CIS Chemical and Petrochemical News

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RUSSIA

Feedstocks & petrochemicals

Russian Chemical Production (unit-kilo tons)

Product	*Jan-Dec 11*	*Jan-Dec 10*
Acetic Acid	139.9	156.7
Ammonia	13,884.8	12,699.6
Benzene	1,124.5	1,171.0
Butanols	200.0	245.7
C Black	726.0	668.0
Caustic Soda	913.4	1,050.6
Ethylene	2,468.3	2,382.0
Methanol	3,065.3	2,935.7
PET	360.0	301.9
Phenol	244.8	237.9
Phthalic Anhydride	94.6	94.2
Polyethylene	1,550.1	1,550.9
Polypropylene	681.8	643.3
Polystyrene	321.2	284.3
Propylene	1,218.9	1,210.0
PVC	575.5	547.9
PVC plasticizers	304.5	84.2
Soda Ash	2,822.4	2,704.7
Styrene	486.4	476.3
Synthetic Fibres	77.6	96.6
Synthetic Rubber	1,253.3	1,212.1

MTBE accounted for 402,400 tons.

Russian petrochemical feedstocks

Naphtha consumption in Russia totalled 2.19 million tons in 2011, 8% up over 2010. Increased activity at the mainstream petrochemical plants was the main drive, despite shipments to petrochemical producers declining 25% in December due to the enforced outage at Stavrolen. Feedstock purchases from Stavrolen dropped 43% from November to 29,900 tons in December. Overall for 2011, Russian consumption of naphtha specifically for petrochemical production increased by 9% to 1.24 million tons.

LPG production in Russia totalled 11.890 million tons in 2011, up from 10.336 million tons in 2010. Gas liquid shipments by rail rose 3% in December against November and amounted to 271.600 tons. The Yuzhniy Balyk plant in the Yamal region has started to contribute to gas liquid deliveries, in addition to another gas processing plant Noyabrsk. For the petrochemical industry a total of 139,800 tons of gas liquids were used in pyrolysis in December 2011 which was 19,500 tons more than in November. Isobutane shipments rose by 3,800 tons in December 2011 to 43,200 tons, due largely to increased demand from MTBE producers.

Shipments to MTBE plants totalled 41,700 tons in December, 3,700 tons more than in November. Amongst buyers of isobutane Nizhnekamskneftekhim purchased 7,520 tons, Togliattikaucuk 9,710 tons, Omsk Kaucuk 9,950 tons, and Uralorgsintez 3,330 tons. Deliveries of isobutane on the Russian market amounted to 416,200 tons, which is 1% more than in 2010. Of this amount, producers of

Associated Gas Utilisation Rates by Company%

Oil Producer	*2006*	*2007*	*2008*	*2009*	*2010*
Tatneft	95.1	94.0	94.6	93.7	94.7
Rosneft	59.0	60.3	63.2	67.0	56.2
Bashneft	78.2	82.1	84.5	85.7	83.1
Surgutneftegaz	93.5	94.3	95.4	96.9	95.9
LUKoil	75.0	70.0	71.0	71.1	76.8
TNK-BP	79.8	68.4	79.6	84.4	84.6
Slavneft	62.5	68.1	69.5	71.1	71.9
Russneft	71.0	70.3	61.0	68.9	70.0
Gazprom Neft	45.0	35.7	46.8	48.1	55.2
Average	73.2	71.5	74.0	76.3	76.5

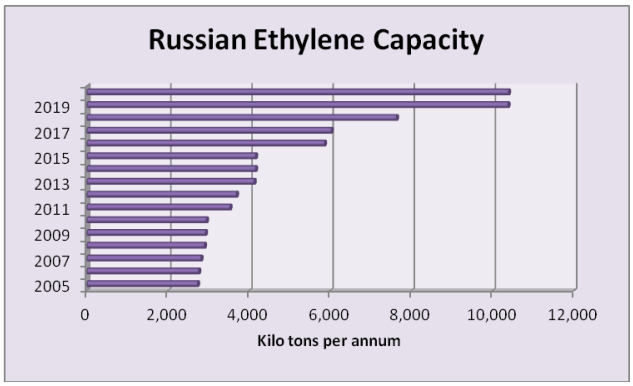
Associated gas utilisation

From 1 January 2012, the Russian decree for 95% processing of associated gas came into force, whereby companies exceeding the permitted levels of flaring incur fines. It may be at least 2014 before Russian oil companies may be capable of achieving this goal. Fines for flaring more than 5% of associated gas will come effective from March 2012, which based on current levels and could yield the government about 340 million roubles per annum.

Currently, only Surgutneftegaz already recycles about 95-96% of associated gas, although Tatneft claims it reached this level in 2011. Tatneftegazpererabotka collected 790.4 million cubic metres of associated gas in 2011, which is 20.4 million cubic metres more than in 2010. Bashneft also is expected to achieve the same level in 2012, but other producers continue to lag behind despite considerable

investment and increased utilisation in recent years. Unfortunately, the financial crisis has forced some adjustments to the programme oil companies, which has been a factor preventing attainment of the 95% goal.

Amongst some of the main players Rosneft and LUKoil expect to achieve 95% in 2013, with TNK-BP following in 2014. Whilst oil companies struggle to achieve targets SIBUR Holding plans to recycle 19 billion cubic metres of associated gas in 2012. In 2010 the group achieved 17.45 billion cubic metres, and has since invested considerable amounts in its gas processing facilities.



Russian ethylene capacity

Large-scale announcements for crackers and derivatives in Russia in recent months paint a significant expansion in ethylene capacity for Russia by 2020. The graphic on page 7 assumes that the large-scale petrochemical projects at Tobolsk, Nakhodka, Budyennovsk and Astrakhan are all undertaken, in addition to planned expansions of Novy Urengoy, Nizhnekamsk and Salavat. Production has increased slowly in recent years with little new capacity coming onstream despite major project plans being announced around 2004-2005. However, it could be claimed that the current wave of projects under consideration possess more substance than in the past.

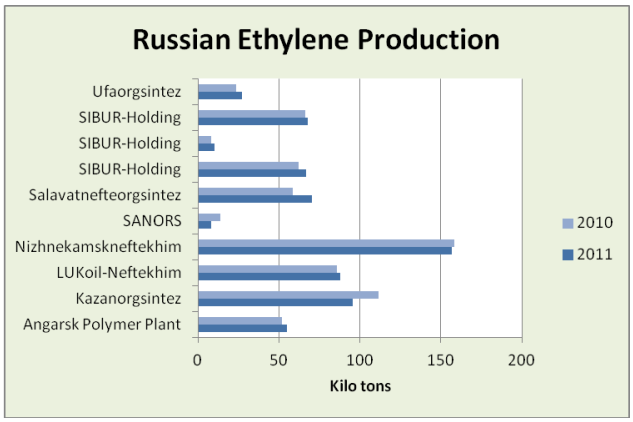
Some of these proposed projects have either been started and are close to completion, as in the case of Novy Urengoy, or very close to starting construction as in the case of Budyennovsk and Nakhodka. The largest project of all, the ethylene cracker at Tobolsk (Zapsibneftekhim), does depend on investments in gas fractionating and feedstock pipeline investments. As Tobolsk has been identified as a major target site for petrochemicals since the 1980s, it tends to suggest that it is a question of time before a large scale complex and cracker is constructed.

Nizhnekamskneftekhim board sanctions design work on new EP-1000 cracker

In late January the board of Nizhnekamskneftekhim approved preliminary work on design plans for its new million ton cracker to be located at Nizhnekamsk. The plan for a new large-scale cracker has been in the background for the past decade for Nizhnekamskneftekhim, and tentative steps are being addressed towards turning the plan into reality. Previously it was assumed that complex would consist of eight furnaces each with a capacity 55 tons per hour, although these plans might be altered depending on feedstock arrangements. Included in the eight furnaces to date are two gas furnaces for processing propane and butane and four furnaces for refining naphtha. The main products of the new complex include 600,000 tpa of polyethylene and 370,000 tpa of polypropylene. Nizhnekamskneftekhim may also be in a position to sell around 400,000 tpa of ethylene, including 300,000 tpa to Kazanorgsintez. Project costs have been estimated at 84 billion roubles.

Novy Urengoy Gas Chemical Complex-2013 start expected

The Novy Urengoy Gas and Chemical Complex has attracted a five-year club loan for $270 million to finance capital expenditure. The deal was attended by Bank of America Merrill Lynch, WestLB and HSBC. At the moment it is difficult to give an exact launch date for the Novy Urengoy gas-chemical complex, but at some stage in 2013 Gazprom hopes to be able to start production of polyethylene. The project provides a single integrated process chain involving technology supplied by Linde and for polyethylene Salzgitter.

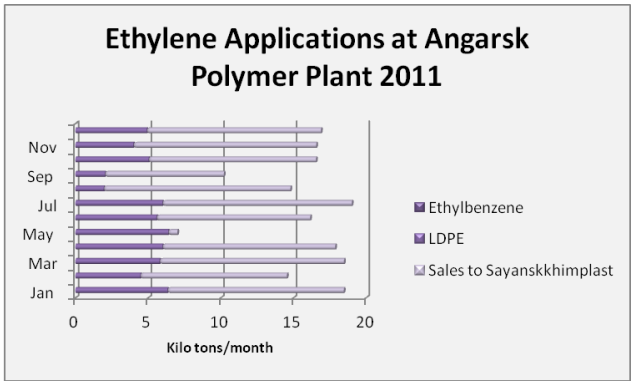


Kuznetsk Steel continues to supply steel structures for Novy Urengoy Gas Chemical Complex, supplying around 2,000 tons for the NGL plant. The capacity of the LDPE plant under construction is 400,000 tpa and is based on ethane supply.

LDPE production in Russia for 2011 totalled 642,768 tons with market consumption estimated at around 560,000 tons. It looks as if Russia will possess a large surplus after the start-up of the Novy Urengoy plant.

