

# CIREC

## MONTHLY NEWS

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

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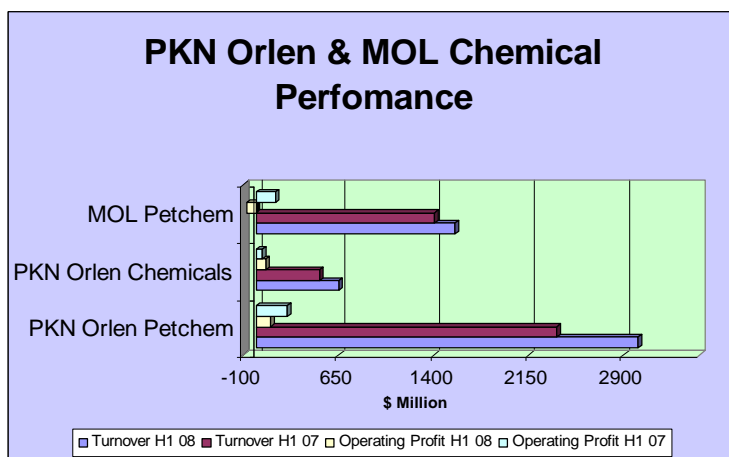
## CENTRAL & SOUTH EAST EUROPE

### Petrochemicals

#### PKN Orlen, Jan-June 2008

PKN Orlen's petrochemical division recorded a zł 132 million drop in revenue in the second quarter of 2008, compared against 2007, which was due primarily to the loss of Kaucuk having been sold to Synthos. The disposal resulted in a fall in sales of styrene, butadiene, polybutadiene, polystyrene, and synthetic rubber. Despite the loss of Kaucuk, Orlen's petrochemical sales were strong in the first quarter, which meant that turnover for the first half of year still exceeded last year's result. Turnover is approximately twice of the levels achieved currently by MOL.

Profitability for PKN Orlen's petrochemical division has been affected badly this year, with an operating profit of only zł 35 million in Q2 2008 against zł 347 million in Q2 2007. The main part of the fall was attributed to lower operating profits at Unipetrol, dropping from zł 196 million to zł 53 million due to adverse macroeconomic factors. A zł 32 million fall in the operating profit of Basell Orlen Polyolefins was also seen due to weak economic conditions, although was slightly offset higher operating efficiency.



The chemical division of PKN Orlen saw a slight increase in turnover, whilst the operating profits were virtually unchanged. However, there was a decline in the sales of PVC (down by 9.3%), PVC granulates (down by 11.8%) and soda lye (down by 23.9%). The chemical division principally includes Anwil and Spolana.

#### PKN Orlen starts PTA plant construction

PKN Orlen officially started the construction of the new PTA plant at Wloclawek on 23 July. The opening ceremony was attended by Mitsubishi, which is supplying the technology license and will represent the

major customer for sales in the first few years. The plant is being constructed by the Polish engineering company Polimex-Mostostal. It will have a capacity of 600,000 tpa and will be located on the premises of PKN Orlen, adjacent to Anwil, at Wloclawek.

PKN Orlen - Petrochemical Projects			
Product	Cap (ktpa )	Location	Start-up date
Paraxylene	400	Plock	2010
PTA	600	Wloclawek	2010
Ethylbenzene	120	Plock	2009
Propylene	200	Mazeikiu	2009

The PTA plant is scheduled to commence production in the second half of 2010, which should be accompanied simultaneously by the completion of the new paraxylene plant under construction at Plock. The PTA plant cost is estimated at zł 3.73 billion. It will directly employ over 200 staff with additional personnel to be employed by the maintenance and logistics' companies.

The paraxylene and PTA projects are part of PKN Orlen's strategy on developing aromatic derivatives. Another project under construction at Plock is for the ethylbenzene plant, which is scheduled to be completed by 2009. The project was set up with Synthos-Dwory, which will be the recipient of the output at its site at Oswiecim. Both companies benefit from the co-operation; Synthos-Dwory stabilises its ethylbenzene requirement whilst PKN Orlen adds value to benzene and ethylene at Plock.

#### Unipetrol Q2 2008

Net profit at Unipetrol fell 80% in the second quarter of 2008 to Kč 302 million (\$18.60 million), due mainly to low margins in its key petrochemical segment and a strong crown. Revenues rose 9% to Kč 27.08 billion, but earnings before interest and tax (EBIT) dropped 61% to Kč 838 million. Oil supplies from Russia to the Czech

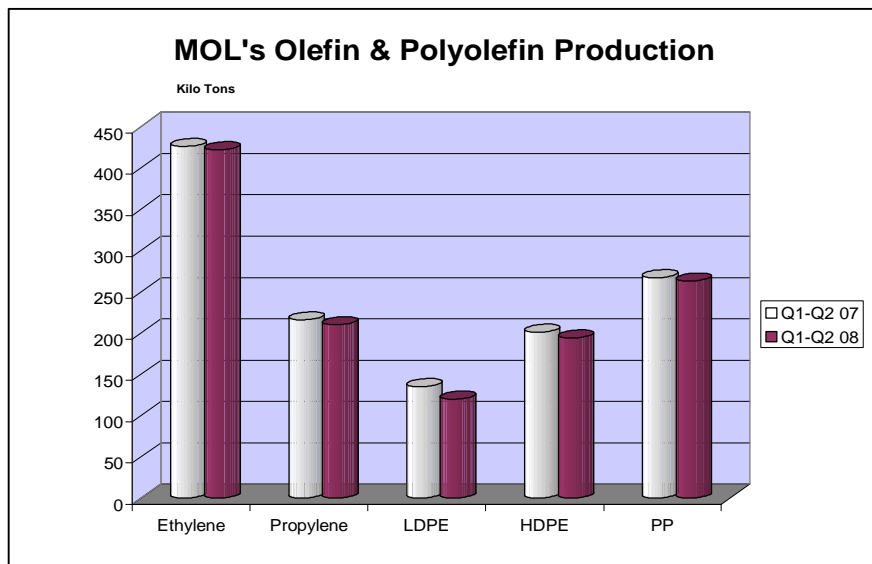
Republic have begun flowing at promised levels for August after the July cut. Unipetrol has been importing more oil than usual through the IKL pipeline from Germany to counter the drop in deliveries. However, oil imported via the IKL is largely more expensive to process. Unipetrol has won a contract to supply diesel worth Kc 8 billion (\$549.5 million) to state-owned Czech Railways. Unipetrol's subsidiary Paramo will deliver around 290 million litres of the fuel over the next three years. Unipetrol beat Cepro and Slovnaft for the contract. Unipetrol has been supplying Czech Railways since 2003.

Unipetrol will shut down its ethylene unit for repairs for three weeks in October, and partly as a result of this the company is not certain it can guarantee to meet its full-year operating profit target of Kc 4.8 billion (\$302.2 million). The main reason for the shutdown is the repair of the turbine that drives the ethylene-cooling compressor. Furthermore, the production of the injection types of high-density polyethylene (HDPE) has been interrupted for some time due to technical problems on the ethylene unit. The company has estimated the lost volume in production and subsequent sales to reach approximately 10,000 tons. The parts necessary for completing this repair will arrive at the beginning of October, so the shutdown of the ethylene unit will also be used for making this repair. Until the ethylene unit shutdown, the production of the remaining types of polyethylene will continue without any constraints.

### **MOL, Jan-June 2008**

MOL's petrochemical division reported a \$67 million operating loss in H1 2008 (Ft 11.1 billion), after the group's integrated petrochemical margin fell to an historic low in Q2 2008. Polymer prices were unable to keep pace with the rising costs of raw materials and crude oil. The integrated petrochemical margin did not cover the operating costs in the first half of the year, with energy prices rising 21-24% compared to 2007.

In Q2 2008, the naphtha price rose by a further 17% against the first quarter, while polymer prices fell by 3-7% in the same period. The integrated petrochemical margin reached its historical low at €278/ton in Q2 2008 (down 33% against Q1 2008 and 45% against Q2 2007). MOL's monomer and polymer production fell by 15% in Q2 2008 compared to Q2 2007, due mainly to a one-month shutdown at the Slovnaft Petrochemicals' olefin and polymer plants in April. Also in June, there was a one-week maintenance shutdown at TVK's Olefin-1 plant, whilst some maintenance was carried out on polymer plants which was originally scheduled for Q3 2008. TVK experienced an electrical failure on 11 August from the national grid in Hungary. Due to the short failure of the power system most production facilities had to be stopped temporarily, although normal operations were recovered by 15 August.



