CIREC
MONTHLY NEWS
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Czech Republic | Slovakia | Hungary | Poland | Bulgaria | Romania | Croatia | Slovenia | Yugoslavia | Baltic States | Russia | Belarus | Ukraine | Transcaucasus | Central Asia | Kazakhstan
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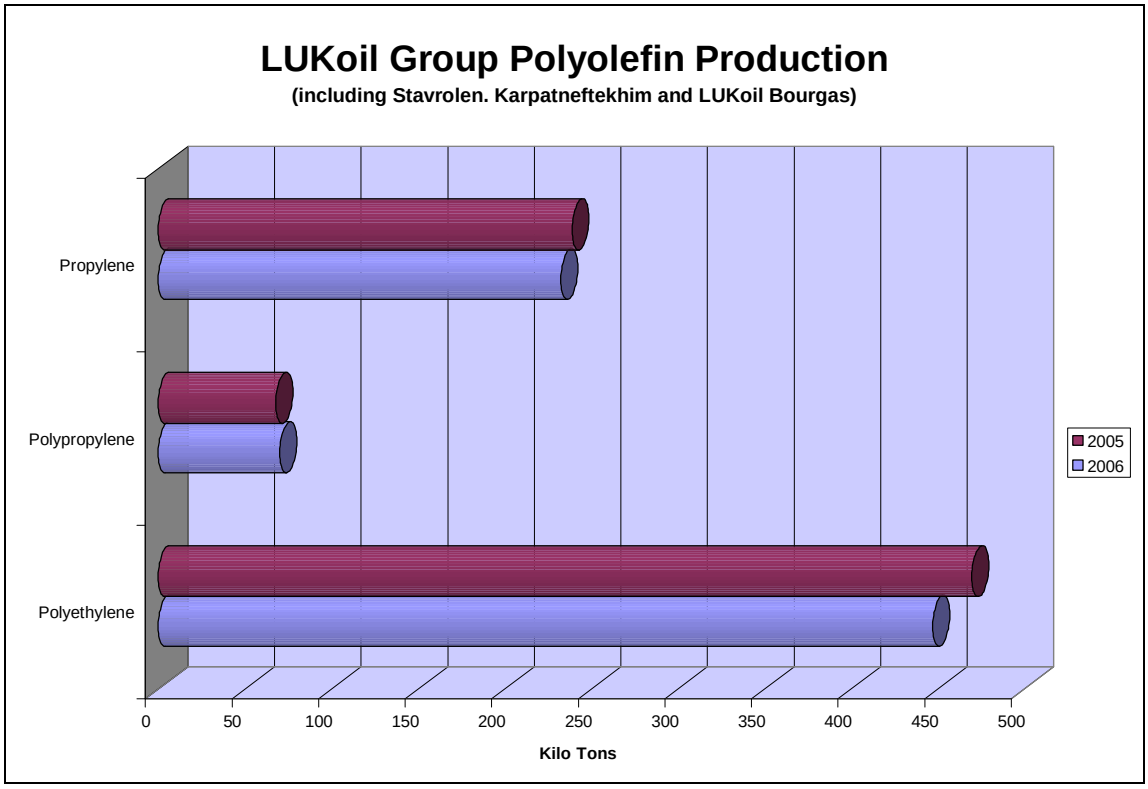
- LUKoil's petrochemical plants produced 2.038 million tons of marketable chemicals in 2006, including 798,000 tons of polymers and monomers, 648,000 tons of organic synthesis products, 584,000 tons of pyrolysis products and fuel fractions.
- Ciech has almost doubled in size in the past year through a string of acquisitions, buying Zachem and Sarzyna, and the Romanian soda ash producer Uzinele Sodice Govora S.A in 2006. After the takeover of USG has made Ciech the second largest producer of soda ash in Europe.
- Arpechim's integrated environment authorization was suspended on 28 May as the plant failed to accomplish two measures of improving environment protection and safety, in accordance with EU demands. Arpechim is owned by Petrom, a member of the OMV group.
- At the end of April Air Products completed the purchase of BOC Gazy from Linde, making Air Products is the largest industrial gas supplier in Poland.
- Petrom has progressed with its plans to create a spin-off of the petrochemical operations. According to OMV, the strategy follows the international tends in splitting the chemical business from the refinery.
- Gazprom and KazMunaiGaz have agreed through its jv KazRosGaz to increase processing of raw materials from Karachaganak at the Orenburg Gas Processing Plant.
- Dioki Group and HIP Petrohemija have signed an agreement for the delivery of ethylene from Pancevo to Zagreb. Dioki has its own plant for 90,000 tpa of ethylene at Zagreb, based on ethane, but production has been restricted due to ethane supply.
- Following the sale of Angarsk Polymer Plant to Rosneft, as part of assets belonging to YUKOS, estimations have been made that the plant requires investments of around $455 million in the 2008-2012 period just to keep afloat.
- Nizhnekamskneftekhim is taking long-term steps to diversify its feedstock sources for petrochemical production and to reduce dependency on naphtha. LUKoil-Neftekhim is considering an expansion of ethylene capacity at Budyennovsk from 350,000 tpa to 600,000 tpa and is aiming to diversify its feedstock sources.
- SIBUR-Holding and Solvay were expected to conclude a jv on 28 June for the proposed PVC project, which is to be constructed in the Nizhniy Novgorod region.
- Metafrax has bought 82% of Karbolit at Orekhovo-Zuyevo in the Moscow region, which is a producer of formaldehyde and urea-formaldehyde resins. The purchase of Karbolit is part of the strategy employed by Metafrax towards increasing domestic consumption of methanol.
- Titan and the Kazakh bank TuranAlem have reached agreement to merge two production sites at Omsk, involving Omsk Polymer and Omsk Kaucuk.
- The State Property Fund of Uzbekistan has given plans to sell all large chemical producers in the near future. In May, Spanish company Maxam Corp bought 49% of Elektrokhimprom at Chirchik for $22 million.

