

# CIREC

## MONTHLY NEWS

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

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Czech Republic | Slovakia | Hungary | Poland | Bulgaria | Romania | Croatia | Slovenia | Yugoslavia | Baltic States | Russia | Belarus | Ukraine | Transcaucasus | Central Asia | Kazakhstan

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### CENTRAL EUROPE

- **POLAND INCREASES PROPYLENE IMPORTS, UKRAINE REPLACES RUSSIA AS MAIN SUPPLIER**
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- **POLISH PLASTICS CONSUMPTION ROSE 9% IN 2017 DRIVEN BY IMPORT DEPENDENCY**
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- **ACRYLONITRILE EXPORTS FROM BELARUS DROP 20% IN FIRST QUARTER TO 12,400 TONS**
- **TURKMENISTAN ENGAGED IN INVESTMENTS INTO WIDE RANGE OF CHEMICALS**
- **UREA PRODUCTION TO START IN TURKMENISTAN AND AZERBAIJAN IN 2018**

## CENTRAL & SOUTH-EAST EUROPE

### Polish Propylene Imports (unit-kilo tons)

Country	Q1 18	Q1 17
Azerbaijan	1.9	3.1
Czech Republic	4.3	1.2
Germany	14.7	8.1
Russia	5.8	29.7
Ukraine	21.1	0.0
Hungary	3.1	0.0
Others	0.0	0.6
Total	51.0	42.6

### PKN Orlen investment plans

PKN Orlen is considering large-scale investment plans up to 2023, involving sums of around zł 8.3 billion (€1.94 billion) and to be directed towards a development programme aimed at transforming the company from an importer into an exporter. The intended programme is expected to represent the largest investment in the company's history and will be focused principally on production facilities at Płock and Włocławek. Orlen hopes to unveil plans for the programme by the end of 2018 in an effort to reduce dependency on the fuel sector.

The current focus for Orlen is centred on the merger with Lotos and taking full ownership of Unipetrol. PKN Orlen has agreed to buy the remaining 5.97% shares in Unipetrol that it does not own, paying Kc 380 per share to minority shareholders and completing its takeover and delist the unit from the Prague bourse. The company expects the transaction to be completed by the end of the year.

### Polish PTA Exports (unit-kilo tons)

Country	Q1 18	Q1 17
Germany	73.7	81.3
Belarus	7.7	6.1
Others	8.2	6.7
Total	89.6	94.1

The merger between Orlen and Lotos has now been placed under direct supervision of the Polish Prime Minister. Opinions suggest that the intervention will be beneficial not only for the merger mechanism itself, but also for the further functioning of both companies and the Polish economy. Interested parties suggest that the merger needs to be conducted under a clear vision of the functioning of the oil and petrochemical and chemical sector and the skillful management of financial resources of both companies.

### Unipetrol completes repairs

Unipetrol completed planned repairs at its refinery at Kralupy nad Vltavou in May. Scheduled maintenance was started on 27 March, although the refinery had effectively been shut on 21 March following an explosion and lasted for six weeks. Part of the maintenance included work on the 60,000 tpa propylene plant at Kralupy. The propylene produced in the catalytic cracking plant at Kralupy is processed at the Litvinov plant for the production of polypropylene with a capacity of 275,000 tpa.

### Rompetrol Rafinare 2018 targets

Rompetrol Rafinare recorded a net loss of \$3.8 million in the first quarter of 2018, versus from a \$63,000 net loss in the same period in 2017. This is despite gross turnover jumping 47% to \$1.2 billion in the first quarter. Margins were affected by volatility in oil prices, thus affecting operating costs.

### Rompetrol Rafinare Polymer Production & Sales (unit-kilo tons)

Polymer Production		
Product	2017	2016
Polypropylene	84.8	86.1
LDPE	62.1	63.5
Polypropylene sales		
Market	2017	2016
Domestic	30.2	29.6
Export	52.6	59.3
LDPE Sales		
Market	2017	2016
Domestic	27.6	27.7
Export	32.6	38.4

Rompetrol's main refinery Petromidia Navodari processed 1.52 million tons of raw materials in the first quarter, up 27% on the same quarter last year. The smaller Vega Ploiesti refinery recorded an increase of 26% in processed raw material to 76,600 tons. The Petromidia refinery attained 98.5% utilisation in the first quarter, higher by 25.1% compared with the same period in 2017. Through its two refineries, Petromidia and Vega, Rompetrol Rafinare accounts for over 40% of Romania's total oil refining capacity, whilst Rompetrol Rafinare is the only producer of polymers in the country.

### Petrohemija resumes rubber production

HIP Petrohemija began the process of resuming production at the plant of styrene-butadiene rubber at Elemir, Serbia on 31 May after the completion of planned maintenance. HIP Petrohemija resumed operation of the petrochemical site at Pancevo on 10 May after

carrying out scheduled maintenance activities. The closure of a cracker with a capacity of 200,000 tpa of ethylene and 85,000 tpa of propylene led to the shutdown of plants producing 90,000 tpa of HDPE and 65,000 tpa of LDPE.

HIP Petrohemija Exports (unit-kilo tons)		
Product	Q1-18	Q1-17
Polyethylene	34.6	27.5
Polypropylene	5.6	9.2
Styrene Butadiene Rubber	4.9	2.6

in HIP Petrohemija.

In September 2017, Gazprom Neft indicated that would increase the share of shares in the HIP Petrohemija to 21% via Naftna Industrija Srbije (NIS), from 12.72% but this is yet to materialise. NIS is supplying more feedstock to HIP Petrohemija which in turn is reducing the amount of butane purchases on the market. The state controls 54.89% stake

#### Lukoil-Bourgas petrochemical expansion

Lukoil is considering the possibility of investing in petrochemical production at the existing facilities in Bulgaria to offer a wider range of products. Currently the Bourgas refinery produces propylene and naphtha, and Lukoil is looking at the possibility of producing 150,000 tpa of polypropylene, almost double the current capacity.

#### Oltchim to sell three more assets

Oltchim has put three of its production units on sale, including a PVC plant at Ramnicu Valcea, a petrochemical plant near Pitesti and a phthalic anhydride plant in Ramnicu Valcea. In 2017 Oltchim's most important assets were purchased by Chimcomplex Borzesti for €127 million. Oltchim recorded sales of almost €64 million in the first quarter this year, up by a third compared to the same period in 2017 and a net profit of €10 million which was six

times higher than the same period last year.

#### MSK Kikinda-new tender

Investors from Japan, Turkey and Germany have expressed interest towards the privatisation of MSK Kikinda in Serbia after announcement of a new tender. The company currently operates at a profit but faces significant difficulties over gas prices. Possibly the optimal partner for MSK would be a in position to secure cheaper raw material prices and can access international markets for methanol and acetic acid. Currently, 95% of methanol and 98% of acetic acid production by MSK is exported, mainly to the EU region.

MSK Exports (unit-kilo tons)		
Product	Jan-Mar 18	Jan-Mar 17
Methanol	30.0	30.1
Acetic Acid	26.9	23.5

A new tender for the privatisation of MSK Kikinda was started on 1 June. The starting price in the tender is set at €20.4 million, or 50% of the estimated value of MSK Kikinda, and the deadline for the submission of bids is 10 August 2018. The previous tender failed to attract any offers in February, after a single company, Cyprus-based Kronospan Chemical Holdings bought documents but did not submit a bid.

Polish Methanol Imports (unit-kilo tons)		
Country	Q1 18	Q1 17
Germany	23.9	30.8
Norway	11.6	26.6
Russia	111.7	60.1
Others	39.6	2.3
Total	186.8	119.8

#### Polish methanol imports, Q1 2018

Polish methanol imports totalled 186,800 tons in the first quarter in 2018 against 119,800 tons in the same period in 2017. Russia increased imports to Poland to 111,700 tons in the first three months this year, up from 60,100 tons. By contrast, imports from Germany and Norway both dropped in the first quarter in 2018.

#### Czech chemical trade Jan-Apr 2018

Ethylene exports from Unipetrol totalled 32,000 tons in the first four months in 2018 from 12,100 tons in the same period in 2017. Almost all of the ethylene this year was shipped to Bohlen in Germany.

Czech Petrochemical Exports (unit-kilo tons)		
Product	Jan-Apr 18	Jan-Apr 17
Ethylene	32.0	12.1
Propylene	7.4	3.1
Butadiene	0.2	1.4
Benzene	7.8	7.6
Toluene	5.9	3.9
Ethylbenzene	46.9	32.1

Propylene exports rose in the first four months to 7,400 tons, whilst imports of propylene rose from 14,242 tons in January to April 2017 to 17,604 tons in the same period this year. Germany provided 11,186 tons to the Czech Republic in the first four months followed by Slovakia with 2,275 tons and Ukraine 3,344 tons.

Benzene imports into the Czech Republic rose to 29,110 tons in the first four months in 2018 from 28,737 tons in the same period last year. Benzene imports are largely sourced from Poland whilst Czech ethylbenzene exports are shipped in the opposite direction, moving mostly from Kralupy to Osweicim. Ethylbenzene exports from the Czech Republic amounted to 46,900 tons in the first four months versus 32,100 tons in the same period in 2017.

Polish Chemical Production (unit-kilo tons)		
Product	Jan-Apr 18	Jan-Apr 17
Caustic Soda Liquid	125.3	117.7
Caustic Soda Solid	22.1	27.1
Ethylene	184.1	163.6
Propylene	112.1	117.6
Butadiene	19.7	19.4
Toluene	4.9	6.5
Phenol	16.4	14.2
Caprolactam	58.2	56.1
Acetic Acid	3.0	5.6
Polyethylene	134.9	115.1
Polystyrene	21.7	17.9
EPS	19.7	27.4
PVC	95.4	98.6
Polypropylene	98.7	87.7
Synthetic Rubber	92.6	84.1
Ammonia (Gaseous)	953.0	1029.0
Ammonia (Liquid)	53.2	32.4
Pesticides	18.4	18.8
Nitric Acid	834.0	833.0

an increase of 9% compared to 2016. By comparison the plastics market in Europe grew at a rate of about 3.5%, and globally about 3.8%.

Polish Polymer Trade Q1 2018		
Product	Imports	Exports
Polyethylene	290.3	88.3
Polypropylene	180.9	54.4
Polystyrene	90.1	15.5
PVC	98.7	27.5
Vinyl Acetate Polymers	15.4	4.5
Acrylic Polymers	67.9	4.2
Polyesters	153.5	91.4
Polyamides	35.0	42.1

#### Slovnaft-fertiliser production capacity added

Slovnaft is launching production of fertilisers having already completed, in cooperation with Stercorat Hungary, a new production line to make liquid fertilisers. The partners have invested a total of €18 million in the project where the production capacity is 50,000 tpa. The expansion of Bratislava refinery's production portfolio is in line with the 2030 strategy to increase the production of non-fuel products.