Russian ethylene deliveries by pipeline

Russian ethylene production totalled 2.468 million tons in 2011 against 2.382 million tons in 2010. All producers increased production marginally over 2010, with Gazprom Neftekhim Salavat showing the largest increase of 30,000 tons. Shipments of ethylene by pipeline in Russia in 2011 amounted to 418,100 tons. Kaustik at Sterlitamak purchased 84,200 tons from Gazprom Neftekhim Salavat, and Kazanorgsintez bought 32,000 tons from the same source. Kazanorgsintez also purchased 175,500 tons of monomer from Nizhnekamskneftekhim in 2011, whilst Sayanskkhimplast bought 126,400 tons from Angarsk Polymer Plant.



Sayanskkhimplast-Rosneft ethylene dispute

Sayanskkhimplast remained the largest outlet for ethylene produced by Angarsk Polymer Plant in 2011, with VCM production slightly exceeding volumes in 2010. Following the dispute between the two plants over ethylene pricing Sayanskkhimplast has been supported by local courts and the FAS which acknowledged in 2010 that Rosneft violated the law on protection of competition. According to the FAS, this resulted in "economically or technologically unjustified deviation" from the contract with Sayanskkhimplast for ethylene supply, which gravely damaged the interests of consumers. Rosneft was also issued an order prohibiting action which has restricted its ability to alter pricing without prior consultation.

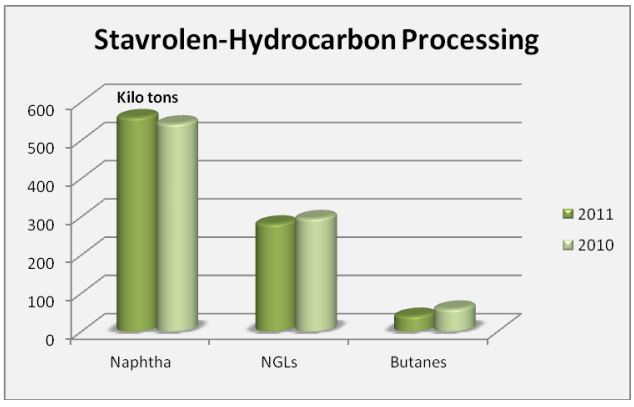
Tomskneftekhim-feedstock processing

In January 2012 Tomskneftekhim launched an investment project to optimise the pyrolysis furnaces using an advanced process control (ARS) system. The project is aimed at lowering the cost of ethylene. The ARS will implement systems to maximise the yield of ethylene and propylene from different raw materials (naphtha or LPG). In accordance with the technology, ARS will give special signals for process control, which in turn will adjust the production process of ethylene and propylene, depending on the composition of raw materials. The planned date of completion for this system is Q3 2013.

Tomskneftekhim increased hydrocarbon processing in 2011 by 12% over 2010 to 761,300 tons. Naphtha supplies increased by 67% to 473,700 tons whilst other raw materials declined. Processing of natural gas liquids decreased by 17% to 201,300 tons, including propane by 45% to 54,300 tons. Normal butane supplies rose 40% up to 32,000 tons.

Stavrolen, Budyennovsk outage

The enquiry into the Stavrolen accident in December was extended by Rostekhnadzor until early February in order to establish the full causes. A fire took place on 15 December in the gas separation plant at Budyennovsk for the production of ethylene. The fire spread to a large area which was eliminated only two days after it had started. LUKoil believes that the burning of hydrocarbons C2-C3 at high temperatures may have caused the fire, with the formation of carbon monoxide, methane, sulphur dioxide and hydrogen sulphide. However, the state organisation Rostekhnadzor has the final say in what caused the accident.



Stavrolen is the second largest Russian producer of HDPE, after Kazanorgsintez and the third by volume of polypropylene after Nizhnekamskneftekhim and Tomskneftekhim. As a result of the incident, Stavrolen was forced to cease production of HDPE and polypropylene, at least until the end of March. The fire damage to the Stavrolen is estimated in terms of capital costs at $25 million, although all equipment is insured at full replacement cost.

Partly as the result of the unplanned outage Stavrolen reduced hydrocarbon processing by 3% in 2011 against 2010, down to 881,800 tons. Deliveries of naphtha increased by 3% to 559,100 tons, but NGL processing was reduced by 5% to 281,000 tons. Volumes of consumption of butane fell by 47% to 39,700 tons. The increase in the share of naphtha in feedstock composition facilitated an increase in benzene production of 18% over 2010. Full ethylene production figures for

2011 for all Russian producers are available on CIREC's Statistical Database at www.cirec.net. Capacities are also shown for existing plants combined with new projects.

Russian propylene market 2011

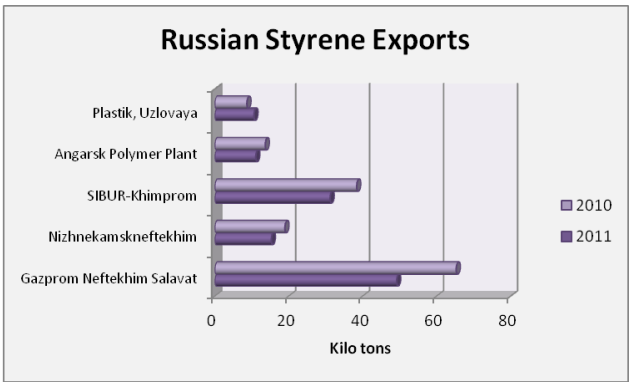
Propylene production rose 10% in 2011 over 2010 in Russia, due primarily due to the start-up of LUKoil's Kstovo plant. Larger-scale changes are expected in 2012 after start of production of polypropylene at Polyom at Omsk. LUKoil-NNOS commissioned its propylene plant at Kstovo in December 2010 and this helped availability in the domestic market in 2011.

Russian Propylene Merchant Purchases

Consumer	Jan-Nov 11	Jan-Nov 10
Volzhskiy Orgsintez	10	10.1
Saratovorgsintez	135.6	107.5
Gazprom Neftekhim Salavat	31.3	33.9
Nizhnekamskneftekhim	9.5	5.7
Kazanorgsintez	7.2	8.1
Plant of Synthetic Alcohols	0.5	0.5
SIBUR-Khimprom	47.9	9.8
Ufaorgsintez	11.3	3.2
Akrilat	17.2	16.3
Tomskneftekhim	5.4	3.8
Moscow NPZ	0.6	1.1
Usolyekhimprom	0	11.4
Stavrolen	0	0.3
Samaraorgsintez	2.8	0
Omsk Kaucuk	6	0

The major consumer for propylene in 2011 was Saratovorgsintez for the production of acrylonitrile. Usolyekhimprom did not purchase propylene in 2011 due to the cessation of epichlorohydrin production, whilst Omsk Kaucuk was forced to buy propylene monomer between September and November. Angarsk Polymer Plant supplied product to Samaraorgsintez when the holding company SANORS lacked the basic raw material (propane-propylene fraction for the production of phenol and acetone.

Last year SIBUR-Khimprom reduced its own production of propylene by 27% to 64,900 tons and was forced to buy 4.9 times more monomer (47.900 tons) on the open market. 88% of propylene deliveries to SIBUR-Khimprom came from SIBUR-Neftekhim. The increase in supply from one subsidiary company in SIBUR to another was made possible by reduced shipments to Saratovorgsintez, which bought product from LUKoil-NNOS. In the period January-November 2011 Saratovorgsintez increased purchases of propylene by 26% against the same period in 2010 to 135,600 tons, of which around half was supplied by LUKoil-NNOS. Full propylene production figures for 2011 for Russian producers are available on CIREC's Statistical Database at www.cirec.net.



Russian styrene exports 2011

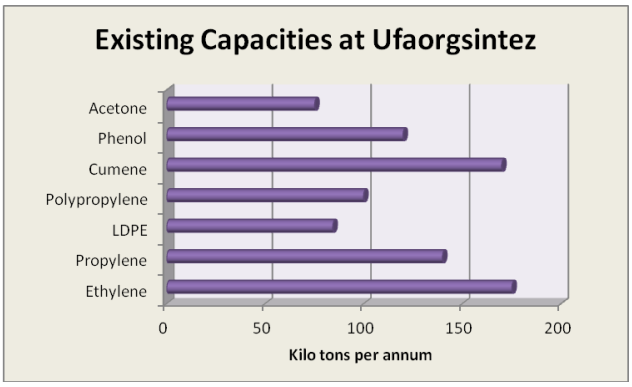
Russian styrene exports totalled 117,400 tons in 2011, 25% down on 2010. The reduction was due to mainly lower shipments from Gazprom Neftekhim Salavat by 33% against 2010 to 49,200 tons. Nizhnekamskneftekhim reduced exports by 24% to 15,300 tons, whilst SIBUR-Khimprom and Angarsk Polymer Plant both reduced exports by 23%, to 31,200 tons and 11.100 tons respectively. Only Plastik at Uzlovaya increased exports last year, rising by 22% over 2010 to 10,600 tons.

SIBUR offloads tyre and fertiliser assets

At the end of December SIBUR closed a deal to sell 100% in SIBUR-Russian Tyres and exiting the tyre business. Prior to entering into the transaction SIBUR restructure SIBUR-Russian Tyres by selling SIBUR-Volzhskiy Thus, SIBUR to the end of 2011 completed the sale of noncore assets for the production of tyres and fertilisers.

SIBUR-Russian Tyres includes Yaroslavl Tyre Plant, Voltyre-Prom, Omskshina, Cordiant-East and Uralshina. The company also has control over the Kirov tyre plant and Voronezh tyre plant, both previously associated with Amtel which is now bankrupt. The transfer of Kirov Tyre Plant to the jv Pirelli and Russian Technologies was completed in December last year.

