

# CIREC

## MONTHLY NEWS

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

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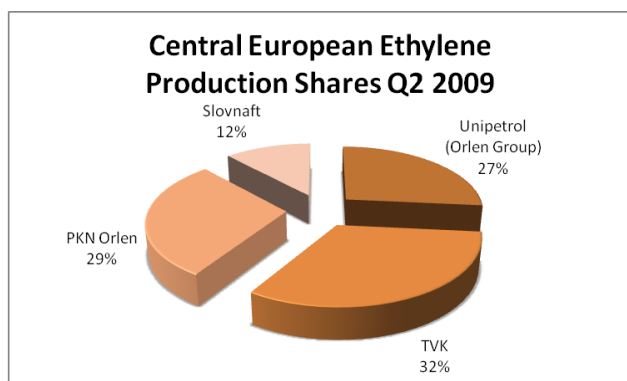
- PKN Orlen's petrochemical division recorded an operating loss of zł 172 million in Q2 2009, set against a profit of zł 120 million in Q2 2008.
- HIP Petrohemija restarted ethylene and petrochemical production at Pancevo on 17 September
- The Polish Ministry of the Treasury closed bidding on 15 September from investors willing to take part in the privatisation of the first batch of major chemical companies
- Spolchemie has opted to put up its assets as collateral with a consortium of five banks to put off the payment of loans totalling Kc 2.77 billion
- LUKoil has taken the decision to transfer the construction of the gas-processing plant, based on North Caspian feedstocks, from Kalmykia closer to the petrochemical complex at Budyennovsk
- SIBUR is take charge of production and raw material supply for the polypropylene plant located at the Moscow refinery and owned by the subsidiary NPP Petrochemia
- Kazanorgsintez has agreed with SIBUR that deliveries of ethane from Orenburg will no longer be carried out on a tolling arrangement, considered to be disadvantageous for profitability at Kazan
- Due to a lack of liquidity on the domestic market Russian polyethylene producers have increased exports this year to sustain capacity utilisation levels. Production continues to rise.
- Gazprom is continuing to try and attract finance for the Novy Urengoy Gas Chemical Complex, with aims of a start-up by 2012. Funds were awarded in September
- The RusVinyl project is expected to start construction in the first quarter in 2010, after a positive outcome of the project assessment was reached by domestic and foreign engineering companies
- Paraxylene operating rates are exceeding orthoxylene at Russian refineries due to higher demand and higher profit margins
- Russian engineering group Metaprocess and Gazprom subsidiary TyumenNIIgiprogas are to assess the prospects for a proposed methanol project in the Yamburg region of West Siberia
- Evrokhim has started the construction of the first melamine plant in Russia, located at the group's subsidiary Azot at Nevinomyssk
- Solvay has stated that it has agreed to buy Sodium Group Investments Limited's majority stake in the Berezniki soda ash plant in Russia

## CENTRAL & SOUTH EAST EUROPE

### Petrochemicals

#### PKN Orlen Q2 2009

PKN Orlen's petrochemical division recorded an operating loss of zł 172 million in Q2 2009, compared with a profit of zł 120 million in Q2 2008, and the continuing poor results are rendering questions over the group's future strategy in petrochemicals. Due to poor petrochemical margins, the divisional result shrank by zł 327 million in the second quarter although it was offset by the depreciation of the zloty against the dollar and euro helping to increase the value of inventories by zł 115 million. Overall it was lower sales' volumes, notably in olefins and polyolefins which fell by a total of 49,000 tons, that drove the group's operating result in petrochemicals down by zł 52 million.

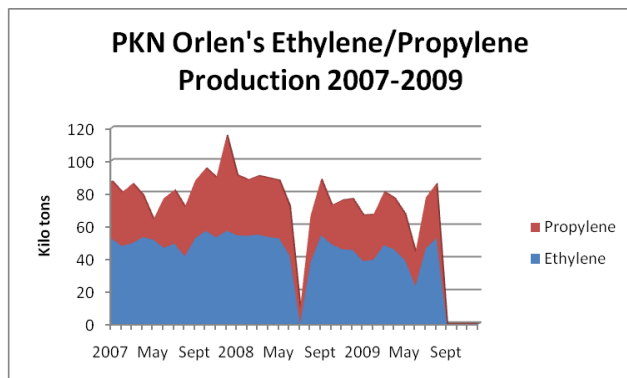


Compared with Q2 2008, margins on ethylene, propylene, polypropylene and polyethylene for the Orlen group fell respectively by 27.9% (to \$502.43/ton), 46.0% (to \$282.55/ton), 3.9% (to €263.40/ton) and 32.0% (to €195.38/ton). In terms of significance to Central European ethylene supply (including Czech Republic, Hungary, Poland and Slovakia) PKN Orlen accounted for a combined 56% of production in the second quarter this year. Quarterly data for olefins and polyolefins in Central Europe from 2004 onwards is available on the Statistical Database at [www.cirec.net](http://www.cirec.net)

In order to adjust the investment policy to tighter financial markets, the Orlen group has made some cuts this year but the main projects are being continued to schedule. In Q2 2009, Orlen's petrochemical division increased capital expenditure by zł 605 million to zł 892 million. Despite the negative financial position, PKN Orlen is still planning to spend zł.10 billion on investments between 2009-2011.

The largest ongoing projects in Q2 2009 included the construction of the paraxylene units at PKN Orlen, the construction of a new butadiene unit at Unipetrol, and the construction of the PTA unit at Anwil. Other projects included work on the ethylene oxide and glycol facilities at Plock, and the construction of the propylene plant and start of new hydrogen unit at Mazeikiu Nafta in Lithuania. Unipetrol is investing to increase olefin processing capacity to 544,000 tpa for ethylene and 275,000 tpa of propylene, and the completion of the 120,000 tpa butadiene plant at Kralupy.

Due to growing financial pressure, PKN Orlen may be forced in 2010 to negotiate with banks over the terms of its credit agreements. This would take place if it did not manage to reduce its debts to a sufficient degree by the end of 2009. One way out of the situation would be to sell its shares in Anwil and PKN Orlen has indicated of its readiness to dispose of the subsidiary even if it is required to break it into parts.



In terms of petrochemical volumes, production at Plock recorded its highest month of the year in August, with ethylene totalling 52,500 tons and propylene 33,300 tons. For both monomers, production in the period January-August this year exceeded volumes in the same period in 2008.

#### Unipetrol ethylene shutdown

Unipetrol shut its steam cracker in Litvinov on 19 September for an unplanned outage for around nine days. The reason for the shutdown is technical issue in the polypropylene unit, having an effect on production at the polyethylene units. Prior to the outage, the third quarter has been performing relatively well against the first and second quarters, but this shutdown is likely to restrict a recovery in financial

results. Supplies of polyolefins to Unipetrol's customers are to be covered from inventories during the shutdown.

**HIP Petrohemija restarts ethylene**

HIP Petrohemija restarted ethylene and petrochemical production at Pancevo on 17 September. The relaunch was attended by the Deputy Prime Minister and Minister of Economy and NIS, both of whom have a strong interest in seeing ethylene production run normally at Pancevo. Prior to the restart, a protocol was signed on strategic cooperation between NIS and HIP Petrohemija which is of significance to the company's long-term prospects. NIS stopped feedstock supplies being shipped to Petrohemija in the spring due to outstanding debts, but this looks much less probable to happen in future. Although Petrohemija buys some of its feedstocks from abroad, the quantities required from NIS and LUKoil-Beopetrol are crucial for the normal operations of the cracker. In addition to resolving the position with NIS, Petrohemija has been in direct negotiations with LUKoil, to whom it owed \$35 million. Similarly to LUKoil wants to see petrochemical facilities at Pancevo running at full capacity.

By signing the agreement of co-operation with NIS, Petrohemija will save \$14 million per annum on raw material costs. By reducing salaries and the number of employees around another €22 million per annum could be saved. A sum of €30 million is expected to be invested in Petrohemija in the near future, €10 million of which will be provided by the government. Investments are promised to be invested in the reconstruction of the ethylene and HDPE units, in addition to the construction of LDPE and polypropylene units. More information about these investments will become available after the complex has been running stably for a reasonable period.

**South East European petrochemicals-upstream**

KazMunaiGaz, the majority shareholder of the Rompetrol group, could launch an offer ranging from 40 to €80 million to take over the 25% minority stakes in Rompetrol Rafinare including the Petromidia refinery. Petromidia's chief problem remains the €600 million-debt to the Romanian state, which needs to be paid by the Kazakhs next year. Recently, it was announced that Rompetrol Rafinare intends to take part in a share capital increase for Rompetrol Downstream and for Rompetrol Petrochemicals. The petrochemical division has been facing losses this year, and requires additional capital if it is to become capable of meeting its strategic programme.

Croatian polyethylene and polystyrene producer Dioki reported a loss of HRK 25.6 million (€3.5million) in H1, following a loss of HRK 3 million in the same period in 2008. Total revenues for polymer sales were down by 32.5% against 2008 to HRK 904.3 million, whilst at the same time total operating costs dropped by 29.4% to HRK 636.4 million. Sales' revenues declined by 41.1% to HRK 521.8 million.

LUKoil is investing \$249 million in the next few years in the Bourgas refinery to produce cleaner motor fuels and meet stringent European Union emission standards. The refinery will use most of the funds this year to upgrade and build new hydrocrackers to meet the EU standards as of 2009. For the petrochemical division at Bourgas, most units are running normally although there was minor outage in July involving the cracker and polymer units.