Polymer sales' volumes for MOL fell by 14,000 tons in H1 2008, as a result of lower production combined with lower demand. The group's ratio of HDPE in polymer sales grew to 34%, PP rose to 46% whilst LDPE dropped back to 20%.

### **MOL-OMV-INA**

OMV has revoked its intention, published on 25 September 2007, to make an offer to MOL at Ft 32,000 per share. The motive behind the move is that the European Commission had indicated it would not accept the commitments that OMV had

proposed. OMV is now considering various options to maximize the value of its 20.2% stake in MOL and to benefit from value creation in the consolidation process.

MOL has notified the government in Croatia about its intention to launch a voluntary public for all of the shares in INA that are not already owned by MOL. MOL believes that further strengthening of the strategic partnership with INA could create significant value for all the stakeholders concerned. MOL has initiated the scope and budget increase for the modernisation of INA's Rijeka and Sisak refineries to meet European product standards.

MOL has also initiated the construction of gas pipeline interconnections with Romania and Croatia. On 3 July, MOL's gas transmission subsidiary reached agreement with Croatia's state pipeline company, Plinacro, to build an interconnecting pipeline between the two countries' gas transmission systems. The new line, from Városföld in Hungary to Slobodnica in Croatia, is planned to run for more than 200 km. This should be completed by mid-2011 at the latest.

MOL and Romania's state pipeline company Transgaz are already undertaking a project to connect the two countries' gas transmission systems. The agreement envisages laying a pipeline of more than 100 Km in length from Arad in Romania to Szeged in Hungary. Construction work is under way and could be completed in 2009. The two connections will make the transmission of gas via Hungary throughout the area between the Black Sea and the Adriatic Sea possible, and could provide an alternative to Gazprom.

#### **Petrochemical Arges sale**

Negotiations for the sale of Petrochemicals Arges are expected to be finalised in August, or the beginning of September according to Petrom. Should all conditions be met with the buyer, the transaction is expected to be completed by the year's end. The two potential buyers include Oltchim and the German company Petro Carbo Chem, although the former is considered to be the most likely winner based on the advantages of integration. The petrochemical division of Arpechim was split from the refinery division last year, thus leading to the creation of Petrochemicals Arges.

#### **NIS, Petrohemija and Gazprom-Neft**

Serbia will try to renegotiate the sale of its stake in Naftna Industrija Srbije (NIS) to Gazprom Neft, after a new estimate of the company is made in September. Belgrade and Moscow earlier this year agreed the sale of 51% of NIS, and the development of Serbia's wing of the South Stream pipeline that will carry natural gas from Russia via Serbia to European markets. Although the deal for NIS stipulates a sale price for the company of €400 million, plus another €500 million in investments, such a price was mentioned only in an attached protocol. The Serbian government may value NIS at a higher number, whilst Gazprom Neft could be looking to pay less.

Jointly with its purchase NIS, Gazprom could take a majority stake in HIP Petrohemija. Gazprom Neft has accordingly used the services of SIBUR to provide an estimate of the value of HIP Petrohemija, which was the second largest exporter in Serbia in 2007. The Serbian government wishes to sell NIS and Petrohemija together, but would need pledges of investment from the Russian side and some guarantee over jobs.

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### **Chemicals**

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<b>Polish Chemical Production (unit-kilo tons)</b>		
<b>Product</b>	<b>H1 2008</b>	<b>H1 2007</b>
Caustic Soda	47.6	48.8
Soda Ash Light	165.6	183.6
Soda Ash Heavy	442.3	417.3
Ethylene	310.4	300.9
Propylene	208.0	172.5
Butadiene	31.4	29.0
Toluene	77.0	58.1
Phenol	25.5	24.9
Caprolactam	81.0	82.2
Polyethylene	197.2	193.0
Polystyrene	55.9	52.8
PVC	145.6	152.7
Polypropylene	140.8	146.6
Synthetic Rubber	68.1	64.8
Pesticides	20.6	20.5

#### **ZA Tarnow-2008 targets**

ZA Tarnow may raise 2008 earnings forecasts in August due to strong demand for nitrogen fertilisers. The company has forecast that it would earn zł 74 million (\$36.08 million) on zł 1.33 billion in sales this year. ZA Tarnow increased net income 228.8% in 2007 over 2006, totalling zł 63.8 million. The company has warned though that for the next three years the results will be lower due to the lack of investment. Around 61% of the company's turnover is currently exported, although there are efforts to increase its sales on the domestic market.

ZA Tarnow is looking for partners to build a heat power plant with 200MW of capacity. PGNiG gas monopoly and Enion, part of Tauron group, are reported to be interested in this project. The present plant meets around 60% of the company's needs, but the new plant would be capable of producing 100% of energy requirements. PGNiG could deliver natural gas for the heat power plant, and that could be consistent with PGNiG's aims to build a chemical and energy group. ZA Tarnow, ZAK and ZA Pulawy are the biggest gas

buyers in Poland, using 2.5 billion cubic metres of gas annually of the country's total consumption of 14 billion cubic metres.

### **ZA Kedzierzyn-coal gasification programme**

ZA Kedzierzyn (ZAK) may begin construction of a coal gasification plant as early as 2010 to diversify its sources of gas. The company estimates that the plant will cost around zł 2 billion (\$975 million) and is in talks with banks about funding. After the second part of the feasibility study is ready, ZAK could seek the co-financing of the project from the European Union. Poland has Europe's largest deposits of coal and by using technology to turn it into gas; it could boost margins for ZAK as they benefit from rising fertiliser demand. ZAK is the second Polish fertiliser producer after ZA Pulawy to express interest in building a coal gasification plant. Both companies want to diversify their supplies of gas, which the country imports from Russia. ZA Pulawy has hired Bechtel to prepare a feasibility study for the installation.

### **ZA Kedzierzyn evaluation**

The Polish Treasury Ministry has indicated that the privatisation of ZA Kedzierzyn (ZAK) later in the year should reach an evaluation of around \$226 million, despite the poor showing of the Tarnow IPO. The \$135 million Tarnow listing, the first privatisation IPO in nearly two years, had to be saved by PGNiG and Ciech.

Ciech has made it clear that it wants a stake in ZAK, and may spend up to \$100 million on top of that to buy small local chemical companies. Ciech would probably take part in the IPO of ZAK, which will issue around zł 500 million (\$246.4 million) in new shares. Ciech's main strategy is to push for the rapid consolidation of heavy chemical companies.

### **Ciech Q2 2008**

Ciech encountered a difficult second quarter of 2008 due largely to rising debt servicing costs and the impact of the strong zloty. Other factors included high raw material costs, the growth of transportation costs, combined with price/demand fluctuations for certain organic products. As a result, the net profit for the Ciech Chemical Group for the first half of 2008 amounted to zł 125 million vs. zł 194.1 million in the same period in 2007. Whilst profits were down, revenues rose to zł 2.061 billion in 2008 from zł 1.7 billion. This year the group's revenues are expected to reach zł 4.270 billion, with the net profit totalling zł 225 million.

The Ciech Chemical Group has been carrying investments, the aim of which is to improve the results of the individual divisions. In the case of the organic division (consisting of Zchem from Bydgoszcz and Organika-Sarzyna from the Podkarpacie region), the process of integration in the first half-year generated an estimated financial benefit of zł 36.5 million. In the near future, Organika-Sarzyna will introduce a new system for producing polyester resins, increasing the plant's capacity by an additional 10,000 tpa. At Zchem, a project is being carried out to increase TDI production capacity to 75,000 tpa. By 2011, Ciech has estimated that it could save around zł 124 million from integration of the organic division.

This year, Ciech's soda division took over soda sales contracting from its Romanian plant, US Govora, which is undergoing modernisation and expansion. The aim is to increase capacity this year to 1,000 tons per day, and then expand to 1,500 tons per day in 2009. Increased soda production is also planned by the German company belonging to Ciech, Sodawerk Stassfurt.

The agricultural division was the fastest growing sector for Ciech in the first half of 2008, with revenues rising 36% against 2007 to total zł 417.3 million. Ciech is particularly interested in taking over control of ZA Tarnow and ZA Kedzierzyn.

### **Nitrokemia-lactic acid**

Nitrokemia Zrt. is planning to build a Ft 40 billion (€173 million) lactic acid plant at Balaton. The plant is expected to start operating in 2012, with a capacity to produce 20,000 tpa of PLA from 100,000 tpa of wheat. The investment is to be carried out from European Union combined with local subsidies and investors' funds. The return period is estimated at eight years and Nitrokemia estimates that annual revenues could be boosted by approximately Ft 23 billion.

