ten months in 2016 against 101,996 tons in 2015, of which around three quarters were shipped to Russia.

Belarussian Organic Chemical Exports (unit-kilo tons)		
Product	**Jan-Oct 16**	**Jan-Oct 15**
Acrylonitrile	29.2	29.0
Caprolactam	6.5	27.8
Phthalic anhydride	18.3	21.4
Methanol	28.0	59.6

In the chemical division, acrylonitrile was the only major product to increase export activity in the first ten months in 2016. Caprolactam exports stopped earlier in the year so as to concentrate on more internal processing, whilst lower methanol production at Grodno reduced exports from 59,600 tons in January to October 2015 to 28,000 tons in 2016. The major destinations for Belarussian methanol exports currently consist of Ukraine and Poland.

PTA imports into Belarus totalled 45,400 tons in the first ten months in 2016, against 44,500 tons in the same period in 2015. In 2016 imports from South Korea rose to 21,100 tons against 8,000 tons in the first ten months in 2015, whilst imports from Poland dropped from 30,100 tons to 20,100 tons. The average price per ton for Belarussian PTA imports dropped from $778 in January to October 2015 to $690 in 2016.

Mogilevkhimvolokno PTA Imports (unit-kilo tons)

Country	*Jan-Oct 16*	*Jan-Oct 15*
Poland	20.1	30.1
Russia	2.2	3.2
South Korea	21.1	8.0
Portugal	1.0	0.0
Thailand	1.1	3.2
Total	45.4	44.5

Paraxylene imports into Belarus totalled 17,870 tons in January to October 2016, against 9,534 tons in the same period in 2015.

MEG imports totalled 54,831 tons in January to October 2016 versus 50,664 tons in 2015. Russian producers supplied almost all of the market requirements, although a large shipment from Saudi Arabia arrived in October.

Ukrainian Polyolefin Imports (unit-kilo tons)

Product	*Jan-Oct 16*	*Jan-Oct 15*
LDPE	45.0	42.9
LLDPE	38.2	28.9
HDPE	81.1	60.1
Other Polyethylene	11.8	8
PP	97.8	76.4

Ukraine

Ukrainian polymer imports

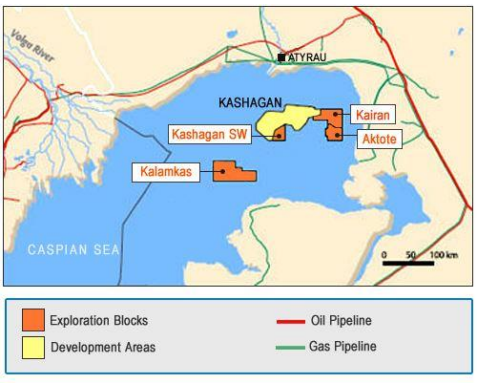
In the first ten months 2016 Ukrainian imports of polyethylene increased by 28% over 2015 and amounted to 216,400 tons versus 169,700 tons. The largest increase was recorded in the supply of HDPE and LLDPE, rising from 73,600 tons to 100,600 tons and 47,700 tons from 36,100 tons respectively. LDPE imports totalled 56,200 tons, 9% up on 2015. Imports of other types of polyethylene, including EVA, for the period under review amounted to about 11,800 tons against 8,200 tons in January to October 2015.

Imports of suspension PVC increased by 29% in January-October 2016 compared to the same period of 2015 and amounted to 91,800 tons. Imports from the US increased to 51,700 tons against 30,200 tons, whilst Europe supplied 33,700 tons against 33,300 tons. Imports from Russia dropped to 5,800 tons against 6,300 tons in January to October 2015. Polypropylene imports into Ukraine increased by 28% in January to October 2016, totalling 97,800 tons against 76,400 tons in the same period in 2015.

Central Asia

Kazakh petrochemical project-Kashagan field

The Kashagan offshore field in the Caspian Sea was launched in December, which is intended to provide the necessary feedstocks for petrochemical production in the Atyrau region. Following the introduction of the aromatics complex Kazakhstan Petrochemical Industries is now focused on the development of the polypropylene and polyethylene projects with a combined capacity of 1.3 million tpa.



Whilst the polyolefin capacity considerably exceeds consumption at current levels, the availability of polyethylene and polypropylene will help to influence investments in packaging and plastics conversion. Already a large plant has been established in the Atyrau region for production of polyethylene film and polypropylene bags and further projects are expected to follow.

Kazakh polymer imports, Jan-Oct 2016

Imports of polypropylene into Kazakhstan increased by 8% in the period January to October 2016 to 18,700 tons against 17,400 tons. Export sales of polypropylene, on the contrary, decreased by 26% from 19,500 tons to 14,500 tons. The growth in demand for polypropylene has allowed Neftekhim at Pavlodar to reduce exports this year.

Polyethylene imports totalled 78,400 tons in the first ten months in 2016, 6% down against the same period in 2015. HDPE imports dropped 8% to 60,100 tons, whilst LDPE imports dropped 4% to 14,200 tons. The only increase was recorded in LLDPE imports, rising from 3,400 tons in the first ten months in 2015 to 4,200 tons in 2016.