Moreover the operation of the line will have a positive impact on the environment by reducing sulphur dioxide (SO<sub>2</sub>) emissions. Technology for the production of ammonium thiosulphate was supplied by the American company ThioSolv. The fertiliser will be produced from gases generated in the refinery during the oil refining process.

Chemical exports from the Czech Republic comprise ethylbenzene, caprolactam, plasticizers, plasticizer alcohols, etc, whilst imports cover products such as benzene, methanol, oxo alcohols, glycols and TDI. Methanol imports, usually supplied mainly from Germany and Russia, totalled 30,422 tons in January to April 2018 against 34,776 tons in the same period in 2017.

Exports of phthalic anhydride from the Czech Republic totalled 6,000 tons in the first four months in 2018 against 5,670 tons in the same period in 2017. Deza at Valasske Mezirici produces coal based aromatics in addition to phthalic anhydride and plasticizers. Although DOP exports made a revival in 2017, rising to 9,600 tons against zero in 2016, DINP is far more important these days rising to 35,900 tons in 2017 against 30,800 tons in 2016. In the first four months in 2018 Czech exports of DINP amounted to 13,575 tons versus 13,525 tons in the same period in 2017.

#### Polish plastics market 2017 & Q1 2018

The consumption of plastics in 2017 in Poland was estimated at approximately 3.5 million tons, representing

The large increase in demand for raw materials for production from Polish processors causes that Poland imports large quantities of polymers, and the negative trade balance with foreign countries is deepening and in 2017 amounted to 2,202 million tons. Poland's main trading partner in intra-EU trade, both in exports and in the import of plastics in primary forms and products, has been Germany for many years. Poland imports the most plastics from non-EU countries in basic forms from South Korea, and from China.

#### Synthos-Brazilian investment plans could be revived

Synthos is reconsidering re-assessment of investment prospects in Brazil, after previously putting plans on hold due to feedstock uncertainty. The problem lies in the fact that Brazil is famous for its protectionist practices and is considered as a market as difficult as it is unpredictable. In 2014, the general assumptions were already known to cost about \$170 million investment. For more than half a billion zlotys near Porto Alegre, the Triunfo petrochemical complex in the Brazilian state of Rio Grande do Sul was to build a polybutadiene rubber plant on a neodymium catalyst.

#### Ciech-protection agent acquisition

Ciech will buy 75% stake in Spanish Proplan Plant Protection company for €33.5 million. The transaction will significantly expand the product portfolio of the Ciech group in the field of plant protection chemicals and will allow opportunities for geographical diversification.



# RUSSIA

Russian Chemical Imports by value (\$million)		
Product Group	Jan-Apr 18	Jan-Apr 17
Organic & inorganic chemicals	1,915.8	1,453.6
Pharmaceuticals	3,448.5	3,125.0
Cosmetics	1,008.2	864.2
Soap and detergents	454.4	369.3
Polymers and Rubber	3,853.9	3,111.5
Others	2,171.8	1,827.3
Total	12,852.6	10,750.9

## Russian chemical trade & production Jan-Apr 2018

Russian chemical product exports rose from \$5.170 billion in the first four months in 2017 to \$6.172 billion in the same period in 2018. Despite the rise, the trade deficit in chemicals rose from \$5.713 billion to \$6.742 billion in the period January to April 2018. The reason was that the value of Russian chemical imports increased in the first four months to \$12.853 billion against \$10.751 billion in the same period in 2017. All product categories have showed rising

cost trends. Isocyanate and epoxy resin import costs rose sharply in the four months due to higher raw material prices, thus limiting physical volumes.

Russian Chemical Production (unit-kilo tons)		
Product	Jan-Apr 18	Jan-Apr 17
Caustic Soda	425.7	405.9
Soda Ash	1,185.0	1,145.0
Ethylene	1,027.0	1,000.0
Propylene	805.1	742.6
Benzene	505.1	483.0
Xylenes	215.5	183.6
Styrene	645.0	238.8
Phenol	64.2	73.5
Ammonia	6,200.0	5,500.0
Nitrogen Fertilisers	3,763.0	3,292.0
Phosphate Fertilisers	1,376.0	1,091.0
Potash Fertilisers	2,844.0	2,749.0
Plastics in Bulk	2,745.0	2,554.0
Polyethylene	741.0	685.0
Polystyrene	180.2	173.2
PVC	336.4	314.7
Polypropylene	532.0	478.0
Polyamide	57.3	52.2
Synthetic Rubber	571.0	585.0
Synthetic Fibres	55.2	53.8

Regarding chemical production in the first four months in 2018 most main products saw comparable volumes to the same period in 2017. Russian bulk plastics production rose in the first four months from 2.554 million tons in 2017 to 2.745 million tons, whilst ethylene production rose from 1.0 million tons to 1.027 million tons and propylene rose by more than 20% to 805,100 tons. Production has been boosted this year in ammonia where a number of expansions have taken place. Another new ammonia plant is close to start-up at Shchekinoazot where a new methanol plant is being introduced at the same time.

Despite efforts by the FSB to limit chemical production at relevant locations during the period of the World Cup, which started on 14 June, most producers will continue throughout the duration of the competition. Trade may be affected though, for example methanol shipments and other hazardous chemicals will be restricted until mid-July.

## Russian petrochemical projects

## Gazprom-Power of Siberia, June 2018

By the middle of May this year, Gazprom had constructed 1,791 km (or 83%) of the Power of Siberia gas pipeline from the Amur region. By 2019, scheduled testing of the pipeline, installation of power supply systems will undergo commissioning.

At the Chayanda field in Yakutia, which will provide the first gas for the pipeline, 105 operational wells have thus far been completed. At the same time the construction of a two-junction underwater crossing Power of Siberia through the Amur is underway.

The pipeline's main objective is to export gas to China, whilst also providing opportunities for investments en-route inside Russia. The main project involves the Amur Gas Processing Plant at Svobodny, which could be



followed by the Amur Gas-Chemical, and also the large methanol complex at Skovorodino.

#### Power of Siberia Distances

- Total length 4,500 km
- Chayanda to Chinese border 2156.1 km
- Chayanda to Kovytka 803.5 km

The total length of the Power of Siberia comprises 4,500 km, including nine compressor stations with a total energy capacity of around 1200 MW. By the end of 2019, a section of the main gas pipeline from the Chayanda oil and gas condensate field will be extended to the Chinese border with a length of 2156.1 km and the compressor station Zeyskaya will be built. In the second stage of the project schedule, the Yakutia gas production centre will be connected to the Irkutsk gas production centre or Kovytka gas field (803.5 km, 1 compressor station with a capacity of 48 MW).

#### Chayanda & Kovytka fields

The recoverable reserves of the Chayanda field by at the beginning of 2018 comprised 1.2 trillion cubic metres of gas, 17.6 million tons of condensate, 43.9 million tons of oil and 7.4 billion cubic metres of helium.

The start of gas production at the Chayanda field is planned for the end of 2019. The field is expected to reach full capacity in the fourth year of development. The maximum level of annual free gas production will be 25 billion cubic metres (stable condensate 404,000 tons per annum, oil 3.27 million tons per annum).

Current recoverable reserves of the Kovytka field at the start of 2018 comprised 2.72 trillion cubic metres of gas, 91.1 million tons of condensate and 7.7 billion cubic metres. m of helium.

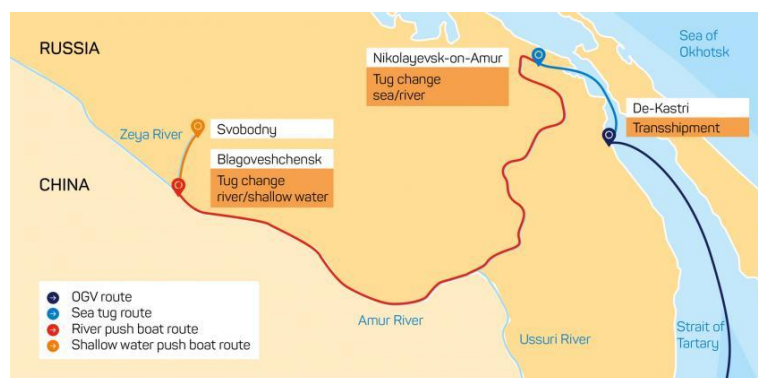
The commissioning of the Kovytka gas condensate field and supply of gas to the main Power of Siberia gas pipeline is expected from the end of 2022. The design capacity is 25 billion cubic metres of gas and 1.4 million tons of condensate per annum. At present, the Kovytka gas condensate field is under experimental development.

installation works to be carried out performed by Renaissance Heavy Industries.

At the end of 2017 the construction started of the compressor station Zeyskaya, which is one of the main parts of the gas transmission system. Its commissioning in 2019 will allow Gazprom to provide the set parameters of the commodity gas for the first deliveries to China, and in the future to support gas processing at the Amur Gas Processing Plant.

#### Amur GPP-NIPIGAS & Tecnimont

NIPIGAS, selected by Gazprom as an EPCM contractor for the Amur Gas Processing Plant project, has entered into an additional agreement with the Maire Tecnimont Group. Tecnimont has agreed further measures on subcontracting construction and



Linde, Tecnimont, China Petroleum Engineering & Construction Corporation and Sinopec are involved as key contractors in the construction of the Amur Gas Processing Plant. The first stage of the plant (two production lines) will be commissioned in April 2021. The launch of the enterprise will allow to produce up to 2.6 million tpa of ethane, 1.6 million tpa of liquefied petroleum gases, up to 60 million cubic metres per annum of helium and

up to 38 billion cubic metres per annum.

#### SIBUR-Gazprom agreements for ethane

SIBUR and Gazprom signed a further agreement in May for the supply of ethane fraction for the Amur Gas Chemical Complex which is currently in the evaluation stage. The document specifies the main conditions

#### SIBUR-VEB agreement for Amur Gas-Chemical Complex

SIBUR and Vnesheconombank (VEB) intend to sign an agreement for working out the possibilities for granting project financing for the Amur Gas Chemical Complex. The final decision on the implementation of the project of the Amur Gas Chemical Complex will not take place until the middle of 2019.

for future deliveries during the 20-year period of the ethane fraction from the Amur Gas Processing Plant of Gazprom to the Amur Gas Chemical Complex projected by the SIBUR Group.

The document is claimed to fix the volumes of ethane supplies to about 2 million tpa, as well as the formula for the price of commodity products. The signing of the agreement will allow Gazprom to guarantee the investments allowing the supply of the ethane fraction in the long term, while SIBUR will continue to work on the Amur gas chemical project. SIBUR

estimates preliminary investments in the construction of the Amur gas-chemical complex at \$7-8 billion (about 500 billion roubles). In addition to ethane supply SIBUR and Gazprom signed an additional agreement in June for extension of NGL deliveries to 2033.