In December last year, SIBUR and URALCHEM entered into an agreement for the sale of 51.22% shares in Chemical fertilisers (Perm). Also, the holding company Siberian Business Union (PIF) acquired SIBUR-Mineral Fertilisers, which included Azot at Kemerovo and Angarsk Nitrogen Fertiliser plant. SIBUR hopes to sell raw materials to the companies that have bought their assets, particularly the tyre producers.



Bashneft-Petrochemical Holding

Bashneft and Petrochemical Holding joint petrochemical company is expected to be registered in the near future in which Bashneft will receive a 75% share and Petrochemical Holding (Austria) will receive 25%. The general goal is to create new production capacity in Bashkortostan to process petrochemical raw materials at Bashneft's refineries.

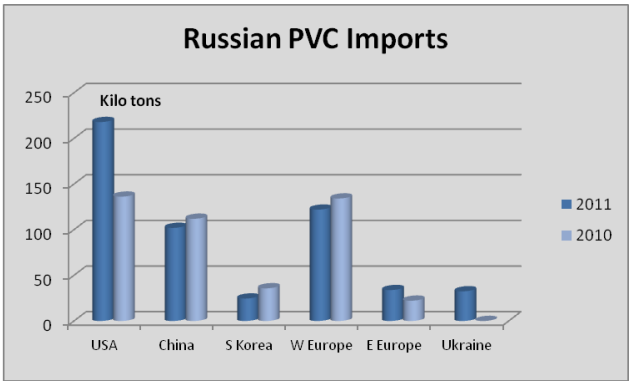
As part of the investment targets the jv hopes to produce a wide range of products, including propylene oxide (up to 200,000 tpa) and MDI (up to 200,000 tpa, as well as polyurethanes up to 400,000 tpa. In addition, the jv wants to create a pyrolysis unit with a capacity of 300,000 tpa of ethylene. As part of the jv, Bashneft may pass the newly created structure of Ufaorgsintez to System. Ufaorgsintez uses raw materials supplied from the three-Ufa refineries hydrocarbon gases and light gasoline. The plant produces about 40% of all Russian phenol, about 20% polypropylene, 13% of LDPE and a significant proportion of acetone.

Major Russian petrochemical producers record strong perfoirmance in 2011

Gazprom Neftekhim Salavat increased the unconsolidated revenue by 33% in 2011 up to 147.6 billion roubles. Net income increased by more than half to 4.5 billion roubles. In 2011, the company disbursed 17.5 billion roubles of investments, the current planned investment in 2012 about 19 billion roubles. Revenue growth from 2011 is associated with both a rise in prices for primary products such as gasoline, petrochemicals and fertilisers, combined with higher production in some product areas. The EBITDA for Gazprom Neftekhim Salavat was restricted by higher costs for raw materials and electricity

Nizhnekamskneftekhim states that it has achieved more than 14 billion roubles of net profit under RAS in 2011. This is twice the figure for 2010. The net profit growth was influenced by an increase in production of commodity products. The total amount produced in 2011, production is estimated at 121 billion roubles, up 7.6% from the previous year in comparable prices. The company achieved the maximum production of synthetic rubber at 559,000 tons, plastics 593,000 tons and ethylene exceeded 600,000 tons for the first time.

Bulk Polymers



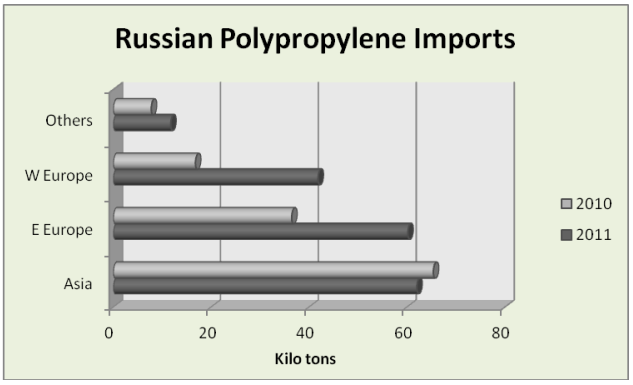
Russian PVC market 2011

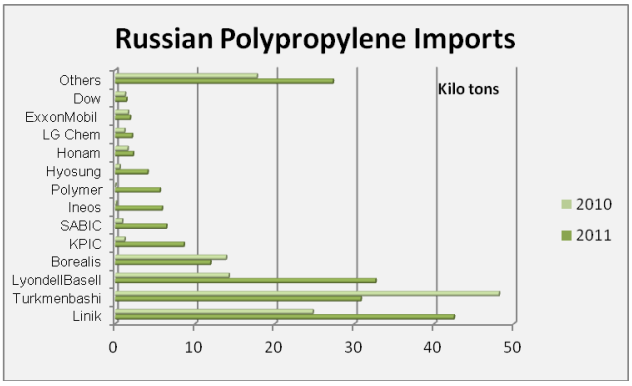
Russian imports of PVC increased 21% in 2011 over 2010 to 533,000 tons. 41% of total imports were purchased from the US, rising 1.6 times against 2010 and amounting to 218,000 tons. At the same time imports from South East Asia dropped 9% to 135,000 tons, with China reducing volumes from 112,000 tons in 2010 to 102,000 tons in 2011. Imports from South Korea fell 40% in 2011, whilst shipments from West Europe fell 10%.

Russian PVC consumption increased by 12% in 2011 to 1.017 million tons. Domestic production totalled around 575,451 tons in 2011, which was up slightly against 2010 due to less ethylene shortages, and consumption was also boosted by supply from the US. The share of imported PVC in total Russian consumption was 49% against 45% in 2010.

Russian polypropylene imports

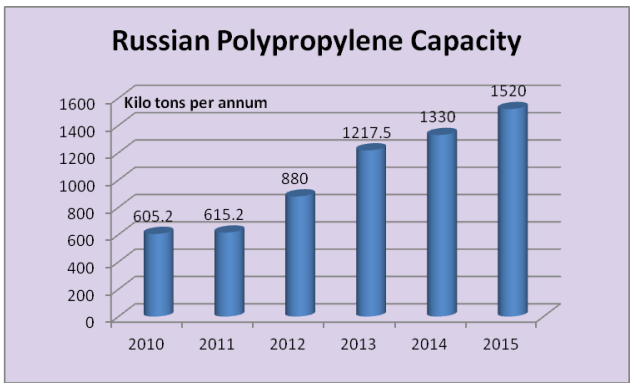
Russian imports of polypropylene totalled 176,310 tons in 2011, 39% more than in 2010. Imports from Europe recorded the largest increases measured against 2010, with Linik in Ukraine increasing shipments by 71% over 2010 to 42,490 tons. The share of Ukrainian polypropylene amounted to 23% last year, whilst at the same time deliveries from Turkmenistan dropped 36% against 2010 to 30.800 tons. Higher costs tended to reduce interest in polypropylene from Turkmenbashi which accounted for 17% of total imports. Other key suppliers included LyondellBasell which accounted for 32,650 tons, twice more than in 2010. The share of this company in total imports was 18%. Supplies from other countries varied, i.e., were down from China and Iran, but up from India and South Korea.





Nizhnekamskneftekhim-polypropylene grades

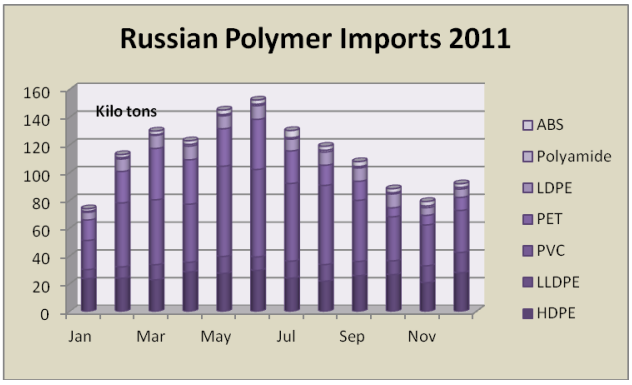
Nizhnekamskneftekhim produced 210,410 tons of polypropylene in 2011, which is 5% more than in 2010. The company has set a target of 195,000 tons of polypropylene in 2011, 7% less than in 2011. Of the total production in 2011, 46% comprised copolymers. During the course of last year Nizhnekamskneftekhim has developed new grades of polypropylene, including high-impact grade PP LM 7445 with the capacity of up to 2,400 tons per quarter. Nizhnekamskneftekhim is now capable of producing a total of up to 53 grades of polypropylene.



The introduction of the polypropylene plant at Omsk this year, when fully operational, will not only increase Russian production significantly but also erode the share of Nizhnekamskneftekhim from 30% in 2011 to around 25%. The impact of the Tobolsk project is expected to be much larger in 2013-2014, although Nizhnekamskneftekhim is aiming to construct a new plant of its own of 370,000 tpa as part of the proposed large-scale petrochemical complex. Full polypropylene production figures for Russian producers are available on CIREC's Statistical Database at www.cirec.net.

Russian polypropylene projects

The delivery and installation of oversized and heavy equipment for the dehydrogenation of propane was completed at Tobolsk towards the end of 2011. .In September to November 2011 over 40 units of oversized and heavy equipment were installed at the site, including tower and heat exchangers, tanks, reactors, power modules continuous catalyst regeneration. The biggest challenge for the project is mounting a block of continuous catalyst regeneration, which consists of six modules weighing over 700 tons. Equipment for the unit for dehydrogenation of propane was produced in Korea and the EU, and was delivered to Tobolsk by road and rail, and sea through the Archangelsk and St. Petersburg ports. It was then delivered on Northern Sea Route and the Ob and Irtysh rivers to the industrial port of Tobolsk. The polypropylene plant could be finished in 2012, but the full effects of the plant will not be seen until 2013. Total project costs are estimated at $1.441 billion.



Omsk polypropylene plant in operation

The Omsk plant Polyom, which is a part of GK Titan, produced the first batch of polypropylene on 25 December including 10 tons of polymer. The plant has since announced that the full production cycle with a capacity of 180,000 tpa or 22.5 tons per hour will not be possible immediately, but should be in operation by the middle of 2012. The company is yet to confirm the grades of polypropylene being produced but it is most likely to be homopolymer.