Serbian gas company Srbijagas is interested in projects relating to LPG on the island of Kirk in Croatia, as both Serbia and Croatia have an interest to continue the cooperation in the energy sector. The management of the Croatian state-owned oil pipeline operator Jadranski naftovod (Janaf) recently approved a decision to buy an oil derivatives depot at Zitnjak from Dioki.

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**Chemicals**

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**Polish privatisation**

The Polish Ministry of the Treasury closed bidding on 15 September from investors willing to take part in the privatisation of the first batch of major chemical companies. The first group of chemical plants included Ciech, Zaklady Azotowe w Tarnowie-Moscicach (ZAT), and Zaklady Azotowe Kedzierzyn (ZAK). In June, Nafta Polska invited investors to negotiations on 36.7% in Ciech, 52.6% in ZAT and 86.3% in ZAK.

After the closure of the bidding, the Polish Treasury Ministry shortlisted six bidders for controlling stakes. The list includes the German chemical group PCC, the Lithuanian company UAB Achema, National Qatar Industries Company, the Polish fund Mistral and two equity companies Bain Capital (USA) and Cinven (UK).

The Treasury plans to sell the stakes by the end of the year as a part of a larger privatisation drive aimed at financing the growing budget deficit. Other producers Zakłady Chemiczne Police and Zakłady Azotowe Puławy are planned to be sold to private investors next year.

#### **Central European chemical company responses to financial pressures**

PKN Orlen has said it hopes to receive offers for its Anwil chemical's unit in October as part of a plan to sell off non-core assets. However, securing a price that is considered satisfactory may prove extremely difficult. The company said in a statement that it was to produce a memorandum for investors interested in the purchase of the business, and will prepare a data room for due diligence. The company has appointed UniCredit to advise on the sale.

The Chinese company Yantai Wanhua has reportedly bought a significant part of BorsodChem's mezzanine loans, estimated at around 75%. Permira took over about €200 million in mezzanine loans when it acquired the BorsodChem in 2006. Yantai Wanhua's management has been in talks with Permira discussing how it could enter BorsodChem as a strategic investor and how it could take part in the reorganisation of the company. However, the surfacing of a new investor could put in jeopardy the subsidies already agreed on by BorsodChem with the Hungarian government. Yantai Wanhua is a major listed MDI producer and has indicated aims of long-term involvement in BorsodChem.

<b>Polish Chemical Production (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Aug 09</b>	<b>Jan-Aug 08</b>
Caustic Soda	50.3	53.5
Soda Ash	591.5	711.1
Ethylene	332.5	310.4
Propylene	232.5	217.3
Butadiene	32.9	31.4
Toluene	61.9	78.1
Phenol	21.5	25.5
Caprolactam	90.3	94.6
Polyethylene	216.9	197.3
Polystyrene	82.5	67.8
PVC	168.2	148.7
Polypropylene	170.6	143.3
Synthetic Rubber	86.936	76.432
Pesticides	16.5	22.59

Regarding debts, BorsodChem has that said its creditors, of around sixty, have supported a proposal to restructure. BorsodChem's management believes the proposal can be carried out and that it will be approved by creditors at the beginning of October.

In the Czech Republic, Spolchemie has opted to put up its assets as collateral with a consortium of five banks to put off the payment of loans totalling Kc 2.77 billion. The step has been reported as necessary to secure the future of the company. The agreement with banks is to ensure that the company will have to pay the loans by the end of 2015. Spolchemie, located at Usti nad Labem, is the third largest producer of epoxy resins in Europe with more than 90% of its production being sold inside the EU region. In 2008, Spolchemie generated sales worth Kc 5 billion, posting a profit of Kc 100 million. Spolchemie's majority owner is investment company Via Chem Group.

The European Commission has opened a formal investigation into Romania's plans to aid Oltchim in the form of a 135-million euro debt-to-equity swap and a €339.2-million state guarantee. Accordingly, the Commission has doubts whether the planned measures are in line with the state aid rules. Romania had notified the Commission in July of its intended support measures towards Oltchim. The Commission must verify whether the measures planned for Oltchim would entail state aid, and if so, whether such measures would not give rise to excessive distortions of competition. Oltchim hopes to take over the petrochemical division of Arpechim in the near future that will provide ethylene and propylene for chemical production at Ramnicu Valcea.

#### **Polish plastics**

Elastogran is to establish a new PU systems house at Srem, near Poznan in Poland as part of its plan to meet growing demand in Central Europe. Elastogran is constructing the €4.1m Polish plant on a 2.2 hectare site in the Walbrzych Special Economic Zone. The new Polish plant is the latest operation in a series of PU systems being set up in the region by Elastogran. Existing units are located in Solymár in Hungary and Nizhnekamsk, whilst Elastogran is launching production and PU system development at a third plant near Bratislava this year.

Portuguese plastics moulder Carfi Fabricá de Plásticos e Moldes is expanding its operations in Poland, after winning formal planning consent to construct a moulding plant at Siedlce. Located in the Tarnobrzeg Special Economic Development Zone, the plant will produce components for the household and television appliance sectors. The group's local offshoot, Carfi Polska, formed five years ago, already operates a 4,000 m2 moulding plant at Losice. This unit runs injection presses from 90-500 tons clamping force, as well as

blow moulding machines able to produce containers of up to 10 litres capacity. The new unit, which will employ around 70, is expected to be completed by the end of 2009.

Film converter Printpack has completed the first stage of a \$12 million complex at Kutno. The phase one production unit of the complex was launched in June. The full project is due for completion in the second half of 2010. The industrial development, located in the Lodz, will manufacture a range of flexible packaging aimed at the food industry.

South African and UK packaging company Mondi is proceeding with €178 million investments in Poland and Russia as part of its plans to expand in East Europe. In May, the group announced the expansion of a reclosable bag plant at Békéscsaba in Hungary. The new plant includes a 2,500m<sup>2</sup> production hall, a 1,500m<sup>2</sup> warehouse and two new production lines.

### **ZA Pulawy-investment projects**

ZA Pulawy recorded a zł 195 million net profit in its 2008-2009 fiscal year which ended in June, down from zł 331 million in 2008. ZA Pulawy increased its capital expenditure by nearly 50% over the past year, with further rises planned in 2009/2010 from zł 160 million to zł 400 million. The most important of the investment projects is the modernisation of the oxygen generation plant-ammonia-urea production line, which is the key for ZA Pulawy's operations.

By investing in the oxygen generation plant-ammonia-urea project, ZA Pulawy wants to reduce ammonia emissions and to reduce the consumption of electricity and natural gas in its production process. It will also allow the company to increase its urea production by 270,000 tpa, which will not only help production capacity for granulated fertilisers but also of melamine. The first melamine production line is to be modernised and expanded, with also intentions to increase caprolactam capacity from the current 65,000 tpa to 70,000 tpa. The company is to start considering new investment projects at the Pulawy Industrial Park, whilst also remaining committed to the construction of a coal gasification unit and power station.

### **Gas supplies for Polish chemical producers**

The major short-term concern for ZA Pulawy, as with other fertiliser producers, in Poland, is over gas supply. PGNiG estimates it will be short 0.5 billion cubic metres of gas in the fourth quarter and may be forced to reduce supplies to large industrial clients. Poland, which was not receiving all the contracted gas from Russia for nearly six months this year, is currently in talks with Russia to increase gas supplies to make up for shortages in 2009 in 2010. PGNiG estimates that it could be short 2.3 billion cubic metres next year, should the government fail to amend a deal with Russia.

### **South East European chemicals**

The Serbian Privatisation Agency has extended the deadline for submitting offers for the purchase of the Krusevac-based company Zupa until 30 September at the request of potential buyers, including the Czech company Spolchemie. The tender documentation for the purchase of a 70% stake in the Krusevac based plant had been submitted by the consortium of Spolchemie and the Krusevac based Plima Holding. Zupa produces a wide range of chemical products, from inorganic salts in the form of sulphates and products of potassium chloride, through to plant protection agents, leather processing agents, etc.

Austrian insulation producer Austrotherm is launching a new €8 million expanded polystyrene plant at Horia in Romania. The new unit has a capacity of 150,000 linear metres of EPS per annum and will be targeted on markets in Bulgaria, Hungary, Ukraine and Moldova. Austrotherm is also constructing an EPS insulating board plant in Hungary, with a capacity of 400,000 cubic metres per annum due for completion in 2010. ArcelorMittal has closed down the Galati Coke Chemical Plant in Romania, with the intention and to import coke from another plant of the group in Poland. Paints and varnish producer Megachim at Rousse in Bulgaria has reported heavy losses this year, after recording 27% sales growth to €13 million in 2008. Megachim controls a reported market share of 23% of the domestic paints market in Bulgaria. Megachim also exports quantities in partnership with DuPont.

Petrom may close its chemical plant at Doljchim in Romania, which produces methanol and fertilisers, if it fails to find a way to keep it operating. The company is considering both temporary and permanent closure of the plant, with redundancies to become effective in October and a decision next spring whether or not to continue. Petrom has been searching without success for a partner to manage Doljchim at Craiova. The chemical plant's sales fell 37% in the first half of the year to 173,000 tons owing to lower demand.