CENTRAL & SOUTH EAST EUROPE

Petrochemicals



LUKoil's petrochemical division 2006

LUKoil's petrochemical plants produced 2.038 million tons of marketable chemicals in 2006, including 798,000 tons of polymers and monomers, 648,000 tons of organic synthesis products, 584,000 tons of pyrolysis products and fuel fractions. Output included 447,300 tons of polyethylene (4.8% less than in 2005), 232,500 tons of propylene (2.7% less than in 2005) and 70,200 tons of polypropylene (3.3% more than in 2005). The slight reduction in petrochemical production volumes in 2006 was due to scheduled repair and upgrading. LUKoil's capital expenditure into petrochemicals amounted to $172 million in 2006, focused mostly on modernisation of existing facilities and several new units. The major investment was for the polypropylene plant at Budyennovsk, which was commissioned in the first quarter of 2007. Propylene feedstock is produced by the Stavrolen complex and supplied to the unit through a pipeline. General-purpose polypropylene is being supplied to Russian consumers.

A key project for LUKoil in the next few years is construction of the Caspian Gas chemical Complex, which will process natural gas and gas condensate, produced by LUKoil in the Caspian region. The purpose of the project is to increase value added by deeper processing of gas feedstock and to ensure efficient chemical processing of ethane, natural gas liquids and condensate. The Caspian Complex will refine natural gas and its components to produce basic organic synthesis products, polyethylene, polypropylene and other petrochemicals. The feasibility study for the complex started in 2006 and should be completed in 2007.

Petrom confirms new petrochemical division

Petrom has progressed with its plans to create a spin-off of the petrochemical operations. According to OMV, the strategy follows the international tends in splitting the chemical business from the refinery. Moreover, by this decision, the management of the new company will be able to focus on the possibilities to develop and increase the efficiency of petrochemical operations. .

The new petrochemical company, Petrochemicals Arges, will include the steam cracker, aromatics extraction, LDPE units and several logistic facilities and will also operate the HDPE unit. The aromatics extraction unit has a capacity of 50,000 tpa, while the steam cracker II can produce up to 200,000 tpa of ethylene and 95,000 tpa of propylene. In 2006, Petrom's petrochemical sales totalled 393,300

tons, which went both to the domestic and the international market. The oil and gas reserves of Petrom are currently worth an estimated $9.53 billion, and are the most valuable asset of the company.