Russian LLDPE imports

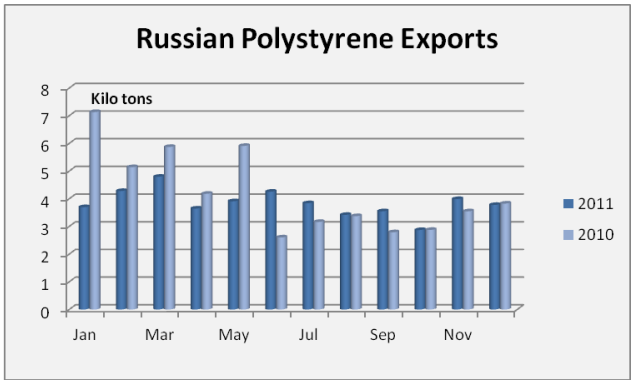
Russian LLDPE imports totalled 125,700 tons in 2011, 18% up on 2010. Imports from Saudi Arabia accounted for 33% of shipments, reaching 41,500 tons against 25,000 tons in 2010. South Korea also increased its imports into Russia in 2011 totalling 20,600 tons against 11,000 tons in 2010. The main supplier from Europe was

South Korean Polymer Exports to Russia (unit-kilo tons)		
Product	2011	2010
PET	98.943	118.314
PVC	24.629	35.808
Exp PS	35.728	35.261
HDPE	51.583	51.732
LDPE	25.307	12.254
PP	17.468	15.144
ABS	25.75	25.171

France which supplied 8,500 tons of LLDPE. Russian production totalled 56,652 tons in 2011, mostly produced by Nizhnekamskneftekhim.

Russian polystyrene exports 2011

Russian exports of polystyrene decreased in 2011 compared to 2010 by 9%, or 46,000 tons against 50,500 tons. In early 2010, growth in exports occurred due to low demand in the domestic market resulting in a more sales outside of the country. Demand started to improve in Russia in the second half of 2010 which carried on into 2011 and exports were generally lower as a result. Volumes started to improve in the second half of 2011 as the effects of the first EPS line at SIBUR-Khimprom started to take effect.



SIBUR-Khimprom-2nd EPS line

SIBUR-Khimprom reports that it has completed the construction, installation and commissioning on the second stage of the EPS Alphapor plant. The company expects to begin production in the spring of 2012. The cost of the second stage production of expandable polystyrene was estimated at 1.7 billion roubles and will focus on expandable polystyrene with fillers and colour. Consumption of EPS in Russia in 2011 is estimated at 127,000 tons, with imports from China and South Korea playing an important part in the supply/demand balance. The start-up of the second unit by SIBUR-Khimprom may start to affect imports in the second half of 2011.

Aromatics & derivatives

Russian Benzene Production (unit-kilo tons)		
Producer	***Jan-Dec 11***	***Jan-Dec 10***
Altay-Koks	29.2	40.0
Angarsk Polymer Plant	68.4	64.5
Chelyabinsk MK	15.8	15.1
Gazprom Neft	97.7	108.6
Koks	16.8	32.4
LUKoil-Neftekhim	66.5	57.1
LUKoil-Permnefteorgsintez	42.4	54.4
Magnitogorsk MK	49.7	62.6
Nizhnekamskneftekhim	185.6	186.7
Novolipetsk MK	28.1	29.2
Salavatnefteorgsintez	107.0	102.7
Severstal	38.6	36.2
SIBUR-Holding	75.8	64.5
Slavneft-Yaroslavlorgsintez	57.7	62.6
Surgutneftegaz	62.2	61.7
TNK-BP	36.7	30.8
Ufaneftekhim	74.1	92.4
Ural Steel	5.8	11.4
Uralorgsintez	61.5	37.4
Zap sib	9.0	20.9
Total	1128.4	1171.5

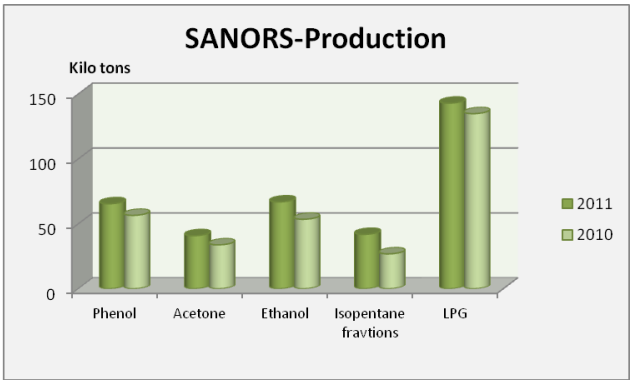
Benzene project at Togliatti cancelled

Magnitogorsk Metallurgical Combine (MMK) has cancelled its participation in the jv MMK-Benzol with Kuibyshevazot, which was created to construct a 50,000 tpa benzene plant at Togliatti. MMK-Benzol was established in 2008, with an intention to invest 1.4 billion roubles in a coal based benzene plant. With the launch of a new plant Kuibyshevazot aimed to reduce dependency on external sources of benzene for caprolactam production. MMK has withdrawn from the project due to the lack of guarantees of a stable supply of crude benzene for processing. It means in effect that the project is not expected to progress as Kuibyshevazot requires a partner to supply the feedstock for benzene production.

SANORS increases revenues in 2011

Revenues from the holding group Samaranefteorgsintez (SANORS) in 2011 totalled 11.5 billion roubles, which is 55% higher than in 2010. The production of commodity products increased by 16% over 2010 and totalled 544,300 tons. The production of LPG amounted to 143,300 tons (6% up on 2010), isopentane and pentane-hexane fraction 41,900 tons (56% up), ethanol 66,900 tons (25% up), and phenol and acetone 65,500 tons and 40,900 tons respectively (20% up).

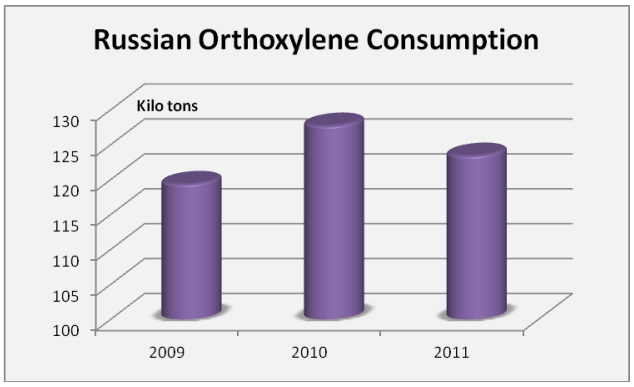
Production increases were enabled by higher domestic sales, and revenues increased largely due to the holding company SANORS helping to coordinate activity of the respective plants. The holding was founded 29 April 2011 by combining Novokuibyshevsk Petrochemical Company, Neftekhimya (previously owned by Renova-Orgsintez) and Samaraorgsintez, all located at Novokuibyshevsk in the Samara region.



In 2011, the group completed the reconstruction of the phenol and acetone plants, which increased the capacity for the production of phenol up to 90,000 tpa. Construction was also undertaken on a plant for propane-propylene fractions with a capacity of 70,000 tpa, and a new plant for alphamethylstyrene with a capacity of 30,000 tpa. The development plan in 2012 provides for an MTAE plant at Novokuibyshevsk Petrochemical Company, and methanol storage. In addition, SANORS intends to complete the modernisation and increase in capacity of the para-tertiary butylphenols plant to 12,000 tpa and the ethanol plant to 90,000 tpa. One of the most important projects for the group could involve the reconstruction of the olefin plant at Neftekhimya and an increase in ethylene capacity to 200,000 tpa. As part of an integrated group additional supplies of ethylene and propylene are required, but further assessment is being undertaken by the group to judge if it is cost-effective to deal with such relatively small volumes of olefins.

Russian orthoxylene market 2011

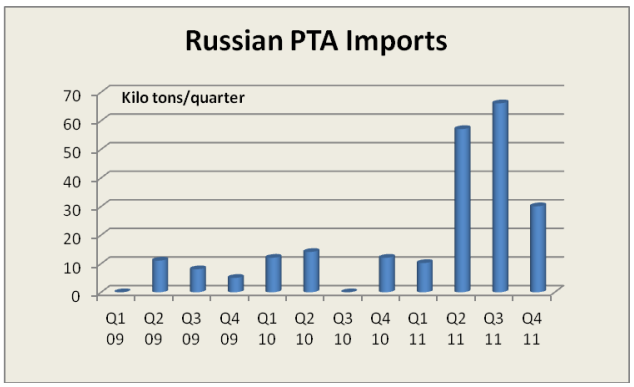
From January to December 2011 a total of 123,370 tons of orthoxylene was sold on the domestic market, which is 7% less than in 2010. Kamteks-Khimprom at Perm remains the largest consumer for the production of phthalic anhydride, followed by Gazprom Neftekhim Salavat. Zagorsk Paint Plant also buys orthoxylene, although paints represent one of the smallest outlets for this product. As an alternative to toluene, orthoxylene consumption increased its usage as a high-octane additive for motor fuels in 2011.



Orthoxylene exports totalled 56,390 tons in 2011 14% less than in 2010. The reason for the lower shipments last year is due to the combination of lower output in Russia and stronger domestic demand. Finland was the main recipient of Russian orthoxylene accounting for 96% of deliveries. Amongst the producers Kirishinefteorgsintez accounted for 52% of total exports, Gazprom Neft at Omsk 44% and Ufaneftekhim only 4%.

Russian PTA imports

Russian PTA imports rose sharply in 2011 following the start-up of the PET plant at Kaliningrad in the middle of the year. The second and third quarters saw the largest volumes of imports, with the fourth quarter recording less shipments due to inventory and the holiday period. Alko-Naphtha from its PET plant at Kaliningrad buys PTA from a number of producers including PKN Orlen in Poland, Lotte Chemical in the UK and Indorama. Other importers of PTA include the Senezh PET plant near Moscow. PTA duties have been set at zero from the start of 2012 to help with the growing dependency on imports.



