

# CIREC

## MONTHLY NEWS

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

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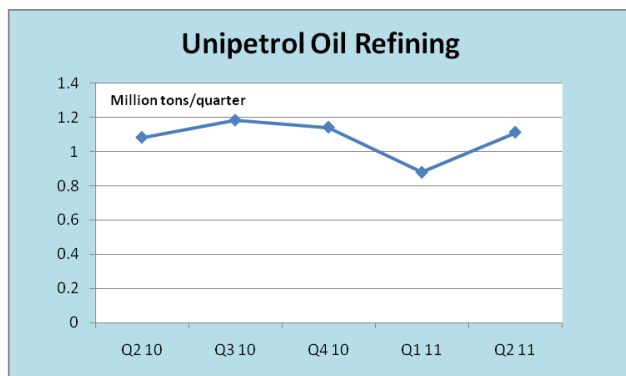
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# CENTRAL & SOUTH EAST EUROPE

## Petrochemicals



### Unipetrol, first half 2011 performance

Unipetrol estimates that the reported EBIT in the second quarter 2011 will be positive but worse than the EBIT reported in the first quarter 2011. Operations with CO2 allowances are estimated to have had a positive on EBIT of approximately Kc 200 million in the second quarter in 2011.

Refined volumes at the Unipetrol refineries were higher in the second quarter, but profitability was affected by lower refining margins. Unipetrol reported a 10% rise in first-quarter operating

profit after higher oil prices boosted the value of its feedstock reserves. In the petrochemical division sales were down for most products, aside benzene and butadiene. The start-up of the new butadiene plant at Kralupy last year has led to an average of around 15,000 tons being sold on the open market.

### Unipetrol's Petrochemical Sales (unit-kilo tons)

Product	Jan-Jun 11	Jan-Jun 10
Ethylene	79	90
Propylene	21	26
Benzene	111	106
Urea	94	98
Ammonia	71	76
Butadiene	29	1
HDPE	138	147
PP	117	126
C4	41	82
Totals	701.0	752.0

The main factors that influenced the quarter-on-quarter performance of the petrochemical division in the second quarter were slightly higher olefin margins as well as polyolefin margins. Propylene margins rose by 2% against the first quarter. Total sales volumes were down due partly to weaker monomer sales.

### Unipetrol, ethylene plant and dismissed EC fine

Unipetrol reduced output at the ethylene unit at Litvinov for two days in July after a fault in the cooling system. Production volumes were only slightly affected. A European court has dismissed fines against Unipetrol and Kaucuk at Kralupy for participation in a cartel after winning its battle against a European Commission fine imposed for allegedly taking part in a price-

fixing and competition-distorting cartel. The European Court of Justice announced in July that it was striking down fines totaling €17.55 million against Unipetrol and Kaucuk imposed in 2006 for participation in a Europe-wide cartel. Kaucuk was sold off in 2007 to Firma Chemiczne Dwory, which is now the Synthos group

### Czech Exports to Germany (unit-kilo tons)

Product	Jan-Apr 11	Jan-Apr 10
Ethylene	8.307	3.114
Propylene	2.843	0
Butadiene	1.265	0.468
Benzene	4.895	9.895
Acrylates	4.186	4.095
Epichlorohydrin	1.062	1.037
HDPE	21.16	14.049
Polypropylene	12.345	14.904

### Unipetrol, export dependency for petrochemicals

Unipetrol is the exclusive producer of polyolefins in the Czech Republic and a major player in Central Europe. Its production capacity for HDPE and polypropylene accounts for more than 5% of Europe's HDPE capacity and almost 3% of Europe's polypropylene production capacity. The HDPE capacity at Litvinov greatly exceeds the domestic market's consumption, and almost three quarters of the HDPE produced is exported outside of the Czech Republic.

The total consumption of polypropylene on the domestic market exceeds the polypropylene quantity produced, which is why only about one half of the polypropylene produced is exported outside the Czech Republic. The principal markets last year, along with the Czech Republic, included Germany, Ukraine, Slovakia, Austria, and Hungary.

### PKN Orlen refinery news

Second-quarter operating profit at PKN Orlen edged down to zł 1.04 billion (\$357 million) due to lower margins and production levels. The quarterly result from the same period last year was zł 1.1 billion. Maintenance at its main Plock refinery lowered refining output by 2%, with its overall margin, including the

refining margin and the Ural-Brent oil price spread, down 34%. PKN Orlen refines cheaper Ural oil, while its products are priced on more expensive Brent.

**Polish Exports to Germany (unit-kilo tons)**

Product	Jan-Apr 11	Jan-Apr 10
Benzene	18.429	13.187
Toluene	10.596	14.563
Caprolactam	16.056	5.726
Melamine	4.906	3.939
N-butanol	2.824	2.024
Isobutanols	0.797	0.833
2-EH	1.451	1.073
MEG	7.562	2.126
DOP	4.125	1.625
Acetic Acid	1.455	1.211
HDPE	9.155	16.166
LDPE	5.197	4.976
Polypropylene	11.008	9.177
PVC	5.726	7.828
Polyamide	11.295	10.29
UPRs	4.935	3.283
Epoxy Resins	1.846	0.896
Polyacetals	1.305	1.532
Polyacetals	1.305	1.532

TNK-BP has signed its first direct crude oil supply contract with PKN Orlen. TNK-BP will ship up to 300,000 tons of crude to PKN Orlen in the third quarter, although it is not clear yet if that will be through pipeline allocation or by tanker. PKN Orlen signed a spot agreement in June with Shell International Trading and Shipping Company (STASCO), for crude oil deliveries to Orlen Lietuva in Lithuania. The estimated net value of the agreement amounts to \$82 million (i.e. approximately zł 230 million). The total value of agreements signed between PKN Orlen and STASCO in the second quarter amounted to \$841 million (i.e. approximately zł 2 287 million).

The Paramo refinery, which is part of Unipetrol, has won the contract for delivery of cationic asphalt emulsion for the Liberec region for the next 12 months. Under the agreement, Paramo will keep the Regional Road Administration Region Liberec and deliver cationic asphalt emulsion containing 65% binder to repair local roads. Paramo is a leading producer of asphalt in the Czech Republic. The major customers include large construction companies in building and repairing roads.

**Synthos-biological butadiene**

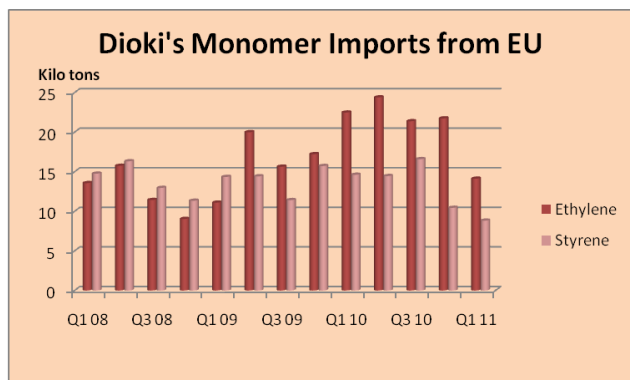
Global Bioenergies in France has announced that it entered into a strategic partnership with Synthos for the production of biological butadiene, a market estimated at \$30 billion. The French group said that the partnership relates to a method for converting renewable resources into butadiene. This collaboration includes research funding, payments to the tune of several million euros to

finance development, royalties, and a distribution of royalties. The agreement also provides for a stake in the capital of Synthos Global Bioenergies up to €1.4 million.

Synthos is the only chemical entity in Poland to record better results. The group is expected to show a profit of zł 200 million for the second quarter. Vertical integration would clearly increase margins for Synthos using products such as benzene, ethylbenzene and styrene. Butadiene prices remain a major problem, although part of the requirements is met through the jv with Unipetrol.

**Dioki-INA feedstock dispute**

Croatia is arranging a debt-for-equity swap through the Ministry of Economy that would leave INA and creditor banks with shares in Dioki. Dioki owes 68 million Kuna (\$12 million) to INA, which it has run for gas costs, and 160 million Kuna to the national power board. Dioki, which owns Dina-Petrokemija d.d. on the island of Krk, also owes millions of Kuna to local banks. The debt deal is being arranged by the Ministry of Economy.



INA has recently been considering the termination of deliveries of ethane and natural gas to Dioki due to unpaid debts. While gas is completely derived from Croatian sources, INA charges around 40% more than the price of gas than is recorded in regional neighbours such as the Czech Republic, Hungary and Italy. As a result the company has run substantial debts which have not been offset by polymer prices. The Croatian government owns 44.84% of INA's stock, while MOL owns another 47.47%.

**BorsodChem-TDI**

BorsodChem, now a unit of China's Wanhua Industrial Group, started test production at its new TDI plant on 11 July. Wanhua made €80 million available to BorsodChem to restart construction of the TDI-2 plant last autumn. The new plant adds 160,000 tpa to

### Faurecia Group

The Slovakian offshoot of Nanterre, France-based Faurecia group is said to have plans to launch interiors production at Kosice. This plant is due to supply interior parts to a list of global automotive customers including Audi, Volkswagen, PSA Peugeot Citroen, Ford and Jaguar/Land Rover. The additional capacity will lead to the creation of 700 jobs, TASR quoted Faurecia's local personnel manager Nora Batova as stating. Faurecia Automotive Slovakia already employs 330 at the plant. It has other national plants located in Bratislava, Trnava, Zilina, Lozorno and Hlohovec. Faurecia is already investing more than €11 million in a project to boost dashboard and door panels and centre console production at Hlohovec. The work includes the addition of a new parts assembly hall and storage and administration buildings, and was due for completion this year. The facility, located in Poland's Lodz Special Economic Zone, will produce a range of latex foams and wire components intended for mattresses and upholstered furniture.

### L-Correct

L-Correct is planning to manufacture a new generation of latex foam for the furniture industry at a plant it aims to construct in Ociazu, Poland. The L-Correct project involves investment of around €17.5 million and will lead to the creation of 100 jobs. L-Correct is part of Correct - K. Blaszczyk & Partners, and expects the operation will provide the domestic Polish furniture market with innovative foams. These products are currently imported from suppliers in countries such as France, Italy, Belgium and Spain. The plant will be close to the group's existing plant in the Lodz SEZ's sub zone of Nowe Skalmierzyce. This operation has expanded in 2006 and 2008 with an overall investment worth €70.3 million.

BorsodChem's existing TDI capacity and production at the new plant could be boosted to 200,000 tpa later depending on demand. BorsodChem's total TDI capacity will rise to 250,000 tpa of the two-month test production phase winds up, making the company the biggest producer of TDI in Europe. BorsodChem is also expanding its capacity for MDI this year. Together with the 800,000 tpa capacity of group member Yantai Wanhua Polyurethanes, Wanhua is the world's third-biggest producer of MDI. BorsodChem's MIDI-2 plant shut down from seven weeks from July 22 to undergo developments. BorsodChem achieved revenues of €750 million in 2010.

### Oltchim-Arpechim

Oltchim has requested a transfer of the refinery operations at Arpechim from Petrom in order to integrate the petrochemical facilities and improve the economics of production. PCC and German investment fund Carlson Ventures International, which together own 31.3% of Oltchim have signed an agreement to participate in the privatisation process of the company. PCC and Carlson Ventures International intend to act concertedly in buying shares in Oltchim, which would allow PCC to extend its influence and pursue its own business plan which differs greatly from the current management. Carlson has decided to support PCC's strategy and business plan for Oltchim, having earlier this year bought 14% through Nachbar Services.

PCC and Carlson are calling for an urgent restructuring plan within Oltchim. Despite Oltchim's financial struggle, the company's management is focused on buying used assets, such as the Pitesti cracker which was closed down

by OMV and requires major investments. The Oltchim management strategy is claimed by PCC to be pursuing the wrong strategy in trying to develop the company as a petrochemical player without any cost advantage. Oltchim already holds total debts of over €550 million. The Romanian government has pledged to privatise the company in response to a request of the International Monetary Fund, but it is unlikely to take place this year.

## Chemicals

### Leading Polish Chemical Companies Turnover 2010

Company	Revenues zł million	Revenues €million
PKN Orlen	63,047	15,762
Synthos	3,917	979
BOP	3,029	757
ZA Pulawy	2,297	574
ZCh Police	2,018	505
Anwil	1,903	476
ZAK	1,785	446
ZA Tarnow	1,576	394
Zachem	900	225
PCC Rokita	880	220
Petrochemia-Blachownia	226	56
PCC Synteza	123	31

### Polish chemical reorganisation & investments

The reshuffle in the Polish chemical industry could lead to the formation of two groups of fertiliser and chemicals. The Polish Office of Competition has recently approved the 66% acquisition of ZCh Police by ZA Tarnow. ZA Tarnow wants to buy 66% of ZCh Police with a view towards creating a large Polish chemical company based around fertilisers.