Arpechim refinery-Oltchim
Arpechim's integrated environment authorization was suspended on 28 May as the plant failed to accomplish two measures of improving environment protection and safety, in accordance with EU demands. Petrom, a member of the OMV group, owns Arpechim.

The problem for Oltchim is that it is dependent exclusively on Arpechim for ethylene supply, and thus an extended outage would have a damaging effect on production. As mentioned in recent months, Oltchim is in discussions to take over Arpechim.

Dioki-Petrohemija, ethylene agreement
Dioki Group and HIP Petrohemija have signed an agreement for the delivery of ethylene from Pancevo to Zagreb. Dioki has its own plant for 90,000 tpa of ethylene at Zagreb, based on ethane, but production has been restricted due to ethane supply. This has led to losses, as Dioki has been unable to maximise polymer production.

The deal concluded with Petrohemija makes it possible for the Dioki Group to obtain ethylene in return for naphtha. Dioki states that this is the biggest individual transaction between companies from Croatia and Serbia registered to date.

The cooperation between Dioki and HIP Petrohemija began in 2005. Both companies are interested in broadening the cooperation for the purpose of maintaining their current positions, and gaining advantage on the European market of petrochemical products. At the end of May, the two companies signed a new annual agreement on business cooperation, which relates to the .compensation arrangement between Petrohemija's ethylene surplus against necessary quantities of virgin naphtha.

Dioki's product capacities

Product	*Capacity (unit-tpa)*
LDPE OKITEN	50,000
LDPE DINALEN	70,000
GPPS DOKI® POLISTIREN & HIPS	DOKI®POLISTIREN : 50,000
PS colour concentrates:	3,300
•EPS OKIROL® -E (production to be started up at the beginning of 2006)	15,000 :
Ethylene	90,000

Dioki-investments
Due to strong domestic demand in Croatia, Dioki plans to restart the idle VCM unit at Omisalj coupled to a restart of a PVC plant further south. Dioki has concluded contracts for ethylene supply, although volumes will not be huge. The restart of the VCM plant is part of the investment strategy up to 2009, with modernisation of the VCM plant currently underway.

VCM production was halted several years ago, largely due to market unpredictability but conditions have changed substantially in the past few years. The company plans to establish a new LNG terminal at Omisalj, as part of its investment strategy. Dioki's capacity for petrochemicals totals 275,000 tpa, having been increased by 15,000 tpa for expandable polystyrene at the start of 2006. Production facilities are listed below.

Intermediates

BorsodChem-Linde, industrial gas
The Linde Group and BorsodChem have agreed to expand their cooperation regarding industrial gas supplies to Kazincbarcika. Linde and BorsodChem intend to enter into a long-term supply agreement about the additional supply of around 150,000 tpa of carbon monoxide and hydrogen for the expansion of BorsodChem's isocyanate production. With new investments of approximately €100 million, complementing the three existing plants, this location will become one of Linde's top five production sites for hydrogen and carbon monoxide worldwide.

BorsodChem Group's sales revenue in 2006 reached Ft 243 billion, or 40.5% up against 2005. This was partly due to expanded capacities and partly to exchange rates. Operating profit was 18.3% up over 2005. The EBIT margin was 8.2%, with the EBITDA margin 15.2%. The operational cash flow (EBITDA) shows a

29.3% increase relative to 2005, nearing Ft 37 billion. First Chemical Holding Kft. holds 89.2% of voting shares, as of the start if 2007.

BOC Gazy-Air Products

At the end of April Air Products completed the purchase of BOC Gazy from Linde, making Air Products is the largest industrial gas supplier in Poland. Air Products announced on 8 January its intention to acquire the BOC Gazy business and has since received clearance from the European and Polish regulatory authorities. The business, headquartered in Warsaw, has five major industrial gas plants and six cylinder transfill facilities serving customers across a diverse range of industries, including chemicals, steel and base metals, etc. Combined with Air Products' existing Polish business, 2006 sales were about 140 million euros or about $190 million.