Ethan PET project to start in May

Insurance Company Russia has concluded an insurance contract for construction and civil liability with Kabbalkinveststroykom for the new PET project near Nalchik. The sum insured against is $1.1 billion to cover a range of possibilities including fire, explosion, falling trees, etc.

Construction is expected to start in May 2012. Aside the PET plant a wastewater treatment plant and fish farm will also be created on the same site. Work has already begun on the construction of the road of 8 km to facilitate deliveries to the proposed plant ThyssenKrupp has concluded a general agreement on cooperation and collaboration to build the PET plant, overriding previous agreements with Lurgi. The first production of the plant is expected to take place in 2015. Full PET production figures for 2011 for Russian producers are available on CIREC's Statistical Database at www.cirec.net.

Synthetic Rubber

Russian Synthetic Rubber Production

Producer	*2011*	*2010*
Efremov Synthetic Rubber Plant	41.9	32.9
Sintez-Kaucuk	114.8	120.3
Krasnoyarsk Synthetic Rubber Plant	38.7	37.2
Nizhnekamskneftekhim	559.3	526.4
Omsk Kaucuk	54.4	44.6
Plant for Synthetic Rubber	8.2	9.3
Togliattikaucuk	171.4	164.9
Voronezhsintezkaucuk,	218.1	229.4
Sterlitamak Petrochemical Plant	43.5	44.2
Ufaorgsintez	3.0	2.8

Russian synthetic rubber 2011

Russian synthetic rubber production totalled 1.253 million tons in 2011, against 1.212 million tons in 2010. Increases were noted at Efremov Synthetic Rubber Plant for polybutadiene, Nizhnekamskneftekhim for a range of products, and Omsk Kaucuk for butadiene based rubbers. Voronezhsintezkaucuk reduced production, as did the Sterlitamak based plants. The overall growth of rubber production is due to the increased demand for tyre and rubber products both in Russia and abroad.

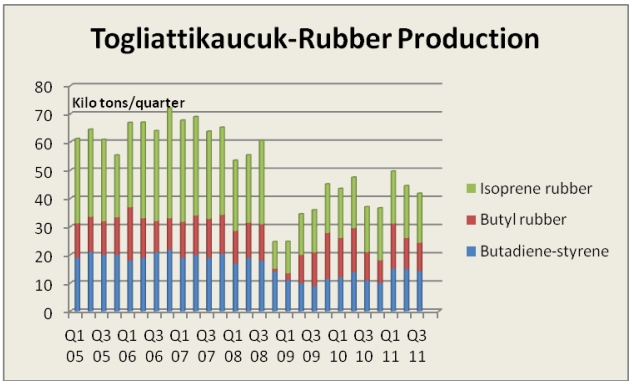
Efremov Synthetic Rubber Plant

The Efremov plant was able to produce more rubber in 2011 due improved butadiene availability. The major factor influencing the production security is butadiene supply for Efremov Synthetic Rubber Plant which the company sources from SIBUR-Holding and Nizhnekamskneftekhim. Butadiene supply has been made available from SIBUR in exchange for polybutadiene for its tyre plants.

The Russian Federal Antimonopoly Service (FAS) recently granted the right to Cyprus Cemoro Commercial Ltd to acquire 100% shares in Efremov Synthetic Rubber Plant. The plant is currently owned 100% by Matrix (Chelyabinsk region), and before that until 2006 was part of Tatneft. Raw materials are provided by Nizhnekamskneftekhim, and SIBUR.

Nizhnekamsk-butadiene fraction processing

Nizhnekamskneftekhim continues to work on the expansion of butyl rubber feedstocks. Sulzer Chemtech has recently installed new equipment to enable the increase in processing capacity for isobutylene-containing fractions by 25%. Nizhnekamskneftekhim also hopes to increase the purity of isobutylene by replacing plates in columns, and to increase butadiene-butylene fractions allowing an increase in processing capacity by 40%. The company has set a long term target of 200,000 tpa of butyl rubber capacity.



Togliattikaucuk-rubber projects

Togliattikaucuk completed the reorganisation of the company's divisions in 2011, essentially leaving production under the control of Togliattikaucuk and services under the control of Toglattisintez. A main direction includes the creation of a chemical park where processors of rubber could be attracted to establish subsidiaries.

The most important projects being undertaken by Togliattikaucuk include the modernisation of the butyl and isoprene rubber units. The project is being implemented to stabilise the production of isoprene rubber, which is in good demand from tyre producers as Bridgestone, Michelin, Continental, and Goodyear. To ensure the availability of raw materials Togliattikaucuk plans to increase the capacity of isoprene monomer up to 120,000 tpa with the simultaneous introduction of new technology. Moreover, the company plans to produce another kind of copolymer meeting the technical regulations of REACH.

Omsk Kaucuk 2011

Omsk Kaucuk (included in Titan group) arranged sales of 20,000 tons of chemical products in January 2012, including 3,000 tons each of synthetic rubber and acetone, 12,000 tons of MTBE, 1,000 tons of

cumene and 3,000 tons of propylene. A large share of the rubber sales is to be shipped to Asia, such as China, India, Malaysia and Indonesia. The main share of acetone shipments is sent by Omsk Kaucuk to Belarus, China and Uzbekistan, propylene to Romania and Poland, and MTBE to Finland.

Omsk Kaucuk increased total output in 2011 by 16% over the previous year, including rubber by 20%, phenol and acetone by 14% and 15% respectively. Omsk Kaucuk produced a record amount of phenol in achieving over 60,000 tons. MTBE production, moreover, grew by 18% to more than 200,000 tons. The introduction of the new polypropylene plant at Omsk is the most significant addition to production capacity in 2012. As the plant will be classified as a subsidiary of Omsk Kaucuk turnover is expected to rise when in full operation.

Zero trafiifs for butane butylene fractions

The Russian Customs Union Commission has decided to remove import duties on butane butylene fractions and butadiene, reducing them to zero. The decision came into effect from 2 January 2012, whilst simultaneously butane butylene fractions and butadiene were separated from other petrochemical feedstocks ethylene and propylene. In 2011, synthetic rubber feedstocks in Russia were broken down into 46.4% based on butane butylene fractions and 53.56% based on butane. The largest producers of butadiene include SIBUR and Nizhnekamskneftekhim, most of which is used captively. Due to supply side pressure non integrated producers such as Omsk Kaucuk and Efremov Synthetic Rubber Plant have been forced into imports which have led to the government decision to zero rate butadiene.

In December 2011, Russian consumers of butylene butadiene fractions purchased abroad 8,930 tons of product, or 1% more than in November. Omsk Kaucuk increased its imports to 2,620 tons, of which 1,160 tons was sourced from Azerbaijan, 129 tons from Belarus and 167 tons from Iran. Deliveries of butylene butadiene fractions from Nizhnekamskneftekhim for export amounted to 6,310 tons, i.e. 16% less than in November. All of the sales from Nizhnekamskneftekhim were shipped to Karpatneftekhim in Ukraine. The open Russian market for butylene butadiene fractions accounted for 79,660 tons of sales in 2011, 23% more than in 2010.

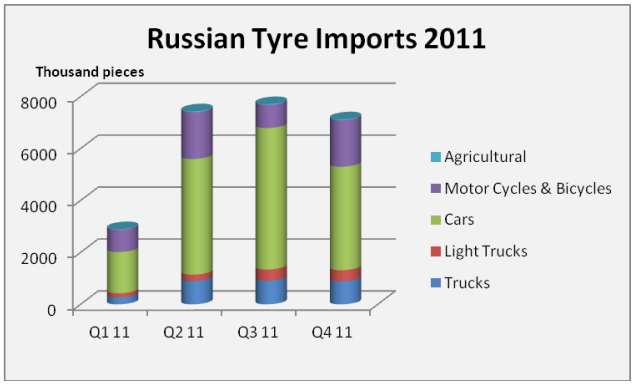
Russian tyre news

Imports of car tyres in Russia increased in 2011 by 50% to 19.56 million units. The main suppliers comprised Japan (with 20% total imports, South Korea (14%), Finland (12%), and China (9%). Imports of truck tyres increased by 63% in 2011 to 3.31 million units. The main suppliers were China (59%), Japan (6%) and Poland (5%). In 2012, the trend of increasing shipments of foreign-made truck tyres on the Russian market is expected to continue, with China being the main source. Overall, imports of tyres in Russia increased by 52% over 2010 to 23 million units.

European tyre producer Continental hopes to produce up to 16 million tyres per annum in Russia, at the proposed new plant at Kaluga. The design capacity will initially be four million tyres per annum on start-up in October 2013, before further expansion. The plant at Kaluga will produce passenger tyres under the brands Continental, Gislaved, Matador and Barum.

Continental has stated that it will need to source some of the raw materials from abroad. Production of speciality chemicals in Russia does not meet quality requirements of Western producers. Continental has decided to build a plant in Russia rather than simply supply the market from outside mainly because it is cheaper and quicker. Continental had previously reported that it planned by 2016 to increase its capacity to 8 million tyres per annum.

At the end of December SIBUR closed a deal to sell 100% in SIBUR-Russian Tyres exiting the tyre business. Prior to entering into the transaction SIBUR restructure SIBUR-Russian Tyres by selling SIBUR-Volzhskiy Thus, SIBUR to the end of 2011 completed the sale of noncore assets for the production of tyres and fertilisers. SIBUR-Russian Tyres includes Yaroslavl Tyre Plant, Voltyre-Prom, Omskshina, Cordiant-East and Uralshina. The company also has control over the Kirov tyre plant and Voronezh tyre plant, both previously associated with Amtel which is now bankrupt. The transfer of Kirov Tyre Plant to the jv Pirelli and Russian Technologies was completed in December last year. SIBUR hopes to sell raw materials to the companies that have bought their assets.