SOCAR OGPC

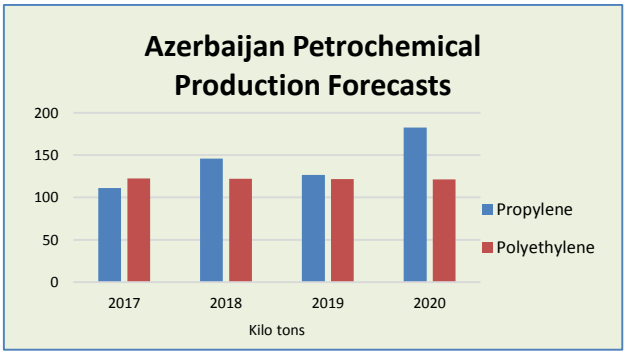
SOCAR GPC, wholly-owned by Azerbaijan's state-owned oil firm SOCAR, intends to close the issue of financing the project on creation of Gas Processing and Petrochemical Complex (GPC) by late 2017. The company will be engaged in the development, design, construction, financing and operating activities of the new gas processing and petrochemical complex, whose capacity is about 10 billion cubic metres of gas per annum.

SOCAR OGPC

- Gas processing capacity, 10 million cm per annum
- Ethylene capacity, 570,000 tpa
- Propylene capacity, 120,000 tpa

Within the complex construction of a stream cracker with capacity of approximately 570,000 tpa of ethylene and 120,000 tpa of propylene and a swing LLDPE/HDPE polymerisation unit with a capacity of approximately 570,000 tpa and related infrastructure are planned. The financing plan consists of a combination of equity, direct funding, export credit agency (ECA) covered debt and commercial bank debt, primarily from Asian and European companies and institutions.

The engineering, procurement and construction (EPC) selection process is underway. Financial close is targeted for the end of 2017. ING Bank, China Development Bank and Gazprombank have been mandated as co-financial advisers. SOCAR intends to finance the project on a non-recourse basis, and seeks to achieve financing terms and conditions standard for project financings of this type. Vinson & Elkins is acting as the international legal adviser of SOCAR GPC with PSG Law Firm as Azerbaijani legal adviser.



Azerbaijan chemical forecasts for 2017

The Azerbaijani government forecasts growth of propylene production in 2017 by 1.9 times compared to 2016, from a projected figure of 58,300 tons. Propylene production in Azerbaijan totalled 46,600 tons in the first eleven months in 2016, 8% less than in 2015. C4 production dropped 22% to 19,200 tons. For 2017 propylene production is forecast to total 111,000 tons, and by 2020 182,700 tons. However, isopropanol production is likely to cease in 2018 after producing 10,000 tons in 2016 and probably 2017.

Russian Domestic Chemical Price Monitor (euros per ton)

Product	*Nov-16*	*Oct-16*	*Average 2016*
Ethylene	472.0	427.9	353.8
Propylene	407.4	470.6	395.5
Benzene	498.9	530.7	472.3
Xylenes	543.1	502.5	469.7
Toluene	470.5	473.2	385.8
Styrene	792.5	791.0	747.7
Plasticizer Alcohols	644.8	625.7	557.0
Butanols	634.9	634.1	546.4
Methanol	154.5	146.1	126.4
MEG	648.0	653.8	578.2
Phenol	959.0	944.6	763.6
Acetic acid	468.2	469.9	402.7
Butyl acetate	523.8	502.9	464.7
Caprolactam	1569.0	1522.1	1339.6
Formalin	155.5	150.0	130.2
Acetone	501.3	468.6	395.5
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
Amino-resins	260.5	253.7	231.8
Phenolic resins	465.0	469.8	410.9
Synthetic rubber	1287.2	1244.1	1078.2
SKMS	1058.9	1013.1	851.8
Butadiene rubber	1208.4	1158.6	966.2
NPR	1742.5	1638.2	1448.5
Isoprene rubber	1305.4	1264.9	1105.1
Other synthetic rubber	2317.8	2371.6	2100.4

Russian Export Chemical Price Monitor (euros per ton)

Product	*Nov-16*	*Oct-16*	*Average 2016*
Propylene	861.2	0.0	729.6
Xylenes	525.0	521.4	482.6
Styrene	724.6	776.0	744.0
Butanols	337.5	319.0	193.2
Methanol	147.5	140.7	124.9
MEG	0.0	638.6	541.5
Acetic acid	274.7	231.2	237.3
Butyl Acetate	483.2	495.8	304.6
Caprolactam	1211.7	1228.9	980.5
Acetone	464.8	411.6	286.9
Polyethylene	1054.8	1045.4	1083.5
Polystyrene	961.4	926.3	975.2
Polypropylene	1066.2	1107.4	990.9
Synthetic Rubber	1179.8	1296.5	1189.0
SKMS Rubber	1056.6	1008.3	894.4
SKD Rubber	1145.9	1105.2	996.4
Isoprene rubber	1159.6	1136.4	1068.5
Other synthetic rubber	3029.9	1723.0	1654.9

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 = 26. €1 = 28: Rus rouble. $1 = 63. €1= 69

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