### **South East European news**

Orgachim at Rousse is introducing two new products on the market, including a polyester isophthalic gelcoat, and a two-component primer on the basis of epoxy resin with hardeners. The latter product is used for protection of industrial facilities and metal constructions, used in an aggressive industrial environment. Bulgarian fertiliser producer Neochim saw its net profit for the first half of 2008 rise almost five times against 2007 to 39 million leva (\$31.4 million/€20 million) as total revenue rose faster than costs.



Romania's largest fertiliser producer Azomures reported a first-half net profit of 132.23 million lei (\$56.17 million/€37.4 million), compared to a loss of 6.14 million lei in the same period last year. Another Romanian fertiliser producer achieved a first-half net profit of 21.27 million lei (\$9.2 million/€6.1 million) from a loss of 7 million lei in 2007, as its turnover jumped 17 times. An explosion in mid July at the Romanian fertiliser producer Fagaras Chemical Plant caused two fatalities. Fagaras Chemical Plant was sold in December 2007 to the Romanian-English company Interagro, which was preparing to begin the production of fertilisers and mining explosives in this autumn.

Zagreb-based trading company Kemokompleks placed the sole bid in a tender for Adriachem, according to the Croatian Privatisation Fund. The Federation of Bosnia & Herzegovina has failed to sell 16% on the Sarajevo Stock Exchange of the chemical producer Global Ispat Koksna Industrija, located at Lukavac. The failure was due to the lack of buyers interested in the package of 572,464 shares in the company. Global Ispat Koksna Industrija (formerly KHK d.d. Lukavac) is involved in coke-based chemicals, including benzene and maleic anhydride.

## **RUSSIA**

### **Russian chemical imports & investment strategy**

Geopolitical tensions have been heightened by events in Georgia, and with positions still unfolding it is too early to assess if this will impact in any way on the Russian economy. Russia continues to import strongly; i.e., in the first six months of 2008, imports into Russia's economy increased 43.8% against the same period in 2007, amounting in financial terms to \$102.509 billion. That trend is likely to continue, although much depends on how far oil prices fall. Chemical imports increased by 44.4% in the first half of the year over 2007, partly fuelled by higher product prices and partly by additional volumes. Polymer and synthetic rubber imports rose by around 50%, whilst imports of organic and inorganic chemicals rose by 35.1%.

The Russian government has been concerned for a number of years over rising imports, and recently has announced a \$2.7 billion investment programme aimed for completion by 2015. The lack of investment over the past two decades has resulted in sensitive sectors such as the defence industry being too dependent on imports, a situation which is not consistent with a resurgent foreign policy. The programme being considered by the government foresees the creation of 200 chemistry ventures by 2015, which would ultimately free the Russian defence industry from reliance on imports. One of the programme's priorities is to create laboratories and plants to develop and produce carbon-fibre composites that are used in aircraft manufacturing. Currently, companies in Japan and the United States produce the best composite materials, but they refuse to sell it to Russia, which must buy inferior carbon fibre from other countries.

Until now, state backing for developing the chemical industry has been minimal, whilst there is no federal programme of support for research into new materials, technologies, etc. The range of products available from Russian chemical companies is extremely small compared to foreign companies, and this position is not likely to change without substantial investment in R&D. Thus, despite the potential of gas based petrochemical projects, Russia remains too dependent on imports of certain products and the scientific circles argue that it is not using its raw material base anywhere near its full advantage.

### **Russian chemical exports**

With the aim of trying to defend domestic supplies of petrochemicals, the Russian government has increased export duties for light petroleum products from 1 August, from \$280.5 per ton to \$346.4 per ton. Light petroleum products include gas oils, propane, butanes, ethylene, propylene, butylene and butadiene, other liquefied gases, and aromatics benzene, toluene, xylenes.

Exports of nitrogen fertilisers from Russia fell 1% in the first half of 2008, from 5.05 million tons to 5 million tons. In financial terms, revenue has increased 1.7 times to \$1.515 billion. Potash fertiliser exports fell 15% to 4.129 million tons, although revenue increased 44.7% to \$1.134 billion. Exports of synthetic rubber increased by 1.7% to 366,400 tons from 360,200 tons, whilst revenue rose 63.1% to \$1.06 billion. Methanol rose 11.4% to 1.051 million tons from 944,000 tons in 2007, whilst revenue rose 49.5% to \$386.8 million from \$258.7 million last year. Ammonia exports rose 9.7% to 1.866 million tons, with revenue rising 1.9 fold to \$738.5 million.

### **REACH for Russian companies**

Russian chemical companies need to register their products under REACH in order to sell products into the EU, to become applicable after 1 December 2008. So far only Metafrax has complied with these regulations, but other companies are expected to follow in the near future. As the EU is one of the largest export markets for Russian chemical companies, it is important that products are harmonised under the regulations set out by REACH. The basic registration of products on REACH must be completed by 30 November 2010. Companies need to provide as much data as possible about the imports, including the results of the most recent studies of the relevant products.

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## **Petrochemicals**

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### **Russian oil refining up to 2020**

Oil refining in Russia is expected to grow by 18% between 2007 and 2020, totalling 270 million tons. In 2007, the country refined 229 million tons, which was 3.8% higher than in 2006. Increases by 2020 will come from reconstruction and modernisation of existing refineries, in addition to the construction of two new refineries at Nizhnekamsk each of 7 million tpa. Investments in existing refineries will be made mainly by LUKoil at its plants at Kstovo, Perm and Volgograd, Rosneft at Krasnodar and Khabarovsk and Surgutneftegaz at Kirishi. Around 2.5 trillion roubles will be invested into Russian refining in the period 2008-2020, including the construction of several new refineries and raising capacity overall by around 20 million tpa.

### **Refinery projects**

In the fourth quarter of 2009 Kirishinefteorgsintez plans to start the modernisation of the refinery and aromatics division, involving \$5 billion worth of investment. The company aims to revamp the LAB-LABS complex which was started in the 1990s. Kirishinefteorgsintez is owned by Surgutneftegaz, and draws its feedstocks from West Siberia.

Foster Wheeler Italiana has recently been awarded a contract by Taneko for the supply of fired heaters for the Nizhnekamsk integrated refinery and petrochemical complex. Foster Wheeler Italiana will engineer and supply the materials for two hydrocracking unit furnaces, and a charge heater and three interheaters for the continuous catalytic reformer unit. The Nizhnekamsk refinery will have a refining capacity of 7 million tpa, and will be commissioned in phases during 2011-12. The refinery will have aromatics units and a deep conversion section with a fluidized catalytic cracker, a distillate hydrocracker, a delayed coker, and a gasification plant. The petrochemical plant will include PTA, PET, linear alkylbenzene and polypropylene units, plus the associated power generation facilities. The project was originally expected to cost \$3 billion when it was first announced but rising costs and the ultimate availability of project financing are driving up the overall budget.

### **SIBUR-Vostok**

SIBUR Holding has decided to incorporate a new subsidiary, SIBUR Vostok, into its holding structure with the aim of implementing investment projects in East Siberian and the Russian Far East. The new company will focus on opportunities to design, construct and operate gas processing and gas petrochemical facilities in the Irkutsk, Krasnoyarsk, Primorsk and Khabarovsk regions and in the Sakha Republic (Yakutia). SIBUR Vostok's remit will involve entering into negotiations with subsoil users and regional authorities on possible participation by the company in the development of new production facilities. East Siberia and the Far East are considered to be regions with good development prospects for the gas processing and gas petrochemicals industries; although at the same time SIBUR argues that investments from the private sector need to be matched by investments from the government into the regional infrastructure.

### **Orenburg-Karachaganak agreement**

The Russian government has ratified a Russian-Kazakh intergovernmental agreement signed on 3 October 2006, which provides for the creation of a JV between Gazprom and KazMunaiGaz. The new company is to be established at the Orenburg Gas Processing Plant, and is expected to buy gas produced at Karachaganak in north west Kazakhstan. The product will be then sold on the Kazakh market, in addition to exporting via Gazprom's channels.

### **Gazprom-Kazanorgsintez**

Gazprom remains in talks with TAIF for concluding the purchase of a controlling stake in Kazanorgsintez, of 50% plus one share. TAIF is insistent that the sale should require that Gazprom invest up to 60 billion

roubles in Kazanorgsintez, with the aim of increasing annual turnover to around 120 billion roubles by 2012, or roughly five fold the level achieved in 2007. Accordingly, TAIF and Gazprom have designed a programme for the company's second main phase of development.