## RUSSIA

### Feedstocks & petrochemicals

#### Investments in associated gas

SIBUR has started a feasibility study for construction of gas processing and petrochemical facilities in East Siberia and the Far East. The feasibility study of the project for construction of a gas processing plant (GPP) in the north of the Irkutsk Region will include selection of the construction sites, estimation of capital

Russian Chemical Production (kilo tons)		
Product	Jan-Aug 09	Jan-Aug 08
Ethylene	1473.1	1551.6
Benzene	668.0	780.8
Styrene	328.6	398.8
Phenol	97.7	150.2
Polyethylene	924.6	842.5
Polypropylene	377.3	338.5
PVC	361.5	393.3
Polystyrene	167.5	170.1
Butanols	169.7	175.0
Methanol	1341.0	2376.7
Syn Rubber	592.5	835.7
Caustic Soda	729.0	899.4
Soda Ash	1519.9	1888.0
Ammonia	8431.2	8806.0

investments and operating costs, and the finished products distribution pattern. The construction site will be chosen in accordance with the deposits of Irkutsk Oil Company and other subsoil users. On completing the feasibility study at the end of 2009, the parties will take a decision on expediency of joint participation in construction of the GPP.

After opening the second line of processing at Yuzhno-Balyk in West Siberia, which increases processing at the site to 3.0 billion cubic metres per annum, SIBUR has stated that its total capacity for processing associated gas will reach 19 billion by 2012-2013. In addition to processing associated gas, Yuzhno-Balyk also acts as a conduit for 3 billion cubic metres of associated gas from other sources in West Siberia. By processing 3 billion cubic metres of gas per annum, the gas processing plant is capable of producing 900,000 tpa of SHFLU. The associated gas is sourced from

Rosneft's Priobsky oil field.

Another important ongoing SIBUR feedstock project includes the reconstruction of the Vyngapur compressor station in Yamal-Nenets and the construction of a product pipeline for the transportation of over 200,000 tpa of C3 fractions.

#### LUKoil opts for Budyennovsk as location for new gas processing plant

After reassessment, LUKoil has reached the decision to transfer the construction of the gas-processing plant from the originally planned Kalmyk settlement of Artezian to Budyennovsk near the Stavrolen plant. In the first half of 2009, the Kalmykia and Stavropol regions had made strong cases for locating the gas processing plant on their territories.

Whilst the decision does not affect the forthcoming programme for petrochemical investment at Stavrolen, it does impact directly on the budget of the Kalmykia region which had been looking to receive around \$2 billion of investments. This change of plan may affect fertiliser investments that were being planned in the Kalmykia region. LUKoil's explanation for relocating the gas processing plant has been put down to required pipeline connections, which favour taking the feedstock source closer to Budyennovsk. For the Kalmykia option, the pipeline for SHFLU feedstocks from Artezian to Budyennovsk would total 234 km. This measures against 100 km from the new option of Georgievsk, which is located in the Stavropol region and 600 km from the coast.

Taking into account the links from the Caspian Sea, the building cost of the gas and oil pipelines was estimated in the range of \$1.6 billion for Georgievsk against \$2.0 billion in Kalmykia. The original plan was to send SHFLU from Artezian to Budyennovsk on a separate 200-km pipeline. However, to process liquid fractions at Artezian and then to deliver it to Budyennovsk has now been judged to be not cost-effective. Instead, the Caspian gas will go straight to a gas processing unit on the Stavropol territory where after processing it will be converted into liquid fractions for delivery to the petrochemical complex.

For Kalmykia, the loss of the investment could affect the planned construction of fertiliser plants, over which the region had been in discussions with Vietnamese partners. Vietnam had stated in 2008 that it was prepared to invest at least \$750 million in a \$1.5 billion joint venture to build a fertiliser plant in Kalmykia, but there are now questions whether the project could be profitable.

LUKoil's gas processing plant is to be based on associated gas and SHFLU. Aside cost, one of the main advantages of building a gas processing plant in the Stavropol region is the developed infrastructure which would need to be built in Kalmykia. After constructing the gas processing plant, LUKoil aims to expand polyethylene capacity at Budyennovsk roughly three-fold to 900,000 tpa and polypropylene to 320,000 tpa. LUKoil expects to invest \$3.6 billion in the construction of the petrochemical complex, with start-up of polyethylene and polypropylene facilities aimed for 2015-2016. Whilst it is too early to know how much product will be sold on the domestic market, LUKoil estimates that around 40% of output from the new complex will be exported.

### Novy Urengoy gas-chemical complex

Gazprom is continuing its efforts to attract finance for the Novy Urengoy Gas Chemical Complex (NGKhK), with aims of a start-up of production by 2012 or 2013. Despite the absence of consumption growth for polyethylene in Russia this year, Gazprom has been seeking finance to support the construction of the complex. The project appears to have been wavering between being cancelled and continually revised start-up dates for a considerable amount of time. However, in the past few weeks the Russian state bank VTB has granted credit worth \$400 million to Gazprom for the construction of the petrochemical complex, including 400,000 tpa of polyethylene.

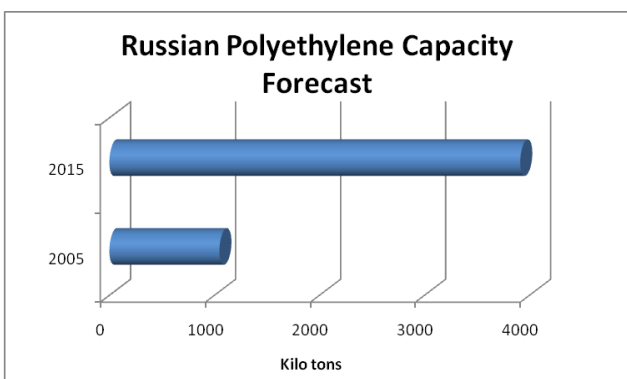


The current project dates to 20 May 1993 when Gazprom decided to construct a polyethylene plant based on ethane feedstocks. The origins of Novy Urengoy being developed as a site for petrochemicals date back even further to the late 1980s. The project made a degree of progress in the 1990s, but then fell victim to the political and economic transition in Russia. As a result, the project went through extended periods of inactivity, interrupted occasionally by statements about new

schedules. Gazprom included NGKhK in the list of priority objects in 2002, and laid the preparations for the plant by 2003 at the same time as registering NGKhK.

In 2008, the Russian institute Stroytransgaz started the construction of the complex based on technology supplied by Linde. Polyethylene equipment was supplied originally by Salzgitter. Initial estimates of around \$800 million required for the project have now more than doubled to an estimated \$1.7 billion for completion, which raises questions about the economic feasibility of the plant. Although the location of Novy Urengoy has the advantage of being close to feedstock supply and extremely low production costs, it is also has the disadvantage of being located far from markets for polyethylene sales, either export or domestic.

Thus, whilst demand in several years may be able justify the investment plans, logistical costs could erode any profitability in sales. This is a subject yet to be clarified by Gazprom, although the main aim of the project is to help the utilisation of associated gas for which the government has set a target of 95% by 2012. The complex is being designed to be capable of processing 400,000 tpa of SHFLU and 1.479 billion cubic metres per annum of methane.



The graphic opposite illustrates the impact of the Novy Urengoy and Budyennovsk projects upon polyethylene capacity in Russia by 2015, illustrating almost a four-fold increase against capacity volumes at the end of 2005. Even allowing for a strong recovery in polyethylene growth rates in Russia, it indicates that there could be a surplus which may need to find an export home.

### Rosneft-Primorsk refinery and petrochemical plans

Rosneft continues to access prospects for a petrochemical complex at Primorsk in the Russian Far East, as part of its investment into a world-scale

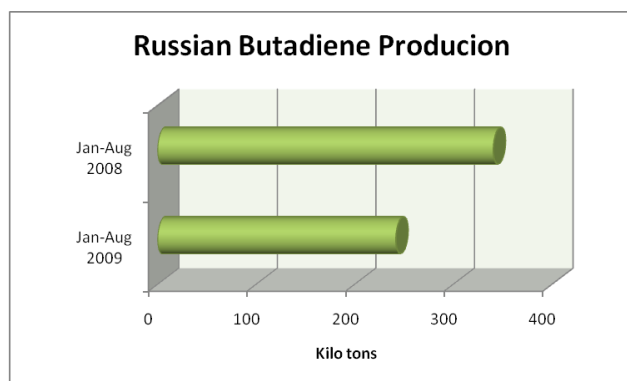
refinery. The first phase of the Primorsk Kray project is to concentrate on oil refining products such as gasoline, kerosene, diesel fuel, etc. The second phase is to concentrate on polyolefins, using gas reserves from Sakhalin and East Siberia. Paraxylene is also under consideration, as it could provide a good export commodity. Petrochemicals for Rosneft remain a long term concept for the period post 2015 and ultimately oriented on the Asian export market. In the shorter-term, Rosneft plans construction of terminals capable of trans-shipment of up to 30 million tpa of oil products, including 20 million tons within the framework of the Primorsk refinery and 10 million tons at the Black Sea near Tuapse Refinery. The construction project of Primorsk Refinery is to be implemented in two phases and is valued at \$5-7 billion.

#### **Tatarstan petrochemicals**

In the period January-August 2009, Nizhnekamskneftekhim achieved 2.8% more production than planned at the start of the year. Polystyrene and ethylene production rose 14,700 tons and 21,300 tons respectively against the same period last year. The company produced 115,400 tons of ethylene oxide in the first eight months of 2009 and 30,400 tons of MEG. SIBUR Holding and Kazanorgsintez have come to the agreement that deliveries of ethane from Orenburg will no longer be carried out on a tolling arrangement. Currently around half of the ethane supplied from Orenburg Helium Plant arrives as part of a toll arrangement, and the remaining half for Kazanorgsintez and its own separate production of ethylene and polyethylene. However, the FAS anti-monopoly service has stated the price formula for ethane has been calculated unfairly and this is to the disadvantage of Kazanorgsintez.