Russian tyre raw materials

Higher prices of carbon black for the tyre industry can be expected in the second quarter in 2012, in line with seasonal trends. Synthetic rubber costs started to decline for tyre producers in the second half of last year following European market patterns, particularly for isoprene rubber. In terms of additives and compounds, Russian car manufacturers rely mostly on imports import aside exceptions such as Kuibyshevazot which focuses on engineering plastics.

Many Western producers of compounds have to date shown little interest in producing in Russia and prefer to bring in compounds from Europe, where there is excess capacity.

Domestic producers in Russia are as yet unable to provide the required quality standards for compounds; Western car manufacturers in Russia tend only to localise purchases of large simple products such as bumpers, luggage racks, upholstery, etc. As for the more complex and technologically advanced components produced from polyamides, they come on the conveyor as part of a larger collection from abroad. Polypropylene compounds to the car industry in Russia are supplied by one domestic producer Polyplastik, but this only amounts to around 15% of the market with the remainder supplied from imports.

Methanol & related chemicals

Russian Chemical Exports (unit-kilo tons)

Product	*Jan-Dec 11*	*Jan-Dec 10*
ABS	1.3	1.4
Acetic acid	55.2	57.6
Acetone	26.4	23.8
BOPE	1.4	2.8
BOPP	10.7	15.1
Calcium Chloride	19.5	22.3
Caprolactam	202.5	168.3
Carbon Black	459.4	436.9
Caustic Soda Liquid	289.0	345.2
Caustic Soda Solid	74.6	73.3
Chlorine	17.6	7.6
Ethyl acetate	0.0	2.8
HDPE	101.1	26.8
Isobutanol	83.4	99.3
LDPE	171.9	47.1
LLDPE	1.0	0.4
Methanol	1026.0	967.9
MTBE	131.6	304.5
N Butanol	108.3	132.6
Orthoxylene	53.4	65.9
Paraxylene	124.6	107.7
PET	72.7	8.7
Phenol	0.8	1.6
Phosphoric Acid	1.0	1.7
Phthalic anhydride	50.7	52.6
Polyamide	93.7	85.8
Polypropylene	63.9	63.9
Polystyrene	40.7	50.2
PTA	0.0	4.4
PVC	3.3	14.5
PVC Films	0.4	0.5
Soda Ash	668.8	373.2
Styrene	132.4	158.7
Synthetic Rubber	823.7	742.8

Togliattiazot-ammonia problems

The largest ammonia producer in Russia Togliattiazot was forced to reduce operating rates in January due to the cessation of pumping through Ukraine, but averted a full stoppage due to the restart of pipeline transportation on 18 January. Togliattiazot transports ammonia by pipeline via Gorlovka to Odessa on the Black Sea coastline. Prior to the reopening of the pipeline all reserve capacity of ammonia at Togliattiazot had already been filled, with five out of the seven ammonia plants operating in idle mode.

The main part of ammonia produced at Togliatti is transported by through the Odessa link. The Ukrainian part of the ammonia pipeline is administered by the state company Ukrtransammiak with which Togliattiazot has a long-term contract. Ukrtransammiak without prior warning stopped pumping ammonia in December; the reason given was due to the need to repair a key pumping station and other pipeline maintenance. The Russian company said that they had previously concluded with Ukrtransammiak additional agreements governing the amount and price of pumping ammonia in 2011 and 2012. According to Togliattiazot, financial losses of the company due to the cessation of pumping ammonia amounted to more than 500 million roubles.

Metafrax 2011

Metafrax produced 970,000 tons of methanol in 2011, which is 5% less than in 2010. Reduced production was due to scheduled repairs to methanol, which took place last summer. The production of other products by Metafrax included formaldehyde which was up 26% to 313,000 tons, urea-formaldehyde concentrate up 13% to 197,000 tons, pentaerythritol up 21% to 22,000 tons, and hexamine up 1.5 times up to 23,000 tons. Metafrax exported 7,580 tons of pentaerythritol in 2011 which was 48% more than in 2010. Uzbekistan was the main customer, accounting for 15% of shipments, followed by Poland with 14% and Germany 13%.

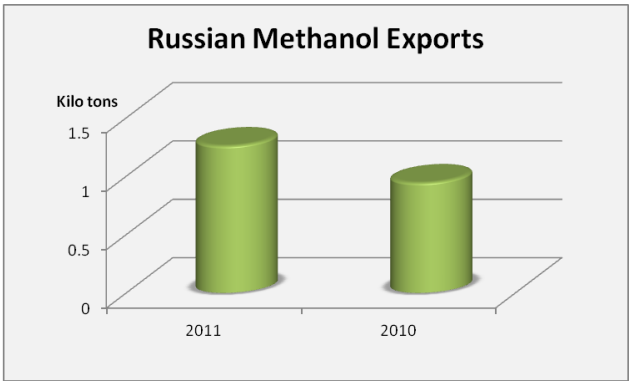
Shchekinoazot-methanol plant at full capacity

Shchekinoazot is now running its new methanol plant at full capacity. The facility now produces 1,350 tons of products a day. Methanol production capacity at the old Shchekinoazot plant is 350,000 tpa, and this was expected to be closed with the start-up of the new plant.

Metafrax-methenamine

Metafrax plans in 2012 to build and commission a new installation of micronized methenamine and pentaerythritol with an average particle size of about 40-60 microns. Feedstock for micronized products will include methenamine and pentaerythritol, manufactured at the company. It should be noted that these products have not been produced previously in Russia.

Shredded methenamine is used in the tyre industry and the production of Bakelite plastics. These products are intended to be exported to European countries. Micronized pentaerythritol is used in production of flame retardants and fire-resistant paint. Production is planned to sell in the domestic market and abroad. Regarding the project Metafrax is in talks with the German company Netzsch over equipment purchases estimated at a cost of around 50 million roubles.

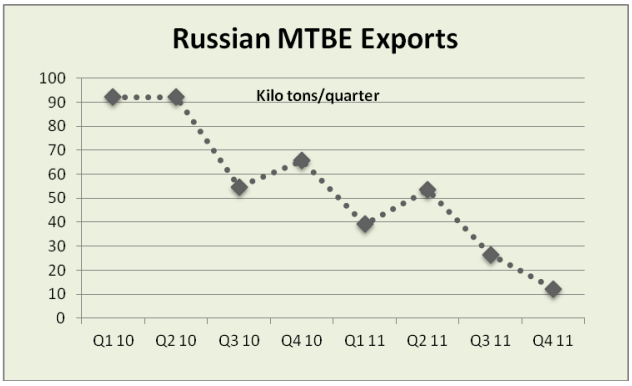


Russian methanol exports 2011

Russian methanol exports totalled 1.26 million tons in 2011, 6% up on 2010. Increased production by Togliattiazot in 2011 helped export availability from Russia, offsetting the reduced shipments from Sibmetakhim at Tomsk and Metafrax at Gubakha by 3% and 6% respectively. Changes in the volume of shipments of Russian methanol to foreign markets had practically no effect on the structure of its deliveries. During 2011, the first major consumer of Russian exports was Finland accounting for 60% of shipments.

Azot to start melamine plant in 2012

Azot at Nevinomyssk aims to start producing melamine in March 2012 with the start-up of the new 50,000 tpa plant. Russia annually imports about 35,000 tons of melamine at present and thus the new plant will in theory at least cover the full needs of Russia and the CIS. The volume of investment by Evrokhim in this project will amount to about 9 billion roubles. The latest technology has been used for the project leading to the production of low-pressure melamine.



The holding company Evrokhim plans to invest around $1 billion in Azot at Nevinomyssk to build a fertiliser complex including ammonia at 700,000 tpa, in addition to derivative plants. Ammonia from the new complex will be shipped to Belorechensk Minudobrenya, which is also part of Evrokhim. This project could take four to five years to construct.

Russian MTBE Exports 2011

MTBE exports from Russia dropped 40% in 2011 against 2010 and amounted to about 187,000 tons. At the same time the fuel crisis that took place in the middle of 2011 forced Russia to even import MTBE, largely from Finland and Ukraine. The main exporters of MTBE last year were Tobolsk-Neftekhim, Omsk Kaucuk, and Uralorgsintez, which together combined accounted for 83.5% of total shipments. Despite the drop in volumes there were signs towards the end of the year that export capability was improving. In December 2011, Russian exports of MTBE amounted to 20,000 tons, and increased relative to November almost 2.5 times.

Organic Chemicals & Plastics

Russian PP Film Market (unit-kilo tons)		
	Jan-Nov 11	Jan-Nov 10
Production	137.4	147.7
Exports	9.7	14.1
Imports	34.7	27.8
Market Balance	162.4	161.4

Russian PP films

Polypropylene film consumption increased 1.4% in 2011 against 2010, following two previous years of modest growth. Domestic production in 2011 totalled 151,400 tons which was 6.8% down on 2010, whilst imports rose 25.4% to 34,700 tons. The share of exports of PP-films in production for the year declined to 7% from 10% in 2010 due largely to the loss of price competitiveness in foreign markets. Exports totalled 10,670 tons which was 26% lower than in 2010. The share of imported PP films in total Russian consumption amounted to 21.4% in 2011 against 17% in 2010. Despite the rise of imported film products, growth declined in the second half of the 2011.

During the period January-November 2011 NTL Package produced 893 tons of CPP film, a 0.6% increase over the same period in 2010. The plant bought 318 tons of imported polypropylene in 2011, with suppliers including LyondellBasell, Polymer-Chemie and Borealis. BOPP producer Isratek C produced 18,700 tons of films in the

period January-November 2011 which was 2.6% less than the same period in 2010. Last year the company started to buy raw materials from foreign companies including Polymer-Chemie and LyondellBasell.