This year Kazanorgsintez is completing its first phase of modernisation, which has cost the company around 35 billion roubles. This has included an expansion of HDPE capacity from 197,000 tpa to 510,000 tpa, and the construction of bisphenol A and polycarbonate plants. It has also included the start of the modernisation and expansion of the ethylene facilities at Kazan, raising capacity from 430,000 tpa to 640,000 tpa, which is now close to completion. Previously, TAIF had targeted the second phase of modernisation on widening polyethylene production to include all grades of product assortment, resulting with a capacity of 1.2 million tpa. Gazprom is yet to speak openly about financing the second phase of modernisation.

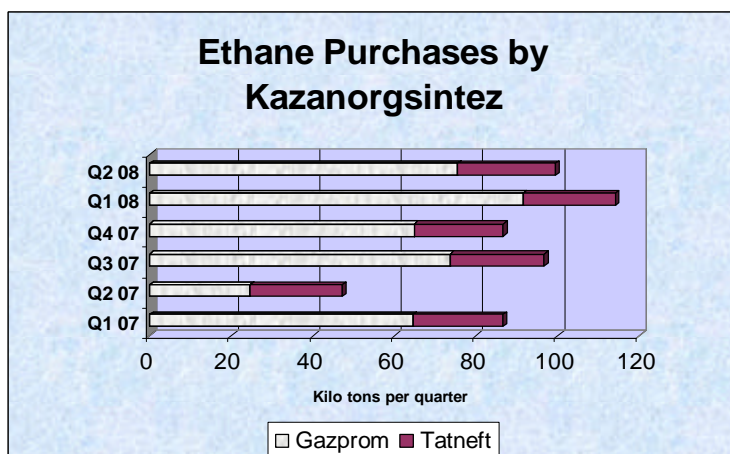
At present, it is not clear which of the stakes in Kazanorgsintez will be sold to Gazprom, i.e., either the TAIF's 52.02% stake or alternatively Tatarstan-based state-run holding Svyazinvestneftechim's of 28.4%. Despite selling the majority stake to Gazprom, TAIF intends to maintain an interest. Even at this stage, TAIF has no idea if the stake will stay with Gazprom or be transferred to SIBUR.

Kazanorgsintez increased turnover by 19.2% in the first half of 2008, totalling 12.376 billion roubles. Pre-tax profit rose threefold to 792.391 million roubles. The company should benefit in the second half of the year through the operation of the bisphenol A plant and the planned start-up of the polycarbonate plant, whilst at the same time the construction of the new ethylene plant is reported to be 98% complete, and should be finished in the fourth quarter this year.

#### **Kazanorgsintez-new ethylene furnaces completed**

The construction of the dual chamber pyrolysis furnace by Technip has been completed at Kazanorgsintez, bringing the expansion programme for ethylene capacity almost to a close. Kazanorgsintez reports that the new furnace and expanded capacity is 98% complete and should be finished in the fourth quarter this year. It is the second new furnace based on gas separation unit for ethylene production at Kazan.

Until the modernisation programme began the ethylene capacity at Kazanorgsintez was 430,000 tpa, consisting of four separate units, but never reaching full utilisation. The smallest naphtha unit of 35,000 tpa remains unchanged, but second and third units of 60,000 tpa and 100,000 tpa respectively, have been combined and expanded into a gas separation unit capable of producing 330,000 tpa. This comprises two furnaces, including the Technip furnace and another dual chamber furnace which was constructed by Linde and completed in 2007. Finally, what was the fourth unit, also based on gas separation, and has been expanded from 235,000 tpa to 275,000 tpa. Effectively there are now three ethylene plants of 35, 330 and 270 ktpa, compared previously to four units of 35, 60, 100 and 235 ktpa



The modernisation not only facilitates an increase in ethylene production, but also reduces energy and raw material expenses. In the new furnace constructed by Technip a compressor has been supplied by the US company Elliott, whilst the cold box is being prepared, based on equipment supplied by the French company Nordon Cryogenie. The expansion in ethylene capacity will eventually allow the company to reduce ethylene pipeline purchases from Nizhnekamskneftekhim and occasionally Salavatnefteorgsintez, and to maximise the polyethylene capacities.

#### **Kazanorgsintez-ethane shortages**

The main problem for the expanded ethylene capacity at Kazanorgsintez, expected to be complete in the fourth quarter, is a shortage of around 200,000 tons of ethane. If this issue is not resolved, it will mean that the new capacity, which raises total capacity at Kazanorgsintez from 430,000 tpa to 640,000 tpa, is unlikely to start this year. The new plant will require around 260,000 tpa of ethane, of which 60,000 tpa has already been guaranteed



through Tatneft from the Minnibayevo Gas Processing Plant. As yet, it is not clear why the deal for additional ethane with Gazprom has not been concluded, but the fact that the planned purchase of Kazanorgsintez is not yet considered to be a finished deal by Gazprom could be a factor. Kazanorgsintez is under the impression that Orenburggazprom would supply the additional ethane, but it is not clear if the plant can supply this volume. The only gas processing plant in Tatarstan, the Minnibayevo Gas Processing Plant, has increased capacity of ethane to 180,000 tpa but this is still insufficient to meet the demands of Kazanorgsintez. Gazprom provides 70% of raw materials to Kazanorgsintez.

#### **SIBUR-Neftekhim-Technip**

SIBUR-Neftekhim and Technip have signed the contract for the ??-1 phase (engineering and purchases) for ethylene expansion at Kstovo. According to the contract, Technip is providing the detailed design of the reconstruction of the EP-300 cracker and this stage has almost been completed. Purchases of key equipment have begun and thus the company is moving from design to practical plans. The project is being synchronized with the RusVinyl project. SIBUR-Holding plans to invest around 7 billion roubles into the reconstruction of the Kstovo cracker, raising capacity from 260,000 to 360,000 tpa and then subsequently to 450,000 tpa. The expansion of capacity and introduction of new furnaces, including F-110,-120 and-130, will also include increases in safety standards.

#### **Tobolsk-Neftekhim-maintenance**

Tobolsk-Neftekhim completed its shutdown cycle last month, with the central fractionating unit taking its first shipment of SHFLU on 18 July, with the first output being seen on 21 July for isobutylene and MTBE. Butadiene production started later on 25 July. The catalyst for the second reactor block of the butadiene plant was replaced by Sud-Chemie. Overall, the costs for the shutdown were similar to 2007, apart from the isobutylene unit which required around 100 million roubles. SIBUR provided most of the financing for the shutdown.

Processing of SHFLU at Tobolsk increased 9.4% in the first half of 2008 against 2007, whilst butadiene rose 4%. Product sales rose 51% to 2.482 billion roubles. In 2008, the company aims to process 2.8-2.9 million cubic metres of gas through the central gas fractionating unit.

#### **Salavatnefteorgsintez-maintenance**

The Russian safety commission Rostekhnadzor has examined Salavatnefteorgsintez regarding technical and ecological safety, and has revealed more than 300 violations of industrial and energy safety. The commission noted, however, that the company had started a programme of modernisation and the replacement of obsolete equipment. Regarding investments, Salavatnefteorgsintez is currently constructing its HDPE plant which is scheduled to be onstream in Q1 2009.

Salavatnefteorgsintez completed its annual shutdown in the monomer division in July. Aside traditional maintenance, a new pipeline has been installed for the new ethane furnace which is planned to start up in the fourth quarter of 2008. This is part of the modernisation and expansion programme for ethylene capacity. Other steps this year have included a revamp of the benzene unit and introduction of a new control system supplied by the Japanese company Yokogawa. Considerable investments have been undertaken in the gas separation unit, where a new steam turbine system was introduced.

#### **Sayanskkhimplast-Kovytk**

Sayanskkhimplast continues to hold out hope over the construction of its gas chemical plant to supply ethylene for PVC production, but remains unsure over the feedstock situation. The question of ethane supplies to Sayanskkhimplast has still to be resolved; as yet there is no guarantee that the regional pipeline will bypass the Zima district of Sayansk, where Sayanskkhimplast is based. The company considers that the Russian PVC market is witnessing a rapidly increased presence of imported material, from countries such as China and South Korea, and that the only way of combating this trend is through vertical integration in PVC production. Sayanskkhimplast is known to want to expand PVC production capacity to 400,000 tpa from 250,000 tpa at present. Even now, the Angarsk Polymer Plant struggles to meet the demands for ethylene via the connecting pipeline.