#### **Synthetic rubber monomers**

The closure of the Novokuibyshevsk plant at the end of 2008 is cited as one of the main factors behind lower availability of isoprene monomer in Russia this year. A total of 28,000 tons of isoprene was produced in August which was 21% lower than in July. For the period January-August 2009, Russia produced 205,800 tons of isoprene which was 34% lower than in 2008. Nizhnekamskneftekhim produced 109,300 tons, reducing volumes by 24% against 2008. From the total production at Nizhnekamskneftekhim, 86,000 tons was produced from the one-stage production process which was 10% lower than in 2008.



Butadiene production in Russia increased 10% in August against July, totalling 43,900 tons, and 6% higher than in August 2008. However, for the period January-August 2009 production fell 29% in Russia against 2008 and totalled 241,900 tons. Lower production was due to lower demand for butadiene rubber on external and internal markets. The largest fall of 44% was seen by Sintez-Kaucuk at Sterlitamak, which produced 12,300 tons in the first eight months of 2009. Nizhnekamskneftekhim reduced butadiene production by 30% down to 88,000 tons. The only producer to increase production was Omsk Kaucuk, which is part of the

Titan group, producing 24% more in 2009 and totalled 26,600 tons.

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### **Bulk polymers**

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#### **RusVinyl project receives positive assessment**

The RusVinyl PVC project at Kstovo is expected to start construction in the first quarter in 2010, after a positive outcome of the project assessment was reached by domestic and foreign engineering companies. The project has been included by the Ministry of Industry and Trade of the Russian Federation in the so-called Strategy of Development of the Chemical and Petrochemical Industry of Russia up to 2015. The project has received support from Vneshekonombank, with its status having been awarded priority by the government in June.

The first production stage of the PVC project at Kstovo has been targeted for the first quarter of 2013, having been rescheduled due to a combination of changes in the PVC market over the past year combined with restrictions imposed on finance. The PVC market in Russia declined by around 40% in the first quarter against the same period in 2008. Although the market could rebound quickly when liquidity improves, it has been decided to reschedule the start-up date for the 330,000 tpa plant. The expansion of the Kstovo cracker, which aims to increase ethylene capacity eventually to 430,000 tpa, is also expected to follow a 2013 completion schedule.



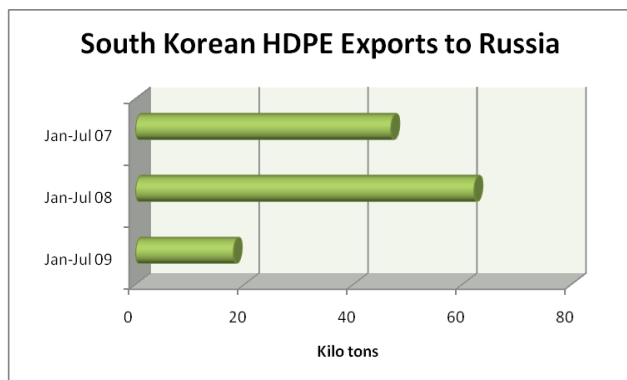
**SIBUR to make use of Moscow PP plant**

SIBUR has concluded a contract for renting and utilising the polypropylene plant located at the Moscow refinery and owned by the subsidiary NPP Petrochemia. In 2008, the Moscow plant produced 102,499 tons of polypropylene. Under new arrangements, SIBUR will supply raw materials to the plant and take responsibility for production and sales. The contract will run for a year at minimum and possibly until the Tobolsk project is completed. SIBUR's only operational polypropylene plant, at present, is located at Tomskneftekhim.

In effect, by renting the Moscow plant virtually doubles the group's availability for sales. Whilst managing the plant, SIBUR plans to improve the know-how and to improve the efficiency of sales. NPP Petrochemia is located at the Moscow refinery at Kapotnya, where there is also a company called NPP Progress which uses the polypropylene. The Moscow refinery belongs to the JV between Gazprom-Neft and Sibir Energy.

**Russian polyethylene exports continue to increase**

Due largely to a lack of liquidity on the domestic market Russian polyethylene producers have increased exports this year to sustain capacity utilisation levels. In July, exports of polyethylene totalled 54,400 tons, 38% more than in June and 2.4 fold higher than in July 2008. The main exporters include Tomskneftekhim, which accounted for 51% of exports in July, and Kazanorgsintez with 31%. Around two thirds of polyethylene exports from Russia have gone to China this year, with exports totalling 262,500 tons in the first seven months. This was 1.8 fold higher than in 2008.



Imports of HDPE from South Korea into Russia have dropped sharply this year, as shown in the graphic opposite. Aside lower demand, other factors affecting South Korean imports include the start-up of HDPE production at Nizhnekamskneftekhim. In terms of trading, currency depreciation has made Russian import purchases less attractive. The combination of these factors helped reduce HDPE

imports into Russia to 86,900 tons, or 42% less than in the period January-July 2008.

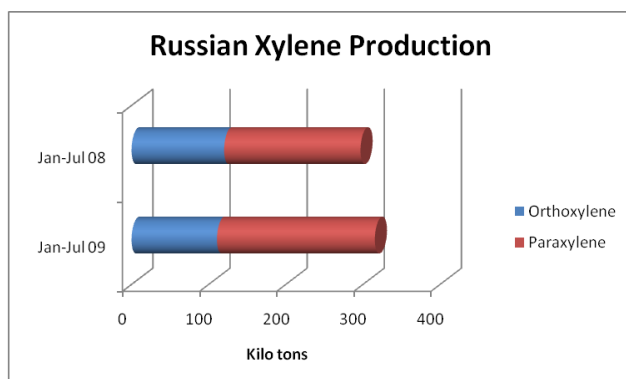


Imports of all types of polyethylene had virtually stopped in the first part of the year, but have risen since with 29,600 tons being imported in July. Even this figure, however, was down 9% on the corresponding month in 2008. For January-July 2009, Russia imported 179,200 tons of polyethylene, 30% less than in 2008. With the arrival of autumn, several Russian polyethylene producers are planning shutdowns which may affect availability and particularly export volumes. At the beginning of September, NeftekhimSevilen at Kazan started a planned outage for the whole month whilst Salavatnefteorgsintez is also undertaking repairs

September for 28 days. Nizhnekamskneftekhim started a shutdown on 12 September for 14 days. For Kazanorgsintez, the LDPE unit was stopped on 11 September running through to 15 October, whilst the HDPE shutdown started on 25 September until 10 October. Elsewhere in the CIS, Polymir at Novopolotsk stopped in September for around two weeks.

Despite an anticipated slowdown in export volumes to China in the next couple of months, export activity promises to be high at least in the first half of 2010. Salavatnefteorgsintez expects to start a new HDPE plant in November, whilst other producers have generally been operating at high rates of utilisation notwithstanding the downturn in domestic demand. Nizhnekamskneftekhim is expected to see higher operating rates next year. Consumption of polyethylene in Russia fell 16% in the first seven months of 2009 against last year, with production rising 5%. As a consequence, in view of the slow recovery taking place in the Russian market the supply/demand balance is leaning heavily towards surpluses for continued export activity and lower imports.

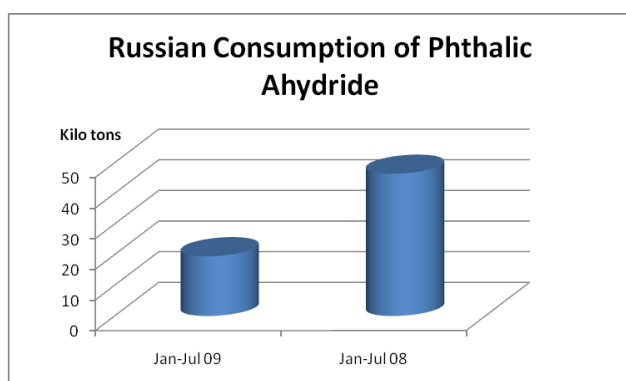
## Aromatics &amp; derivatives

**Russian refineries reduce ortho for paraxylene**

Paraxylene operating rates have been exceeding orthoxylene at Russian refineries due mainly to better demand trends and overall higher profit margins that have been seen this year. Increases in PTA/PET production in Russia, combined with good export opportunities, have influenced Russian producers to promote paraxylene at the expense of orthoxylene. The Russian market for paraxylene is estimated have been rising 5-7% per annum, as Polief has increased its PTA production, whilst orthoxylene has seen little growth by comparison. Low demand for solvents and lower phthalic

anhydride production have reduced the possibilities for selling orthoxylene on the domestic market, whilst export prices have been less attractive than for paraxylene.

Orthoxylene accounted for 35% of total isomer production in Russia in the period January-July this year, against 40% in the same period in 2008. Consumption of orthoxylene dropped 17% in the first seven months of 2009, and with the announced closure of the phthalic anhydride plant at Novokuznetsk there is no sign that demand will increase from current levels in the near future. In order to overcome the declines in consumption on the domestic market, producers have responded through increased export activity, as with the case of Kirishinefteorgsintez and Ufaneftekhim, and lower output of orthoxylene as with Gazprom-Neft at Omsk.