Russian PE Film Market (unit-kilo tons)

	Jan-Nov 11	Jan-Nov 10
Production	242.7	250.2
Exports	1.3	1.4
Imports	95.2	82.1
Market Balance	336.6	330.9

Russian PE films

The Russian PE film market hardly changed in 2011 aside stretch film based on LLDPE. Sales of greenhouse, shrink films and general-purpose, did not increase meaning that LDPE and HDPE volumes changed only marginally. Overall growth in 2011 in PE film consumption was less than 2% over 2010, totalling 336,600 tons in the period January-November 2011.

Domestic production dropped 3.3% to 242,700 tons in this period whilst imports rose 16% to 95,200 tons. Domestic producers were affected last year by the liquidity of customers and by the slight loss of competitiveness against imports. One of the leading producers of stretch film in Russia Lava increased LLDPE imports threefold in the period January-November 2011 to 10,160 tons most of which was sourced from SABIC. Overall, the company's import of raw materials increased from 18.7% in 2010 to 53.6% in 2011.

The Kama Plant of Polymer Materials in Tatarstan produced 8,930 tons of polyethylene films in the period January-September 2011 which was 2.3 times higher than in the same period in 2010. The significant increase in production was due to the expansion of films, and signing contracts with new customers. The total capacity of the plant is 12,000 tpa based on polyethylene produced by Nizhnekamskneftekhim and Kazanorgsintez.

Russian PVC films

Consumption of PVC films in Russia totalled 58,600 tons in the period January-November 2011, which was 5% up on the same period in 2010. Imports rose 8% in 2011, whilst exports declined 51%. Stretch films constitute an important part of PVC consumption used in packaging of meat, poultry, vegetables, fruits and other food products. Increased consumption of these products in the Russian Federation during 2011 is mainly due to the use of stretch film for goods that previously were not packaged. From January to November 2011 the Kazan Plant of Artificial Leather produced 1,520 tons of PVC film, using 260 tons of imported PVC suspension. The production of film production dropped by 34% in the period January-November 2011, leading to a decline in PVC imports.

Russian Chemical Imports (unit-kilo tons)

Product	Jan-Dec 11	Jan-Dec 10
ABS	35.5	37.3
Acetic Acid	18.9	11.7
BOPE	105.6	92.4
BOPP	37.6	31.1
Caustic Soda Liquid	29.4	14.6
Caustic Soda Solid	30.2	37.8
HDPE	274.9	268.8
LDPE	98.4	94.5
LLDPE	104.6	107.2
PET	230.6	265.6
Phenol	6.4	0.9
Phosphoric Acid	8.7	11.9
Phthalic Anhydride	4.4	4.2
Plasticizers	15.2	23.3
Polypropylene	155.0	133.4
Polystyrene	152.1	163.8
PTA	163.5	38.3
PVC	502.3	454.7
PVC films	77.2	74.2
Synthetic Rubber	67.4	62.1
Titanium Dioxide	96.8	86.3

Organic chemicals trade

Russian imports of DOP totalled 8,710i in 2011, which was 46% lower than in 2010 due to changing patterns of applications. One of the largest consumers of plasticizers in Russia, Tarkett has stopped using DOP in production and increased processing of DINP.

Russian exports of MEG dropped 37% in 2011 against 2010 to 50,000 tons. Higher domestic demand for MEG in Russia, particularly from the PET sector, helped deflect product away from exports. SIBUR-Neftekhim accounted for 82% of MEG exports in 2011, whilst the main destination of Russian shipments is Belarus. However, in view of declining availability from Russia, Belarus is being forced to purchase MEG from other sources including the Middle East.

Russian exports of butanols totalled 207,100 tons in 2011, 7% lower than the same period of 2010. The share of exports to China in 2011 amounted to 51% and Finland 42%. Gazprom Neftekhim Salavat accounted for 53% of sales, Asha Chemical plant 24%, SIBUR-Khimprom- 22%, and Azot Nevinomyssk 1%. Of the butanol total, 56% was n-butanol and 44% isobutanol.

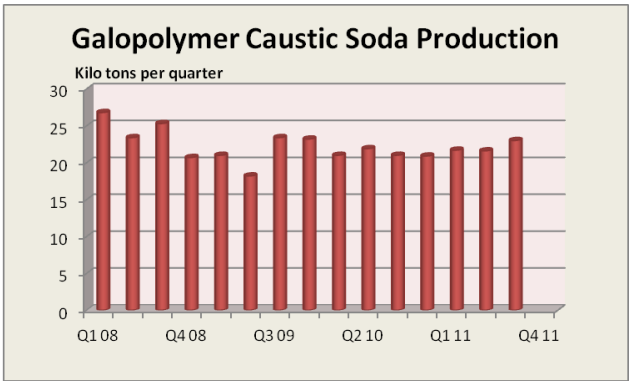
Russian chemical trade 2011

Russian imports of chemicals and polymers were similar in overall volume in 2011 against 2010, particularly for polyethylene, polystyrene and polypropylene. Slower growth in the Russian economy in the second half of the year, combined with higher output in some product groups, helped contain import volumes. Overall though imports of polymers continue to play an important part in Russian

supply/demand balances. PVC recorded a significant increase in imports, particularly in the first half of the year. The second half of the year was characterised by lower demand, as for most of the bulk polymers, and volumes were lower than the first. PET imports into Russia declined in the second half of the year as the Alko-Naphtha plant at Kaliningrad started to impact on supply. The start-up of the new plant in June 2011 resulted in a sharp increase in PTA imports into Russia.

Russia finally joined the WTO in December last year after 18 years negotiating its membership. Full terms will be implemented during 2012 and are set to impact heavily on import duties over the next few years. A full list of polymers has already been assembled where import duties are likely to be changed downwards from 10% on average to 6.5% on polymers by 2014-2015.

Chlorine



Other products

Nitric acid modernisation

Uralkhim intends to increase production capacity of weak nitric acid by 200,000 tpa at its Berezniki site after modernisation. After extensive renovation of main units and contact apparatus, replacing the turbocharger, installing a new boiler, etc, the plant will be capable of producing 1.2 million tpa. In 2011 the company produced 1.086 million tons of nitric acid which was 23,412 tons more than in 2010.

Azot Berezniki

Azot at Berezniki has completed the modernisation of a number of major units with project costs estimated at 850 million roubles. The company has reconstructed large-scale ammonia plants, which will allow Azot to increase the production of ammonia by 12.2% up to 1,650 tons per day. The modernisation of the weak nitric acid plant has increased production capacity by 2.3% to 1.087 million tpa whilst the modernisation of the granular ammonium nitrate plant will increase capacity by 4.3% to 1.047 million tpa. Also in 2011, Azot renovated shops of higher aliphatic amines, nitrite-nitrate salts, concentrated nitric acid and ammonium nitrate with water-resistant.

Fosagro-Metakhim

Fosagro has started the process of modernising Metakhim at Pikalevo in north-west Russia and has plant dismantled a number of buildings. This has included the phosphoric acid plant, laboratory automation, warehouse of aluminium sulphate and sulphuric acid tank. In their place are plans to build new capacity. The company is considering a variety of projects at the plant, in particular the organisation of production of pure phosphoric acid and compound fertilisers. Fosagro intends to increase its stake in Metakhim to 100% and thereby after is interested in increasing the volume of nepheline concentrate processing, which is produced at the Apatit plant.

Galopolymer-memrane conversion

Galopolymer at Perm plans to implement a project to transfer the existing production of chlorine and caustic soda from mercury technology to membrane. The investment programme for membrane electrolysis could cost around 5 billion roubles and would aim to double the capacity of caustic soda production by 200,000 tpa.

The production of chlorine and caustic soda membrane method makes it possible not only to abandon production using mercury and reducing power consumption, but also to avoid time-consuming disposal of mercury waste. Galopolymer uses caustic soda for chloroform production whilst also selling caustic to the merchant market including chemical and metallurgical plants, and pulp and paper mills.

Khimprom-chlorine modernisation at Novocherkassk

Khimprom at Novocheboksarsk is undertaking a project to modernise the production facilities for chlorine, in order to prevent accidents related to the emissions. The cost of the project will amount to about 18 million roubles. The company incurred an accident last year that led to the release of chlorine into the atmosphere. As a result, the company's management has developed a programme to modernise the production of chlorine, which is designed to take place in the period 2011-2012.

Khimprom-chlorine modernisation at Volgograd

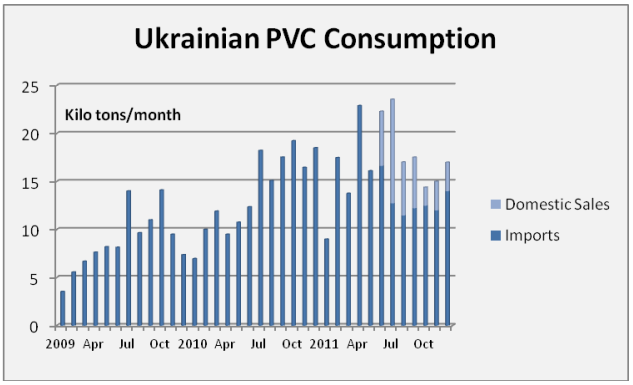
Khimprom at Volgograd has entered the period of intensive modernisation including the construction of a chlorine compressor, the purchase of new centrifuges, evaporator equipment, etc. The aim is to extend the operation of new equipment, and eventually reduce the cost of the finished product. Khimprom uses diaphragm electrolysis to produce chlorine.

Ukraine

Ukarinian chemical industry2011

2011 was a successful year for the Ukrainian chemical industry insofar most products recorded an increase in production. The operation of the Karpatneftekhim

cracker for the full year was a significant part of the increase in Ukrainian production, and this was accompanied by the start-up of the PVC plant at Kalush in May 2011. Titanium dioxide volumes were up by 39% in 2011 over 2010 due to strong global demand. The consolidation of the main fertiliser plants in Ukraine under the DF Group helped reduce gas costs, allowing Azot at Severodonetsk to increase methanol and acetic production. Increases in 2012 are expected to be more modest, with the focus on increasing profitability.