ZCh Police has already identified several synergy effects of a potential merger with ZA Tarnow. After already merging with ZAK last year, the incorporation of ZCh Police into the ZAT group would create a strong capital group that could compete with Europe's biggest chemical companies. In terms of revenues for 2010 ZA Tarnow was lower than ZCh Police and also ZAK. ZA Tarnow claims to be in favour of further takeovers, viewing Spolana as the possible next acquisition target. ZA Pulawy has already shown interest in ZCh Police, but has been unable to buy the shares and has been somewhat outflanked. Practically the only chemical company that ZA Pulawy is capable



of buying is Anwil.

ZA Tarnow should know the outcome of the application to purchase shares in ZCh Police by mid-August. As the purchase of even a minimum number of shares requires nearly zł 440 million, ZA Tarnow has reached agreement for a bridging loan. If successful, the enlarged group will use a number of synergies, such as an increased scale of operations, and an increase in the product range for fertilisers. Other advantages include improvements in the efficiency and conditions of supply for raw materials (including natural gas), balancing the supply and production of ammonia for the enlarged group, logistics, investment and research and development.

<b>Polish Chemical Production (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-May 11</b>	<b>Jan-May 10</b>
Caustic Soda Liquid	121.1	120.2
Caustic Soda Solid	21.6	26.2
Soda Ash	405.3	397.9
Ethylene	229.6	199.7
Propylene	152.1	125.8
Butadiene	26.2	23.5
Toluene	46.9	32.2
Phenol	17.6	11.3
Caprolactam	72.6	70.2
Polyethylene	156.3	134.7
Polystyrene	53.5	55.3
PVC	119.2	88.7
Polypropylene	99.8	94.0
Synthetic Rubber	77.9	66.3
Pesticides	11.2	11.8

Such consolidation is seen as important for investment. In recent years, investments have largely been undertaken on necessary projects involving plant modernisation rather than completely new products aimed at meeting demand. Recent projects can be divided into reconstruction, or those investment tasks required by law and in compliance with EU regulations. Such projects include approximately zł 250 million of investment into a new installation of nitric acid at ZAK's Kedzierzyn plant whereby the old plant needed to be closed as it did not comply with environmental regulations.

Major challenges face most of the large scale Polish chemical companies in respect to CO<sub>2</sub> levels and other emissions, which threaten to impose significant costs. The EU countries have committed themselves to reduce CO<sub>2</sub> emissions by 20% by 2020, which may represent an unattainable target for the Polish chemical industry taking into account the capital costs that are required. The most recent olefin based project took place in 2005 with the start-up of the BOP polyethylene and polypropylene plants at Plock. For aromatics PKN Orlen has started its new PTA

and paraxylene plants in the past few months which have been the most capital intensive of projects in the past decade.

### **ZA Pulawy-AdBlue**

ZA Pulawy has completed a major investment project which increases its AdBlue production capacity from 30,000 tpa to 100,000 tpa. The project has included a significant intensification of ammonia production, as well an increase in urea production capacity by over 270,000 tpa to 1,215,000 tpa. At the forefront of this strategic investment was the construction of a new oxygen generation plant to replace the old units which had a smaller capacity. ZA Pulawy is currently working on a project to further expand its production of urea for the fertilisers market.

### **ZA Tarnow-ZAK**

ZA Tarnow expects to receive zł 665 million (\$238 million) from a rights issue of 29.34 million new shares which is aimed to finance the further acquisition of ZAK. ZA Tarnow wants to buy an additional 40% in ZAK in which it already owns 52%. ZAT and ZAK are examining ways of how to improve sales for fertilisers. A large reorganisation of the company is intended to be conducted in the sales system.

One of the goals for ZAK is for the attraction of chemical companies in the chemical industry to Kedzierzyn-Kozle. As part of the proposed cluster, a research and development centre would be developed that would aim to help companies in introducing innovative ideas to the production of chemicals. Although the cost of the project is not yet known, the initiators hope to attract EU funding.

### **Polish gas and energy news**

Polish chemical companies could soon be faced by hikes in energy costs which could undermine profitability. Electricity prices are already rising rapidly which may also be reflected in the prices for the chemical industry. Gas prices could follow this trend if PGNiG puts through its plans. The Polish Energy Regulatory Office has approved a new gas tariff for PGNiG, which was to apply from 15 July. The Polish Chamber of Chemical Industry argues that the increase would adversely affect profitability.

At the same time consolidation offers chemical producers ways around the problems of energy and fuel costs. If ZA Tarnow should merge with ZCh Police, which now looks imminent, it could significantly change the situation on the Polish gas market. The newly formed company would be capable of consuming up to 8% of all gas used

in Poland, or more than one billion of cubic metres per annum. An interesting option in response to the possible newly combined company is to build a gas connection between the two plants to Germany. This would provide additional gas sources other than PGNiG and would allow the purchase of gas on spot markets, which are often cheaper than from the Polish market. This would not be beneficial for PGNiG as it could affect sales, but would help the Polish chemical companies.

ZAK has developed an in-house project, designed to reduce energy consumption in the company. The company expects to save around zł 10 million per annum from the project. Improving energy efficiency does not just entail cost savings, but the project will also help ZAK reach decision about which power plant to build. ZAK hopes to decide on a power plant in July, to be based either on gas or coal. The most likely prospect is that ZAK will opt for a gas power plant with a capacity between 110 to 200 MW. The biggest doubt is over the security of gas supply, and it is probably this issue that might stimulate interest in a coal based plant.

### **Anwil-Spolana**

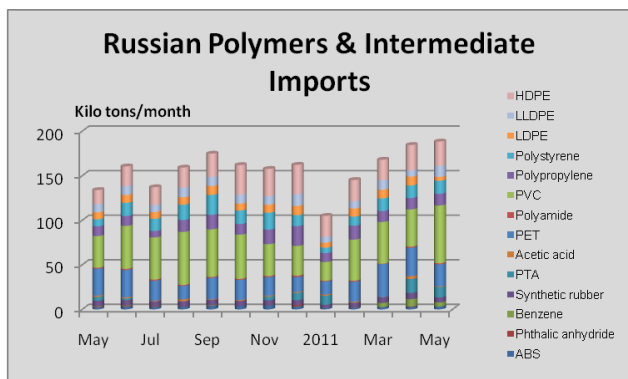
Anwil wants to sell Spolana in order to raise funds and interested buyers could include ZA Pulawy and Synthos. Anwil bought 82% of Spolana from Unipetrol in 2006, based on product synergies such as PVC.

ZA Pulawy and ZA Tarnow could be competing forces for Anwil. ZA Tarnow has made great strides in the past year with the acquisition of ZAK and the pending offer for ZCh Police, whilst ZA Pulawy has only managed a modest expansion in assets after taking Gdansk Fospor from Ciech. Anwil is interesting for both companies both in terms of performance and product portfolios.

### **NCHZ again up for sale**

NCHZ is officially for sale again after previous failures of privatisation. Last year the company achieved revenues of €153 million and currently employs about 1,500 people. This strategic business has kept their business partners and has remained significant Slovak exporters. NCHZ is being sold as a whole. The main business of the company is manufacturing and selling products based on chlorine production and processing, the production of calcium carbide and industrial gases, the production of PVC and its processing products.

## **RUSSIA**



### **Russian chemical trade & production Jan-Jun 2011**

In the first half of 2011 Russia's plastics production totalled 2.7 million tons which was 8.2% up on 2010. Synthetic rubber production totalled 734,000 tons, which was 9.3% up on last year. Fertiliser production grew 6.1% in the first half of 2011 whilst ammonia increased by 10.9% to 7.3 million tons, and soda ash increased 5.7% to 1.381 million tons. Russian refinery throughput increased January-May 2011 by 3.8% to 105 million tons, whilst naphtha production increased by 5.8% to 5.2 million tons.

Russia reduced the export of petrochemical products by 20% in the first five months against the same period last year to 888,398 tons. In value terms exports fell by 12% to \$718.683 million. LDPE exports totalled 62,186 tons in the first five months in 2011, 40% lower than in the same period in 2010. In value terms, shipments reached \$100.06 million (down 25%). Exports of HDPE fell by three-fold to 25,598 tons, whilst values have dropped two-fold to \$42.074 million. Exports of polypropylene amounted to only 3,632 polypropylene in the first five months this year against 29,309 tons in the same period in 2010.

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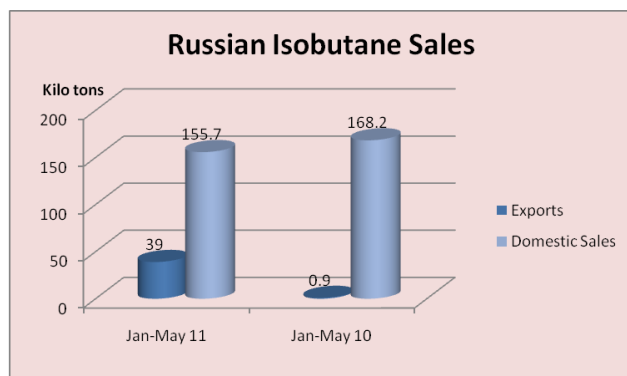
### **Feedstocks & petrochemicals**

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### **Russian LPG market, Jan-May 2011**

Russian companies increased the production of propane and butane in January-May 2011 by 5.6% compared to 2010 totalling 4.48 million tons. SIBUR Holding produced 1.248 million tons of these types of liquefied gases, of which Tobolsk-Neftekhim produced 971,000 tons (down 9%). Gazprom produced five months of 2011 1.086 million tons of propane and butane. Compared with last year reduced the production of Gazprom mining Orenburg,

Sosnogorsk GPP and Astrakhangazprom. LUKoil produced 487,700 tons of the product, Surgutneftegaz 380,500 tons, Gazprom Neft 182,100 tons, Tatneft 134,400 tons, Bashneft 125,300 tons, TNK-BP 107,000 tons, and Rosneft 99,900 tons. Nizhnekamskneftekhim reduced the production of propane and butane to 0.3% to 388,600 tons.



In the period January-May 2011 Russian domestic sales of butane totalled 455,800 which is 18% less than last year. The main reason for the decline in the supply is high export activity of producers, whereby exports increased by 21% to 464,500 tons. Russian sales of isobutane totalled 155,700 tons in the first five months in 2011, 8% down on the same period last year. Export activity increased significantly due to high demand. Isobutane is used primarily in Russia in the production of isobutylene, which in turn is used in MTBE production. The main consumers of commercial isobutane in the Russian market include Kaucuk Volzhskiy, Togliattikaucuk and Omsk Kaucuk, which

together account for 70% of total purchases in the domestic market.

The export duty on LPGs from 1 July was increased by 9% against June to \$172.9/ton. From July 2010 to February 2011 the duty on LPG export regularly grew to \$20.5/ton to \$198.8/ton which equates to 9.7 times. In March 2011 there was the first decrease in the fee for the period up to \$150.2 /ton. Then, in April, the fee is also reduced by 40% compared to March up to \$91 per ton. The duty on LPG exports in May rose again by 43% compared with April. In June of duty has increased in comparison with May at 46%.

#### Russian Chemical Production (unit-kilo tons)

Product	Jan-May 11	Jan-May 10
Acetic Acid	57.4	59.8
Ammonia	6,081.6	5,018.0
Benzene	499.0	446.2
Butanols	82.7	112.2
C Black	299.0	257.5
Caustic Soda	388.3	452.4
Ethylene	1,054.5	1,085.3
Methanol	1,267.6	1,280.8
PET	128.7	193.3
Phenol	109.1	102.4
Ph Anhydride	47.1	50.5
Polyethylene	670.7	703.9
Polypropylene	286.8	277.8
Polystyrene	134.3	114.9
Propylene	544.6	437.9
PVC	215.9	241.1
Soda Ash	1,150.6	1,077.6
Styrene	218.0	222.1
Syn Rubber	524.7	473.4
Urea	2,118.9	2,373.7

#### Gazprom-helium increase planned

Gazprom is studying the possibility of constructing a liquefaction of helium unit at the Orenburg Helium Plant. The export arm Gazprom Export has already begun to develop a programme of helium sales outside the country. With its own equipment for fine purification and liquefaction of helium, Gazprom has the potential to control up to 20% in Europe and up to 5% of the world market for gas. In addition, Gazprom Export plans to start the export of polyethylene (up to 300,000 tpa, which is to be produced at the new Novy Urengoy plant scheduled for launch in 2013.