Kirishinefteorgsintez increased orthoxylene exports by 21% in the period January-July this year, with Ufaneftekhim increasing 1.8 fold although this was from a small base. Ufaneftekhim has been helped by the start of phthalic anhydride production in Ukraine in June, at the paint producer Lisinvest at Rubzhnoye. Lisinvest is expected to purchase a minimum of 1,000 tons per month of orthoxylene from Ufaneftekhim, which will help to justify maintaining production volumes at Ufa. The major producer of phthalic anhydride in Russia, Kamteks-Khimprom at Perm, buys orthoxylene either from Omsk or Kirishi although the former is more

competitive. In addition to price, transport costs per ton of orthoxylene are 15% less from Omsk than from Kirishi. Kamteks-Khimprom accounts for around 80% of Russian orthoxylene consumption.

Russian Phthalic Anhydride Market (Kilo tons)				
	2008	2007	Jan-Jul 09	Jan-Jul 08
Production	90.6	100.7	54.5	61.9
Exports	31.3	29.0	39.6	21.4
Imports	7.5	6.9	4.6	5.6
Market Balance	66.8	78.6	19.5	46.1

Phthalic anhydride exports have increased sharply this year to compensate for the lack of consumption in the domestic market. At the same time, imports were 18% lower in the period January-July 2009, down to 4,600 tons. Demand from China has helped domestic suppliers, coupled with currency advantages, and accounted for 71% of total

Russian exports in the first seven months of this year against 38% in 2008. The sole exporter of phthalic anhydride in Russia is Kamteks-Khimprom, which ships product to China through trading companies Rosplast (for softeners) and Uralkhimprom (for paint and varnish industries).

**Russian PET production rises**

Russian PET production amounted to 25,000 tons in July, 69% more than in the same month last year. All of the Russian PET plants reported that they ran at full capacity. For the period January-July 2009, Russia produced a total of 151,396 tons of PET which was 69% higher than in 2008. The introduction of facilities at Blagoveshchensk has made a major contribution to PET production in Russia, whilst SIBUR-PETF and Senezh recorded modest increases against 2008.

The Kaliningrad PET project remains active if not evidently close to completion. The project belongs to the company Alko-Naphtha, which is part of the Mari refinery in Russia, and was originally tabled at 220,000 tpa of PET. Recently, the Alpha Bank has opened a credit for the Mari oil refinery for 2.6 billion roubles for investment into refining operations. The Mari refinery started operations in 1998 and is one of the few independent plants with production focused on naphtha, diesel fuel, etc. Modernisation includes the construction of hydrocracking and catalytic reforming unit, which allude to providing the raw materials for the PET project at Kaliningrad. Whilst, the Mari refinery is expected to increase oil-processing capacity three-fold to 4.5 million tpa, information about the PET project remains vague.

### **Azot completes caprolactam modernisation**

Azot at Kemerovo, which is part of SIBUR-Minudobrenya, has completed the modernisation of the caprolactam unit. The project has been conducted over the past two years, without affecting production, and has cost in the range of 800 million roubles. The investment has improved the environmental standards of production and reduced energy consumption. Azot's main problem is cited as a lack of integration in caprolactam and dependency on merchant market sales.

By contrast, other Russian caprolactam producers Kuibyshevazot and Shchekinoazot have reduced its dependency on the merchant market. Kuibyshevazot has extended beyond its own production facilities to purchase Kurskhhimvolokno (2008) which helps to provide additional possibilities for caprolactam sales in the domestic market. As a result, Kuibyshevazot has operated relatively well through the economic downturn compared to other caprolactam producers. By trying to construct its own benzene facilities, Kuibyshevazot is attempting to create a chain of integration from monomer to fibre.

### **Other aromatic derivatives**

Pigment at Tambov has signed a memorandum with the Republic of Chuvash for supplies of aniline from Khimprom at Novocheboksarsk for a period of 15 years. Pigment at Tambov is one of Russia's main producers of paints and lacquers, whilst Khimprom is Russia's second largest producer of aniline behind Volzhskiy Orgsintez. Pigment has also concluded an agreement with Sberbank for a credit line of 150 million roubles to support company investment programmes.

With the aim of increasing the range of products from polyamide, Metafrax has signed a contract with the Italian company Persico for the supply of equipment with a capacity of 1,450 tpa. The contract is reported by the company to be close to completion, with start-up to take place in October. Metafrax produced 1,040 tons of polyamide at Gubakha in 2008. The major producers of polyamide-6 in Russia, SIBUR-Volzhskiy and Kuibyshevazot which use the product in captive consumption. Other producers include Kurskhhimvolokhno (owned by Kuibyshevazot) and Khimvolokno at Shchekino.

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## **Methanol & gas based chemicals**

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### **Metaprocess reaches agreement with TyumenNIlgiprogas for Yamburg methanol project**

Russian engineering group Metaprocess and Gazprom subsidiary TyumenNIlgiprogas have concluded a method approach for calculating the technical and economic basis for a proposed methanol project in the Yamburg region of West Siberia. Despite its feedstock potential, the idea of constructing a methanol plant in the Yamburg region has now attracted the same degree of interest as for Yakutsk in the Russian Far East where there are plans to construct three methanol units each of 450,000 tpa. This project is however dependent on investments into the infrastructure.

### **Shchekinoazot reaffirms methanol project**

Most of the equipment for Shchekinoazot's new methanol plant has been delivered to the site and the first stage of construction has already been completed. Sberbank has provided the financial support for the project, which is estimated to be worth around \$160 million, whilst also providing funds for the neighbouring Khimvolokno plant. The methanol plant is expected to be completed in the middle of 2010, with automated warehouses for methanol storage already having been established. The installation of the new 450,000 tpa methanol plant represents a key project for Shchekinoazot, with the subsequent closure of the existing plant.

### **Mendeleevsk project**

The Mendeleevsk methanol and ammonia project looks likely to meet its targeted 2012 start-up date, with Japanese contractors working largely to schedule. Agreements for the construction of the methanol and

ammonia complex at Mendelevsk in Tatarstan were signed in Japan on 12 May 2009, involving investments of around \$900 million. The Russian state bank VEB is involved in the three agreements which provide the financing of civil-engineering design of a large gas-processing complex together with several Japanese companies. The project is being constructed at the existing fertiliser company Mendelevskazot and includes 230,000 tpa of methanol, 717,000 tpa of urea, 717,000 tpa of ammonia and 380,000 tpa of ammonium nitrate. The total cost of the project comprises in the range of \$1.5 billion.

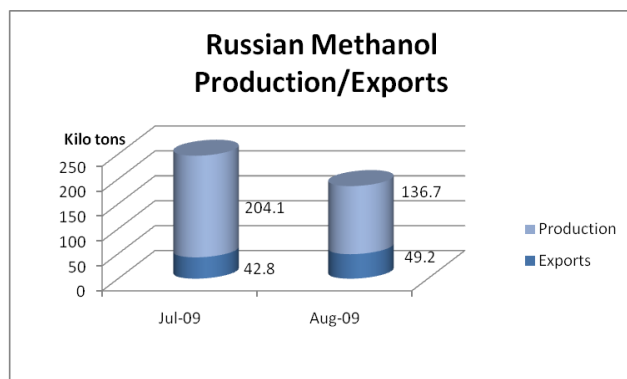
On the Japanese side, Sumitomo has approved \$350 million finance for the project which is expected to take 35 months to construct. The licensor of the project is Haldor Topsoe, with Mitsubishi Heavy Industries acting as the contractor. In November 2008, Mitsubishi Heavy Industries and Sojitz Corporation signed agreements on providing a package of engineering specifications, design, etc. The new complex will depend on gas from Gazprom in volumes of 800 million cubic metres per annum. Most of the intended output will be sold in Tatarstan to aid agriculture, with some methanol being delivered to Nizhnekamskneftekhim. The Mendelevsk complex may act as a form of competition for Togliattiazot, which is the only company in Russia with world scale plants for both ammonia and methanol.

#### **Metafrax restarts methanol after maintenance**

Metafrax restarted its methanol plant at Gubakha on 8 September after a 35 day shutdown. The company plans to run at 100% of capacity in the fourth quarter, after producing 501,300 tons in the first seven months of 2009. In the first and second quarters of 2009, Metafrax operated at 60% and 80% respectively. Russian Railways has agreed to reduce tariffs for the fourth quarter for methanol shipments, after pressure was mounted from the methanol producers in response to lower methanol prices on the world market. Metafrax was the main producer requesting a reduction in rail tariffs per ton of product, and has succeeded in achieving a 30% reduction from the previous level of 1515 roubles per ton. Tariffs for 2010 are to be reviewed later. The company hopes that the reduction of transport costs per ton of methanol will help export volumes, although longer term the focus is on the domestic market.

Metafrax recorded a four-fold drop in its net profit for the first half of 2009 against last year, down to 246 million roubles. Product sales dropped 47% to 2.342 billion roubles, with methanol production down 21%, formaldehyde down 44%, and urea-formaldehyde concentrate down 19.4%. In December, the company is

expected to start the production of nitrogen gas with a capacity of 5,200 cubic metres per annum of gas and 4,000 cubic metres per annum of compressed air. Metafrax plans to start a new unit for utroprin in 2010, which is costing 570 million roubles to construct.



#### **Russian methanol exports increase**

Exports of methanol in Russia rose in August by 15% against July following the reduction in rail costs. This change has allowed some producers to record profits for methanol exports instead of losses as encountered in the first seven months of 2009.

Metafrax, Sibmetakhim, Azot Novomoskovsk and Shchekinoazot accounted for around the majority exports in August which totalled 49,200 tons. Exports were higher in August even though production was lower, due principally to the maintenance shutdown by Metafrax. The main end-destinations of Russian methanol exports in the past three months have included Finland, Slovakia and Ukraine. Exports are expected to increase in the last few months of the year, with the major producers expected to be running close to full capacity.