#### Nizhnekamskneftekhim-dividends used for new cracker

The Board of Directors of Nizhnekamskneftekhim has recommended shareholders not to pay dividends for 2017 and to redirect the profits into financing the new cracker. Nizhnekamskneftekhim refrained from paying dividends for 2016 in connection with the need for funds for the ethylene complex with a capacity of 600,000 tpa.

#### SIBUR Tobolsk technical improvements

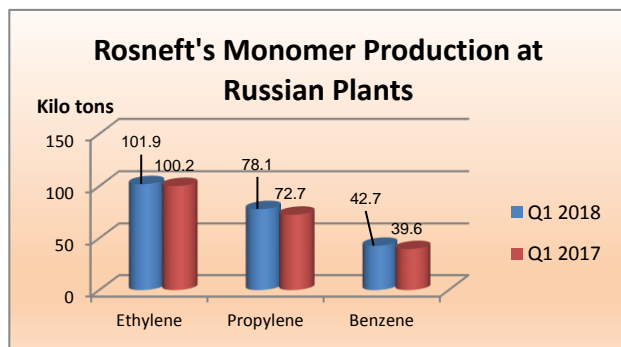
SIBUR has carried out a number of measures to reconstruct the Tobolsk industrial site, including new equipment installed for the dehydrogenation unit of isobutane in order to increase the production of isobutylene. The pipeline for the transportation of the catalyst was replaced, whilst work was carried out on the polypropylene plant. Production facilities at SIBUR Tobolsk include a central gas fractionation plant, production of liquefied hydrocarbon gases, butadiene, isobutylene, and MTBE.

Nizhnekamskneftekhim aims to provide its own financing for part of the project, whilst the main part of finance is to come from international banks.

On 25 May Nizhnekamskneftekhim signed a long-term loan agreement with Deutsche Bank AG for the olefin complex project. The financial

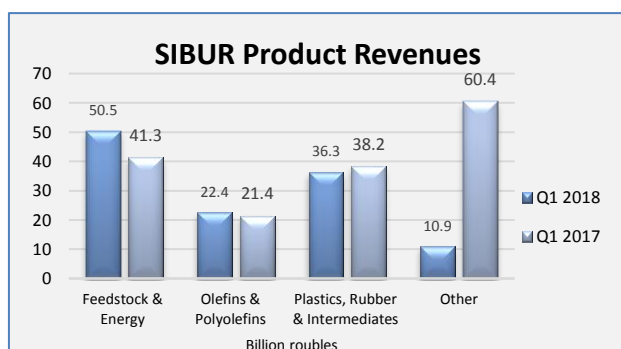
agreement, concluded with the support of the export-credit agency Hermes, is designed for €807 million and will be in effect until 2032. Five German banks will act as lenders, including Deutsche Bank, UniCredit Bank AG, Bayerische Landesbank, Landesbank Baden-Württemberg, and DZ BANK AG. This loan solution will allow Nizhnekamskneftekhim to produce an additional 600,000 tpa of ethylene, doubling current capacity to 1.2 million tpa. The new cracker and related facilities will help increase electricity consumption influencing the company to construct its own power generation which is to be launched by May 2021.

### Russian petrochemical producers



#### Rosneft Q1 2018

Rosneft increased the sales volumes of petrochemical products in the first quarter by 14.3%. Rosneft sold 800,000 tons of petrochemical products in the first quarter this year, against 700,000 tons in the same period in 2017. Sales in the domestic market increased by 25% to 500,000 tons. Rosneft's main petrochemical facilities inside Russia include Angarsk Petrochemical, Angarsk Polymer Plant, Novokuibyshevsk Petrochemical Company, the Ryazan refinery and Ufaorgsintez.



#### SIBUR Q1 2018

SIBUR increased revenues by 11.9% to 120 billion roubles in the first quarter this year, whilst the net profit decreased by 26% and amounted to 26.8 billion roubles. Revenues from olefins and polyolefins increased by 4.7% to 22.404 billion roubles, whilst revenues for plastics, elastomers and intermediate products declined by 4.9% to 36.3 billion roubles. SIBUR's EBITDA increased by 4.8% due to high results in the fuel and raw materials segment and amounted to 42.261 billion roubles. This growth was offset by a slight

decrease in the petrochemical segment due to the narrowing of price margins. Capital expenditure in the first quarter of 2018 increased for SIBUR by 42.6% and amounted to 31.9 billion roubles.

Operating expenses for the SIBUR group increased by 15% in the first quarter this year. Feedstock and materials costs increased on higher volumes of external feedstock purchases, as well as higher prices for hydrocarbons due to the increase in the respective export netbacks.

SIBUR's monomer & Intermediate Production (unit-kilo tons)		
Product	Q1-18	Q1-17
Benzene	47.3	46.4
Styrene	42.3	47.0
PTA	66.7	67.3
Propylene	209.3	218.1
Ethylene Oxide	80.6	78.0
Butadiene	78.1	73.9
Isoprene	23.4	21.7
Isobutylene	52.0	40.0
Ethylene	175.9	171.0

to higher transported volumes of LPG and indexation of railway tariffs. Increase in staff costs was related to the growth in headcount of NIPIGAZ as a result of the expansion in their operations and increase in average salaries.

#### SIBUR's key achievements, Q1 2018

- Gas fractionation volumes increased by 9%
- Liquid hydrocarbons sales volumes increased by 18.3%
- Revenue from LPG sales increased by 31.3%
- Revenue from Polyolefins sales increased by 4.7%
- Revenue up by 11.9%
- EBITDA up by 4.8%
- EBITDA margin amounted to 35.2%
- Total debt decreased by 6.2% from end of 2017

#### SIBUR's financial overview Q1 2018

In the first quarter of 2018 SIBUR's revenue increased by 11.9% to 120 billion roubles. This included an increase of 22.3% in the growth in LPG sales volumes on higher raw NGL fractionation volumes. The increase in revenues from sales of liquid hydrocarbons was also attributable to favourable market conditions.

#### SIBUR gas processing Q1 2018

In the first quarter of 2018, SIBUR's gas processing plants processed 5.6 billion cubic metres of associated gas representing an increase of 2.3%. NGL fractionation volumes increased by 9% to 2.2 million tons. In the first quarter, SIBUR's sales volumes of liquid hydrocarbons increased by 18.3% and totalled 1.5 million tons, while natural gas sales volumes increased by 1.9% and totalled 4.5 billion cubic metres. In the first quarter of 2018, polyolefin sales volumes increased by 3.2% and totalled 210,000 tons, while sales of plastics and organic synthesis products increased by 2.2% to 197,000 tons.

Revenue from olefins and polyolefins increased by 4.7% mostly due to the growth in polypropylene benchmark prices, which was partially offset by a downturn in polyethylene prices. Revenues from the division for plastics, elastomers and intermediates decreased by 4.9% and totalled 36.3 billion roubles.

The EBITDA increased by 4.8% due to strong performance in the feedstock and energy segment, which was counterbalanced by weaker EBITDA in the petrochemicals businesses reflecting tighter spreads. The net profit decreased in the first quarter of 2018 compared to the first quarter of 2017 to 26.8 billion roubles.

Russian Ethylene Production (unit-kilo tons)		
Producer	Jan-Apr 18	Jan-Apr 17
Angarsk Polymer Plant	76.8	75.4
Kazanorgsintez	204.2	194.5
Stavrolen	112.1	99.4
Nizhnekamskneftekhim	212.0	213.4
Novokuibyshevsk Petrochemical	17.7	18.6
Gazprom n Salavat	126.4	120.7
SIBUR-Kstovo	126.3	135.8
SIBUR-Khimprom	17.0	16.4
Tomskneftekhim	95.1	92.1
Ufaorgsintez	42.1	42.1
Total	1029.7	1008.3

#### Russian petrochemical production & sales

##### Russian ethylene & propylene production, Jan-Apr 2018

Ethylene production in Russia dropped 11% in April against March to 243,600 tons, due partly to planned repair work at Kazanorgsintez and SIBUR-Kstovo in the second half of April. The Kazan plant produced 44,100 tons of ethylene, 18% less than in March, and SIBUR-Kstovo reduced monomer production by 40% to 22,000 tons. Nizhnekamskneftekhim and Stavrolen produced 53,200 tons and 28,600 tons respectively, 3% and 5% less than in March. SIBUR-Khimprom was operating in regular mode



and increased monomer production by 22% in April to 5,000 tons. For the first four months of 2018 Russia produced 1.03 million tons of ethylene, 3% more than in the same period in 2017.

<b>Russian Propylene Domestic Sales (unit-kilo tons)</b>		
<b>Company</b>	<b>Jan-Apr 18</b>	<b>Jan-Apr 17</b>
Angarsk Polymer Plant	28.6	26.8
Omsk Kaucuk	0.0	1.0
SIBUR-Kstovo	44.5	26.1
Akrilat	3.3	1.4
Lukoil-NNOS	69.1	68.9
Tomskneftekhim	0.2	1.0
Stavrolen	0.0	2.0
Tobolsk-Polymer	0.2	0.1
<b>Total</b>	<b>145.9</b>	<b>127.4</b>

#### Russian propylene sales Jan-Apr 2018

Propylene sales on the Russian domestic market totalled 40,500 tons in April, 8% up on March. SIBUR Tobolsk increased purchases of monomer 3.5 times to 13,200 tons. This was to cover inventory due to forthcoming repairs. Propylene from the Kstovo plant managed by Lukoil-NNOS was restarted in April when 17,200 tons was delivered.

At the same time, propylene shipments from Lukoil-NNOS to Saratovorgsintez decreased in April by 25% to 12,300 tons. During the first four months of 2018, Russian plants supplied 145,900 tons of domestic products, which is 15% more than in the

same period of 2017. Russian producers sold 47,500 tons of propane-propylene fractions on the domestic market, 2% less than in the first four months in 2017.

#### Russian styrene production & exports Jan-Apr 2018

Russia produced 60,600 tons of styrene in April, which is 2% less than in March. Gazprom neftekhim Salavat reduced production by 5% to 17,200 tons, whilst Nizhnekamskneftekhim reduced production by 17% to 21,900 tons and Plastik by 15% to 5,200 tons. At the same time, after completed maintenance at SIBUR-

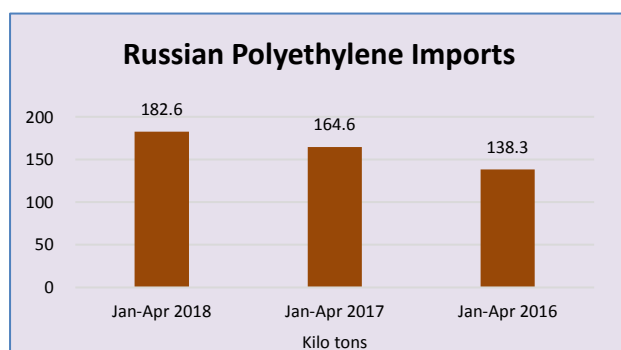
<b>Russian Styrene Production (unit-kilo tons)</b>		
<b>Producer</b>	<b>Jan-Apr 18</b>	<b>Jan-Apr 17</b>
Nizhnekamskneftekhim	98.9	98.4
Angarsk Polymer Plant	13.3	12.8
SIBUR-Khimprom	38.9	38.9
Gazprom n Salavat	69.0	66.4
Plastik, Uzlovaya	22.5	22.4
<b>Total</b>	<b>242.7</b>	<b>238.8</b>

Khimprom production was increased by 42% to 12,900 tons. Angarsk Plant of Polymers produced 3,500 tons. In the first four months in 2018 Russian styrene production increased 1.5% to 242,700 tons.