#### Gazprom Neftekhim Salavat-new cracker furnace & ELOU AVT-6 unit

Gazprom Neftekhim Salavat intends to install a new F-04 furnace for pyrolysis, as part of the expansion of ethylene capacity to 380,000 tpa. Completion of construction and commissioning and subsequent launch of the furnace of pyrolysis gasoline position F-04 is scheduled for the fourth quarter in 2012. Commissioning of the new F-04 furnace will increase the selectivity of the pyrolysis process and improve production safety. The new furnace pyrolysis can produce superheated steam (about 41 tons per hour), thereby reducing the load on the overheating of the steam superheater. Performance of the new furnace will comprise 36.4 tons per

hour, and efficiency up to 93.2%.

Construction has started at Gazprom Neftekhim Salavat for a new ELOU AVT-6 unit, the aim of which is the primary processing of raw materials for light oil and gas oil fractions. The main activity will be completed in the first quarter in 2012. The main part of the construction has been developed by CAC (Chemieanlagenbau Chemnitz GmbH) and the Moscow Design Institute VNIPlneft. The installation is using equipment: heat exchangers company Alfa Laval (France), water rotation block firm GEA (Germany), electric motors and concern ABB (Germany), etc.

### **Gazprom-Kovytko-Sayanskkhimplast**

Gazprom Processing, SIBUR and Sayanskkhimplast signed an agreement of intent in June for construction of a new chemical plant in the area of Sayansk. On 1 March 2011, Gazprom became the winner of the auction for the Kovytko gas condensate field from Russia Petroleum. The proven reserves of the Kovytko gas field are estimated to include about 2 trillion cubic metres of gas. Gazprom plans to develop petrochemical facilities based on the Kovytko and Chayanda deposits, which could produce around 110 cubic metres of gas per annum by 2020.

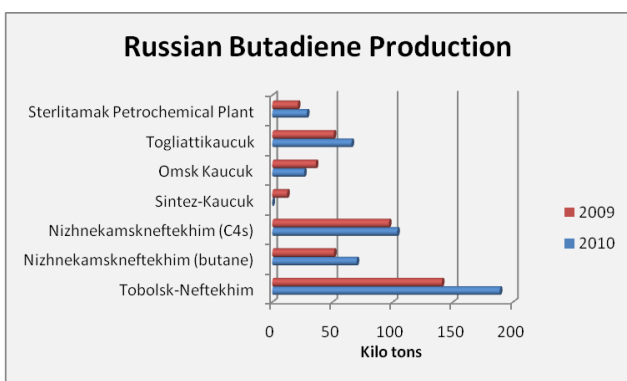
### **Rosneft-Sayanskkhimplast ethylene dispute**

The Arbitration Court of Irkutsk region in early July to annulled the decision of the Office of FAS in the Irkutsk region of a violation of Rosneft Law on Protection of Competition, which was summed up in an unjustified deviation from the contract supply of ethylene on Sayanskkhimplast. The Irkutsk ethylene conflict in contrast to the Bashkirian conflict between Gazprom Neftekhim Salavat and Kaustik has passed almost unnoticed by the market. The Russian federal antimonopoly commission (FAS) has acknowledged in 2010 that Rosneft has violated the Law on Protection of Competition. The view was that this has resulted in economically or technologically unjustified deviation from the contract with Sayanskkhimplast in production capacity and supplies of ethylene. Rosneft also issued an order prohibiting actions that could lead to restriction of competition regarding ethylene production. In other words Rosneft is opposed to Sayanskkhimplast producing its own ethylene as it plans to do with Gazprom based on gas from the Kovytko gas condensate field.

### **Primorsk petrochemical project-environmental pressures**

Scientists and environmentalists have declared that Rosneft's proposed petrochemical project at Primorsk in the Russian Far East could be detrimental to the ecology of the region. Of particular concern is the potential danger of destroying the habitat of rare and endangered species. The creation of the Eastern Petrochemical Company may still go ahead despite the negative environmental assessments, and may be capable of making a significant contribution to the regional economy. Rosneft has already selected a location near Nakhodka for the site of the proposed complex which is considered the least vulnerable to natural and seismic hazards, and had already dropped plans to build in the East Bay area, taking into account the views of the scientific community. Preliminary project costs have been estimated at \$10 billion. Rosneft also plans to attract foreign partners and is already in talks with Korean and Japanese companies on their possible participation.

It is assumed that the plant will process naphtha and liquefied petroleum gas (LPG) from the Komsomolsk refinery and Achinsk, Angarsk Petrochemical, including 3.5 million tons of naphtha and LPG, as well as 1.5 million tons of gas condensate, produced by the project Sakhalin-3 and 5 million tons of oil to be transported after the 2nd stage of the pipeline East Siberia-Pacific Ocean (ESPO). The company will specialise in the production of polymers (polyethylene and polypropylene), and make other petrochemical products. The target markets will be the Far East and South-East Asia, primarily China. For shipment of finished products for export is planned to build a specialised marine terminal.



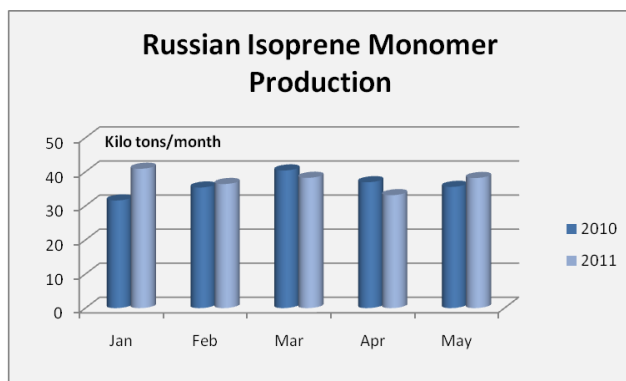
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### **Russian butadiene market, Jan-May 2011**

Butadiene imports into Russia have been sourced solely from Iran in the first five months of 2011, which contrasts with last year when Czech material was prominent in the market. The largest butadiene producers in Russia are integrated into rubber production and possess only marginal surpluses and so non-integrated producers are largely reliant on imported butadiene. Overall imported volumes of butadiene are insignificant in the supply/demand balance; imports totalled 2,999 tons in the first five months in 2011. Prices of imported butadiene vary sharply and often higher than Russian product, which is not often

The main consumers of imported butadiene include Omsk Kavcuk which accounted for 51% of purchases in the first five months of this year. Other important consumers include Efremov Synthetic Rubber Plant and Kazan Synthetic Rubber Plant. Further increases in imports are expected this year to meet demand. Nizhnekamskneftekhim has taken over 100% of its subsidiary Nizhnekamskneftekhim-Butadiene, from the previous figure of 50%. Nizhnekamskneftekhim-Butadiene was established in 2004 by Nizhnekamskneftekhim and ImpeksNeftehim.





#### **Russian isoprene market, Jan-May 2011**

Russian production of isoprene monomer increased 4% in the first five months in 2011, totalling 187,000 tons. Isoprene in Russia is produced in three companies including Nizhnekamskneftekhim, Togliattikaucuk and Sintez-Kaucuk at Sterlitamak.

The largest producer is Nizhnekamskneftekhim, which accounts for over half of all accumulated in the Russian isoprene. From January to May 2011 Togliattikaucuk reduced production of isoprene relative to the comparable period last year by 9%, and Sintez-Kaucuk 8%.

#### **Russian ethylene & propylene, Jan-May 2011**

The supply of propylene in the domestic market increased by 15% in May compared to April, with Russian merchant consumers buying 27,200 tons in total. Saratovorgsintez and SIBUR-Khimprom increased their consumption of commercial propylene by 52% and 7% respectively. In the first five months of 2011, a total of 132,900 tons of propylene was sold on the Russian domestic merchant market, which is 36% more than in the same period in 2010. Saratovorgsintez and SIBUR-Khimprom accounted for 67% of propylene supplied to the domestic market in the first five months this year.

Ethylene production totalled 212,900 tons in May, 4% more than in April. The growth was due to increased production volumes at plants such as Gazprom Neftekhim Salavat, Ufaorgsintez, Stavrolen and Nizhnekamskneftekhim. At the same time Kazanorgsintez cut production by 12%. In the first five months of 2011, Russia produced 1.068 million tons which was 1% more than in the same period in 2010.

#### **SIBUR-Neftekhim considers projects for propylene oxide and polyols**

SIBUR-Neftekhim is planning to establish plants for propylene oxide and polyols, with capacities of 150,000 tpa and 170,000 tpa respectively. A feasibility study is currently underway for both plants, with the aim to construct at the ethylene oxide plant at Dzerzhinsk. To undertake the project, SIBUR-Neftekhim has held talks with foreign companies, and technology licensors for the production of propylene oxide and polyols. Negotiations with Degussa were unsuccessful and now SIBUR is considering alternative technologies for the production of propylene oxide, chlorohydrin and cumene. Since 2010, SIBUR-Neftekhim has been working on a study for a pilot plant for the production of propylene oxide capacity of 10 tpa.

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### **Bulk Polymers**

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#### **RusVinyl-EBRD agreement**

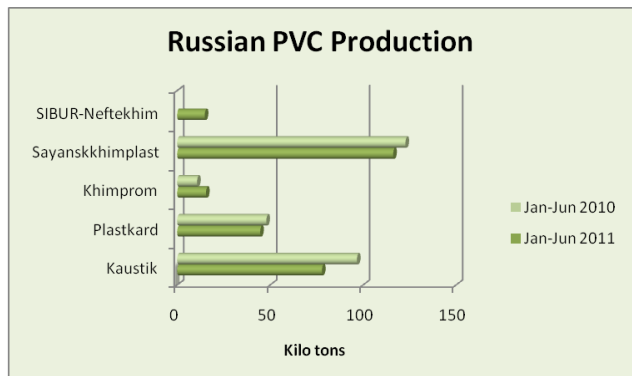
RusVinyl has signed agreements with the EBRD and Sberbank for financing the PVC project at Kstovo. The EBRD has agreed to provide the company an 11-year rouble-denominated loan equivalent to €150 million. The same amount will be provided by Sberbank. Another €450 million will be provided by BNP Paribas, ING Bank NV and HSBC, guaranteed by COFACE and ONDD which are the export credit agencies of France and Belgium. The first part of the project is intended to start in 2013 including capacities of 330,000 tpa of suspension grade PVC and 235,000 tpa of caustic soda. By 2016, RusVinyl plans to increase production capacity of PVC to 500,000 tpa. The total project cost is estimated at €1 billion. SIBUR plans to increase the capital in RusVinyl in order to help with financing.

#### **Kaustik-VCM expansion**

Kaustik has held meetings with INEOS and STX Heavy Industries to consider licences for its expansion of VCM and PVC facilities at Sterlitamak. The strategic aim of the company is to expand capacity in the first phase to 325,000 tpa and in the second phase up to 615,000 tpa. In the medium term, Kaustik is in the process of pre-project assessments for expanding VCM-PVC capacity to 325,000 tpa. Further expansions to 615,000 tpa would depend on major additions to ethylene capacity in the Volga Urals region. The company's plans for 2011 include the completion of solid caustic soda capacity up to 50,000 tpa. Other goals include the optimisation in the cost of electricity in the production of nitrogen gas, and plans to replace the air separation unit in the shop number 30. The total capacity of operating plants for the production of PVC in Russia amounts to 636,000 tpa, of which 558,000 tpa is based on suspension grade.

### Russian PVC market, Jan-Jun 2011

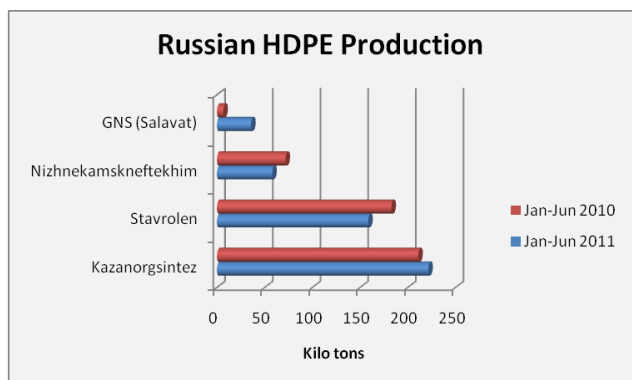
Russian PVC production totalled 329,000 tons in the first six months in 2011, 8% less compared to the same period last year. The second quarter witnessed a fall in production, due to scheduled stops by Khimprom at Volgograd, Sayanskkhimplast, Plastkard and SIBUR-Neftekhim. The protracted conflict over ethylene prices between Kaustik and Gazprom Neftekhim Salavat has also affected production volumes.