#### **Uralkhim- Voskresensk Mineral Fertilisers**

Uralkhim has acquired 71.72% of voting shares in Voskresensk Mineral Fertilisers (VMF) from their shareholders. VMF is one of the top four Russian producers of phosphate fertilisers; the plant includes capacities of 750,000 tpa of mono-ammonium phosphate (MAP) and di-ammonium phosphate (DAP), 200,000 tpa of ammonia, 320,000 tpa of phosphoric acid and 1.050 million tpa of sulphuric acid. The acquisition of a controlling stake in VMF will enable Uralkhim to diversify its product range and become one of the largest players not only on the nitrogen fertiliser market, but also on the Russian phosphate fertiliser market. By integrating VMF into Uralkhim's production chain, the company intends to increase its capacities of phosphate fertilisers, mono-ammonium phosphate (MAP) and di-ammonium phosphate (DAP), at Voskresensk Mineral Fertiliser Plant.

**Salavatnefteorgsintez-Toyo urea**

Salavatnefteorgsintez has signed a licence agreement with Toyo Engineering Corporation for the production of granulated urea. At present, the complex produces low quality urea and thus has decided to expand into the granulated form. The capacity of the new unit is 1400 tons per day, with start-up scheduled for March 2012. Due to the lack of know-how for this product in the Russian chemical engineering market, Salavatnefteorgsintez has had to purchase the license from the Japanese company.

**Evrokhim starts construction of melamine plant**

Evrokhim has started the construction of the first melamine plant in Russia, located at the group's subsidiary Azot at Nevinomyssk. Lurgi is constructing the melamine plant at Nevinomyssk, with Urea Casale providing the licence. The Russian market's prospects are considered extremely favourable in view of the use of resins in the wood processing industry. The size of the plant is being designed at 50,000 tpa at a cost of €180 million. The new plant will allow Evrokhim to become one of four major producers in the market. The previous producer of melamine in the CIS was Rubin at Armenia, but this plant was destroyed in the earthquake in 1988. The Nevinomyssk plant is expected to come onstream in 2011. By this time, Russian consumption is estimated to have reached around 44,000 tons and then rising to around 55,000 tons by 2015. At present, Russia depends on imports. Total demand for melamine in the CIS by 2015 could reach 80,000 tpa, so although imports will be affected by the Nevinomyssk plant there should still be opportunities.

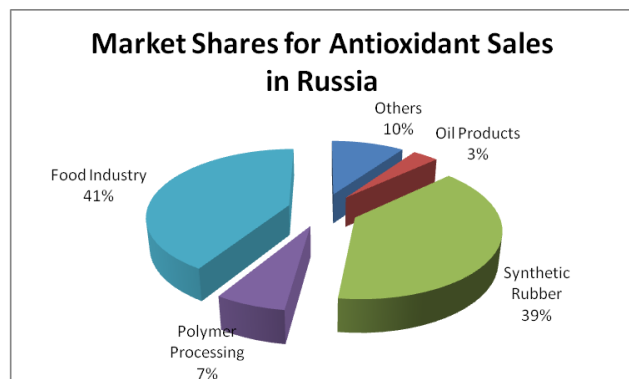
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**Organic chemicals**

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**Nizhnekamskneftekhim-Sterlitamak Petrochemical Company jv**

Nizhnekamskneftekhim plans to co-produce phenolic antioxidants with Sterlitamak Petrochemical Company in Bashkortostan, and also to produce isoprene rubber with Sintez-Kaucuk at Sterlitamak. Nizhnekamskneftekhim is a main customer of Sterlitamak Petrochemical Combine for antioxidants and has



decided to create a jv to produce a new generation of antioxidants including Agidol-110. This will help to reduce imports. The Sterlitamak Petrochemical Combine gains from the jv in terms of financial support and the creation of new jobs.

The production of antioxidants provides opportunities for domestic companies in view of limited competition and dependency on imports. Aside Sterlitamak Petrochemical Combine, Khimprom at Novocheboksarsk is the only other producer in Russia. Sterlitamak Petrochemical Combine specialises in the production of phenolic

antioxidants under the trade mark "Agidol". The capacity for Agidol-1 increased in 2008 from 1,500 tpa to 2,530 tpa, and further expansions are planned in conjunction with Nizhnekamskneftekhim which is a major consumer of the product. Nizhnekamskneftekhim is interested in the reconstruction of the Agidol-2 unit at Sterlitamak and building of new shop for a new generation of Agidol-110. Antioxidants are used mainly in the processing of polymers, synthetic rubber production.

**Organic chemical markets**

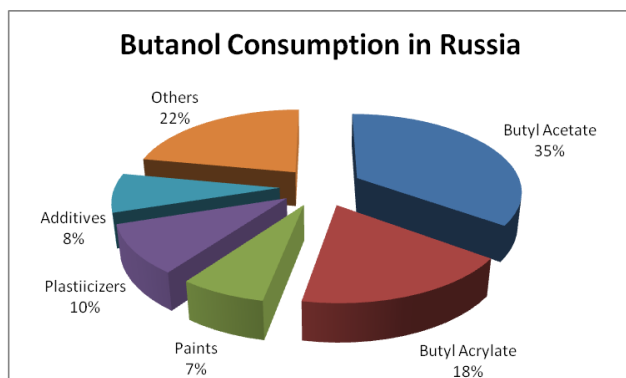
Sintez and Khimsorbent at Dzerzhinsk are to invest 214 million roubles in 2009, with the main focus including the reconstruction and modernisation of the technical ethanolamine plant. This will be expanded from 55,000 to 70,000 tpa. Sintez and Khimsorbent specialise in the production of anti-freeze, corrosion inhibitors and sorbents for the oil & gas industry.

Russian ethyl acetate exports totalled 1,340 tons in the period January-July 2009, 83% less than 2008. Exports have been affected by raw material shortages this year. Russia reduced acetone consumption by 24% in the first eight months of 2009, down to 35,300 tons. The main cause of the lower consumption was the halt in MMA production by Dzerzhinsk Orgsteklo (DOS), which plans to restart in the near future. MMA production at Dzerzhinsk stopped in June 2008 due to high raw material costs.

Other key factors this year explaining for lower acetone consumption include lower demand for solvents. The main suppliers of acetone to the merchant market in Russia include Kazanorgsintez, Ufaorgsintez and Omsk Kaucuk, together accounting for 88% of the market in the period January-August 2009. The restart of



the MMA plant at Dzerzhinsk at the end of October will provide a boost to the domestic market eventually, but in the first phase of production DOS is expected to source raw materials from Belarus.



Demand for butanols is not expected to improve this year, and possibly even further falls could occur thus granting more availability for export. By focusing on exports the Russian producers have been able to maintain utilisation levels. Overall, butanol consumption has fallen only relatively this year compared to other petrochemical products.

In July, Russia produced 15,700 tons of acetic acid that exceeded the June figure by 7%. Overall, production increased 9% in the first seven months of 2009 totalling 96,000 tons. The main consumers of

acetic acid in Russia are the producers of acetate solvents, which accounted for 53% of all shipments, followed by other products such as PTA. Azot at Nevinomyssk produced 97% of acetic acid in the first seven months of 2009, with the remaining 3% produced by the Sverdlov plant.

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### **Plastics**

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#### **Kazanorgsintez, polyethylene pipe grades**

Kazanorgsintez plans to reduce the production of pipe grade polyethylene PE80 in 2010 and the volume of pipes based on this grade. The company has stated that it will increase the production of PE100 and pipes, which will account for around 80% of total production. In 2008, Kazanorgsintez produced 70,000 tons of polyethylene pipe grade, of which around 50% was processed into pipes. A total of 32,400 tons of pipes were produced in 2008, with 13,500 tons produced in the first seven months of 2009. The current ratio of production is 45% on PE80 and 55% PE100. Consumption of PE100 pipes is growing in Russia, due to excellent characteristics under pressure and heat, whilst the more mature PE63 is being phased out completely. PE80 is still very popular and accounts for around two thirds of all pipe production in Russia.

#### **Kazanorgsintez-polycarbonate PS-075**

Kazanorgsintez started the production of polycarbonate PS-075 from the start of September. PS-075 polycarbonate is used for the production of CDs, DVDs, etc, and in composite materials for the automobile industry. The polycarbonate plant running at Kazanorgsintez is based on technology provided by Asahi Kasei Chemicals Corporation, with Kazanorgsintez being on the sole producer in Russia. TAIF owns 51.74% directly in Kazanorgsintez, and 28.57% indirectly through Svyazinvestneftekhim.

#### **Plastkard-shutdown**

Plastkard plans a shutdown for its PVC plant on 23 October running until 8 November. In the period January-August 2009, Plastkard produced 63,737 tons of PVC which was 4% less than in 2008. Turnover in the first eight months this year also fell 4% to 2.4 billion roubles. For 2008, Plastkard produced 93,793 tons of PVC, achieving third place behind Russian producers Sayanskkhimplast and Kaustik at Sterlitamak. Plastkard has offered its customers new logistical options, including the possibility of delivering PVC by 30-foot bulk-container.

#### **Plastik restarts ABS production**

Plastik at Uzlovaya restored ABS production in August, although it only produced 800 tons for the month compared to 1,509 tons in August 2008. The company stopped production in April this year due to low demand from the car industry and a fully-stocked warehouse. For the period January-August 2009, Plastik produced 3,670 tons of ABS which was much lower than in 2008 but there has been a slight improvement in market conditions in recent months.