Drawing gas from the Kovytk gas condensate deposit has for many years been seen as the alternative to ethylene from Angarsk, but the project has remained stalled due to the politics and complexities of gas programme in the Irkutsk region. In 2007, Sayanskkhimplast worked closely with the Eastern Siberian Gas Company (VSGK) regarding the regional gas project. However, VSGK is linked closely to TNK-BP and now

the control over Kovytko is to be transferred to Gazprom through a 62.9% stake holding, the pipeline route may not actually include Sayansk. Deutsche Bank has already approved a loan of over \$1 billion that would enable Gazprom to buy out TNK-BP's share in the Kovytko project.

The favoured pipeline route for gas from Kovytko, as proposed by the East Siberian Gas Company, is Zhigalovo-Sayansk-Angarsk-Irkutsk. Gazprom's original plans for the gas project in the Irkutsk involved the construction of a chemical complex at Angarsk, and excluded Sayansk. Locally, however, the development and investment into Sayanskkhimpast is seen as contributing to the development of the Irkutsk region and should receive full support to which Gazprom seems to concur.

Even so, the pipeline connection between Kovytko and Sayansk could take at least three and a half years to construct and there are no imminent signs of the project getting underway. The company estimates that it would require between 2.5 to 4 billion cubic metres of gas per annum, in order to produce sufficient ethylene to run a 400,000 tpa PVC plant. Construction of the gas chemical complex at Sayanskkhimpast started nearly three years ago, but was stopped and the project held until it was certain where the feedstock would come from.

### **Novy Urengoy petrochemical complex**

Gazprom has launched syndication of a \$500 million, five-year loan via bookrunners Calyon and the Royal Bank of Scotland. The borrower is Novy Urengoy Gas and Chemical Complex (NGCC), a wholly-owned subsidiary of Gazprom. The facility, which is fully guaranteed by Gazprom, is expected to be used by NGCC to finance the construction of a gas and chemical complex in Novy Urengoy, Siberia, and to refinance existing debt. Financing for this project may not, however, be the key question as Gazprom probably needs to find a partner. With other polyolefin projects in Russia under construction or planning, the Novy Urengoy project seems unnecessary. However, Gazprom remains determined to try and build the plant.

## **Bulk polymers**

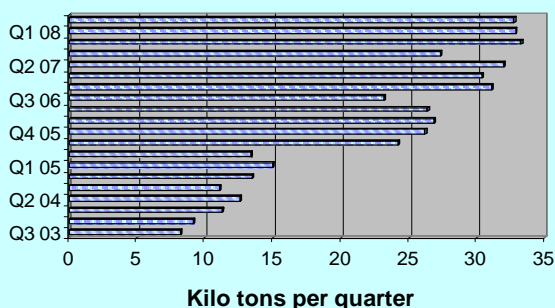
### **Russian Polyolefin Projects in Construction Stage**

<b>Company</b>	<b>Product</b>	<b>Capacity ktpa</b>	<b>Start-up</b>
Nizhnekamskneftekhim	HDPE	230	Q4 2008
Salavatnefteorgsintez	HDPE	120	Q1 2009
Tobolsk-Polymer	PP	500	2011
Taneko, Nizhnekamsk	PP	200	2011
Titan, Omsk	PP	180	2009

### **Nizhnekamskneftekhim-polyethylene project almost complete**

The polyethylene project at Nizhnekamskneftekhim has achieved around 90% completion for equipment installation and 70% for ethylene pipeline construction to the unit. The company hopes that start-up will be undertaken in the fourth quarter, or at the latest by the first quarter next year. Nizhnekamskneftekhim has traditionally sold most of its surplus ethylene to Kazanorgsintez, but supplies to Kazan will be reduced significantly after the HDPE plant start-up. Kazanorgsintez has tried to coincide its own ethylene expansion with the start of polyethylene production at Nizhnekamsk.

### **Polystyrene Production at Nizhnekamskneftekhim**



### **Nizhnekamskneftekhim third polystyrene line start-up**

On 11 August, Nizhnekamskneftekhim produced the first granules from the new general purpose polystyrene plant. The capacity of the new line is 50,000 tpa, raising total design polystyrene capacity at Nizhnekamskneftekhim to 150,000 tpa. Despite the original capacities of the two first polystyrene lines amounting to 100,000 tpa, effective production rates have been running

at 120,000 tpa for the past year as illustrated by the graphic opposite.

The official supplier of Nizhnekamsk produced polystyrene in the Russian market is Europlastik, which accounts for 97% of all domestic sales. The technology and the equipment for the new line was supplied by Fina

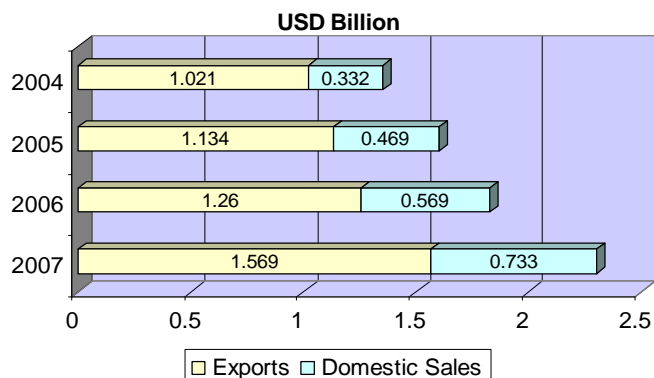
Technology (USA), with the construction undertaken by the Russian company Giprokauchuk. The additional 50,000 tpa is expected to start up in the third quarter.

#### Nizhnekamskneftekhim polystyrene duties

The Russian government commission on trade protection has received a request from Nizhnekamskneftekhim to increase tariffs on imports of general purpose and sock-resistant polystyrene from 10% to 20%. Consideration is being given to the idea that would protect domestic producers against imports, with the decision likely to be known by the start of September. Although Nizhnekamskneftekhim claims not to be concerned by imported polystyrene, ideally it would like to remove the possibility of serious competition to its status as the leading supplier on the domestic market. However, there is not a great of foreign competition for general purpose and sock-resistant polystyrene, and so the move does seem unclear.

Domestic consumers of polymers in Russia have been met with a series of price rises this year, and higher imported sources of polystyrene will only help further to drive up prices. Before any decision is reached the Ministry of Trade will collect opinions from the market in order to assess if a change is necessary. Nizhnekamskneftekhim's main competitor for its product grades is Styrovit, which has not endorsed an increase in duties.

#### LUKoil's Petrochemical Sales



#### LUKoil-Neftekhim, new polyolefin complex

A working group has been established by the Stavropol administration for preparing the basis for the project with LUKoil-Neftekhim for the construction of proposed new petrochemical complex at Budyennovsk. The main focus of the complex is to produce ethylene and polyethylene based on feedstocks from the North Caspian. The capacities at the new complex are set to include 600,000 tpa of HDPE and 180,000 tpa of polypropylene, with investment costs placed at around \$3 billion.

In 2007, Stavrolen produced 321,700 tons of polymers, showing a 20.1% increase over 2006. The increase was attributed to the start-up of the new polypropylene plant with a capacity of 120,000 tpa, although it has encountered problems this year.

#### LUKoil's Petrochemical Production (unit-kilo tons)

Product	2002	2003	2004	2005	2006	2007
Polyethylene	430.9	427.8	442.7	469.9	447.3	477.8
Polypropylene	56.3	64.3	64.8	67.9	70.2	82.9
VAM	30.7	42.5	409	53.1	35	51.3
VCM	120.7	173.2	236	190.2	179.2	171.5
Acrylonitrile	139.5	135.8	137.5	149.3	138.3	143.2
Synthetic Fibres	23.1	32.5	31.9	31.8	30.9	25.3
Synthetic Rubber	17.4	20	19.8	19.6	20.2	21.4
Latex	12.8	12.2	12	12.8	11.8	11
Phenol	64.4	71.6	70.3	68.2	71.5	37.7
Acetone	17.3	18.1	20.8	21	18.4	3.5
MMA	10.7	23.8	26.3	26.6	26.5	25.8

**Including output from Bourgas, Budyennovsk, Kalush and Saratov**

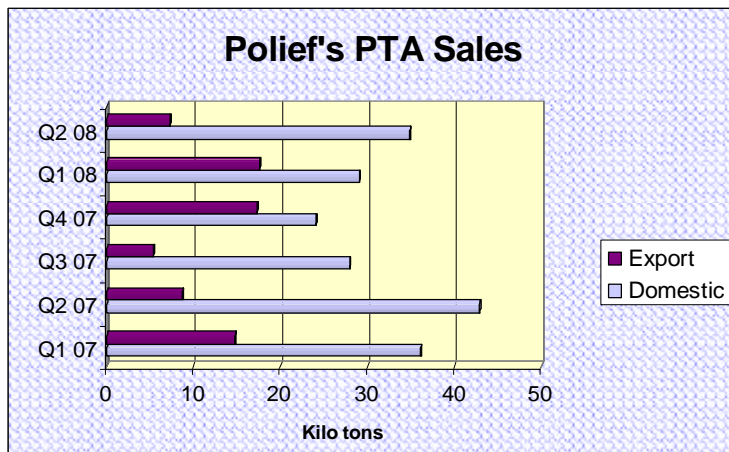
the largest Russian polyolefin complex, although it is possible that other expansion announcements could overtake these numbers.