In line with static production volumes and the simultaneous rise in PVC processing has increased the ratio of imports in the Russian market. In the first six months of this year imports totalled 247,000 tons, which is two-fold more than the same period last year.

A total of 64,900 tons of PVC was imported in May, 1.8 times higher than in April and 1.7 times higher than the same period in 2010. Import volumes of suspension grade PVC doubled and totalled 57,000 tons. Imports from the USA increased sharply in May

after US companies had been forced to complete obligations agreed earlier in the year. In addition, supply from South East Asia increased by 21% and reached 16,000 tons.

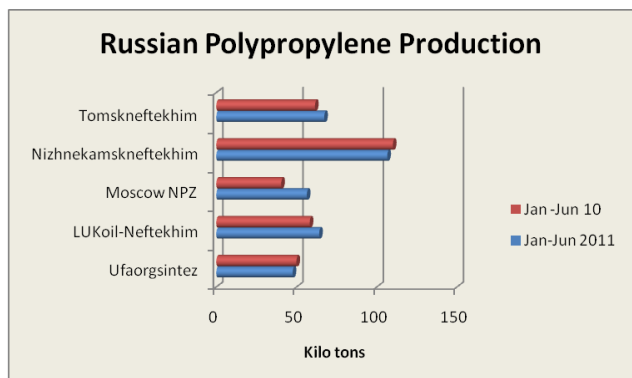


### Russian polyethylene market, Jan-Jun 2011

LDPE production amounted to 56,000 tons in June, 18% more than in May. This was facilitated through the resumption of output of LDPE at Kazanorgsintez after maintenance. In the first half of 2011 Russia produced 332,095 tons of LDPE which was 6% lower than in the same period last year. Russian HDPE production increased in the first half of 2011 by 8% to 474,000 tons. Stocks of HDPE at both producers and traders remain high limiting further sales. However, despite the drop in demand for the first six months of this year exports of HDPE from Russia amounted to 38,000 tons against 70,000 tons last year. A number of outages

are planned for the September-October 2011, including Kazanorgsintez for 30 days from 7 September and Stavrolen for 45 days from early October. Nizhnekamskneftekhim will also shut for 10 days in early October, and Gazprom Neftekhim Salavat for three weeks after that.

Growth in HDPE output was due partly to increased production at Gazprom Neftekhim Salavat; in May the plant produced 6,480 tons of HDPE which was 21% more than in April. HDPE accounted for 55% of total polyethylene production in Russia the first six months in 2011. In the first five months of 2011 Russia 43,400 tons of HDPE, i.e. a 30% increase over the same period of 2010.



In June, Kazanorgsintez produced 31,000 tons of HDPE which was 5% lower than in May. Capacity utilisation dropped to 71.5% due to a lack of ethylene. In the first half of 2011, Kazanorgsintez produced 188,000 tons of HDPE which was 11% less than in the same period in 2010. Nizhnekamskneftekhim produced 17,000 tons of HDPE in June which was 48% more than in May. In the first half of 2011, Nizhnekamskneftekhim produced 97,800 tons of HDPE which represented a 36% increase over the same period in 2010.

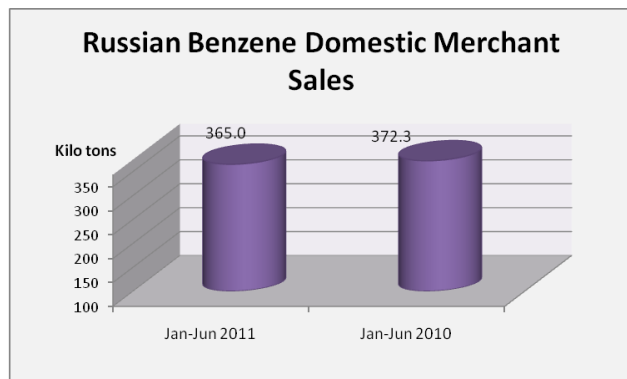
### Russian polypropylene market, Jan-Jun 2011

In the first five months Russian imports totalled 64,000 tons of polypropylene that is 1.7 times higher than in the comparable period of 2010. Turkmenistan and Ukraine have provided the main import sources in recent months. Tomskneftekhim stopped the polypropylene unit on 22 July for scheduled maintenance, which will last approximately a month and ends on 20 August. Maintenance at Neftekhimya at Moscow is not required this year.

### Titan-Basell catalyst agreement

Titan has held talks with Basell to supply the catalyst for the propylene polymerisation plant at Omsk. The first batch of raw materials for the new Polyom plant at Omsk is expected to arrive in late July. The polypropylene plant will have a capacity of 180,000 tpa and is expected to start operation in the third quarter.

## Aromatics & derivatives

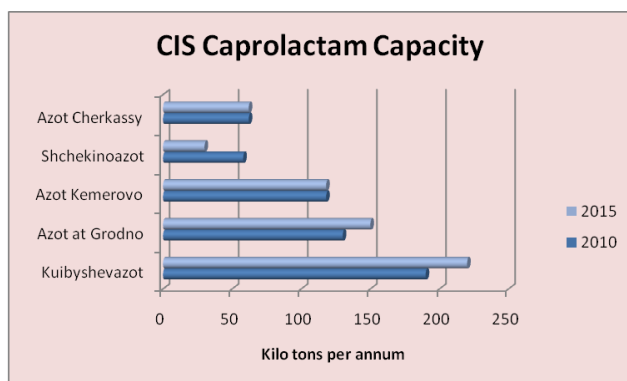


### Russian benzene domestic shipments, Jan-Jun 2011

Benzene merchant sales on the Russian domestic market was 60,900 tons against 61,400 tons in May. A total of 25,000 tons was shipped to caprolactam producers, 11% down on May due to short-term repairs at Azot at Kemerovo. At the same time phenol producers increased purchases by 14%, to 16,700 tons whilst other outlets were unchanged.

In the first half of the 2011 a total of 365,000 tons was sold on the domestic market which was 2% less than in the same period last year. This was caused

mainly a decrease in refinery crude benzene at Gazprom Neftekhim Salavat, although this fall was offset by other producers to some extent. Furthermore, Slavneft-Yanos at Yaroslavl stopped production in April for maintenance, but resumed in May.

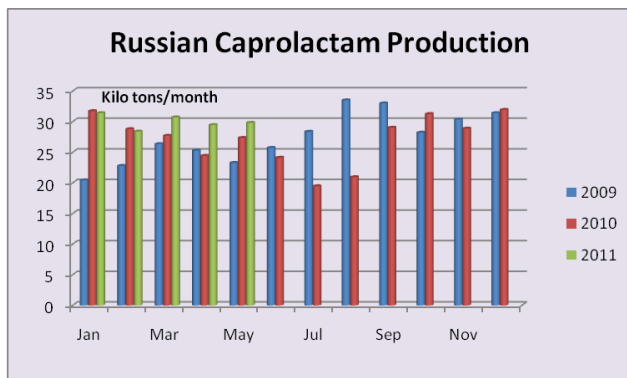


The extended closure at the West Siberian Metallurgical Combine at Kemerovo, where benzene is produced from coal, has impacted this year on total volumes. However, this plant is expected to restart in August 2011. In the first five months in 2011 caprolactam producers in Russia accounted for 132,200 tons of benzene purchases, which was 44% of the total market. Phenol producers accounted for 81,800 tons which was 27% of the total, styrene 35,800 tons and nitrobenzene 18,900 tons.

### CIS Caprolactam market

Production of caprolactam in the CIS is forecast to reach 575,000 tons by 2012, an increase from 193,000 tons in 2010. Polyamide consumption is forecast to grow to 37%. Total production comprised 558,000 tons in 2011, which is expected to rise by 2015 after increases at Kuibyshevazot, Azot at Grodno and Shchekinoazot.

Capacity utilisation for the production of caprolactam in the CIS in 2010 amounted to 92%. The share of exports



in total production is forecast to fall from 62% in 2010 to 49% in 2015, due to increased processing of caprolactam in the CIS. Kuibyshevazot, in particular, is heavily focused on the development of caprolactam processing. Azot at Grodno is also paying attention to commissioning new facilities in Belarus for polymerisation and the increased production of engineering plastics, textile yarns, etc.

caprolactam in 2010 in the CIS amounted to 193,000 tons.

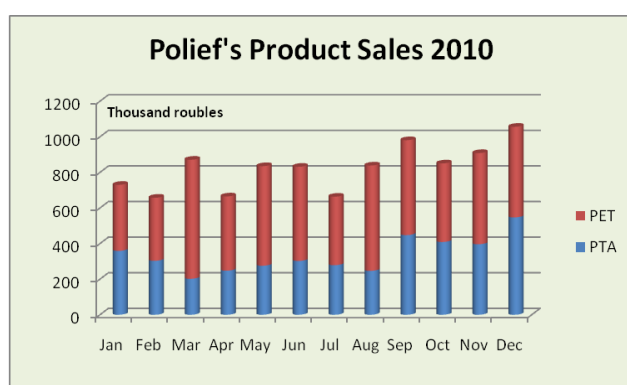
According to Kuibyshevazot, consumption of caprolactam in the CIS amounted to 5% per annum over the period 2005-2010 whilst consumption of polyamide increased by 25%. The consumption of

**Russian caprolactam market, Jan-May 2011**

All three Russian caprolactam producers have been operating at full capacity in the first half of 2011, with Kuibyshevazot and Shchekinoazot even achieving 106% and 109% respectively. Production for the first five months in 2011 amounted to 150,000 tons against 140,000 tons in the same period last year. Kuibyshevazot at Togliatti accounts for more than half of all caprolactam produced in Russia. The structure of caprolactam consumption in the first five months of 2011 remained almost unchanged against the same period of 2010.

**Russian PTA imports rise**

PTA imports into Russia totalled 26,000 tons in the first five months in 2011, 2.2 fold higher than in the same period last year. Alko-Naphtha imported 20,400 tons in the first few months since start up, which equated to 78% of total imports. The remaining imports were taken by the Senezh plant near Moscow. The Senezh Plant of Polymers at Solnechnogorsk has appealed to the Ministry of Economic Development on the abolition of import duties on PTA. Currently the rate of duties on imports of PTA is 5%. According to Senezh, the domestic production of TPA is insufficient to meet domestic market needs in this kind of material. Thus, abolition of import duty will equalize competitive conditions in the Russian market of PET.

**VTB-Polief**

VTB reduced its stake in Polief from 32.5% to zero, after selling to an unnamed source. In addition SIBUR owns 50% of Polief through Domestic Polymers and thus the purchase of the stake from VTB provides the group with a majority stake. SIBUR supplies MEG to Polief as well providing funds for the company. It was reported earlier that a package from VTB could buy SIBUR. The company has also not ruled out further increasing its stake in the venture.

In 2010 Polief increased its production of PTA to 30.6 tons per hour and PET to 16 tons per hour. The company managed to reduce the period of shutdown for the PTA plant. Overall, PTA production increased 3% in 2010 against 2009 to 243,000 tons whilst PET production rose 39% to 137,000 tons.

**Samaranefteorgsintez-raw material supplies**

The newly created Samara chemical holding Samaranefteorgsintez is currently negotiating the supply of raw materials from Rosneft, in order to provide NGLs to Novokuibyshevsk Petrochemical Company for its gas processing plant TSGFU-3. Samaranefteorgsintez has been created on the basis of local chemical and petrochemical producers Samaraorgsintez, Neftekhimya, Novokuibyshevsk Petrochemical Company.

It has set the operation of TSGFU-3 as a priority, after SIBUR could previously not agree with Rosneft over the supply of raw materials. SIBUR sold its stake in Novokuibyshevsk Petrochemical Company earlier this year as the plant did not fit into its industrial structure. Factors against the plant included the remoteness of West Siberian raw material sources; in late 2010, the plant suffered serious problems with the supply of raw materials.

Neftekhimya, part of the newly formed holding company Samaranefteorgsintez, is considering a settlement agreement over debts. The debtor position was supported by a creditor Masterking. A debt of \$40 million was transferred to Renova in 2007 which remains outstanding despite the transfer in ownership in April 2011.

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**Synthetic Rubber**

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**Russian synthetic rubber market 2010-2011**

The Russian market of synthetic rubber has recovered strongly from the crisis of 2009, when consumption was reduced by almost 40% against 2008. Prices have risen substantially since last year whilst volumes sold have almost reached levels recorded at the end of 2008 with the tyre industry having undergone a major recovery. Consumption was 33% higher in 2010 than in 2009 and this trend has continued in 2011 with another 50% increase in the first four months of the year.