Ukrainian PVC market 2011

Ukrainian exports of PVC totalled 42,900 tons in the period January-November 2011 of which Russia was the main destination. In addition, Ukrainian polymer is supplied to Turkey and Belarus. The launch of the Karpatneftekhim plant has had a major transformation on the Ukrainian market in terms of exports, imports and domestic consumption. Until the Karpatneftekhim plant started, Ukraine relied solely on imports, but has now been able to substitute part of these volumes whilst engaging in exports for the first time. At the same time domestic consumption has been rising.

Ukrainian Chemical Production (unit-kilo tons)

Product	*Jan-Dec 11*	*Jan-Dec 10*
Acetic Acid	141.7	89.0
Adipic Acid	56.4	47.3
Ammonia	4201.4	4239.5
Benzene (-95%)	214.9	190.5
Benzene (+95%)	132.5	125.6
Caprolactam	60.7	18.0
Caustic Soda	155.6	74.9
Ethylene	178.8	76.2
Formaldehyde	43.2	74.9
Methanol	159.5	89.5
Polyethylene	102.7	0.0
Polypropylene	94.0	82.8
Polystyrene	20.7	15.6
Polyvinyl Acetate	6.4	6.9
PVC	76.7	0
Soda Ash	747.5	603.9
Titanium Dioxide	153.1	109.8
Toluene	5.3	5.5
Total	6618.2	4212.3

Russia will continue to represent the main end-destination in 2012, whilst importers into the Ukrainian market will find stronger competition from local production. Emulsion grades will continue to be unaffected, but suspension grade imports from Central Europe may fall.

Consumption of PVC in total rose 36% in 2011 over 2010 to 189,000 tons. The expansion of the Ukrainian market was influenced by the start of production of suspension PVC at Karpatneftehim and the increase in imports by 12% to 156,000 tons. The main supplier of PVC to the Ukrainian market remains the USA, which accounted for around 30% of total imports. US volumes dropped in the second half of the year due to prices. Imports from Poland almost doubled last year to 26.800 tons, mainly due to proximity and competitiveness of PVC supplied by Anwil. Imports also increased 1.4 times from NCHZ in Slovakia. Another less expected source of PVC imports in 2011 came from Spain which accounted for 3,600 tons of shipments.

Ukrainian aromatics

The demand for benzene in Ukraine dropped in January this year due to the halt of adipic acid production at Severodonetsk. Adipic acid production at Severodonetsk has been stopped due to unfavourable market conditions in export markets, and the plant is not expected to resume until March 2012 at the earliest. The other producer of adipic acid in Ukraine is Rivneazot, which has not ceased production to date and is still buying benzene. Other important buyers of benzene include Azot at Cherkassy used for caprolactam.

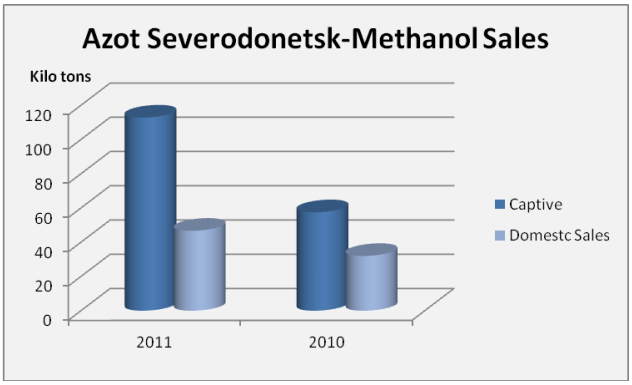
Chemical company Benzene, based at Rubezhnoye, reached an agreement with Zarya (the largest manufacturer of explosives in Ukraine) for the supply of toluene and oleum technical in 2012. Benzene has won the tender for the supply of 1,930 tons of toluene and 4,785 tons of oleum. Benzene is registered as a limited liability company is a supplier of chemical products, in particular toluene, methanol, sulphuric acid, nitric acid, etc.

Ukrainian polymer production 2011

Linik at Lisichansk increased polypropylene production by 13% in 2011 over 2010 to reach a total of 93,960 tons. The improved operating time was due largely to uninterrupted production in 2011, whereas a summer stoppage for maintenance took place in 2010. For polystyrene, Stirol at Gorlovka produced 20,690 tons in 2011, 26% up

on 2010. At the end of November 2011 the company resumed the production of high-impact polystyrene after a year's stoppage, and produced about 500 tons by the end of 2011.

Karpatneftekhim produced 102,700 tons of HDPE in 2011, the first full year of operation after restarting in the second half of 2010. In 2010 the company produced 33,500 tons of HDPE, having restarted in September after a two year outage imposed by unprofitable sales.



Azot-methanol sales & anti-dumping

Azot at Severodonetsk sold 46,700 tons of methanol in the Ukrainian domestic market which was 46% more than in 2010. The main consumers in the domestic market are based in the oil and gas industry, accounting for 71% of total sales by Azot or 33,000 tons. Compared with 2010 gas companies increased the volume of methanol purchases by 5%. Stirol at Gorlovka bought about 12,000 tons of domestic methanol in 2011, i.e., 26% of the total volume and was eleven times above the level recorded in 2010.

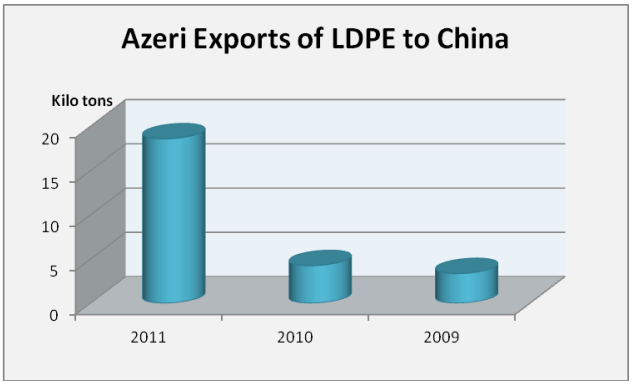
The Interdepartmental Commission on International Trade of Ukraine has set antidumping duties for Russian suppliers of methanol. The decision was adopted on 23 January and will enter into force 30 days from the date of publication. The Commission has set an import duty on methanol for Shchekinoazot at a rate of 9.4% and for other suppliers at a much higher rate yet to be confirmed. The only exceptions have been granted to Azot at Nevinomyssk and Azot at Novomoskovsk which both belong to the Evrokhim group.

The Commission found that both Azot companies in Russia were not selling methanol at prices harmful to the sole producer in Ukraine unlike Shchekinoazot and other Russian producers. According to the Commission, the share of dumped imports of methanol from Russia in 2009 compared with 2007 increased by almost 24%. At the same time in 2009, Ukraine reduced not only the production of methanol, but the rate of capacity utilisation (46%). Ukraine started anti-dumping investigation of imports of methanol from Russia in 2010 on the complaint of Azot at Severodonetsk.

Central Asia & Kazakhstan

Kungrad Soda Plant-capacity expansion

CITIC Pacific from China is in talks with Uzkhimprom to expand capacity of the Kungrad Soda Plant at Karakalpakstan in Uzbekistan, raising capacity 1.5 times by 2015 to 150,100 tpa. Currently, Chinese companies together with the design institute Uzkhimpromproekt, part of Uzkhimprom, is developing the preliminary feasibility study at a cost of $50 million. Capacity expansion of the Kungrad Soda Plant will be carried out by increasing the production of limestone at the quarry and Dzhamansaysk salt deposit Barsakelmes in Karakalpakstan.



Raw materials for Kungrad soda plant are located in the Republic of Karakalpakstan at the Barsakelmes deposit of salt (proven reserves of 131 million tons of salt containing NaCl over 97%) and limestone deposits at Dzhamansaysk (proven reserves of 70 million tons). The Kungrad Soda Plant produced 95,000 tons of soda ash in 2011.

Azerbaijan chemical production 2011

The chemical industry in Azerbaijan increased production by 27.1% in 2011 over 2010. Statistical data shows that sulphuric acid production increased by 64.5% to 15,300 tons in 2011, caustic soda by 63.7% to 10,200 tons, propylene by 13.5% to 22,100 tons, polyethylene-by 41.1% to 74,600 tons, and isopropyl alcohol-by 3% to 10,800 tons. A fall was noted in paint and varnish production-by 20.7%. LDPE production has been helped by the takeover of Azerkimya by SOCAR. The capacity at Sumgait consists of two 60,000 lines for LDPE.

Nearly all of the LDPE produced at Sumgait is exported to China and CIS countries (Ukraine, Kazakhstan and Georgia). Domestic consumption of LDPE totalled only 678 tons in 2011.

Kazakh polypropylene exports

Polypropylene production by Neftekhim at Pavlodar totalled 27,980 tons in 2011, 39% up on 2010. Neftekhim has set a target of 35,950 tons for 2012 which is 28% higher than 2011. The company is now the reconstruction of existing production facilities, resulting in capacity expansion of polypropylene amount to 100,000 tpa. 73% of total exports in 2011 were shipped to China, 22% to Turkey, and 5% to Ukraine. Minor amounts of polypropylene were delivered to Kyrgyzstan (110 tons).

UzKorGaschemical project receives finance approval

The Asian Development Bank has approved a loan and political risk guarantees of up to $400 million to assist build Uzbekistan's largest petrochemical plant. The Surgil Natural Gas Chemicals Project will produce gas for commercial use and for conversion into chemicals used in the plastics and textiles industries. The developer and operator, UzKorGasChemical is a jv owned by Uzbekneftegaz and a consortium of South Korean companies comprising Honam Petrochemical Corp, Korea Gas Corp and STX Energy.

The project, located about 1,300 kilometres from Tashkent, will include production wells, pipelines, an ethylene cracker, polymer plants, and on-site power generation. It will cost around $4 billion. In August 2011, the government in Seoul announced that South Korean companies including Samsung Engineering, GS Engineering & Construction and Hyundai Engineering had been awarded a $2.1 billion contract for construction work at the complex.

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