Ciech

Ciech plans to triple its net profit by 2011 with a series of investments and acquisitions both at home and abroad. Ciech outlined plans to invest zl 3.1-4.8 billion zlotys in the next five years and said its operating margin could reach 10-11% in the period, bringing net profits to as much as zl 500 million, depending on the success of its acquisition plans. The company made zl 151 million in net profit last year and plans to net zl 220 million in 2007. Ciech's strategy for the 2007-2011 period includes a number of acquisitions, involving fertilisers, soda ash and silicon. The company is also considering acquisitions in Germany and Ukraine (soda and silicon producers). Funds for further projects will come from bond issues credits and the company's own funds. Ciech is also reported to remain interested in the possible acquisition of ZA Kedzierzyn and ZA Tarnow, which were stopped last year from becoming part of PCC Cargo. By acquiring these two producers, Ciech would be able to expand annual turnover to its target of €2.1 billion. Some of the other possible acquisitions under consideration include Crimean Soda in Ukraine and Sodawerk Strassfurt in Germany. Crimean Soda Plant produced 680,000 tons of soda ash in 2006.

Polish Chemical Production (unit-kilo tons)

Product	*May-07*	*May-06*
Ethylene	51.6	28.3
Propylene	12.3	22.5
Butadiene	5.3	2.9
Toluene	5.3	3.4
Phenol	4.1	4.2
Caprolactam	14.2	14.5
Polyethylene	30.0	24.4
Polystyrene	10.9	9.3
PVC	28.4	15.9
Polypropylene	21.9	20.9
Synthetic Rubber	10.8	11.0

Ciech has almost doubled in size in the past year through a string of acquisitions, buying Zachem and Sarzyna, and the Romanian soda ash producer Uzinele Sodice Govora S.A in 2006. After the takeover of USG has made Ciech the second largest producer of soda ash in Europe.

Solvay-Sodi

Solvay announced that Solvay-Sodi is expanding the production capacity of its soda ash plant at Devnya to 1.5 million tpa, up from 1.2 million tpa, to accompany the growth projects of its clients in the Balkans, the CIS and the Middle East. According to the company, following this expansion, the Devnya site will become one of the world's largest soda ash manufacturing units implementing the industrial production process developed by Solvay.

This capacity increase includes a new line of dense soda ash particularly aimed at supplying clients in the glass industry and should start operation in the course of 2008. Solvay Sodi has also recently decided to invest 140 million Bulgarian leva (€70 million) to upgrade the site's power supply, with a state-of-the art boiler also scheduled to enter into operation in 2008.

ZA Pulawy-coal gasification

Zaklady Azotowe Pulawy and Lubelski Wegiel Bogdanka have signed a letter of intent concerning a coal gasification project, which is among the key goals of the new business strategy adopted by ZA Pulawy for 2007–2017. The project is designed to facilitate raw material diversification, one of the objectives set in the strategy. If the project is finally approved for execution, it will rank among the largest investment ventures in the chemical industry in Poland.

Zaklady Azotowe Pulawy and Lubelski Wegiel Bogdanka are situated in close proximity, have experience in implementing large-scale projects as well as appropriate logistics resources. Construction of a unit for producing gas from coal would satisfy around 50% of ZA Pulawy's current gas requirements. The unit would also fully cover the demand for electricity and steam at ZA Pulawy. The annual consumption of natural gas at

ZA Pulawy amounts to approximately 900 million cubic metres. The plant's daily consumption of electricity is160–170 MW, 117 MW of which the company is able to generate by its own means.

RUSSIA

Feedstocks

KazRosGaz-Karachaganak

Gazprom and KazMunaiGaz have agreed through its jv KazRosGaz to increase processing of raw materials from Karachaganak at the Orenburg Gas Processing Plant. KazRosGaz was founded several years between Gazprom and its Kazakh partners. The Karachaganak Phase III expansion project is due to be sanctioned in 2008 and will see gas and liquids sales increase to 16 billion cubic metres and 16.5 million tpa respectively. Currently 8 billion cubic metres of untreated Karachaganak gas is exported to the Orenburg processing facility. The expansion of the Orenburg facility to accommodate the increased volumes as a result of Phase III will be completed by the KazRosGaz joint venture. The contract lasts for 15 years. Gas is expected to come on stream in 2012 following completion of the $8 billion expansion at Karachaganak.