LUKoil-Neftekhim is aiming to increase its turnover two fold as a result of these investments. In the first quarter of 2008, LUKoil as a whole achieved petrochemical sales of \$628 million, of which \$403 million came from exports. This compares against \$503 million for the same period in 2007, of which \$347 million came from export sales. Production volumes for LUKoil's total petrochemicals, from Russia, Bulgaria and Ukraine are shown above.

## Aromatics &amp; derivatives

**Polief-second PET line**

Polief's second 60,000 PET plant has made further progress in the past few weeks, and is expected to be running at full capacity by September. The first 60,000 tpa unit was started in May this year and had produced 2,755 tons by the end of June. As the only integrated producer for PET in Russia at present, it should have advantages over SIBUR-PETF and Senezh. Other advantages include location, that whilst SIBUR-PETF and Senezh are closer to Moscow Blagoveshchensk is much closer to more PET preform plants.



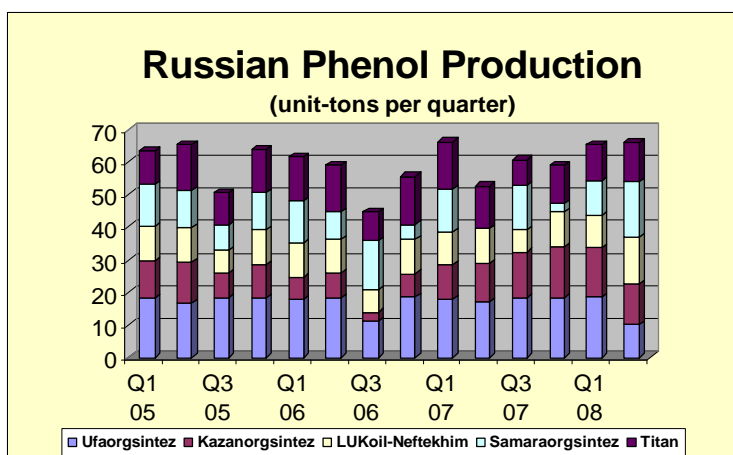
Polief continues to experience debts, but the profit ratio is improving. As the company has almost completed its current wave of investments, operating efforts are expected to move into the black in the next two to three quarters. Long-term debts for Polief for credits and loans at the end of Q2 2008 amounted to 4.44 billion roubles (\$180 million).

Raw material costs accounted for 27% Polief's total costs in the second quarter. In this period, paraxylene prices rose 21%, DEG by 10%, and isophthalic acid by 65%. Exports of PTA dropped slightly due to the start of the PET plant.

In the first half of 2008 Polief produced 88,700 tons of PTA at Blagoveshchensk, down from 102,500 tons in 2007 for a total revenue of 107.537 million roubles. Around 20% of output in the first half of the year was exported against 38% in 2007. Plans are being evaluated by Polief for the expansion of the PTA capacity to 600,000 tpa and PET to 400,000 tpa by 2010. Investments could amount to 22 billion roubles into the whole project.

**Russian phenol market**

The Russian phenol market totalled 106,800 tons in the first half of 2008, which was 8% higher than the same period in 2007. Consumption has been helped in 2008 due to the start-up of the new bisphenol A plant at Kazanorgsintez. At the same time production was lower by 4% in the first half of 2008, down to 114,500 tons. Whilst both Samaraorgsintez and Kazanorgsintez noted increases in volumes, the other three producers all saw declines due to high costs. Rather than imports rising to compensate for the shortfall, exports have dropped.



Around 80% of phenol consumption in Russia goes to the production of for resins, caprolactam and bisphenol A. Planned shutdowns at Samaraorgsintez in July and Omsk Kaucuk in August will reduce any market surplus. The main problem for phenol has been caused by the cessation of MMA production at Dzerzhinsk Orgsteklo, which has reduced the need for acetone. Producers are unlikely to continue producing acetone at the same levels, which has implications for phenol production.

**Kazanorgsintez-polycarbonate start-up**

The new polycarbonate plant at Kazanorgsintez is expected to see its first production by the end of August. The 65,000 tpa plant was scheduled to start initially by the end of 2007, but has been delayed primarily due to slow equipment deliveries. The bisphenol A plant is already operating, with output being currently exported.



**Kuibyshevazot-Jan-Jun 2008**

Kuibyshevazot increased its net profit four fold in the second quarter of 2008 to 1.882 billion roubles, after turnover increased 26.5% to 10.6 billion roubles. The increases in financial performance are attributed to the expansion in polyamide capacity, whilst at the same time benefiting from fertiliser prices. Fertiliser production rose 2.2% in the first half of 2008 to 208,300 tons, although ammonium nitrate fell 1% to 252,000 tons. Urea production rose 1.9% to 151,500 tons, and ammonia rose 5.7% to 306,200 tons. Caprolactam production increased 15.3% to 93,700 tons, whilst polyamide-6 increased 37% to 46,400 tons. Also in the polyamide division, technical threads rose 33.9 % to 3,200 tons, and cord fabrics 39.8% to 2,500 tons.

Construction of a fourth line for polyamide-6 has already been started at Kuibyshevazot, with a capacity of 50,000 tpa. This line is expected to start in 2009 and will increase the total capacity of the company to 150,000 tpa. Other investments are taking place by Kuibyshevazot into the expansion of urea capacity and towards reducing energy and other variable costs in the whole production cycle.

Kuibyshevazot has sent a request to the Russian government to revoke the 5% duty on benzene imports in order to reduce the effects on production costs. However, with Russia currently a net exporter of benzene, albeit on a minor scale, the government may not heed this request too closely. Until the benzene JV at Togliatti starts in 2010, Kuibyshevazot will be dependent on benzene purchases on the open market either from domestic or imported sources. Kuibyshevazot has argued that summer outages at petrochemical plants in Russia impact on real availability, and has forced the company to import at prices 20-30% higher than the domestic price. Kuibyshevazot buys around 130-140,000 tpa of benzene, of which 15,000 tons came from imports in 2007.

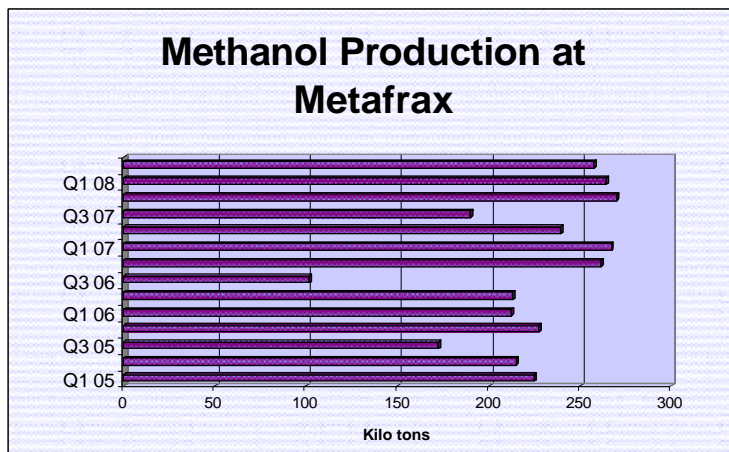
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**Methanol & fertilisers**

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**Metafrax-REACH**

Metafrax has completed the procedure for pre-registering and registering all of its export products for the EU, under the requirements set out by REACH. Metafrax has become one of the first Russian chemical companies to take such measures, thus allowing it uninterrupted sales to the EU area. The process of pre-registration and registration will become applicable from 1 December 2008, and will need to be followed by all other Russian chemical companies that export to the EU in more than one ton per annum. Metafrax has already undertaken pre-registration for methanol, urotropin, pentaerythritol, formaldehyde, polyamide, etc.