Russian Synthetic Rubber Market (unit-kilo tons)		
	Jan-Apr 11	Jan-Apr 10
Production	421.0	379.3
Exports	262.0	275.8
Imports	21.0	15.9
Market Balance	180.0	119.4

Demand for synthetic rubber in the Russian market continues to be met primarily through domestic production. This year's increase in production over the same period of last 11%. Rising domestic demand has resulted in the reduction in export activity. In 2009 export activity accounted for 66% of production, which dropped to 63% in 2010 and below 60% in the first part of 2011. Imports at the same time have been rising this year, although volumes remain relatively small.

Omsk Kaucuk and Kazan Synthetic Rubber Plant reduced production last year compared to 2009 by 25.9% and 1.9% respectively. The main reason for the lower production was the lack of butadiene available despite the fact that butadiene production in Russia amounted to 483,900 tons in 2010 and increased by 74,200 tons against 2009. However, most of this increase was consumed captively by the producers and the smaller synthetic producers struggled for feedstock supply.

Russian exports of synthetic rubber in 2010 amounted to 778,600 tons against 687,100 tons in 2009. The share of exports in total shipments amounted to 66.0% in 2010. The major importers of Russian synthetic rubber were China for 187,000 tons, Poland 48,700 tons, Hungary 39,900 tons, the USA 25,000 tons, Turkey 26,500 tons and Germany 21,000 tons. These countries imported almost 45% of total exports. In 2010 the supply of synthetic rubber sales to the domestic market amounted to 368,800 tons and increased against 2009 by 76,600 tons.

Russian Polybutadiene Production (unit-kilo tons)		
Producer	2009	2010
Voronezhskintezkaucuk	76.0	101.3
Nizhnekamskneftekhim	108.6	141.6
Efremov Plant of SR	30.4	30.6
Total:	215.0	273.5

#### Russian polybutadiene market

Nizhnekamskneftekhim has launched an extra battery for the polymerisation of synthetic rubber as part of the he programme to build a unit for neodymium polybutadiene rubber catalyst. This will increase the amount fed to the polymerisation of butadiene unit. Russia produced 273,500 tons of polybutadiene in 2010 which is 58,500 tons more than in 2009. The Efremov synthetic rubber plant was only able to increase by 0.8% due to lack of butadiene.

#### Efremov Synthetic Rubber Plant 2010

Efremov Synthetic Rubber Plant produced 30,600 tons of polybutadiene in 2010 which represented an increase of 0.8% over 2009. Production was affected by the shortage of butadiene. The second most important product made by Efremov Synthetic Rubber Plant is high-molecular polyisobutylene (PIB) and is the only producer in Russia. In 2010, the Efremov plant produced 3,400 tons of polyisobutylene PIB, which is 700 tons more than in 2009 and nearly 2,400 tons more than in 2000. The main reason for the increase in production compared to 2009 was a recovery in demand for polyisobutylene after the financial crisis.

#### Voronezhskintezkaucuk-TEP plant starts construction

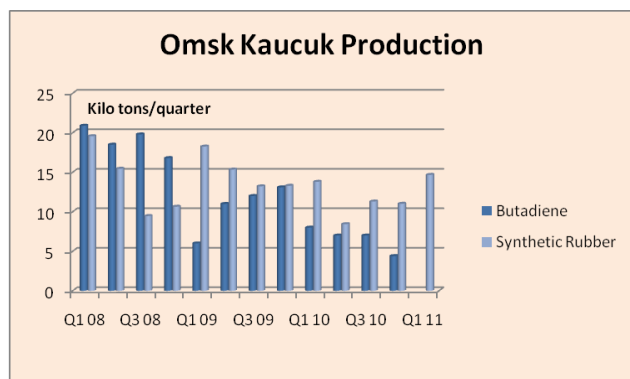
Voronezhskintezkaucuk has started construction of a new butadiene-styrene thermoplastic elastomer plant (TEP), the capacity of which is 50,000 tpa and will add to the existing unit at Voronezh of 35,000 tpa. Investments in the construction of the new plant are estimated at 3.8 billion roubles. The new complex will be built on the site previously decommissioned and dismantled production unit. Completion of construction is planned by the end of 2012.

Consumption of TEPs in Russia is currently estimated at about 30,000 tons, the main outlet currently consisting of roofing products. Usage in road building accounts for a small share of consumption but applications in this sector are expected to rise significantly in the next few years. SIBUR recognises that after production start-up a significant amount of production will be exported in the first phase, but due to a range of new road building programmes consumption in the domestic market is expected to rise in the next few years.

The styrene for the production of TEP is supplied to Voronezh from SIBUR-Khimprom at Perm and Plastik at Uzlovaya (both being part of the SIBUR group). Butadiene is also important and this is supplied from Tobolsk-Neftekhim. Butadiene-styrene thermoplastic elastomers are used in the production of polymer-bitumen binders (WSP) for usage in the upper layer of road construction. The use of PBB increases the overhaul life of asphalt pavement from 3-4 years to 7-10 years. At the present time in Russia the share of polymer-bitumen binder in the total consumption of road bitumen does amounts to only 1%. Last year the Omsk refinery opened a 10,000 tpa facility for the production of road surface components based on polymer-bitumen binders (PBB) and bitumen emulsions supplied from Voronezh.

### Lanxess-Dzerzhinsk

Lanxess started construction on a new production facility at Dzerzhinsk. Rhein Chemie will produce rubber chemicals for markets in Russia and the CIS. The new plant located in the Dzerzhinsk Industrial Park will be equipped with state-of-the-art production technology. The company will produce up to 1,500 tpa of Rhenogran and Rhenodiv rubber additives and release agents at the new plant. These products are used primarily to manufacture car tyres and technical rubber products such as hoses and seals. Until now, Rhein Chemie has supplied Russian customers from facilities in Germany.



### Omsk Kaucuk-increased production 2011

In the first six months of 2011 Omsk Kaucuk operated its synthetic rubber division at 90% which was 30% more than the same period last year. Production was affected last year by the shortage of butadiene, with butadiene production falling much lower than rubber volumes. The company has been forced to purchase monomer on the open market including imports from Iran. In other product areas, Omsk Kaucuk intends to ramp up production of phenol to 30,000 tons and acetone to about 20,000 tons. Propylene supply has been more available this year at Omsk. Omsk Kaucuk is planning to deliver rubber to Sumitomo Rubber

Industries (part of Sumitomo Group). The parties have agreed to supply samples of rubber ARKM 2.15 to the Japanese company.

### Nizhnekamskneftekhim-halobutyl rubber expansion

Nizhnekamskneftekhim is building a third unit of for halobutyl rubber with a capacity of 8 tons per hour. The start of the new machine will increase the production capacity of halobutyl rubber to 100,000 tpa and butyl rubber in total to 200,000 tpa. Capital investments in construction comprise 600 million roubles, and costs are expected to be recouped within two years. The company already has two universal units, manufactured in Europe for drying and separation of butyl rubber and halobutyl. The general designer of the new unit is Soyuzkhimpromproekt at Kazan, and the general contractors Tatspetsneftehimremstroy and Dvigatelmontazh-NC.

Nizhnekamskneftekhim is the only Russian manufacturer of halobutyl rubber and supplies about 93% to European, Asian and American markets. The product is certified and accredited by the world's producers of tyres by Michelin, Pirelli, Goodyear, and Bridgestone. In 2010, the ratio of the plant production was 45% halobutyl rubber and the remainder butyl rubber. The ratio will increase to 48% for halobutyl rubber this year to 52%, and following the launch of the new halobutyl unit further increases are anticipated.

### Russian carbon black market, Jan-Jun 2011

In the first half of 2011 Russian carbon black production totalled 110,200 tons which was 17% higher than in the same period in 2010. An increase in car production this year has culminated in an increase in tyre consumption. The main problem for the producers the continuous rise in raw materials, which were 17% higher in the first half of 2011 than last year. Around 64% of production was exported in the first half of the year, but export ratios are expected to decline in the next few years in response to higher utilisation at existing tyre plants in addition to the construction of new plants such as Continental at Kaluga. The Omsk Plant of Carbon Black is introducing a number of measures that will by 2015 produce 265,000 tpa of carbon black (in 2011 225,000 tpa, in 2012 235,000 tpa). The Volgograd TU plans to gradually increase capacity to 200,000 tpa from its current capacity to 75,000 tpa.

Russian Carbon Black Production (unit-kilo tons)		
Producer	Q1 11	Q1 10
Yaroslavl Carbon Black	55.6	47.2
Nizhnekamsk Carbon Black Plant	27.5	23.7
Omsk Carbon Black Plant	57.4	42.1
Volgograd Carbon Black Plant	16.7	12.8
Sosnogorsk GP Plant	7.8	7.6
Barnaul Carbon Black Plant	0.0	0.0
Ivanovski TU Plant	4.5	4.0
Tumazi Carbon Black Plant	6.0	5.2
Total	175.5	142.7

### Russian tyre news

Continental aims to start building a new plant to produce car tyres at Kaluga in late 2011. Investment in plant is expected to be worth around €220 million. The new company will begin production of tyres in late 2013 and will be capable of shipping about 4 million tyres per annum and about 8 million tyres in the future for expansion of the

plant. Products are to be supplied for car group Volkswagen at Kaluga where Continental will produce summer and winter tyres under the brands Continental, Gislaved, Barum and Matador.

A jv between Pirelli and Russian Technologies State Corporation, which will build a plant for the production of automobile tyres, will become a key investor in the special economic zone (SEZ) at Togliatti with a total investment of 11.7 billion. The SEZ provides for a special tax regime with residents granted significant preferences such as exemption for up to five years for property tax, land tax, vehicle tax, reduction of income tax to 15.5% and other benefits.

In 2008, holding Russian Technologies and Pirelli announced plans to build a Togliatti plant with an annual production capacity of 4 million tyres. Plans have since been revised and now will focus on building a plant for the production of steel cord for radial tyres. SIBUR, Pirelli and Russian Technologies signed an agreement on 25 July 2011 defining the assets in the tyre business for the transfer of a jv between Pirelli and Russian Technologies.

### Methanol & related chemicals

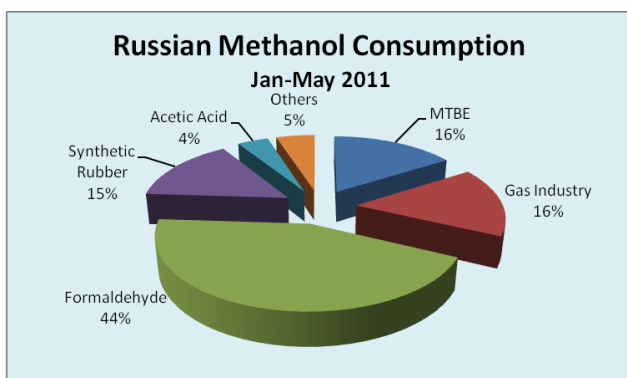
Akron Production 2011		
Product, kilo tons	Jan-Jun 11	Jan-Jun 10
<b>Ammonia</b>	<b>900.2</b>	<b>885.7</b>
including domestic consumption	792.4	743.7
Urea	228.4	224.0
including domestic consumption	130.9	114.0
<b>Organic chemicals, including:</b>	<b>188.3</b>	<b>176.7</b>
including domestic consumption	98.2	87.7
Methanol	37.4	41.7
including domestic consumption	34.9	32.2
Formaldehyde	68.5	61.4
including domestic consumption	62.9	55.1
Urea formaldehyde resin	82.4	73.6
<b>inorganic chemicals including</b>	<b>382.3</b>	<b>341.0</b>
Porous and technical ammonium nitrate	114.2	94.1
Calcium carbonate	165.9	143.0
Liquid carbon dioxide	27.0	22.3
Argon	3.5	3.1
Hydrochloric acid	71.7	78.5

#### Akron, Jan-Jun 2011

Akron increased production in the first half of 2011 by 6% to 2.922 million tons of marketable products. Ammonia production increased by 2% to 900,200 tons, urea by 2% to 228,400 tons, and the production of organic chemicals by 7% to 188,300 tons. This included 37,400 tons of methanol which was 10% up, formaldehyde by 12% to 68,500 tons, and urea-formaldehyde resins by 12% to 82,400 tons. In the inorganic sector, calcium carbonate production rose to 16% to 165,900, whilst hydrochloric acid production fell by 9% to 71,700 tons. Growth for Akron was achieved through higher capacity utilisation for the production of final products and the stable operation of production equipment.

#### Metafrax, Jan-Jun 2011

Metafrax produced 525,000 tons of methanol in the first half of 2011, which was 1.9% lower than the same period last year. Formaldehyde production increased by 25.2% to 149,000 tons, urea-formaldehyde concentrate by 20% to 91,700 tons, and pentaerythritol by 32.1% to 10,700 tons, and hexamine by 1.8 times to 13,100 tons.