Russian companies supplied 9,200 tons of styrene to the domestic market in April, 13% less than in March. Styrene exports increased by 26% to 15,400 tons. In April the Angarsk Polymer Plant reduced styrene shipments to domestic consumers by 36% to 926 tons due to higher export activity where volumes rose by 19% to 1,900 tons.

Gazprom neftekhim Salavat increased its exports of styrene by 20% in April to 11,800 tons, whilst supplies to the domestic market fell to 4,500 tons, 24% down against March. SIBUR-Khimprom increased shipments of styrene to Russian consumers almost twofold to 3,700 tons, whilst exports rose from 270 tons to 1,800 tons. In the first four months in 2018, Russian plants exported 49,500 tons, unchanged from 2017.

### Bulk Polymers



#### Russian polyethylene imports, Jan-Apr 2018

Russian polyethylene imports into Russia rose by 8% in the first four months in 2018 to 187,300 tons. HDPE imports rose from 60,900 tons to 80,000 tons, whilst LLDPE imports dropped to 48,300 tons from 58,700 tons. LDPE imports amounted to 28,800 tons against 29,400 tons a year earlier, and EVA imports rose by 30% to 15,200 tons.

Other imports of ethylene polymers amounted to 14,500 tons against 12,500 tons. In the first four months of 2018, HDPE production rose 5% to 327,900 tons, whilst LDPE production rose 4% to 230,800 tons. LLDPE production was unchanged at 60,000 tons.

### Russian polypropylene production, Jan-Apr 2018

In January-April 2018 Russian polypropylene production increased by 7% compared over the same period of 2017 and amounted to 496,200 tons against 467,200 tons. Production in April rose to 130,000 tons against 120,900 tons in March. SIBUR Tobolsk produced 46,800 tons against 39,800 tons in March. For the first four months in 2018 SIBUR Tobolsk produced 173,300 tons of polypropylene.

Russian Polypropylene Production (unit-kilo tons)		
Producer	Jan-Apr 18	Jan-Apr 17
Ufaorgsintez	44.9	41.2
Stavrolen	41.0	38.2
Neftekhimya	45.2	24.8
Nizhnekamskneftekhim	69.6	72.7
Polyom	73.2	70.0
Tomskneftekhim	49.0	46.5
SIBUR-Tobolsk	173.3	173.8
Total	496.2	467.2

The largest increase this year was recorded by the Kapotnya at the Moscow refinery, doubling production to 45,200 tons after significant downtime in 2017.

Polyom increased production by 5% to 73,200 tons in January to April 2018, whilst Tomskneftekhim produced 49,000 tons against 46,500 tons in the same period in 2017. Ufaorgsintez produced 11,200 tons of polypropylene in April, against 11,800 tons in March. For the period January-April the plant increased production from 41,200 tons to 44,800 tons.

SIBUR Polyolefins (unit-kilo tons)		
Production	Jan-Mar 18	Jan-Mar 17
LDPE	68.2	67.9
Polypropylene	163.4	164.9
Purchases from third parties	36.0	19.0
Total	267.7	251.8
Total Sales	Jan-Mar 18	Jan-Mar 17
LDPE	68.7	66.3
Polypropylene	142.5	134.8
Total	211.2	201.1

Stavrolen produced 10,800 tons of propylene polymers in April against 10,500 tons in March. The company increased production by 7% in the first four months to 41,000 tons. Nizhnekamskneftekhim reported a 4% decline in polypropylene production to 69,600 tons.

### Russian polypropylene trade, Jan-Apr 2018

In the first four months of this year, the total volume of imports of polypropylene (PP) to Russia increased by 35% and amounted to 61,900 tons against 45,700 tons. Homopolymer imports rose to 21,000 tons against 14,000 tons, block copolymer imports rose to 16,200 tons from 13,600 tons and random copolymer imports rose from 8,700 tons to 10,800 tons. Other supplies of propylene polymers amounted to 14,000 tons against 9,500 tons.

### Russian PVC, Jan-Apr 2018

Russian PVC production totalled 322,200 tons in the first four months in 2018, 6% up on the same period in 2017 at 302,600 tons. RusVinyl at Kstovo reduced production in April due to maintenance and volumes fell from 30,800 tons in March to 20,900 tons.

Russian PVC Production (unit-kilo tons)		
Producer	Jan-Apr 18	Jan-Apr 17
Bashkir Soda	89.1	86.1
Kaustik	31.4	30.3
RusVinyl	105.5	102.6
Sayanskkhimplast	96.2	83.5
Total	322.2	302.5

RusVinyl produced 105,500 tons in the first four months in 2018 against 102,600 tons in the same period in 2017. Sayanskkhimplast produced 96,200 tons of PVC versus 83,500 tons in the same period last year, whilst Bashkir Soda increased production by 3% to 89,100 tons. Kaustik produced 31,400 tons in the first four months in 2018 against

30,300 tons in the same period in 2017.

In January-April 2018 imports of PVC to Russia amounted to 9,100 tons, which is 23% less than in the same period in 2017 when volumes totalled 11,800 tons. At the same time, due to the low demand from the domestic market, Russian manufacturers were forced to ship resin more actively this year, export sales increased by almost a quarter. China supplied 8,300 tons of imports in the first four months in 2018 against 10,700 tons in the same period in 2017. For January-April 40,500 tons of slurry were shipped for export against 32,800 tons in the same period last year.

## PX-PTA chain

Russian PTA Imports (unit-kilo tons)		
Country	Jan-Mar 18	Jan-Mar 17
Belgium	2.1	13.6
India	4.8	13.5
China	26.2	18.2
South Korea	13.1	12.5
Poland	0.0	3.6
Thailand	8.0	2.0
Total	54.2	63.4

14,400 tons last year.

## Russian PTA &amp; PET imports, Jan-Mar 2018

Russian PTA imports totalled 54,200 tons in the first quarter in 2018 against 63,400 tons in the same period in 2017. China supplied 26,200 tons in the first three months against 18,200 tons last year, whilst India reduced shipments from 13,500 to 4,800 tons. Thailand increased exports to 8,000 tons from 2,000 tons, supplying Russia at \$831 per ton which was the most expensive source in the first quarter.

Imports of PET to the Russian market increased by 12.8% to 21,100 tons for the first quarter of this year versus 18,700 tons. Supplies of bottled PET grew by 21% to 17,400 tons, compared to

## Polief PTA expansion &amp; paraxylene

SIBUR and the government of Bashkortostan have signed an agreement on investment and reconstruction of Polief's PTA plant. The cost of the investment and capacity expansion is estimated at about 6.4 billion roubles (\$103 million). This project is designed to increase PTA production by one third.

SIBUR's PTA & PET Production (unit-kilo tons)		
Product	Q1 18	Q1 17
Paraxylene Purchases	45.0	49.2
PTA Production	66.7	67.3
PTA Domestic Sales	2.7	2.1
PTA Exports	1.2	1.1
PET Production	74.1	74.9

to pressure rotary filters.

As part of the project, eleven existing production buildings at Blagoveshchensk will be modernised, and a significant part of the auxiliary equipment will be updated. The amount of atmospheric air emissions from the production site will be halved after the construction of a modern gas catalytic oxidation unit and the renewal of all gaseous emission cleaning systems. Furthermore, the volume of industrial wastewater produced by PTA is expected to drop by 1.5 times through the transition

In August 2016, SIBUR and Bashneft signed a long-term contract for the delivery of paraxylene for Polief, lasting until 2036. Bashneft will annually deliver at least 120,000 tons of paraxylene to Polief, although there is flexibility in volumes in the case of expanded PTA capacity. Volumes of supplies can

be increased by mutual agreement of the parties. At present, Polief is the only producer of PTA and a major supplier of PET in Russia, with respective capacities of 272,000 tpa and 219,000 tpa.

Russian Benzene Consumers (unit-kilo tons)		
Consumer	Jan-Apr 18	Jan-Apr 17
Kuibyshevazot	77.2	57.5
Azot Kemerovo	50.3	39.2
Shchekinoazot	23.5	17.7
Kazanorgsintez	27.7	21.7
Omsk Kaucuk	9.6	3.5
Nizhnekamskneftekhim	12.5	8.7
Novokuibyshevsk Petrochemical	6.8	14.5
Zapsib	15.9	12.4
SIBUR-Khimprom	22.7	27.5
Promsintez	2.4	6.7
Uralorgsintez	12.8	24.4
Others	7.8	1.5
Exports	27.7	70.9
Total	314.6	307.7

Kuibyshevazot remained the only importer of benzene in April, taking 307 tons from the Atyrau refinery. The reduction in benzene imports is due to the availability of warehouse stocks at Kuibyshevazot, which were

## Aromatics

## Russian benzene sales, Jan-Apr 2018

Benzene sales by Russian producers totalled 314,800 tons in the first four months in 2018 against 307,700 tons in the same period last year. Despite higher production this year all three caprolactam producers have increased benzene purchases in 2018. The main players recording declines this year include Novokuibyshevsk Petrochemical and Uralorgsintez. Benzene exports dropped to 27,700 tons in January to April against 70,900 tons.

formed in February. In the first four months of 2018, 4,000 tons of benzene for synthesis were imported into Russia, which is 18% less than in the same period of 2017.

### Russian benzene production, Jan-Apr 2018

Russian petrochemical companies produced 105,300 tons of benzene for synthesis and nitration in April, 15% less than in March. Uralorgsintez reduced production 2.3 times to 3,100 tons due to maintenance whilst repairs started on 19 April at SIBUR-Kstovo thus reducing production by 46% to 4,400 tons. In addition, Gazprom Neft reduced its benzene output by 20% to 7,900 tons due to increased volumes of toluene production. In the first four months in 2018 Russian benzene production rose 5% to 467,500 tons.

In the second half of May, SIBUR-Kstovo resumed production of aromatic raw materials. In addition, the plant Stavrolen worked without interruption which allowed the company to increase shipments to the domestic market. At the same time, repair works began at the Kirishinefteorgsintez aromatic complex.