In the first half of 2008, Metafrax increased methanol sales by 17,800 tons, or 5%, more than in 2007. Output of methanol increased 3% in the first six months of the year or by 15,500 tons, with further increases seen for formaldehyde (11%), pentaerythritol (13%) and utropin (4%). The company suffered an explosion at the end of June at the formaldehyde plant with several fatalities.

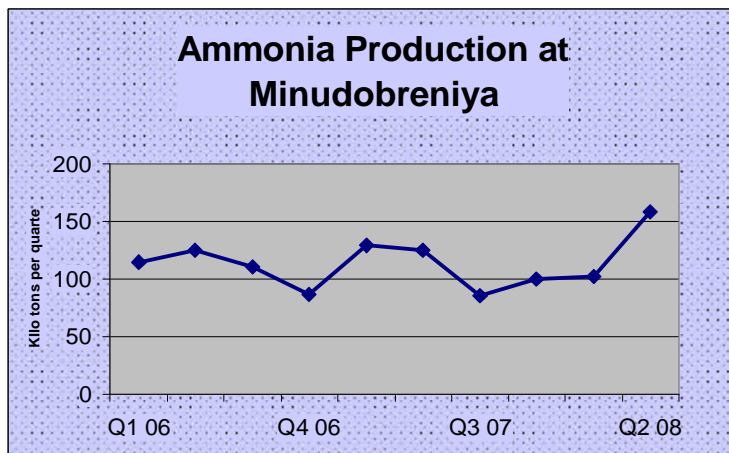
**Uralkali-potassium chloride price increase**

Uralkali raised prices for potassium chloride to 12,000 roubles per ton on 1 July for Russian industrial producers due to price increases on the Chinese market. Potassium chloride was previously shipped to the Russian market at a price of 3,500 roubles per ton. However, the company has fixed the price for potassium at 3,000 roubles per ton until the end of the year for direct shipments to Russian agricultural producers, and at 3,500 roubles per ton for Evrokhim and Fosagro for production of complex fertilisers for domestic agricultural producers.

The company said that it plans to sell about 220,000 tons of potassium chloride on the domestic market in the second half of 2008, not including exchange sales. Of this, about 120,000 tons will be sold at a price of about 12,000 roubles per ton, 90,000 tons at 3,500 roubles and about 10,000 tons at 3,000 roubles. The company has therefore fixed prices for 45% of total shipments, not including exchange sales.



Uralkali sells potassium chloride on the Russian market via direct shipments to customers and through exchange trading. Not including exchange trading, the company annually sells about 450,000 tons of potassium chloride on the domestic market, which amounts to less than 10% of its total sales. Prices are supposed to be calculated on the basis of the weighted average price for exports to the market with the lowest price, which is currently China, minus transportation costs.



#### **Minudobrenya Perm**

Minudobrenya at Perm increased ammonia production by 2.2% in the first half of 2008 to 260,400 tons, whilst urea rose 5.7% to 262,600 tons. The plant shut for maintenance between 11 July and 12 August, including predatory measures for the modernisation of the ammonia compressor. This will facilitate an increase in capacity by 17%, or to 1,650 tons per day (572,300 tpa). Natural gas consumption per ton of product will also be reduced. Another aim of the company is to move towards a two-year cycle between-maintenance that will allow a reduction in

downtime. This will result in estimates of 45,000 tons of urea and 9,000 tons of ammonia which could be sold on the merchant market.

Recently, SIBUR-Holding confirmed the purchase of 51% in Minudobrenya at Perm for a sum of \$187.414 million and integration into SIBUR-Mineral Fertilisers. The integration of Minudobrenya into SIBUR-Mineral Fertilisers is seen as beneficial due to gas supply agreements with SIBUR for the Perm fertiliser complex. SIBUR-Mineral Fertilisers concluded an agreement for processing with Minudobrenya for the first half of 2008, and this was followed by minority shareholder CI-Chemical Invest approving another processing deal with SIBUR. CI-Chemical Invest, which owns 44.27% in Minudobrenya, has agreed to take 319.9 million cubic metres of gas and convert it into 477,500 tons of urea over the period 1 June 2008 to 30 September 2009.

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#### **Other products**

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##### **Nitol-Solar, IFC agreement**

Nitol Solar and the IFC have signed the agreement under which the IFC will invest around \$50 million into Nitel Solar. The funds will be directed towards the construction of the polycrystalline silicon plant, which will have a capacity of 3,700 tpa. The plant is located at Usolye Sibirsk in the Irkutsk region, and should be ready for operation by 2009. It will be the first unit of its kind in Russia, although in May this year Renova-Orgsintez announced plans to construct a similar plant at Novocheboksarsk. This second plant is set to have a capacity of 5,000 tpa

The IFC's investment into Nitel Solar is aimed at expanding global supplies of polycrystalline silicon, used to make solar cells, and bring down costs of solar energy. The investment is part of IFC's strategy to support the growth of renewable energy amid concerns over global climate change and soaring oil prices. Nitel's projected output of 3,700 tpa of polysilicon constitutes about 9% of last year's global supply.

##### **Plastics news**

Penopleks has started up a plant at Kirishi for the production of disposable packaging, based on foam polystyrene. Investments into the project have comprised €12 million, and the company plans to start a second line before the end of 2008. A second unit has been also started at Kirishi for the production of waterproofing PVC, following start-up of the first unit in 2007.

SIBUR subsidiary Orton at Kemerovo has recently concluded contracts on the delivery of equipment for the production of geosynthetic materials from O.R.V. in Italy. Two lines will be installed for processing polypropylene non-woven materials, with a combined capacity of 20,000 tpa. In addition, the Chinese company Shunde Plastic Machine Co will provide equipment for two industrial lines for manufacturing

geolattices from polypropylene with a total capacity of 3,000 tpa. The lines for geosynthetics and geolattices are scheduled to start production in mid-2009, with full capacity being seen in 2010. SIBUR-Holding hopes to take around 20% of the Russian market in geosynthetic materials. Two months ago, SIBUR Mineral Fertilisers completed the sale of 71.49% in Orton to SIBUR-Holding.

Profile producer Veka started its eleventh extrusion line on 1 July at Novosibirsk. The line will be used for the extrusion of PVC and will increase the company's turnover by 10%. The company can now produce up to 60 tons of finished production in a 24 hour period.

Uralkhimplast has developed a new strategy for exports, which prioritises sales to the Central Asian republics of the CIS, East Europe, India and China. The main aim of the company is to sell products for heat insulation, phenoplast, resins, etc. In addition, the company will ensure that all products are registered with REACH.

### **Khimprom-Rostekhnologi**

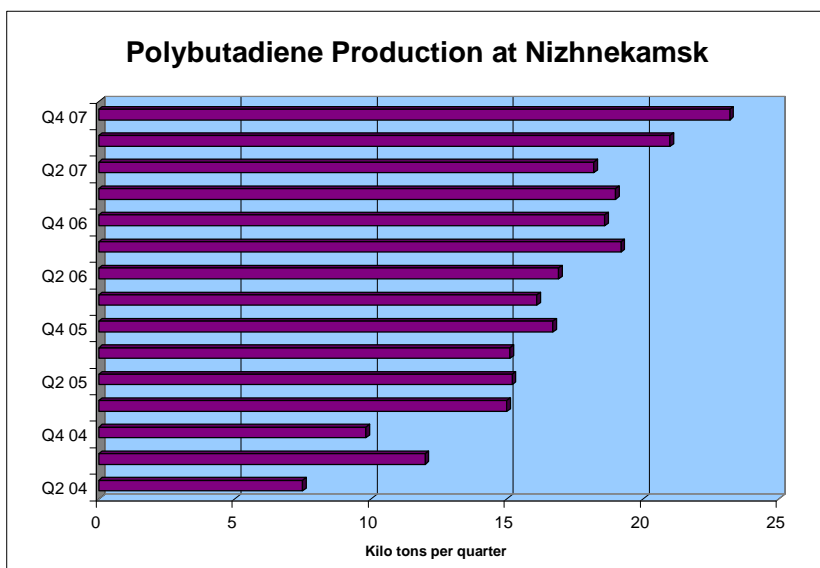
A controlling stake in Khimprom at Volgograd has been handed over to the Russian company Rostekhnologi. A 51% stake in Khimprom, owned by the Federal State Property Agency, Rosimushchestvo, is being transferred to the corporation's ownership. A 34% stake in the company is controlled by Renova-Orgsintez and private individuals and legal entities own the other shares.