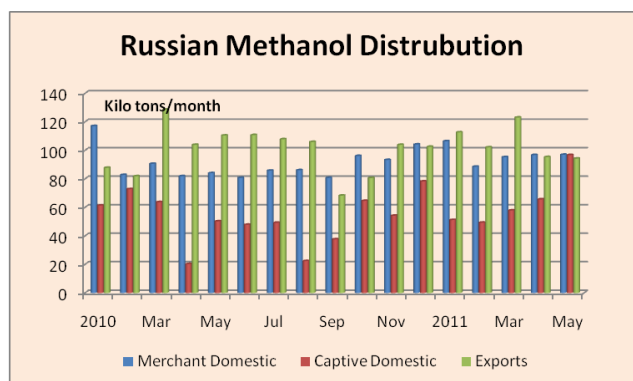
#### Russian methanol consumption, Jan-May 2011

Russian exports of methanol decreased by 1.5% to 504,953 tons in the first five months in 2010. In the domestic market acetic acid proved the most profitable outlet for methanol, but still only constituted 4% of total usage. Formaldehyde remained the dominant outlet followed by MTBE. Exports of methanol from Russia recorded declines in the second quarter due to the slowdown in global methanol prices in Europe and China. By contrast, processing has increased particularly for acetic acid, urea-formaldehyde and urea-formaldehyde concentrate. In the first five months in 2011 Russia increased methanol processing by 35%

over 2010 from 605,000 tons to 815,000 tons. The rapid growth of in-plant processing of methanol has led to changes in the structure of gross consumption in the Russian Federation. The only division in which the reduced use of the product in May was the gas sector. This was due to the end of the heating season (mid April). The maximum increase of methanol in-processing plant was recorded at Azot at Nevinomyssk which is the sole producer of acetic acid in Russia.

Demand for acetic acid in the domestic market increased in June to 8,800 tons which is 18% more than in May. Plants for the production of acetate solvents increased their purchases of raw materials by 17%, to 3,500 tons whilst in the production of vinyl acetate acetic acid consumption of commodity increased by 30%, to 3,300 tons. Polief, where acetic acid is used for PTA, purchased products almost 2-fold higher than in May (up to 1,300 tons).

In the first half of 2011 Russia shipped 35,000 tons of acetic acid to the domestic market, a 9% increase over the same period last year. The main reason for the increase in supply is due to increased production of vinyl acetate at Stavrolen, where purchases rose 64% to 10,600 tons. At the same time producers of acetate solvents reduced consumption by 12% to 14,100 tons.



#### Russian methanol project news

Akron's investment plans in the next few years involve an expansion of methanol capacity to 200,000 tpa at costs of around 1.49 billion roubles. Other projects for Akron include the reconstruction of the electricity station in the Novgorod region.

Preparations are reported to be underway for construction of the methanol plant at Nizhniy Tagil. To date work has been carried out on pipelines and electric cables, whilst surveys have been completed on the environmental impact of the plant. In 2011, investment in the project is expected to total €146.5

million. Haldor Topsoe has provided the licence for the methanol project, which will involve Czech and Italian engineering companies in the construction process.

A new methanol project is being considered for the Poronaysk port on the eastern coast of Sakhalin, linked to new offshore projects Sakhalin-3, Sakhalin-5, Sakhalin-6. The plant for production of methanol from coal could be built in three phases; the first of which could be completed by 2015 with a capacity of 3 million tpa. Already agreements have been signed with the Chinese corporation Inner Mongolia KingHo Group, which will participate in the construction of the proposed methanol plant.

#### Russian urea projects

ASG Power has signed an agreement with the Omsk administration to build an ammonia-urea complex, planned at Kalachinsk. The regional Ministry of Industry is to provide ASG Power with the required information on the construction of the complex, whilst the Swiss company will start to consider options for the construction of the complex, and start to prepare technical documentation.

Russian Urea Production (unit-kilo tons)		
Producer	Jan-Jun 11	Jan-Jun 10
Akron	251.5	237.8
Azot Kemerovo	241.3	233.5
Azot Novomoskovsk	287.3	476.7
Azot (SIBUR)	345.8	293.7
Kuibyshevazot	713.8	155.5
Minudobrenya	97.5	324.5
Azot Nevinomyssk	176.6	346.9
Azot Cherepovets	338.2	245.8
Gazprom Neftekhim Salavat	332.9	281.0
Togliattiazot	341.8	273.2
Total	3126.7	2868.7

Gazprom Neftekhim Salavat aims to complete construction and installation for a new urea granulation unit by September 2011. The new unit will be capable of producing 1,400 tons per day and has been constructed by Toyo Engineering Corporation. The installation will be provided with the company's own integrated transformer substation. An option exists to increase capacity by 10%; production is to be focused largely on exports.

The Dzerzhinsk based institute NIIK and Sojitz Corporation (Japan) have signed a contract to design the urea unit as part of the new Ammonium complex at Mendeleevsk in Tatarstan. NIIK will act as a general contractor for the design and construction of offsite and storage facilities in the project. The entire complex is planned for completion

by 2015, including a urea plant with a capacity of 717,500 tpa. Vnesheconombank (VEB) has agreed to attract a loan of \$1 billion for a period of 14.5 years for a number of foreign banks to finance the construction project. Foreign financial institutions will serve as a source of long-term funds to finance the complex. Terms of the credit agreement include the provision of c JBIC financing from JBIC to VEB and the club of foreign banks led by Sumitomo Mitsui Banking Corporation and the Bank of Tokyo-Mitsubishi, under the cover of export insurance agency Nippon Export.



**SIBUR-Azot Cherepovets**

SIBUR Holding is considering the purchase of shares in FosAgro in a forthcoming IPO. The FosAgro group consists of Apatite, Ammofos, Azot Cherepovets, Balakovo Mineral Fertilisers, etc. FosAgro is preparing for an IPO, in which investors can offer about 10-15% of the shares, the amount of accommodation can range from \$500 million to \$1 billion. SIBUR has already reached an agreement for the acquisition of a 26.3% stake in Azot at Cherepovets from a group of investors. The acquisition is aimed at improving the current capitalisation of SIBUR's business in relation to the production of mineral fertilisers.

Although SIBUR has reported a strategy of phasing out of non-core businesses such as fertilisers, the group is still aiming to increase the total capitalisation in the fertiliser division. Given the growth potential of FosAgro, this financial investment will increase the number of possible options for the most effective way out of the share capital of SIBUR-Fertilisers. In return, FosAgro is considering taking a loan to purchase SIBUR-Mineral Fertilisers, which could amount to around \$650 million. Thus, it is a very complicated procedure but it could eventually allow the exit of SIBUR from the fertiliser sector.

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**Organic chemicals & plastics**

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Russian Butanols Market (unit-kilo tons)		
Period	Jan-Jun 11	Jan-Jun 10
Production	144.9	140.9
Exports	105.1	122.0
Imports	0.0	0.0
s/d balance	39.8	18.9

**Russian butanols, Jan-Jun 2011**

Russian butanol exports have declined this year to China due largely to lower demand. Russia exported 46% of production to China in 2010 which is twice more than is consumed domestically. In the first half of 2011 exports to China totalled 63,600 tons which accounted for 44% of production. Exports fell to other countries this year too. A total of 105,100 tons of butanols was exported in the first half of 2011 which is 13% less than the same period last year.

The domestic market has witnessed growth in demand for butanols this year, particularly in the production of butyl acrylate and butyl acetate. From January to June of 2011 the Russian market consumed 39,800 tons of butanols, 92% more than the same period in 2010. Thus, reduced export activity has been beneficial to the domestic market which has largely recovered from the 2008-2009 crises. Product has been relatively well balanced until June when Gazprom Neftekhim Salavat stopped for maintenance.

**Russian DOP market**

Russian DOP imports comprised 2,900 tons in the first four months in 2011, 36 times more than the same period last year. In the middle of 2010 the Ukrainian company Lizinvest resumed production of DOP and now exports mostly to the Volgograd plant Plastkab which is part of the Nikokhim group. In the first four months in 2011 Ukraine shipped 1,600 tons of DOP to Russia. In addition to Ukrainian DOP, Russian consumers also buy plasticizers from Korean producers and sourced 1,100 tons in the first four months. Korean product started to emerge on the market after an unplanned stop at the Roshalsky Plant of Plasticizers.

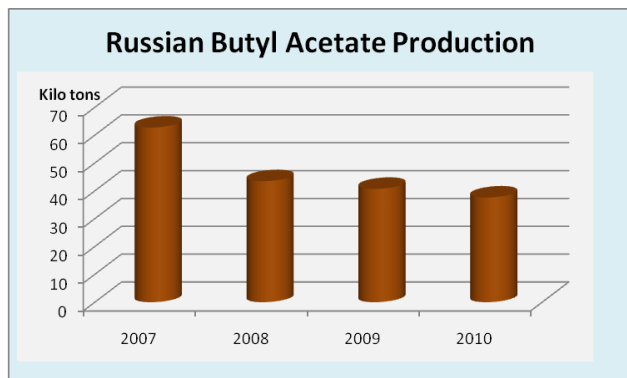
In the first part of this year about 90% of the volume of DOP has been imported from Ukraine and Korea. Plasticizers of Ukrainian origin are available at prices that are quite competitive with Russian plants and thus the influence of Ukrainian DOP on the market is minimal. The cost of the Korean DOP is lower than domestic production, but with 10% duties prices are increased at the Russian border by about \$200. However, some importers have found ways to reduce the rate of duty at the customs clearance or avoid payment altogether.

For example, DOP can be imported by HS code, which corresponds to the other phthalate plasticizers and this reduces the duty to 5%. Around 30% of imports have been based on this methodology this year. Another way to reduce the rate of duty is an understatement of customs value of imported goods, such as reporting a much lower price. These factors have contributed to forcing Russian producers to reduce prices, and consequently have applied to the Federal Customs Service with complaints about unscrupulous importers.

**Russian acetone market, Jan-May 2011**

Domestic sales of acetone in Russia totalled 25,500 tons in the first five months in 2011, which is 24% more than in the same period in 2010. The main consumers include Sintez-Acetone, Dzerzhinsk Orgsteklo, and Khimprom Cheboksary. These companies purchased 67% of commercial acetone supplied to the domestic market. The volume of shipments in the first five months increased by 14% in the first five months in 2011.

Acetone exports totalled 26,000 tons, which is 31% more than in the same period in 2010. The main supplier of acetone to the external markets is Samaraorgsintez, which shipped 11,400 tons or 10% more than the same period last year. The main export shipments were sent to Finland (31% of gross shipments to foreign markets), Belarus (30%), Turkey (25%) and Latvia (6%). Increasing the supply of acetone on the domestic and export markets was made possible through the growth of production. Production totalled 57,400 tons in the first four months in 2011, 20% more than in the same period last year.



nothing thereafter. Only two plants have been able to increase production in the past few years. Azot at Nevinomyssk increased production of butyl acetate in 2009 to 18,451 tons and in 2010 to 18,926 tons. DXI in the Ivanovo region produced 14,143 tons in 2010, compared to 9,062 tons in 2007, 9 540 tons in 2008 and 15,756 tons in 2009.

#### Russian acetate markets

Russian butyl acetate production has witnessed a steady decline in recent years and has not recovered from the crisis in 2008-2009. A number of producers have reduced production volumes due to raw material problems, demand, etc. Molomsky Wood-Chemical Plant in the Kirov region produced 8,045 tons of butyl acetate in 2007, but fell to 3,213 tons in 2010. Asha in the Chelyabinsk region produced 18,000 tons in 2007, dropping to 7,983 tons in 2008, and 1,689 tons in 2009. Karbokhim at Nizhny Novgorod has now ceased production, whereas in 2007 the company produced 5,138 tons followed by 1,168 tons in 2008 and then

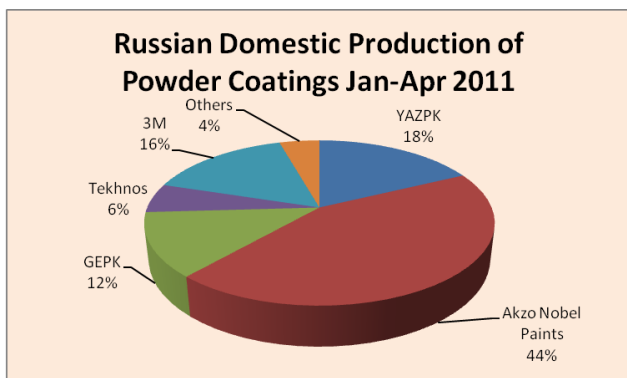
#### Russian Powder Coatings Market (unit-kilo tons)

	2007	2008	2009	2010	J-A 11
Production	5.1	7.5	7.8	10.8	4.4
Imports	21.5	22.2	14.3	21.8	6.5
<b>Market Balance</b>	<b>26.7</b>	<b>29.7</b>	<b>22.1</b>	<b>32.6</b>	<b>10.9</b>
Share of imports in market	81%	75%	65%	67%	60%

Some companies have not been able to increase the production of coatings due to the absence of titanium dioxide and solvents.