Russian Toluene Domestic Sales (unit-kilo tons)		
Producer	Jan-Apr 18	Jan-Apr 17
Novopiletsk MK	0.0	0.1
Slavneft-Yanos	10.8	4.5
Severstal	1.4	1.7
Lukoil-Perm	10.8	1.6
Gazprom Neft	27.4	25.6
Zapsib	0.2	10.8
Kinef, Kirishi	6.8	8.9
Gazprom Neftekhim Salavat	0.0	1.7
Others	0.8	2.5
Total	58.4	57.3

### Russian toluene & orthoxylene, Jan-Apr 2018

Russian sales of toluene on the domestic market dropped 17% in April against March to 15,720 tons. Purchases made by manufacturers of explosives amounted to only 370 tons versus 2,400 tons in April, although plants producing paint and varnish materials increased by 5% to 4,980 tons. Manufacturers of motor fuels and additives reduced purchases of toluene by 44%, to 4,310 tons (27%). In the first four months in 2018, toluene sales on the domestic market amounted to 58,020 tons which is 1% more than in the same period last year.

Sales of orthoxylene on the Russian domestic market dropped 7% in April to 11,840 tons. Kamteks-Khimprom reduced purchases by 17% compared to March to 5,670 tons, whilst Gazprom neftekhim Salavat increased purchases by 9% to 900 tons. Dmitrievsky Chemical Plant also bought 250 tons, whilst domestic paint and varnish manufacturers increased shipments by 3% to 3,200 tons. Manufacturers of fuel, agrochemistry, pharmaceutical and other products purchased 1,830 tons (15%). Sales of orthoxylene on the domestic market were unchanged for the first four months in 2018 at 48,720 tons. Orthoxylene exports from Russia totalled 23,140 tons in the first quarter, 24% down on the same period in 2017.

Russian Orthoxylene Domestic Sales (unit-kilo tons)		
Producer	Jan-Apr 18	Jan-Apr 17
Gazprom Neft	26.8	17.5
Ufaneftekhim	10.7	14.5
Kinef, Kirishi	12.1	7.2
Total	49.6	39.3

Russian Market Phenol Sales by Supplier (unit-kilo tons)		
Producer	Jan-Apr 18	Jan-Apr 17
Novokuibyshevsk Petrochemical	15.5	18.2
Kazanorgsintez	2.9	4.0
Ufaorgsintez	15.1	19.0
Borealis	1.8	1.3
Total	35.2	42.4

### Russian phenol production, Jan-Apr 2018

Russian phenol production dropped 8% in April to 15,500 tons. Ufaorgsintez produced 4,600 tons, unchanged from March, whilst Kazanorgsintez reduced production by 14% to 5,600 tons and Novokuibyshevsk Petrochemical by 8% to 5,200 tons. Repair work on the production of phenol and acetone facilities for Kazanorgsintez will be held from 1 August to 28 August 2018.

Domestic sales of phenol dropped 3% in April to 9,800 tons. Ufaorgsintez supplied 4,700 tons, whilst Novokuibyshevsk Petrochemical supplied 4,350 tons. Phenol sales on the domestic market totalled 35,200 tons in the first four months in 2018 against 42,400 tons in the same period in 2017.

### Ufaorgsintez completes cumene expansion

On 22 May Ufaorgsintez launched its new cumene plant, replacing the old plant which started production nearly forty years ago. Modernisation of the plant has facilitated an increase in capacity to 170,000 tpa, consolidating Bashkortostan's leading positions in the production of acetone and phenol. The new cumene



plant uses modern zeolite catalysts which not only help to increase the selectivity of the process but also to improve the ecological standing of the plant.

#### Omsk Kaucuk, phenol-acetone restart 2018

Omsk Kaucuk aims to restart the modernised and revamped phenol-acetone complex in late 2018. The restart is important not only for phenol and acetone availability, but also other projects being undertaken by Omsk Kaucuk, including epoxy resins and isopropanol. Investment projects are expected to be undertaken the Omsk petrochemical cluster in four stages until 2022 under which the company seeks to combine two clusters including agrobiotechnology and petrochemical. Omsk Kaucuk is currently modernising the equipment for its thermal power plant. The station provides in full the needs for energy and steam for the petrochemical site of Titan and Polyom.

#### Azot Kemerovo-caprolactam & expansion plans

Azot at Kemerovo intends to invest about 9.9 billion roubles into expansion and development of new facilities. The investment programme includes the expansion of caprolactam capacity and the development of adipic acid production facilities. The company's main project includes the expansion in caprolactam capacity from 116,000 tpa to 150,000 tpa and to achieve the production of polyamide 6. The output of ammonium sulphate could be increased from 334,000 tpa to 400,000 tpa. Azot plans to establish the production of soda ash and adipic acid with a capacity of 5,000 tpa and components of emulsion explosives with a capacity of 100,000 tpa.

Azot is part of the SDS Azot group along with the Angarsk nitrogen fertiliser plant. In 2017, Azot produced 592,000 tons of urea, 115,000 tons of caprolactam, 316,000 tons of ammonium sulphate, 228,000 tons of sulphuric acid, 1.1 million tons of ammonia, 854,000 tons of nitric acid, and 1.5 million tons of ammonia.

### Synthetic Rubber

Russian C4 Purchases (unit-kilo tons)		
Consumer	Jan-Apr 18	Jan-Apr 17
Omsk Kaucuk	20.7	17.7
Nizhnekamskneftekhim	58.7	54.0
SIBUR Togliatti	69.4	66.5
Sterlitamak Petrochemical Plant	0.0	1.4
Total	148.7	139.6

#### Russian C4 sales, Jan-Apr 2018

C4 sales on the Russian domestic market amounted to 28,300 tons in April, 19% down on the previous month. Planned repairs at SIBUR-Kstovo meant that deliveries dropped 39% to 6,100 tons whilst Angarsk Polymer Plant also reduced supplies by 39%. In the first four months in 2018 sales of C4s on the domestic market totalled 124,100 tons which is 4% more than in the same period of 2017.

#### Sintez-Kaucuk-new isoprene rubber grades

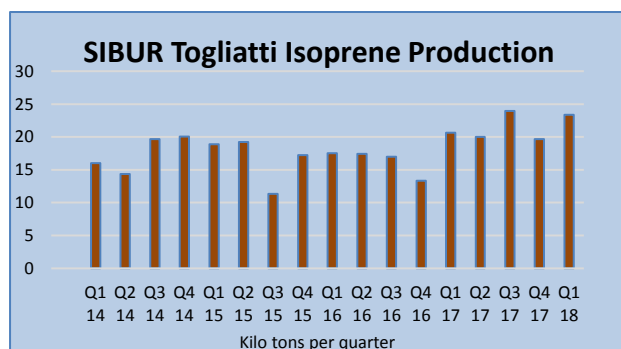
Sintez-Kaucuk at Sterlitamak has started production of a new generation of isoprene rubber, the closest synthetic analogue of which is natural rubber. To obtain the product, various catalytic systems were proposed of which the most successful were based on titanium and neodymium compounds. Neodymium isoprene rubber under the trade marks SKI-5 and SKI-5PM have been put on industrial production, the first of which has proved itself in the tyre and rubber industry, and the second in the manufacture of products for the food industry and medicine. Among the latest achievements is the development of a promising high-performance gadolinium-based catalyst system for the production of cis-polyisoprene. Based on the results of the study carried out in the laboratory of polymerisation, the isoprene rubber synthesized using a gadolinium-based catalytic system has a better microstructure and physical-mechanical properties than the rubber obtained with the use of neodymium compounds.

C4 imports into Russia rose 35% in April over March to 6,600 tons. The increase in imports was due to the fact that there were delays in the return of tanks to Azerkhiyma in March. In April Nizhnekamskneftekhim acquired 4,300 tons on foreign markets, which is 12% more than in March. In addition, Omsk Kaucuk increased purchases of C4s almost five times to 2,300 tons. In the first four months of 2018, Russian companies imported 25,000 tons of the C4s which is 15% more than in the same period in 2017.

#### Russian isoprene monomer modernisation

Nizhnekamskneftekhim has set targets to complete the modernisation of the isoprene monomer plant and expand capacities for the production of isoprene rubber in 2018. At present, the workshop 1806 is preparing for the launch of the third isoprene plant. At the beginning of 2018, Nizhnekamskneftekhim completed the construction of a new isobutylene plant, which allowed it to increase capacity by 160,000 tpa. Current plans include an increase in the production capacity for isoprene rubber SKI-3 from 280,000 to 330,000 tpa. In addition to the commissioning of the production of isobutylene,

Nizhnekamskneftekhim will be able to increase the production of MTBE.



SIBUR has completed one of the stages of technical re-equipment of the isoprene monomer plant at the Togliatti industrial site. The project is scheduled until the end of 2018. An important task within the project was the replacement of a pipeline designed to transport superheated steam. Furthermore, reconstruction of the furnace will reduce the consumption of natural gas by 8% due to the reduction of heat loss.

#### SIBUR completes butyl rubber shutdown

SIBUR has completed scheduled shutdown repairs for the production of butyl rubber at Togliatti. During the shutdown a system of automated process control systems worth more than 137 million roubles was installed.

SIBUR Synthetic Rubber Revenues (billion roubles)		
	Q1 18	Q1 17
Commodity rubbers	7,195	8,802
Domestic	3,011	3,192
Export	4,184	5,610
Specialty rubbers	2,658	3,009
Domestic	397	366
Export	2,261	2,643
Thermoplastic elastomers	2,257	2,334
Domestic	1,298	990
Export	959	1,343
<b>Rubbers, total</b>	<b>12,110</b>	<b>14,145</b>
<b>Domestic</b>	<b>4,706</b>	<b>4,548</b>
<b>Export</b>	<b>7,403</b>	<b>9,597</b>

On the third line of butyl rubber separation, a complete analysis was carried out with replacement and restoration of the parts. Also, several units of pumping equipment were modernised. In place of single mechanical seals, double seals have been installed on the pumps, which eliminates the possibility that process media will enter the atmosphere.

The production of butyl rubber has been switched to a two-year inter-repair cycle since 2016. This allowed the plant to increase productivity, reduce raw material consumption and reduce costs.

#### SIBUR synthetic rubber production & sales Q1 2018

SIBUR's production of synthetic rubber totalled 132,800 tons in the first quarter in 2018 against 130,700 tons in the same period in 2017. Commodity rubber production totalled 85,700 tons against 85,300 tons against 26,900 tons and thermoplastic elastomers 20,500 tons against 18,000 tons in Q1 2017.

SIBUR-Synthetic Rubber Production (unit-kilo tons)		
	Q1 18	Q1 17
Commodity Rubber	85.7	85.3
Speciality Rubber	26.6	26.9
Thermoplastic elastomers	20.5	18.0
3rd part purchases	0.0	0.5
<b>Total</b>	<b>132.8</b>	<b>130.7</b>
SIBUR-Synthetic Rubber Domestic Sales (unit-kilo tons)		
	Q1 18	Q1 17
Commodity Rubber	33.4	30.3
Speciality Rubber	3.0	3.0
Thermoplastic elastomers	11.0	8.9
<b>Total</b>	<b>47.4</b>	<b>42.2</b>
SIBUR-Synthetic Rubber Export Sales (unit-kilo tons)		
	Q1 18	Q1 17
Commodity Rubber	47.4	57.7
Speciality Rubber	22.2	23.4
Thermoplastic elastomers	7.2	12.3
<b>Total</b>	<b>76.8</b>	<b>93.5</b>

Revenues from SIBUR's sales of synthetic rubber dropped in the first quarter both for domestic sales and export shipments, in line with the fall in volumes. Exports of thermoplastic elastomers dropped from 12,300 tons in the first quarter last year to 7,200 tons whilst commodity rubber sales dropped from 57,700 tons to 47,400 tons. Speciality rubber sales declined from 23,400 tons to 22,200 tons. Exports accounted for 61.8% of total rubber revenues for SIBUR in the first quarter against 67.1% in the same period in 2017.