#### **BOPP production stable**

BOPP production in the period January-July 2009 totalled around 60,000 tons which is a similar volume to 2008, despite the economic downturn. BOPP production in Russia is dominated by the Biakspen group, which controls plants at Nizhniy Novgorod (Biakspen-H), Kursk (Biakspen-Kursk) and Moscow (Biakspen-M). The other two plants in Russia are controlled by Novatek-Polymer at Samara (22% of the Russian capacity total) and Isratek in the Moscow region (16%).

**Glass fibre plant to start at Alabuga in November**

The jv P-D Tatneft-Alabuga Glass Fibre expects to start the first stage of its new plant by the end of November 2009, with the second stage planned for April 2010. The capacity of the glass fibre plant is 21,000 tpa, and is based on a jv between Preiss Daimler and Tatneft in the Alabuga special economic zone in Tatarstan. The jv is oriented towards industrial enterprise of high quality product from glass fibre, used in building, automobile, ship-building, electro engineering and other industries. Investment in the project will amount to €74 million. The advantages of constructing a plant in the Alabuga special economic zone include the possibility to use tax benefits combined with proximity to major petrochemical, car production and other industrial enterprises.

**SIBUR & Gazprom-Neft consider polymer-bitumen**

SIBUR and Gazprom-Neft are in talks over the participation in promotion of polymer-bitumen products for the construction of roads, partly using thermoelastomers produced by Voronezhskintezkaucuk. Consideration is being given to new for polymer bitumen units near Ufa. Polymer bitumen binder (PBB) is used in bituminous surfacing, prolonging the lifespan of roads. PBB manufacture involves styrene butadiene thermosetting elastomers, which adds enhanced characteristics to conventional bitumen. In view of the government targets of 20,000 km of roads being modernised to the latest standards by 2030, the long term demand for PBBs is viewed as extremely promising.

SIBUR aims to extend the capacities of Voronezhskintezkaucuk by building a new TEP production facility, a licence for which was recently signed with TSRC Corporation in Taiwan. In July, SIBUR concluded an agreement with the Ministry of Transport of the Russian Federation for the production and use of oil road bitumen of new generation in Russia. Tests have been made in the Nizhniy Novgorod region during the 2005-2008 period, which have shown the value of applying PBBs and this is now expected to be extended to other regions.

**Soyuz Polymer-achieves full capacity**

Soyuz-Polymer at Chelyabinsk, which started up a new unit at the end of April this year for the production of polymer packaging films, has reached its 100% capacity level of 300 tons per month. The unit is based on German equipment and by late May had already achieved around 30% of capacity. Production is focused mainly on 2-3 layer combined packaging materials based on polymers BOPP, PET and polyethylene. Prior to the start-up of the new unit, Soyuz-Polymer produced only polyethylene films, with a capacity of 1200 tons per month. Output from the new unit is to be targeted on the south Urals and Siberia.

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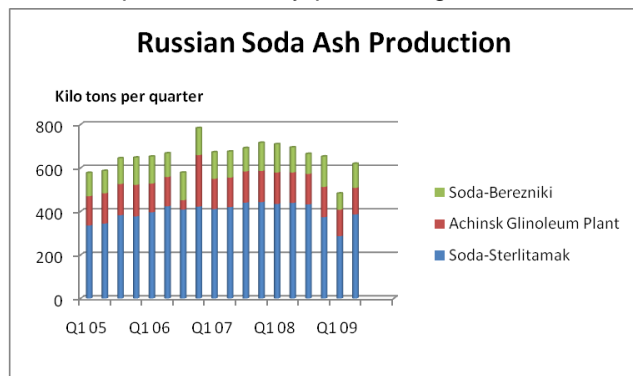
**Russian caustic-chlorine news**

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**Solvay-Berezniki Soda**

Solvay has stated that it had agreed to buy Sodium Group's majority stake in the Soda at Berezniki for a value of €160 million (\$230.2 million). Solvay is buying Sodium Group's 90% stake in Berezniki Soda and 100% stake in ZAO Berkhimprom, which are merging. After the closure of the deal next year, Solvay will gain immediate control of the operation of the soda ash plant and Sodium Group will retain a minority share for three years. The acquisition will be paid over this period. Solvay said it will not be able to judge the equity value until cash and debt is taken into account at closing of the transaction.

The soda ash plant at Berezniki is one of the three major soda ash producers in Russia, with a capacity of 500,000 tpa. It can only produce light soda ash but dense soda ash will be available by the end of 2009



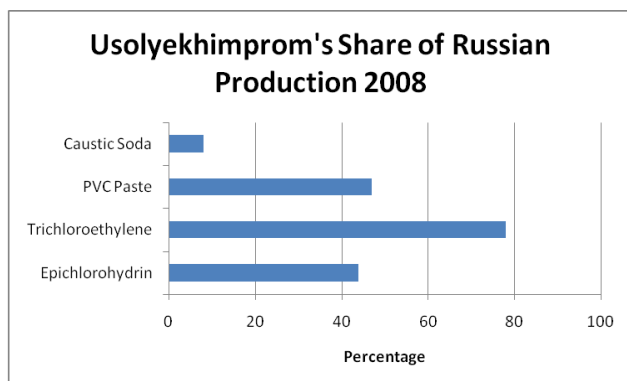
when the construction of a dense unit is finalised. The current owners of Soda, Sodium Group Investments, are based in Cyprus. For the past 18 months, Bashkiriya Khimya has been managing the shares in Soda and in the first quarter this year had accumulated 84.06% of shares. During the summer, Bashkiriya Khimya requested approval from the anti-monopoly service (FAS) to tighten its control over Soda at Berezniki and to increase voting shares to 96.38%. Bashkiriya Khimya controls Kaustik and Soda at Sterlitamak. The FAS was concerned that if Bashkiriya Khimya owned both Soda at Berezniki and Soda at Sterlitamak that it would have an effective

monopoly over soda ash production in Russia. Both plants produced a combined 79% of soda ash in 2008

from the total of 2.4 million tons in Russia. As a result, the Solvay decision to buy Soda helps to maintain the balance of the market in Russia. Bashkiriya Khimya concluded a three year contract from May 2009 to manage Soda, although it is not clear if the contract will continue after the takeover by Solvay. The Sodium Group also includes ownership of the Plant of Synthetic Alcohol at Orsk.

#### **Usolyekhimprom to transfer from chemical commodities to polysilicon**

Nitol is considering the possibility of constructing solar batteries in the Irkutsk region after it has completed investments into polysilicon production. The group's entire strategy appears to be directed towards polysilicon and the solar industry, and gradually withdrawing from the bulk chemical sector. As mentioned



recently, the Nitol group has decided to close three acetylene based units at the Usolyekhimprom plant in the Irkutsk region. This includes PVC, trichloroethylene and calcium carbide. According to Nitol, all three units have been unprofitable in recent times. Most of the trichloroethylene is exported to China, whilst 60% of the PVC production (emulsion grade) is sold on the Russian market and almost 100% of calcium carbide.

Nitol aims to focus more on the production of polysilicon in which it is investing around \$600 million into the construction of a 3,700 tpa plant.

Production of polysilicon is expected to start at Nitol Solar before the end of 2009, which will be expanded over the next few years. By 2015, Nitol hopes to have phased out base chemical production at Usolyekhimprom. Polysilicon production by 2015 should account for 85-90% of turnover from the current Usolyekhimprom site.

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### **Belarus**

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#### **Belarussian chemical production, Jan-Aug 2008**

Revenues from chemical and petrochemical production in Belarus rose 33.8% in the period January-August 2009, totalling 8.388 trillion Belarussian roubles. The big climber came from paint materials which rose 4.7 fold and totalled 1.617 million tons due to the bulk production of solvents. However, the production of resins and plastics dropped 12.5% in the first eight months to 234,600 tons. Synthetic fibres and threads dropped 16.7% to 124,200 tons. Tyre output for cars dropped 5.4% to 2.296 million pieces, lorries by 11.4% to 649,700 pieces; and agricultural by 13.1% to 323,100 pieces.

#### **Polymir exports acrylic fibre to Bulgaria and Italy**

Polymir underwent a shutdown at its polyethylene facilities in the second half of September for two weeks. In its fibre section, Polymir has started to supply acrylic fibres this year to Bulgaria and Italy, amounting to around 300 tons per month. In the first five months of 2009, the company exported 400 tons to the two countries under the brand Nitron-D. In addition, exports of 100-200 tons per month are shipped to Poland and overall the company hopes to export more than 3,000 tons in 2009 to the EU area. Acrylic fibre prices have been rising in recent months making shipments more profitable. Polymir can produce up to 5,000 tons per month of acrylic fibre, of which around 70% is exported. Destinations such as China, Turkey and Iran account for the largest share of exports.

#### **Paraxylene-PTA chain in Belarus**

After reconsidering the paraxylene project, the Mozyr refinery may have concluded that it does not represent a profitable investment and aims to focus on developing the refinery. Instead of spending over \$300 million to construct a paraxylene plant, which may be too small in capacity size to be effectively competitive, the company now wants to spend the finance on improving gasoline output. As an alternative to the paraxylene project, Gazprom-Neft has proposed long-term deliveries of from Omsk to Belarus to satisfy demand at Mogilevkhimvolokno. At the same time, Mogilevkhimvolokno is in discussions with SIBUR regarding a possible jv for PTA, as both groups are facing supply challenges in the coming years.