#### Russian powder coatings market

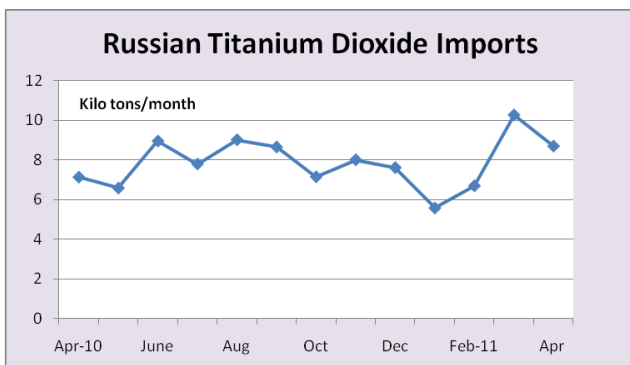
Russian paint producers increased production in the period January-May this year by 2% to 431,500 tons. Production slowed down in May due to oversupply, but due to seasonal consumption patterns increases took place at most Russian plants in June and July. Some



The demand for powder coating has been rising strongly this year, with a 44% increase in consumption in the first six months. Imports have led the way in terms of market share in recent years although domestic production has started to increase its proportion of consumption. As is often Russian powder coatings are cheaper than imports, and can naturally provide greater supply security. Akzo Nobel from its Russian plant occupies the largest share of the market. The plant was opened in 2007 at Orekhovo-Zuyevo in the Moscow region.

#### Russian titanium dioxide demand

Titanium dioxide demand in Russia has risen in 2011 faster than supply. Despite an abundance of titanium ore Russia does not produce titanium dioxide and depends largely on imports from Ukraine. The geological ore deposits in Russia are yet to be developed due to profitability issues.



The largest deposits of titanium ore in Russia are controlled by Medvedevsky GOK, which has been threatened with bankruptcy. In addition to Ukraine, Russia depends on imports from the US and Europe. In 2010, the main suppliers included Crimean Titan (24%), DuPont (18%), Kronos (12%) and Sumykhimprom

(14%).

Russian consumers of titanium dioxide have faced difficulties this year in supply set against high demand. Traders have struggled to secure supply and when available have sold almost straight away. Chinese products have started to be seen this year, accounting for 9% of shipments in the first five months. However, there are problems with Chinese titanium dioxide are usually linked to quality and delivery times. Commissioning of domestic capacity for titanium dioxide in Russia is not being planned and so consumers will remain dependent on imports for the foreseeable future.

## Industrial parks & clusters

### Tobolsk economic zone

The issue of establishing a special economic zone at Tobolsk is under review, which will lead to the development of processing facilities in the Tyumen region. By 2014, SIBUR plans to almost double the capacity for gas fractionation at Tobolsk, from 3.5 million tons to more than 6.5 million tons. By 2015, the company expects to complete construction of a product pipeline from the northern regions of West Siberia to Tobolsk. This will correspond to the plans for establishing a petrochemical cluster in Russia. The authorities of the Tyumen region of Russia have appealed to the government initiative to create a special economic zone at Tobolsk, including duty-free importation of foreign equipment and partial exemption from income tax and land tax.

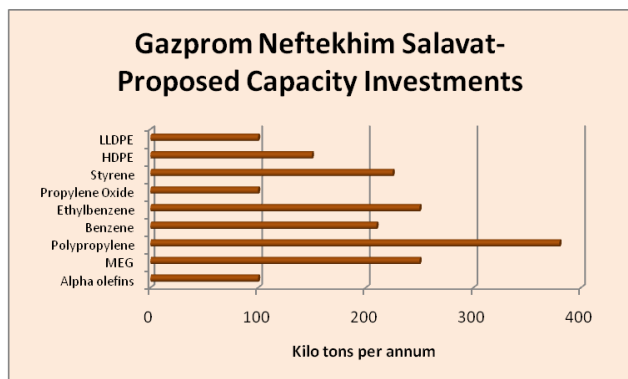
Salavat Industrial Park-Expected Petrochemical Consumption by 2016		
Product	Final Products	(ktpa)
HDPE	Pipes	20
	Films	4
LDPE	Films	6
	Others	4
LLDPE	Films	5
	Others	5
Polypropylene	Pipes	10
	BOPP	10
	Packaging	4
	Non-fabric materials	10
	Thermoelastomers	10
Polystyrene	Insulation	10
	Films	5
	Decorative materials	2
	Packaging	3
Butadiene	Thermoelastomers	35
MEG	Antifreeze	10
Alpha-olefins	LAB	30
Total		183

### Gazprom Neftekhim Salavat-proposed cluster

Gazprom Neftekhim Salavat will form the basis of the proposed industrial park, with the aim to attract small and medium-sized businesses to develop Salavat industrial site. Companies will focus on the manufacture of the final products from raw materials supplied by Gazprom Neftekhim Salavat. According to preliminary calculations, by 2016 the park will operate more than 50 small and medium sized processors. The volume of the final product of the industrial park business in 2016 will amount to 183,000 tpa.

Gazprom is in the process of preparing a feasibility study for the establishment of the Industrial Park, with a detailed study of long-term basic projects. In particular, Gazprom Neftekhim Salavat plans to build a new railway overpass, tank farms for the storage of natural gas liquids and gasoline, and warehouses for finished goods, etc. In addition, the group expects to modernise and expand the existing pipeline system of the complex.

To date, the concept based around Salavat involves the creation of a large industrial complex, which includes processes for lower olefins based on feedstocks naphtha, natural gas liquids, ethane), as well as further processing of olefins and by-products of pyrolysis. The investment programme consists of two main stages, firstly from 2012 to 2018 and the second from 2018 till 2022.



The possibilities of creating a new ethylene cracker of 1 million tpa are being considered, in addition to alpha-olefins, butene-1 and hexene-1 (100,000 tpa), ethylene glycol (250,000 tpa), polypropylene (380,000 tpa), benzene (210,000 tpa) and ethylbenzene (250,000 tpa), propylene oxide and styrene (100,000 and 225,000 tpa respectively).

Other plans include the construction of two plants for polyethylene including 150,000 tpa of HDPE and 100,000 tpa of LLDPE. In addition, Gazprom Neftekhim Salavat plans to extract 170,000 tpa of butadiene from butylene-butadiene fractions produced via the two

respective crackers of 380,000 tpa and 1 million tpa.

**Chemical Park Tagil**

The aim in the Nizhny Tagil region is to create a cluster of chemical-based businesses around Uralkhimplast. The first phase includes the new methanol plant which is intended to form the central part of the cluster that already includes subsidiaries of Uralkhimplast including UHP-Andor, UralMetanolGroup, Uralkhimplast-Cavenaghi and Ural Plant of Plasticizers. The second phase of the cluster programme comprises efforts will be made to attract Russian and foreign investors outside of non-Uralkhimplast. To accommodate new companies a plot of land approximately 30 hectares has been reserved whereby negotiations with numerous partners is underway. The entire cluster envisages a grand industrial park of three thousand acres where production will be divided into eight zones: industrial, energy, logistics, etc.

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**Other products**

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**Kuibyshevazot-DSM jvs**

Kuibyshevazot and DSM have concluded agreements to create two jvs. It was also reported that Kuibyshevazot and DSM plan to create two jvs. The first will include a trading company which will implement polyamide-6 sales in Russia and CIS countries. The JV will enable both companies participating to strengthen its presence in the growing market of engineering plastics in Russia and CIS. DSM will own a 51% stake in the JV. The scope of the second JV includes the production of engineering plastic compounds at the facility, located in Togliatti, in the industrial area of Kuibyshevazot. DSM Engineering Plastics plans to buy 80% stake in the JV.

In partnership with DSM, Kuibyshevazot also intends to undertake work on the technology of production of cyclohexanone and to construct energy-efficient production unit for cyclohexanone. Kuibyshevazot approved the transaction in January 2011 for the acquisition of DSM's license technology to produce cyclohexanone for a total purchase price of 7.184 billion roubles. Capital construction will be carried out in 2011-2014.

<b>Russian Caustic Soda Production unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Jun 11</b>	<b>Jan-Jun 10</b>
SIBUR-Neftekhim	25.0	35.9
Khimprom Novocheboksarsk	44.0	47.0
Kaustik Volgograd	104.5	106.3
Khimprom Volgograd	13.5	40.4
Kaustik Sterlitamak	65.2	71.4
Usolyekhimprom	0.0	26.9
Sayanskkhimplast	86.4	84.2
Azot Novomoskovsk	21.7	3.2
Bratsk TSKK	40.4	37.4
Kirov-Chipetskiy CC	43.3	42.9
Others	15.4	49.5
Totals	459.4	545.1

**Kaustik-air separation unit**

Kaustik at Sterlitamak has signed a contract with US company Red Mountain Energy to supply equipment, installation and design of a new air separation unit. Other companies participating in the tender included Linde and the Russian company Kriogenmash. The project is focused on meeting demand not only for Kaustik but other consumers in the Sterlitamak region including Sintezkaucuk and Soda. The air separation unit is intended to start up in the second quarter of 2013.

**Pikalevo soda ash plant**

The Russian fertiliser holding Fosagro has negotiated the purchase of a package of shares in Metakhim and Pikalevo soda ash plants for a total of \$11 million. In April Fosagro

and the Danish company FLSmidth signed an agreement for technological cooperation and modernisation of the Pikalevo industrial complex. The agreement envisages using the dry method of limestone-nepheline, reducing power consumption, and increasing the capacity for processing nepheline concentrate. In addition, the agreement provides for the possible construction of new facilities for processing of nepheline concentrate. In addition, the management holding company intends to modernise Metakhim and Pikalevo Soda.

**Kaustik at Volgograd, fined for cartel**

The Federal Antimonopoly Service (FAS Russia) has fined Kaustik at Volgograd 191.5 million roubles for participating in cartel arrangements for caustic soda sales. A number of traders were fined for involvement in the cartel. Other companies under examination for cartel fixing by the FAS include traders Himpek, Orion, Biakr, and Promhim.

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**Plastics**

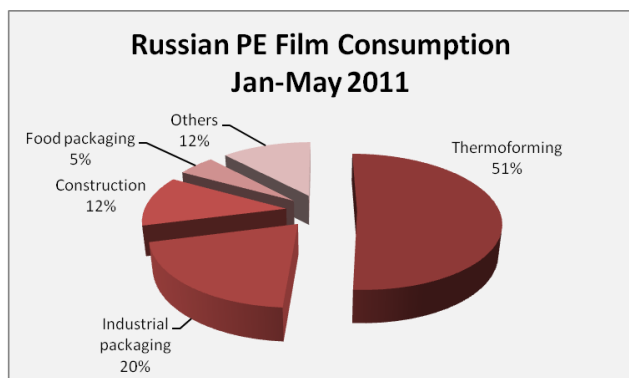
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**Russian polymer markets**

Market demand for polyethylene films rose 19% in the first four months in 2011 and totalled 128,430 tons. Domestic production rose 22% to 98,570 tons whilst imports rose 10% to 30,460 tons and exports rose 30% to 600 tons. Inventories rose this year due to some processors lacking working capital. In the five months of this



year, the export of Russian polyethylene films amounted to only 701 tons that is 41.6% lower than the same period of 2010.



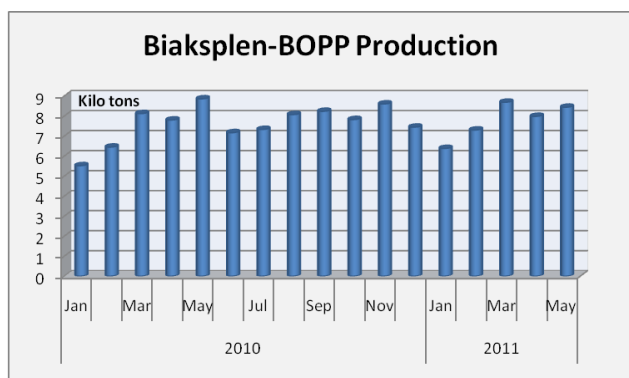
Kaprolaktam, owned by SIBUR-Neftekhim, produced 14,900 tons which is 8% more than the same period last year. Kaustik at Sterlitamak produced 11,300 tons of PVC plasticizers in the first five months in 2011 that is 30% more than in the same period in 2011.