#### Russian synthetic rubber exports, Jan-Mar 2018

Export volumes for Russian synthetic rubber in the first quarter only slightly changed, but values dropped from \$472.3 million in the first quarter in 2017 to \$426.3 million in the same period in 2018. Average product prices dropped in the first quarter from \$1727 per ton to \$1603 per ton, although prices are expected to rise in the second quarter in line with crude oil hikes. By product category, isoprene rubber exports increased from 73,400 tons in the first quarter last year to 78,400 tons in January to March 2018. Isoprene rubber prices fell to \$1436 per ton in the first quarter this year from \$1492.

Russian Synthetic Rubber Exports (unit-kilo tons)		
Category	Jan-Mar 18	Jan-Mar 17
E-SBR	7.4	11.1
Block	6.6	11.5
SSBR	1.7	2.3
SBR	23.9	29.0
Polybutadiene	62.1	63.5
Butyl Rubber	44.3	31.2
HBR	34.8	33.9
NBR	8.5	7.9
Isoprene Rubber	78.4	73.4
Others	0.0	10.1
Total	267.7	274.0

Export sales of both butyl rubber rose in the first quarter from 31,200 tons in 2017 to 44,300 tons in the same period this year. Export prices of butyl rubber dropped from \$1764 per ton to \$1614 per ton. By contrast, average prices for halogenated butyl rubber rose to \$2109 per ton from \$2046 per ton in the first quarter in 2017.

Regarding export destinations for the first quarter, China was the largest recipient of Russian rubber exports amounting to 27,459 tons at an average price of \$1509 per ton. This compares against 37,469 tons in the first quarter in 2017, at \$1904 per ton. Other leading markets included India, Hungary, Poland, and Mexico.

Russian exports to Hungary could be affected later this year after the start-up of the new plant at Tiszaujvaros and the expected reduction in rubber imports. In the first quarter Hungary imported

22,854 tons of synthetic rubber from Russia against 21,865 tons in the same period in 2017. Imports into Poland dropped in the first quarter to 25,616 tons against 35,690 tons in the same period in 2017. Mexico saw a large rise in the first quarter this year, rising to 16,142 tons against 9,128 tons.

### Methanol & related products

#### Russian methanol sales, Jan-Apr 2018

Russian methanol production totalled 1.419 million tons in the first four months in 2018 against 1.337 million tons in the same period in 2017. Russian methanol

Russian Methanol Production (unit-kilo tons)		
Producer	Jan-Apr 18	Jan-Apr 17
Shchekinoazot	146.4	153.7
Sibmetakhim	322.8	335.4
Metafrax	404.5	369.5
Akron	35.6	32.6
Azot, Novomoskovsk	93.7	89.9
Angarsk Petrochemical	0.5	1.4
Azot, Nevinnomyssk	30.0	34.9
Tomet	311.8	251.9
Ammoni	73.7	67.3
Totals	1419.1	1336.7

production increased by 5% in April over March to 368,500 tons. Following maintenance in March Shchekinoazot increased production in April by 40% to 42,100 tons, whilst due to repairs in April Azot at Nevinnomyssk reduced production by 45% to 4,300 tons. Sibmetakhim at Tomsk increased production by 20% to 85,400 tons, whilst other domestic producers of methanol slightly reduced or stabilized capacity utilisation.

In April, the Russian market sold 133,600 tons of methanol, or 2% less than in March. Shchekinoazot resumed production after planned repairs, and reduced sales by 28% to 11,000 tons.

Nizhnekamskneftekhim is the largest individual buyer of merchant methanol on the Russian market, but reduced purchases from 43,700 tons to 28,500 tons in the first two months in 2018. SIBUR Togliatti increased purchases from 19,900 tons to 25,900 tons.

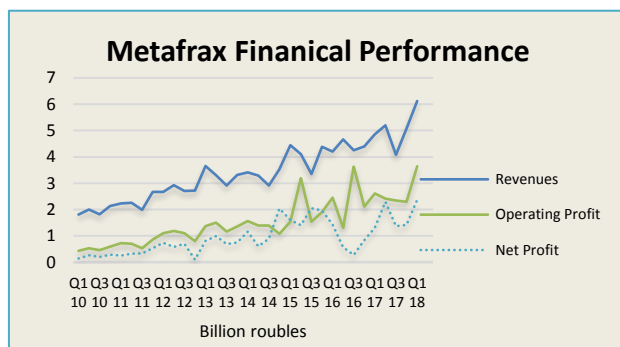
Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Apr 18	Jan-Apr 17
Azot Nevinnomyssk	2.3	6.7
Azot Novomoskovsk	51.2	32.0
Metafrax	85.0	122.4
Sibmetakhim	121.2	134.5
Tomet	194.1	161.8
Shchekinoazot	15.9	14.5
Ammoni (Mendelevsk)	57.7	34.5
Others	0.5	1.8
Total	527.9	508.3

#### Russian methanol exports, Q1 2018

Russian methanol exports totalled 478,000 tons in the first quarter against 441,000 tons in the same period in 2017. Russian methanol exports amounted to 154,500 tons in the March, 4% less than in February. Finnish re-exporters in March reduced purchases of Russian methanol compared to January by 16% to 76,000 tons (49% of exports). Metafrax increased methanol exports in March by 20% to 53,600 tons) and Sibmetakhim by 25% to 37,800 tons). Tomet delivered 26,800 tons to foreign consumers.

The average cost of exported methanol in March decreased by only 2%, to \$326 per ton DAF Russian border. Finland bought more than half of Russian methanol exports in 2017 at 893,500 tons, followed by

Poland with 244,000 tons. Russia ships only small volumes to the Asia-Pacific region which is due to the high costs of transporting products. Sibmetakhim was responsible for 29% of Russian exports in 2017, followed by Metafrax with 22.8%. Both manufacturers are mainly focused on deliveries to Finland.



### Russian methanol exports during World Cup

Transportation of methanol by rail during the World Cup will be stopped. Total losses in the volume of loading for two months are estimated at 315,000 tons, and specifically for methanol 270-280,000 tons.

### Metafrax Q1 2018

The net profit received by Metafrax for the first quarter in 2018 amounted to 2.37 billion roubles, 1.06 billion roubles higher than in 2017. For the

first quarter Metafrax produced commodity products worth 6.18 billion roubles, 29.2% higher. The share of exports in sales was 52.3% versus 43.2% in the first quarter of 2017. Due to higher methanol prices in North-West Europe in the first quarter, Metafrax was able to increase its exports by 10% to 130,000 tons.

### Skovorodino methanol project-start of construction

The ESN group hopes to start the construction of the Skovorodino methanol project in 2018, rather than 2020 as originally planned. The company will invest about 40 billion roubles in the implementation of the investment project. The plant will be put into operation simultaneously with the launch of the Power of Siberia gas pipeline in 2020. Most of the methanol production is targeted for export to China whilst part of it is sold on the domestic market.

To produce 1.2 million cubic metres of methanol, it will take 1 billion cubic metres of gas, which the group would like to buy from Gazprom. The ESN group was established in 1991, specializing in investments in energy, crisis management and strategic management.

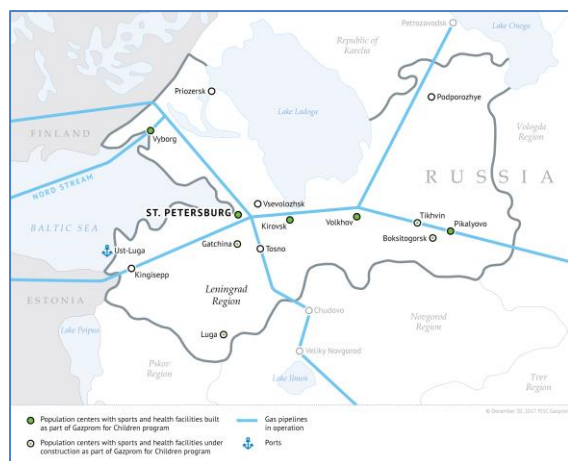
The Skovorodino project has been given priority status in order that when the plant is operational set limits will be placed on how much tax needs to be paid. The company Tehnolizing owns the oil terminal at Skovorodino, but due to falling oil transshipment volumes after the launch of the ESPO oil pipeline the group decided to restructure the business and to start producing methanol. The facility also plans the production of MTBE.

### Shchekinoazot starts commissioning of methanol and ammonia plant

Shchekinoazot started commissioning works at the complex of methanol and ammonia M-450 / A-135 production in June. The launch of the complex is planned for the third quarter of 2018. The project has been managed by the general designer Orgkhim at Severodonetsk started work in 2015. The general contractor for construction has been Russian company Neftezhavodmontazh. The facilities of the complex will produce 1350 tons of methanol and 415 tons of ammonia per day. Total investment in the project amounted to 19 billion roubles (\$306.5 billion)

### Baltic Gas Chemical Company-methanol project

The Baltic Gas Chemical Company has entered into agreements with Mitsubishi Heavy Industries Engineering (MHI) and Haldor Topsoe for the design, construction and operation of a methanol plant at Ust-Luga



on the Baltic coast. Mitsubishi Heavy Industries will be responsible for the preparation of FEED and EPC for the project, while Haldor Topsoe will provide support in terms of basic design, the supply of catalysts and proprietary equipment. The capacity of the plant will be 1.7 million tpa of methanol requiring around \$1.5 billion in investment. The plant has been provisionally targeted to start operations by 2023. In addition to methanol production, the Baltic Gas Chemical Company (BGCC) plans to launch the terminal at its transshipment in the Baltic.

To undertake the project BGCC, Russian Direct Investment Fund (RFPI), and Marubeni recently signed an agreement on trade and investment cooperation.

The parties agreed on the assistance of Marubeni in providing lending from the financial institutions from



Japan under the EPC contract with a Japanese engineering company. The methanol plant at Ust Luga is to be designed to consume around 1.6 billion cubic metres of gas per annum from the Kohtla-Järve-Leningrad gas trunkline. For the construction of the enterprise, BGCC acquired the assets of the Baltic Carbamide Plant project, owned by IST Holding.