Khimprom's investment strategy includes expanding PVC production, although it remains only acetylene based producer. It is not clear at this stage where the funds will come from to support investment. Renova-Orgsintez had offered to invest around \$100 million into Khimprom over a three year period in exchange for an additional 25% stake in the company, but this proposal was rejected. Thus, much depends on if Rostekhnologi is prepared to put up the finance.

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## **Synthetic Rubber**

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polybutadiene capacity up to 160,000 tpa by 2012.

### **Nizhnekamskneftekhim, SKD-N**

Nizhnekamskneftekhim is stage by stage expanding its capacity for polybutadiene (SKD-N), with the aim of producing more than 90,000 tons this year. Nizhnekamskneftekhim increased the production of polybutadiene rubber by 15% in 2007 over 2006, reaching 81,400 tons. Production started in 2004 and has since risen gradually as shown in the graphic.

The technical improvements taking place at present include the application of a neodymium catalyst. The long term goal for Nizhnekamskneftekhim is to expand

Percentage Sales of Commodity Production for NKNK in Q2 2008			
Product	Sales to Russia	Sales to Tatarstan	Export
Isoprene Rubber	5.79	35.59	58.62
Butyl Rubber	5.15	0.42	94.43
Styrene	3.31	0.0	96.69

exported. Around 59% of isoprene rubber production is exported, with the largest domestic consumption taking place in Tatarstan.

Similarly to the commodities opposite, Nizhnekamskneftekhim relies heavily on export sales for its merchant distribution of polybutadiene. Whilst large volumes of styrene are consumed captively, the remaining volumes are almost all

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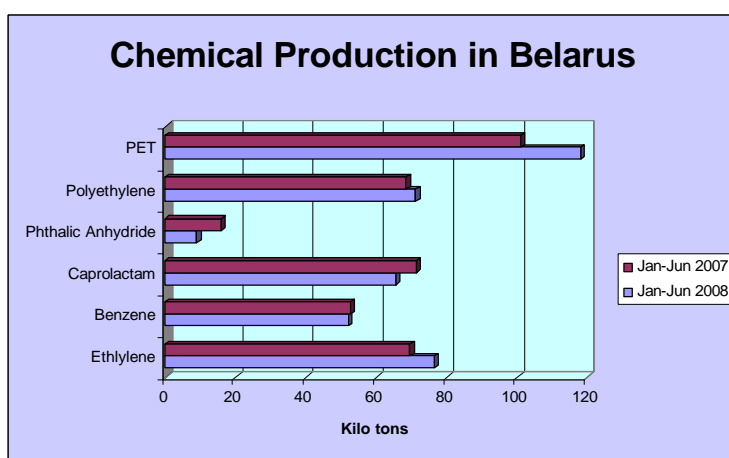
**Belarus**

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**Mozyr paraxylene project**

The Belarussian banks have refused to provide the finance the proposed paraxylene plant at the Mozyr refinery. The project had previously this year been estimated at \$178 million in investment value, with a capacity of 120,000 tpa. The Mozyr NPZ has received several refusals from domestic banks where it had applied for credit. The banks have assessed the project as inefficient, so the main hope for the project proceeding is to secure finance from foreign banks. However, foreign banks may follow the Belarussian banks in concluding that production costs at Mozyr are likely to exceed paraxylene prices.

The design of the plant is being carried out by a St Petersburg based company, whilst the licence has been agreed with UOP. The paraxylene project was created to supply Moglievkhimvolokno for its planned production of PTA. The Belarussian government has already put \$20 million towards the total of \$178 million, but does need to find other sources if the project is to go ahead as part of its PET and fibre integration programme.

**Belarussian chemical production Jan-Jun 2008**

Chemical production in the first half of 2008 in Belarus increased 2% over 2007. The largest increase was seen in the production of PET, which rose 17% to 118,100 tons, whilst the largest fall was seen for phthalic anhydride, which dropped 44% due to reconstruction at the Lida plant.

Export duties for petrochemicals from Belarus, including aromatics, rose to \$280.5 per ton in August. Azot at Grodno intends to export around 40% of its production in 2008, including 56,000 tons of urea, 35,000

tons of caprolactam solid and 3,000 tons of caprolactam liquid. Around 35,000 tons of methanol will be exported to Central-East Europe. Belaruskali plans to increase output of potassium fertilisers from 8.175 million tons in 2007 to 9.650 million tons in 2015.

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**Ukraine**

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**Karpatneftekhim studies modernisation of VCM plant**

Karpatneftekhim has concluded that the construction of the new caustic and chlorine facilities, and PVC unit, will also require the modernisation of the VCM plant which it had been hoping to avoid. Karpatneftekhim is also intent in constructing its own energy resource. Construction of the PVC plant at Kalush has begun, although some backlogs have been encountered which may throw into doubt the completion date. The company conducting the general design, Ukrneftekhimproject, has not to date prepared the budget documentation. This is holding up the project and installation of chlorine and caustic units prior to proceeding to the PVC unit. LUKoil-Neftekhim also considers that the Ukrainian government not to have given full support to the project.

**Brenntag-Dipol**

Brenntag has announced the acquisition of Dipol Chemical International, Inc. Dipol is focused on the distribution of chemicals in Ukraine, Russia and the Baltic States and also provides its services in Belarus and Moldova. Founded in 1994, Dipol is now a distributor of polymers and specialty chemicals in Ukraine, Russia and the Baltic States. With sales in 2007 amounting to \$100 million, Dipol operates an established distribution network via offices and warehouses in Kiev, St. Petersburg, Moscow and Riga.

**Ukrainian caustic market**

In the first half of 2008 imports of caustic soda into Ukraine totalled 52,000 tons, which was up 17% on 2007. Dneprozot reduced production of liquid caustic solution by 12% to 30,000 tons in the period

January-June 2008, whilst Karpatneftekhim reduced production 22% to 21,900 tons. For 100% caustic soda solid Dneprozot reduced production 17% to 22,700 tons in the period January-June 2008, whilst Karpatneftekhim reduced production 25% to 13,400 tons. Imports of caustic soda increased 44% in the first half of the year to 7,750 tons whilst solid caustic imports rose 23% to 59,600 tons.

The aluminium group Rusal is in negotiations regarding the purchase of part of the Ukrainian chlorine producer Khimprom at Pervomaisk in east Ukraine. Rusal is interested primarily in the idle caustic soda unit at Khimprom. The funds from the sale would be directed toward the pay-off of the larger part of accounts payable from affirmed by law court of 160 million hryvnia. The problem for Rusal is that the local administration wants to sell Khimprom to an investor with plans for the PVC plant, which is of no interest to Rusal.

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### Kazakhstan

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#### **Atyrau-petrochemical integration**

Omsk based engineering group has won the tender for design of the Atyrau petrochemical complex. According to the strategic plan, the complex will produce 496,000 tpa of paraxylene and 36,000 tpa of benzene in the first phase, and rising later to 136,000 tpa. The design of the complex is expected to take up approximately 18 months to complete. Estimates of almost \$400 million have already been made for the investments into an aromatics complex at Atyrau. The technical and economic assessment of the project was undertaken by the Japanese companies Cosmo Oil and Marubeni, and includes an oil processing capacity of 1 million tpa. One of the main reasons for constructing a new refinery is due to the scarcity of aviation fuel, high-octane gasolines, etc, in the Kazakh domestic market.

The benzene and paraxylene from Atyrau will eventually be used internally in west Kazakhstan for derivative production, although in the first phase paraxylene is expected to be exported to Russia. The aromatics complex is being developed at the same time as the polyolefin complex, involving 800,000 tpa of polyethylene and 400,000 tpa of polypropylene. These production units will be united in the special economic zone entitled the National Industrial Petrochemical Technopark. Production of polyolefins will be aimed mostly at export due to the small market size in Kazakhstan. The Atyrau Plastic Pipes plant will also benefit from the availability of local polyethylene, as it is currently dependent on imports. The plant was constructed as a JV between Chevron and KazMunaiGaz and produces polyethylene pipes with a diameter of from 25 to 1200 mm.

**Relevant Currencies**

(Czech crown. Kc. \$1= 16.707. €1 = 24.451): (Hungarian Forint. Ft. \$1 = 162.99. €1 = 239.42): (Polish zloty. zł. \$1 =2.279. €1 =3.3372): (Romanian New Lei. \$1 = 2.451. €1= 3.5483). (Ukrainian hryvnia. \$1 = 4.65300. €1 = 6.8083): (Rus rouble. \$1 = 24.585. €1= 36.113)

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