#### Russian PET market, Jan-May 2011

Russian PET exports increased in May to 6,900 tons, 54% more than in April, and six times higher than the same period in 2010. Exports amounted to 12,770 tons in the first five months in 2011, twice more than in the same period last year. This increase was due largely to the start-up of the Alko-Naphtha plant at Kaliningrad.

The new plant started producing chips at the end of February 2011, and initially sales were divided 50/50 between exports and domestic sales. From March to May export activity increased to countries such as Belarus, Poland and Italy.

Alko-Naphtha reduced production in May by 38% against April, which meant that overall Russian PET production declined by 11% to 35,170 tons. In the first five months Russia produced a total of 150,000 tons of PET which was 21% up on the same period last year. The forecast for Russian PET consumption in 2011 is 6-8% growth to a total of 596,000 tons against predicted production of 362,300 tons. The volume of Russian PET production in 2010 increased by 18.5% and amounted to 312,000 tons. PET capacity is expected to total 876,000 tpa by 2015.



#### Biakspen-BOPP expansions

Biakspen plans to launch two new lines for the production of BOPP film by 2013 at Novokuibyshevsk and Tomsk, both with capacities of 38,000 tpa. A further new plant is being considered for Tobolsk after the completion of the polypropylene plant. One of the problems of the Russian market is the lack of production of additives that are used to produce films. Therefore, the company has to buy them abroad.

2010 amounted to 66,900 tons up 11% over 2009. The Russian market for BOPP is currently estimated at around 120-125,000 tpa, of which imports account for about 20% market share. By 2015, the market is forecast to grow to around 200,000 tpa. In the first five months of 2011 Biakspen produced 38,800 tons of BOPP, which was 5.6% up on the same period last year. Exports have dropped this year by 68% to 1,880 tons.

### Ukraine

Ukrainian HDPE Market					
	2007	2008	2009	2010	Jan-Apr 11
Production	102.0	48.4	0.0	33.5	36.4
Exports	100.7	55.2	0.7	32.7	33.8
Imports	167.2	145.1	126.9	125.4	45.0
<b>Market Balance</b>	<b>168.5</b>	<b>138.4</b>	<b>126.2</b>	<b>126.1</b>	<b>47.6</b>

2011 against 2010.

#### Ukrainian polyethylene market

HDPE demand in Ukraine is showing growth after several years of fluctuations. The market expanded rapidly in 2007, declined in 2008, in 2009 and 2010 this trend has continued. It was only in 2011 that the market has started to witness an upward trend again. Consumption rose 1.5 times in the first four months of

LLDPE is not produced in Ukraine, and also sourced in part from Kazanorgsintez for film production. In the first five months in 2011 Ukraine imported 24,400 tons of LLDPE which was 32% more than the same period last year. Product from South Korea has been seen this year, but delays have been encountered with transportation.

### Ukrainian Chemical Production (unit-kilo tons)

Product	Jan-May 11	Jan-May 10
Acetic Acid	53.5	29.8
Ammonia	2246.1	1754.1
Benzene (+95%)	51.9	45.8
Ethylene	84.3	0.0
Formaldehyde	12.8	21.1
Methanol	41.0	31.4
Polyethylene	27.3	0.0
Polypropylene	42.4	36.5
Polystyrene	7.3	7.2
Polyvinyl Acetate	1.4	2.4
Propylene (merchant)	46.5	0.0
Soda Ash	259.2	272.2
Titanium Dioxide	64.6	50.2
Toluene	2.6	2.3
Total	3028.0	2365.0

In the first four months of this year, the consumption of HDPE has increased to the same period last year, but still remains lower than in 2007. In some sectors demand has been much stronger, such as polyethylene for insulation of metal pipes where consumption rose 15 times in January-April 2011 against the same period at year. This resulted from very low levels recorded from January to April of last year, and the important factor this year of a contract for the supply of pipes from a Ukrainian processor to Transneft. However, this is a short term development and is unlikely to go beyond this year.

Overall, HDPE consumption in Ukraine is expected to exceed 2010 levels by 25-30% but still remaining lower than in 2007. Film and pipe outlets will remain key to overall consumption patterns, whilst the share of Karpatneftekhim in the total market will increase from its 11% in the first four months in 2011. Most of the production from Karpatneftekhim was exported to Turkey this year under long term contracts. Imports of HDPE into Ukraine are sourced largely from Kazanorgsintez.

### Ukrainian benzene market

The shortage of benzene in the Ukrainian market has been aggravated by the increases in consumption from caprolactam, adipic acid and nitrobenzene. Consumption increased three-fold in 2010 to 140,100 tons and in the first four months in 2011 by another 27% to 49,400 tons. In April 2010 Yuzhnyi introduced a new nitrobenzene plant with a capacity of 40,000 tpa placing further pressure on availability. Karpatneftekhim restarted benzene production last year, explaining a 73% rise in the period January-April 2011 to 48,600 tons.

### Ukrainian Benzene Market (unit-kilo tons)

	2010	2009	Ja-Apr 11	Ja-Apr 10
Production	104.0	54.5	47.1	28.0
Exports	16.8	10.8	20.5	0.5
Imports	53.0	1.4	22.8	11.2
<b>Market Balance</b>	<b>173.8</b>	<b>66.7</b>	<b>49.4</b>	<b>38.9</b>

Whilst benzene is imported into Ukraine, products using these feedstocks such as caprolactam and adipic acid are exported. Further increases in demand are likely to be met by reduced exports rather than imports, due to Karpatneftekhim redirecting sales. Gross output of coal-benzene is nearly 50% in Ukraine against 25% in Russia. Feedback from consumers reflect that Ukrainian coal benzene is a fairly high-quality product, but it can be used in certain sectors as the organic chemical producers prefer to

use oil based benzene.

Growth in demand for benzene in Ukraine has caused a rapid increase in the supply of imported products. Ukraine imported 54,000 tons of benzene in 2010 against 1,438 tons in 2009. In the first four months in 2011 Ukrainian producers of caprolactam and adipic acid purchased 22,800 tons of imported benzene which was twice more than the same period in 2010.



### Ukrainian soda ash/caustic markets

The demand for soda ash in Ukraine has been rising modestly in 2011, with the glass sector accounting for 76% of soda ash shipments in the first half of the year. Exports have started to be sent to Romania by Crimean Titan to glass producers Buchanskim factory glass and Biomedsteklo. A total of 135,400 tons of soda ash, which was 52% of total production, was exported in the first four months this year with Belarus increasing purchases two-fold to 29,200 tons. The major Belarussian consumer was Gomelglass.

In the caustic market the resumption of production by Karpatneftekhim has had a major impact on the availability of caustic soda in Ukraine, increasing 90% in the first five months in 2011. Production at Karpatneftekhim restarted in October 2010, and the plant can produce around 15,000 tons per month. The other Ukrainian producer Dneprozot underwent two weeks of scheduled

maintenance in April, the result of which the largest domestic consumer of caustic soda Nikolayev Alumina Plant needed to buy an additional 4,970 tons of Turkish and Romanian 2,500 tons of caustic soda. In the first half of 2011, demand for solid caustic soda in Ukraine was high but the monthly increase in tariffs for cargo railway transport in Ukraine has led to increased cost of caustic soda by 5-7%. The increase in production at Karpatneftehim will hinder the growth of prices of liquid caustic soda in the free market.

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**Belarus**

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**Naftan-Polymir**

Belarus has asked LUKoil to make a final decision on the participation in the privatisation of the Naftan-Polymir complex and claims that there are offers from other investors. LUKoil previously examined the possibility of buying Polymir several years ago, but decided against the purchase. Since then Russia and Belarus have intensified the customs union which may increase the attraction of LUKoil buying Polymir and Naftan together.

Polymir is one of the largest chemical plants in the Belneftekhim holding and specialises in producing HDPE, acrylic fibres, and organic synthesis products. Naftan can refine up to 11 million tpa of crude oil and is located close by Polymir, to where it provides feedstocks. As part of the customs union, Belarus has proposed includes the creation of a petrochemical cluster on Belarussian soil that would be supplied by feedstocks and raw materials from Kazakhstan.

**Mogilevkhimvolokno-PET production**

In the first five months in 2011 output amounted to 77,500 tons, which is 13% below the same period in 2010. Earlier this year due to a shortage of PTA Mogilevkhimvolokno was forced to cut output, despite the relatively high demand for chips in both domestic and foreign markets. This has led to reduced production of Belarusian PET compared with last year. Production resumed in May to 20,980 tons, which was 64% more than in April but only 2% more than the same period last year.

<b>Belarussian Chemical Output (unit-kilo tons)</b>		
<i>Fertilisers</i>	<i>Jan-May 11</i>	<i>Jan-May 10</i>
Potassium Fertilisers	2359.6	2315.1
Nitrogen Fertilisers	339.7	342.0
Phosphate Fertilisers	88.7	88.9
Ammonia	438.3	451.3
Sulphuric Acid	413.3	390.2
<i>Petrochemicals</i>	<i>Jan-May 11</i>	<i>Jan-May 10</i>
Ethylene	58.8	57.4
Benzene	44.1	39.1
Caprolactam	53.7	48.5
Phthalic Anhydride	6.7	9.5
Polyethylene	56.4	55.8
PET	77.5	89.6

**Lakokraska-Jotun**

Lakokraska has signed a new licensing agreement to produce coatings with Jotun Paints. Lakokraska has also started sending sample paints to domestic customers, produced under license by BASF.

**Belneftekhim-Gomel Plant**

Belneftekhim has offered the Russian holding FosAgro to participate in the development of Gomel Chemical Plant. Belneftekhim has proposed to Fosagro to buy shares of the company as it sees it as a main strategic partner in the development of the Gomel factory. Belneftekhim had previously reported that because of rising energy prices, the shortage of own sources of financing, existing sanctions by the USA.

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**Central Asia & Kazakhstan**

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**KazRosGaz-Orenburg**

KazRosGaz (a jv between Gazprom and KazMunaiGaz) in 2011 plans to keep the level of production of dry gas at the Orenburg Gas Processing Plant at 6.9 billion cubic metres. In 2010 the volume of dry gas production totalled 6.8 billion cubic metres. The main resource base for KazRosGaz is gas from the Karachaganak oil and gas field in north-west Kazakhstan, purchased from the company Karachaganak Petroleum Operating BV. In 2010 KazRosGaz purchased only about 7.9 billion cubic metres of gas (in the current year is planned 8 billion cubic metres), were exported 6.2 billion cubic metres, with 3.3 billion cubic metres were sold under contracts of substitution of Russian and Central Asian gas recycled gas Karachaganak field for the domestic market.

KazRosGaz expects to increase its resource base by Imashevsk field, which is the second gas field at Karachaganak. According to preliminary calculations, its recoverable reserves are over 128 billion cubic metres of gas and 20 million tons of gas condensate. An intergovernmental agreement was signed between Kazakhstan and Russia in 2010 on joint activities in this field, which provided for geological exploration and prospecting at Imashevsk. The decision to develop Imashevsk will be taken after the completion of its study.

**Foster Wheeler-SOCAR**

Foster Wheeler has announced that its subsidiary Global Engineering and Construction Group has signed an MoU to form a JV with SOCAR. The new jointly-owned company will focus on providing process, engineering, procurement, construction supervision and project management services associated with the development of the new oil, gas processing and petrochemical complex. The new entity will provide the same services for upstream, midstream and downstream oil and gas projects developed by SOCAR both in the Republic of Azerbaijan and in other countries.

Azerkimya, which is part of SOCAR, is planning to overhaul the cracker in August with equipment arriving from Germany, Ukraine, Czech Republic and Russia. Part of the work is being carried out on the Polymir-120 plant, whilst Japanese specialists will conduct an examination of the turbine steam plant. In the first six months in 2011 chemical exports from Azerbaijan rose 62.07% against the same period last year due largely to the increased production at Azerkimya.



*Relevant Currencies*

Czech crown. Kc. \$1= 17.296 €1 = 24.4064: Hungarian Forint. Ft. \$1 = 190.345. €1 = 268.596: Polish zloty. zl. \$1=2.7895. €1 =3.963: Bulgarian leva: \$1 = 1.3885. €1= 1.9551: Romanian Lei. \$1 = 2.9103. €1= 4.1067: Croatian Kuna HRK. \$1 = 5.236. €1= 7.3884: Ukrainian hryvnia. \$1 = 7.993. €1 = 11.2789: Rus rouble. \$1 = 28.037. €1= 38.563

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