Mogilevkhimvolokno originally planned to construct a 320,000 tpa plant for PTA, at an estimated cost of \$213.4 million. However, the shortage of paraxylene in Belarus, and the apparent cancellation of the Mozyr paraxylene project, means that Mogilevkhimvolokno is disadvantaged in terms of feedstock supply. Thus, it is quite possible that a PTA plant could be constructed in Russia and PTA is shipped to Mogilev. SIBUR

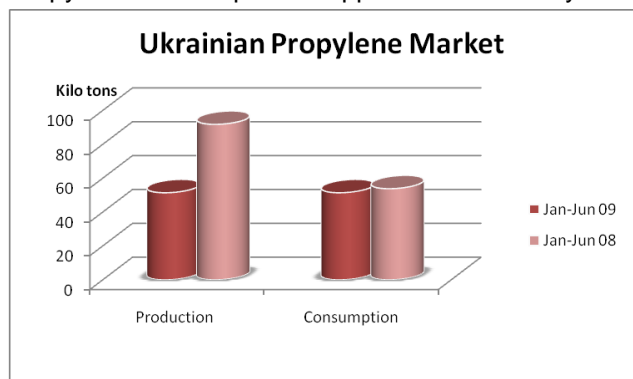
already has a stake in the Polief plant near Ufa, which is expanding its PTA capacity from 230,000 tpa to 600,000 tpa and the PET facilities from 120,000 tpa to 400,000 tpa.

Mogilevkhimvolokno wants to construct a PTA plant to replace DMT in order to reduce costs in the production of polyester fibres and PET. Currently, Mogilevkhimvolokno uses DMT which consumes 10% more paraxylene per ton of production than PTA. The option of buying paraxylene from Omsk may turn out to be the least complicated arrangement for Mogilevkhimvolokno.

## Ukraine

### Ukrainian propylene market

Propylene consumption dropped in Ukraine by 12% in the first half of 2009 down to 91,700 tons. The reduction has resulted from the weak economic conditions, although has not declined as much as some other products. The only producer operating in Ukraine this year has been Linik at Lisichansk, which uses all of the output captively in the production of polypropylene. The Karpatneftekhim cracker at Kalush has been idle since last summer, but output has always been shipped for export and thus not affecting the consumption volumes in Ukraine. The main consumers of propylene produced at Kalush are traditionally Poland, accounting for 81% of purchases in 2008, followed by Slovakia and Romania. There is no indication yet



when the Kalush monomer plant may restart production, although the owner of Karpatneftekhim LUKoil-Neftekhim has indicated next spring if market conditions can show some improvement.

Propylene consumption in Ukraine is expected to increase in 2010, if Linik at Lisichansk undertakes its project plans to expand polypropylene capacity from 100,000 tpa to 150,000 tpa. Propylene production at the refinery, will as part of these plans, be increased to 160,000 tpa.

Ukrainian Chemical Production (unit-kilo tons)		
Product	Jan-Aug 09	Jan-Aug 08
Acetic Acid	46.5	108.2
Adipic Acid	0.0	20.5
Ammonia	1915.6	3497.6
Benzene (-95%)	119.2	174.6
Benzene (+95%)	40.3	124.1
Caprolactam	10.3	38.9
Caustic Soda	28.1	62.9
Ethylene	0.0	85.0
Formaldehyde	11.6	56.1
Methanol	55.0	120.6
Polyethylene	0.0	48.4
Polypropylene	63.9	64.3
Polyvinyl Acetate	3.2	6.9
Soda Ash	444.6	655.1
Titanium Dioxide	62.4	93.2
Toluene	1.9	5.1

### Ukrainian benzene production

Ukrainian benzene exports have dropped this year due mainly to lower production, influenced to a large degree by falling volumes from the coke-chemical plants linked to the iron and steel industry. Exports have also been affected by lower demand in Europe. In total, Ukraine reduced benzene exports by 76% in the period January-August 2009 to 13,900 tons from a total production of 159,600 tons. From the total production, 40,269 tons was above 96% purity which is mostly from oil-refining. Benzene of less than 96% purity, which is coal-based, has seen limited demand this year, with only the Czech Republic taking shipments. However, demand is expected to increase in the latter part of the year, possibly from Russia.

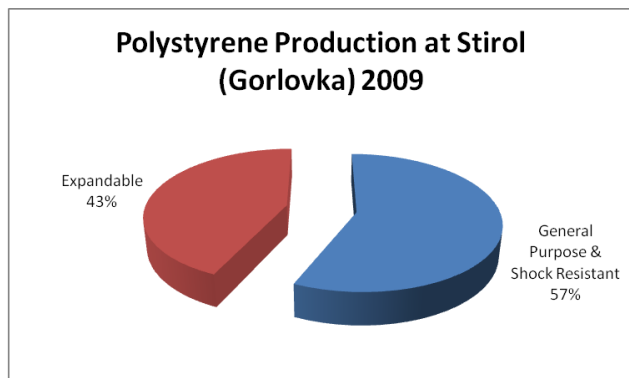
### Lisinvest increases phthalic anhydride

Lisinvest at Rubezhnoye produced 2,000 tons of phthalic anhydride in July, which is 33% higher than in June when the plant started. The plant had been idle for a period due to low demand for phthalic anhydride in Ukraine. Orthoxylene feedstock is sourced from Ufaneftekhim in Russia.

The market for phthalic anhydride is small in Ukraine, with only 2,800 tons consumed in the period January-July 2009. Consumption dropped 7% against 2008, with imports affected by the depreciation of the hryvnia against other currencies. Due to low activity in the domestic market Lisinvest has initially been focusing phthalic anhydride on exports.

**Ukrainian plastics**

Despite weak demand, total polystyrene production by Stirol at Gorlovka totalled 26,770 tons in the period January-August 2009, which was 3% higher than last year. At the same time, imports of polystyrene into Ukraine rose 19% in the first eight months this year to 3,290 tons although exports have also been higher.

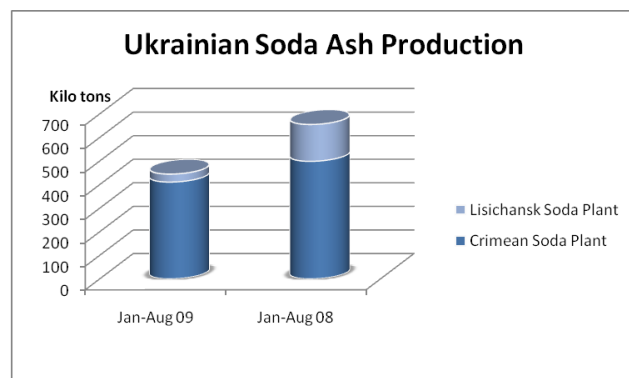


Ukraine imported 16,440 tons of polypropylene films in the period January-July 2009, 27% down on the same period last year. The heavy devaluation of the Ukrainian hryvnia has made imports far more expensive, coupled with weaker economic activity. Most of the polypropylene films used in Ukraine are imported, as the country lacks a raw material base. In the first seven months of 2009, 56% of polypropylene imports came from Russia, 9% from

Belarus, and 8% Germany. The most important players on the Ukrainian market include Novatek-Polymer, based at Samara in Russia, with 15%; the Mogilev Plant of Artificial Fibres in Belarus (9%), Isratek near Moscow (7%), and Innovia Films (6%).

**OstChem-titanium dioxide & soda ash**

Crimean Titan reduced titanium dioxide production by 22.2% in the period January-August 2009 to 50,350 tons despite a 25.2% increase in August 2009. Despite the falls this year, the company is continuing with the planned modernisation. The main challenge is that due to changes in control over the Irshansky mine in Ukraine, Crimean Titan is no longer guaranteed supplies of ilmenite concentrate for the production of



titanium dioxide. As the ownership of the mine is being transferred to another ministry, it will mean that Crimean Titan will be forced to secure alternative sources of ilmenite from abroad. This could increase the cost of titanium dioxide production by 30% as there is a deficiency in the world market for titanium ore.

OstChem owns 50% minus 1 share in Crimean Titan, with the government owning 50% plus one share. OstChem also owns Crimean Soda which provides around 80% of the domestic market for soda ash in Ukraine and 2.5% of the world market.

Around 25% of production at Crimean Soda is sold to Russia, and the company plans to sell around 50,000 tons of soda ash in the Russian market in 2010.

**Odessa Portside Plant –auction scheduled for September**

Bids closed in September for the auction for the Odessa Portside Plant, despite internal opposition to the sale. Evrokhim and SIBUR-Holding are reported to have participated in an auction, scheduled for 29 September 2009. The starting price of shares in Odessa Portside Plant is set at 4 billion hryvnia (\$525 million), which may be too high considering the current economic conditions. The new owner of Odessa Portside Plant will be required by the government to undertake a modernisation strategy estimated at around \$163 million and to keep the plant running at good levels for at least five years. For SIBUR, the purchase of Odessa Portside Plant would allow the group to diversify its export streams for mineral fertilisers.



**Relevant Currencies**

(Czech crown. Kc. \$1 = 19.038. €1 = 26.943): (Hungarian Forint. Ft. \$1 = 200.735. €1 = 284.048: (Polish zloty. zł. \$3.1766. €1 = 4.4956): (Romanian New Lei. \$1 = 3.1637. €1 = 4.1939). (Croatian Kuna HRK. \$1 = 5.1959. €1 = 7.3534 (Ukrainian hryvnia. \$1 = 7.605. €1 = 10.763): (Rus rouble. \$1 = 31.529. €1 = 43.6145)

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