The BGCC notes that the transaction will include the methanol plant, the marine terminal and the pipeline infrastructure. To ensure the future production of industrial gases BGCC has concluded an agreement with a leading manufacturer which will construct an air separation plant for oxygen with a capacity of about 90,000

Nm<sup>3</sup>/h. BGCC believes that and the use of industrial gases will significantly reduce capital investments and improve the efficiency of the methanol project.

<b>Russian Chemical Commodity Exports</b>				
	<i>Jan-Mar 18</i>	<i>Jan-Mar 18</i>	<i>Jan-Mar 17</i>	<i>Jan-Mar 17</i>
<i>Product</i>	<i>Kilo tons</i>	<i>USD Mil</i>	<i>Kilo tons</i>	<i>USD Mil</i>
Ammonia	1,040	274	614	130
Methanol	478	153	441	112
Nitrogen Fertilisers	3,299	360	3,159	573
Potash Fertilisers	1,340	109	2,180	398
Mixed Fertilisers	3,287	439	2,727	693
Synthetic Rubber	266	426	274	472

### **Volgograd methanol project-Marubeni**

The Russian Direct Investment Fund (RFPI), the Marubeni Corporation and the infrastructure corporation

AEON have agreed on cooperation in the framework of the project for the construction of methanol production facilities and the organisation of a chemical cluster in Volgograd.

The capacity of the future methanol plant will range from 600,000 tpa to 1 million tpa of methanol. The company has access to guaranteed gas supplies of up to 1 billion cubic metres with a possible increase in the limit of 2-2.5 times. The pilot project for methanol production in cooperation with RFPI and Marubeni Corporation could open other opportunities.

## **Organic chemicals**

<b>Russian N-Butanol Production (unit-kilo tons)</b>		
	<i>Jan-Apr 18</i>	<i>Jan-Apr 17</i>
Angarsk Petrochemical	11.5	12.7
Azot, Nevinnomyssk	3.3	4.1
Gazprom n Salavat	20.8	25.3
SIBUR-Khimprom, Perm	14.8	13.7
Total	50.3	55.8

<b>Russian Isobutanols Production (unit-kilo tons)</b>		
	<i>Jan-Apr 18</i>	<i>Jan-Apr 17</i>
Angarsk Petrochemical	6.3	6.7
Gazprom n Salavat	14.2	11.9
SIBUR-Khimprom, Perm	16.0	17.2
Total	36.5	34.2

<b>Russian Butanol Domestic Sales (unit-kilo tons)</b>		
<i>Producer</i>	<i>Jan-Apr 18</i>	<i>Jan-Apr 17</i>
Gazprom n Salavat	2.5	2.0
SIBUR-Khimprom	9.1	13.0
Angarsk Petrochemical	8.1	2.5
Azot Nevinnomyssk	0.0	0.9
Totals	19.6	13.2

### **Russian butanol production, Jan-Apr 2018**

Russian plants produced 17,960 tons of butanols in April 22% less than in March. The share of n-butanol in the gross volume of butanols production in April 2018 was 52%, and isobutanol 48%. Gazprom neftekhim Salavat reduced production declined by 39% to 5,480 tons, whilst SIBUR-Khimprom reduced production by 12% to 7,990 tons (45%). Angarsk Petrochemical Complex reduced production by 5% to 4,080 tons and Azot Nevinnomyssk dropped 2.1 times to 400 tons. From January to April 2018, butanol production in Russia amounted to 86,810 tons which is 5% less than in the same period last year.

In April 2018 domestic butanol deliveries to the Russian market amounted to 2,990 tons, 43% down against March. The share of n-butanol in gross sales in April 2018 dominated at 83%, and isobutanol 17%. SIBUR-Khimprom reduced sales by 50% to 1,540 tons, whilst the Angarsk Petrochemical Company reduced shipments by 36% to 1,330 tons. Gazprom neftekhim Salavat supplied only 121 tons of n-butanol to Volzhsky Orgsintez in April, after not sending any product to the market in March. Akrikat purchased only 170 tons in April, whilst

Dmitrievsky Chemical Plant purchased 860 tons of butanols in April, whilst Volzhsky Orgsintez increased purchases by 16% to 520 tons. Alcohols from SIBUR-Khimprom and Angarsk Petrochemical Company take most of the domestic

market. In the first four months butanol sales on the domestic market totalled 20,050 tons which was 20% up on the same period in 2017.



Regarding Russian butanol exports, volumes overall doubled in the first quarter to 16,330 tons. N-butanol exports rose from 3,400 tons to 7,900 tons and isobutanol shipments from 4,700 tons against 8,800 tons. In other areas of oxo alcohols, 2-EH shipments fell from 8,700 tons in the first quarter last year to 6,600 tons in the same period in 2018.

#### Russian phthalic anhydride, Jan-Apr 2018

Russian production of phthalic anhydride amounted to 8,860 tons in April 4% less than in March. Kamteks-Khimprom reduced production by 4% to 7,810 tons and Gazprom neftekhim Salavat also dropped 4% to 1,050 tons. From January to April 2018 in Russia produced 35,400 tons of phthalic anhydride which is 2% lower. Recent reports suggest that Roshalsky Plasticizer Plant is aiming to introduce a new plant for the production of phthalic anhydride in

Russian Phthalic Anhydride Production (unit-kilo tons)		
Producer	Jan-Apr 18	Jan-Apr 17
Gazprom neftekhim Salavat	4.2	3.6
Kamteks	31.2	32.4
Total	35.4	36.0

2018, although no information is available on capacity size, etc.

Russian Organic Chemical Exports		
Product	Jan-Mar 18	Jan-Mar 17
N-Butanol	7.9	3.4
Isobutanol	8.8	4.7
2-EH	6.6	8.7
Pentaerythritol	3.0	2.7
Phenol	2.7	1.9
Ethylene Oxide	3.7	2.8
Formaldehyde	4.4	6.9
DEG	4.0	6.0
MEG	4.8	17.0
Acetone	5.5	14.5
Acetic Acid	12.2	9.6
VAM	6.9	12.8
Butyl Acetate	5.2	6.7
Acrylic Acid	7.1	2.8
Acrylates	12.2	5.0
Phthalic Anhydride	17.6	16.6

In March, exports of phthalic anhydride from Russia amounted to 3,530 tons which is 58% less than in February. Pakistan accounted for 28% of supplies from Russia), Egypt (22%), Poland (14%), the USs (9%) and Finland (6%). In the first quarter in 2018 Russia exported 14,580 tons of phthalic anhydride which is 7% higher than in 2017.

#### Russian DOP trade, Jan-Mar 2018

Russian DOP exports amounted to 247 tons in March, versus 130 tons in February. Nearly all of Russian exports went to Uzbekistan. Kamteks-Khimprom exported 141 tons of DOP in March and the Ural Plasticizer Plant 105 tons. In the first quarter in 2018 Russian DOP exports totalled 481 tons which was 5% up on the same period in 2017. DOP imports into Russia totalled 3,360 tons in the first quarter in 2018 against 314 tons in the same period in 2017.

#### Russian organic chemical trade, Jan-Mar 2018

Butanol exports from Russia increased in the first quarter this year, although remain lower than the volumes recorded prior to the start-up of the Salavat acrylic acid complex in 2017. Normal

butanol export shipments rose to 7,900 tons versus 3,400 tons, whilst isobutanol volumes increased from 4,700 tons to 8,800 tons. The Salavat complex has facilitated a significant rise in Russian acrylic acid and acrylate exports in the past year. Acrylic acid exports rise from 2,800 tons in the first quarter in 2017 to 7,100 tons whilst acrylate exports rose from 5,000 tons to 12,200 tons. In other areas of organic chemical trade acetic acid rose from 9,600 tons in the first three months in 2017 to 12,200 tons whilst vinyl acetate monomer exports dropped from 12,800 tons to 6,900 tons.

#### Metafrax-pentaerythritol expansion

Metafrax expects to complete the first phase of the project to modernise the production of pentaerythritol in the third quarter this year. The project is divided into three stages, the first of which involves the launch of an additional technological line where dipentaerythritol production will be carried out. At the second stage, the site for the synthesis of the product is planned to be modernized, on the third stage the processing of technical queen cells is planned.

Eurasian Imports of MDI 2018		
Country	Jan-Mar 18	Jan-Mar 17
Belgium	2.8	5.6
Hungary	1.5	1.5
Germany	4.0	9.7
Spain	0.0	0.1
China	2.8	1.7
South Korea	0.0	0.2
Netherlands	7.2	6.5
Lithuania	0.1	0.0
Saudi Arabia	7.5	0.0
Turkey	0.1	0.0
Japan	0.4	0.2
Total	26.5	25.5

Eurasian TDI Imports (unit-kilo tons)		
Country	Jan-Mar 18	Jan-Mar 17
Hungary	2.7	3.4
Germany	5.2	3.9
Denmark	0.0	0.1
China	0.0	0.2
South Korea	0.3	1.2
Saudi Arabia	1.5	0.0
US	0.6	1.9
Japan	0.5	0.1
Poland	0.1	0.0
Total	11.1	10.8

After completing all three stages of modernisation, Metafrax will significantly increase the production capacities for commodity pentaerythritol and sodium formate. In addition, the consumption rates of raw materials and electricity will be significantly reduced. Capital investments in the project are estimated at 1 billion roubles. Metafrax has not used borrowed funds for this project.

Pentaerythritol is used in the production of alkyd resins, pentaphthalic varnishes and enamels, synthetic lubricating oils, pentaplast, plasticizers and antioxidants for polymers, heat stabilizers, for the synthesis of surfactants.

#### Isocyanate project Tula

Further consideration has been given to the large-scale investment project in the Tula region to create a complex for the production of propylene oxide, TDI and MDI. This project represents an investment of around 30 billion roubles and the creation of 1,250 new high-performance jobs. TDI imports into the Eurasian economic area totalled 11,100 tons in the first quarter against 10,800 tons in the same period in 2017, whilst MDI imports rose to 26,500 tons from 25,500 tons.

#### Saratov new chemical plant

A new plant will be constructed in the Saratov region by the end of 2018, from which its products will be used in pharmaceuticals and construction materials. The chemical plant, where sodium metal and synthetic calcium carbonate will be produced, will open in the Tatishchevsky district. The opening of the plant is scheduled for November-December 2018 involving investments of about 1.5 billion roubles.

## Ukraine

### Ukrainian PVC imports, Jan-Apr 2018

PVC imports into Ukraine dropped 8% in the first four months in 2018 to 25,800 tons against 28,000 tons in the same period in 2017. In the first four months of the year, imports from the United States amounted to 18,100 tons against 6,800 tons in the same period in 2017. Ukrainian imports of PVC dropped to 6,400 tons versus 15,400 tons in the first four months in 2017.

#### Karpatneftekhim-LPG supplies from Rosneft

Karpatneftekhim started receiving direct deliveries of liquefied gas in May from Rosneft. The company received 4,500 tons of butane fraction in May from the Novokuibyshevsk Petrochemical Company and the Ryazan oil refinery, which are part of Rosneft's structure. Butane was acquired from the Swiss non-resident Proton Energy Group, which is the exclusive seller of Rosneft's liquefied gas at the Ukrainian-Russian border. The total imports of liquefied gas by Karpatneftekhim in May amounted to 11,400 tons. In addition to Rosneft's gas, Karpatneftekhim purchased butane from Omsk Kaucuk and Nizhnekamskneftekhim.

Karpatnsmoly increased purchases almost fourfold, up to 725 tons in April, whilst Ukrgazodobycha took 3,500 tons). Ukratnafta in April stopped buying imported methanol.

### Ukrainian imports of methanol, Jan-Apr 2018

Ukrainian methanol imports rose 51% in April over March to 4,200 tons. The increase in imported methanol was due to a seasonal increase in demand whilst also prices were lower in April, dropping by 6%, to \$455 per ton DAF Ukrainian border. Russian suppliers shipped 3,100 tons and Azot from Belarus 1,100 tons.

Ukrainian PA/DOP Imports (unit-kilo tons)		
Product	Jan-Apr 18	Jan-Apr 17
Phthalic Anhydride	1.080	1.050
DOP	0.9	0.8

### Ukrainian imports of phthalic anhydride-Jan-Apr 2018

Imports of phthalic anhydride into Ukraine amounted to 186 tons in April versus 398 tons in March. Lakokraska at Lida supplied 79 tons, 22 tons came from Austrian company Atmos, 21 tons from Bulgarian plant Orgachim at Rouse chemicals and 20 tons from Kamteks-Khimprom. In the first

four months of 2018, Ukraine imported 1,080 tons of phthalic anhydride which is 3% more than in the same period last year.

<b>Belarussian Acrylonitrile Exports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Mar 18</b>	<b>Jan-Mar 17</b>
Russia	1.3	0.2
Hungary	0.5	1.1
India	0.0	2.0
Iran	0.6	2.4
Netherlands	0.0	6.7
Romania	0.0	0.0
Turkey	10.0	2.0
UAE	0.0	0.0
Portugal	0.0	0.0
<b>Total</b>	<b>12.4</b>	<b>14.4</b>

## Belarus

### Belarussian chemical production, Jan-Apr 2018

In the first four months of 2018 Polymir at Novopolotsk produced 22,000 tons of LDPE which is 6% more than in 2017. Polymir produced 5,400 tons in April against 5,600 tons in March. Polymir undertook a maintenance shutdown between 5-20 May 2018.

Regarding petrochemicals, Naftan reduced benzene production by 7.2% in April to 10,400 tons. At the Polymir plant in April, 4,300 tons of propylene and 6,400 tons of ethylene were produced, which is 6% and 5% less than in March respectively. The reduction in the production of monomers is due to the preparation for planned repairs, which began on 1 May. In the first four months in 2018 Belarus produced 15,800 tons of propylene, 25,600 tons of ethylene, 46,500 tons of benzene and 43,000 tons of caprolactam. In April, Grodno

Azot reduced its methanol production by 40% to 4,800 tons due to maintenance.

### Belarussian polymer trade, Q1 2018

In the first quarter PVC imports into Belarus increased by 49% to 8,800 tons against 6,000 tons a year earlier. The main increase in demand for PVC was seen by local window manufacturers. The key suppliers of resin in Belarus in the first quarter consisted of producers from Russia, accounting for 89%, followed by Germany and Ukraine.

Polypropylene imports into Belarus totalled 23,000 tons in the first quarter against 22,000 tons in the same period in 2017. Homopolymer imports rose 7.3% to 15,800 tons, whilst copolymer imports declined from 7,300 tons to 7,200 tons. Polyethylene imports declined by 0.7% in the first quarter to 31,300 tons the demand for HDPE has increased, whereas the demand for linear polyethylene (LLDPE) has declined. LDPE imports remained unchanged at 9,100 tons, whilst LLDPE imports dropped from 12,000 tons to 7,000 tons. HDPE imports rose by 44% to 15,300 tons.

<b>Belarussian Organic Chemical Exports (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Mar 18</b>	<b>Jan-Mar 17</b>
Acrylonitrile	12.5	14.4
Caprolactam	6.3	4.5
Phthalic anhydride	12.4	5.4
Methanol	3.5	3.3

### Belarussian organic chemical trade, Jan-Mar 2018

Belarussian acrylonitrile exports amounted to 12,400 tons in the period January to March 2018 against 14,400 tons in the same period in 2017. The largest destination for Belarussian exports was Turkey which took 10,000 tons against only 2,000 tons in the same period last year. Average prices for Belarussian acrylonitrile exports rose to \$1607 per ton in the first quarter this year against \$1236 per ton in 2017.

<b>Belarussian Methanol Market (unit-kilo tons)</b>		
	<b>Jan-Mar 18</b>	<b>Jan-Mar 17</b>
Production	23.0	21.8
Exports	3.5	3.3
Imports	16.1	11.7
Balance	35.6	30.2

Caprolactam exports from Belarus rose slightly in the first quarter, to 6,300 tons against 4,500 tons in the same period in 2017. Phthalic anhydride exports rose from 5,400 tons to 12,400 tons, with average prices rising from \$834 per ton to \$899 per ton. Belarus exported 4,099 tons of phthalic anhydride to Russia in the first quarter in 2018 against 2,298 tons in the same period in 2017. Russian consumers paid more than the average price, importing

Belarussian phthalic at \$930 per ton, versus \$899. The second largest destination in the first quarter this year was India, taking 2,318 tons at \$868 per ton.

In other areas of chemical trade, methanol export shipments amounted to 3,529 tons in January to March 2018 against 3,279 tons in the same period in 2017. Average methanol export prices rose to \$355 per ton in the first quarter against \$318 last year. Methanol imports into Belarus totalled 16,135 tons in the first



quarter, at \$318 per ton, against 11,653 tons in the same period in 2017 at \$290 per ton. Methanol consumption in the first quarter totalled 35,600 tons against 30,200 tons in the first quarter last year.

Belarussian PTA Imports (kilo tons)		
Country	Jan-Mar 18	Jan-Mar 17
Russia	1.2	1.1
Belgium	0.5	0.5
South Korea	5.3	11.8
Poland	6.0	3.6
Total	13.0	17.0

Regarding PTA imports into Belarus, volumes amounted to 13,000 tons in January to March 2018 against 16,798 tons in the same period in 2017. Imports in the first quarter this year came largely from Poland with 5,983 tons, followed by South Korea with 5,324 tons. Russian imports amounted to 1,157 tons versus 1,097 tons in the same period last year. PTA import prices rose to \$804 per ton the first quarter against \$738.

### Central Asia/Caucasus

#### Turkmenistan-chemical projects

In addition to the ongoing construction of the gas-chemical and polyolefin complex at Kiyarly on the Caspian coast Turkmenistan is planning another gas-chemical complex for the production of polypropylene, LLDPE, PVC as well as caustic soda, hydrochloric acid, and liquid chlorine. The feasibility study was prepared by the State Scientific Research Institute of Natural Gas Türkmengaz.

In addition, a project is underway to build a methyldiethanolamine (MDEA) plant in Kiyarly, through the processing of 4,000 tpa of ethylene gas and 2,000 tpa of methanol. Along with this, the possibility of building a plant for ethane processing and production of polyvinyl acetate, with a capacity of 55,000 tpa is being studied at the fields of Central Karakum located near the Kiyarly gas compressor station in the Dashoguz velayat.

#### Turkmenistan-BOPP start-up

The Turkmenbashi complex of oil refineries (TKNPZ) has produced the first 90 tons of BOPP film, from the plant capacity that could rise to 21,000 tpa. After the end of construction by 1 July, the plant will produce BOPP-film of two types: transparent single-layer and co-extrusion. The production will use polypropylene, which is produced at the facilities of a complex of oil refineries.

#### Urea projects in Turkmenistan & Azerbaijan close to start

The urea project at Turkmenistan at Garabogaz is being prepared for launch. The project, sponsored by the state concern Turkmenkhimya, is being undertaken by a consortium of companies Mitsubishi Corporation (Japan) and Gap İnşaat (Turkey). Mitsubishi Corporation has installed equipment for industrial processing of natural gas into ammonia and urea, and currently the process chain is being commissioned. The plant will produce 3,500 tons per day, and 1.155 million tpa. About a third of the products will be delivered to the domestic market, and the rest made available for export. Currently the

construction of the quay at Garabogaz is being completed.

#### Nairit restart?

Armenian synthetic rubber producer Nairit after a full financial and technical audit could resume its work within one year. The signing of the memorandum is scheduled for the next two months, after which the banks can accurately assess the plant's condition and clarify the amount of necessary investments that will allow it to resume its work. According to rough estimates, after the audit, it will take a year for the plant to start operating again. The amount of the proposed investment will vary depending on how many production lines will be launched. The launch of one acetylene production line requires an investment of €20 million. The launch of other lines costs about €100 million, thus requiring a total of about €120-130 million. Nairit has been idle since March 2010. According to the estimates of the Ministry of Energy of Armenia, the restart of the Armenian chemical plant Nairit will be economically feasible only with an annual rubber production of at least 10-12,000 tpa.

expected that the transportation of equipment will be completed at the plant site by October 2018.

The urea plant for SOCAR in Azerbaijan has forecast production of about 50,000 tons in 2018, following start-up as scheduled in October this year. Azerbaijan's domestic demand for urea is estimated at 150,000 tpa, but with the commissioning of the enterprise, the demand is expected to increase to at least 200,000 tpa.

#### SOCAR-ethylene and polyethylene olefin construction progress

As of late May, SOCAR had completed 36% on the reconstruction of the existing ethylene-polyethylene plant at Sumgait. Start-up of operations is planned for the first quarter of 2020. The project engineering had been completed in May to a level of 90%, whilst work on procurement of equipment and components are made by 50%, and construction 16%. It is

As a result of the project, the production of ethylene will increase from the current levels of 100-105,000 tpa to 192,000 tpa and the production of propylene from 50-55,000 tpa to 187,000 tpa. Although the completion date remains uncertain Azerkimiya will be able to provide new polyethylene and polypropylene plants for

SOCAR Polymer in Sumgait with the necessary olefin feedstocks. The Ethylene-Polyethylene plant was put into operation in January 1988 as a petrochemical complex at the Sumgait Synthetic Rubber Plant.

SOCAR is also engaged in a possible petrochemical project at Izmir in Turkey. Required licenses were obtained from BP and Axens. The capacity of the enterprise will be 1 million tpa of purified PTA and polypropylene.

**Relevant Currencies**

Czech crown. Kč. \$1=20.4. €1 = 25.4; Hungarian Forint. Ft. \$1 = 250.2. €1 = 311.2; Polish zloty. zł. \$1=3.35. €1 =4.16 Ukrainian hryvnia. \$1 = 27.14 €1 = 33.7; Rus rouble. \$1 = 76.3 €1= 79.9

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