Karachaganak gas differs from Orenburg gas as it contains more hydrogen sulphide and hydrocarbons. Therefore, its processing more complex and requires new technological solutions. It is suggested that with an increase in the volumes of processing gas, the possibilities for constructing polyethylene and polypropylene units at Orenburg could start to see further consideration.

Russian associated gas sources

The Russian Ministry of Natural Resources expects that processing of associated gas output will increase to around 95% by 2011. compared against 75% for 2006. The growth in processing is expected to follow investments planned in the sector, especially by SIBUR-Holding which aims to raise capacity from 6.2 billion cubic metres per annum to 20 billion cubic metres at its four sites in West Siberia. Rosneft and SIBUR signed a memorandum in June 2007 which stipulates the possibility of establishing a joint company for processing associated.gas. The joint venture may be launched on the basis of SIBUR's Yuzhno-Balyksky gas processing plant. The new company is expected to process 3 billion cubic metres per annum of associated gas due to joint modernisation of the plant. .

In 2006, Russian capacity for processing was 26.4 billion cubic metres, including SIBUR-Holding with 6.2 billion cubic metres per annum and Yugragazpererabotka with 7.8 billion cubic metres per annum. There are several main problems in the development of associated gases, one of which is the high costs involved in the output and separation of associated oil gas in comparison to natural gas costs. Other problems involve the high costs involved in the creation of an infrastructure for the delivery of associated gas for processing.

The main challenge for hydrocarbon producers is to increase the feedstock flows to petrochemical plants. At present, only around 10% of the annual production of associated gas is directed towards ethylene through the isolation of propane-butane fractions. The production of ethane in Russia is 21 times lower than in the USA, and is butanes 8.4 times lower. Production of liquefied hydrocarbon gases for petrochemicals is therefore receiving considerable focus at present in order to make some of the major petrochemical projects planned in Russia possible.

TNK-BP & Gazprom, Kovytka

Whilst BP has now lost control of Kovytka, it remains committed to Russia. BP and TNK-BP announced in late June that they had signed a memorandum of understanding to create a strategic alliance with Gazprom, to invest jointly in major long-term energy projects or swap assets around the world. Under the terms of the agreement, TNK-BP agreed to sell Gazprom its 62.89% stake in Rusia Petroleum, the company which holds the licence for the Kovytka gas field in East Siberia. It will also sell its 50% interest in East Siberian Gas Company (ESGCo), the company constructing the regional gasification project. Gazprom will pay between $700-$900 million, subject to adjustments, for TNK-BP's interests in Rusia and ESGCo.

Nizhnekamskneftekhim-KazRosGaz

Nizhnekamskneftekhim is taking long-term steps to diversify its feedstock sources for petrochemical production and to reduce dependency on naphtha. This strategy is seen as central to reducing costs and to facilitating the construction of a world scale cracker of up to 1 million tpa. The company is looking towards

Kazakhstan as providing the basis for feedstocks and in June meetings were held with KazRosGaz, which is a jv between Gazprom and KazMunaiGaz based at the Orenburg Gas Processing Plant.

KazRosGaz represents a formidable partner for Nizhnekamskneftekhim, as it has reached agreement with the BG Group to buy 16 billion cubic metres of gas from the Karachaganak project in northwest Kazakhstan. KazRosGaz will also purchase increased volumes of condensate. Production is expected to double at Karachaganak once the third phase is sanctioned in 2008 to 16 billion cubic metres per anon and 16.5 million tpa of condensate.

On the recent visit to Nizhnekamskneftekhim KazRosGaz even suggested taking an equity stake in the petrochemical complex in order that there would be no limitation on feedstock flows from Karachaganak. It is unlikely that TAIF might wish to go that far, although recent events affecting Kazanorgsintez could start to change attitudes towards equity.

Conflicts of interest could start to emerge should plans progress at Orenburg for the construction of polyolefin units, as proposed by Gazprom. Kazanorgsintez is more in danger from this plan, as it already depends heavily on ethane from Orenburg, which could quickly disappear in the event of a local complex being constructed. At the same time, Nizhnekamskneftekhim can only expand its petrochemical operations through securing lighter feedstocks, as a new large-scale naphtha cracker seems out of the question.

Nizhnekamskneftekhim's location and infrastructure is substantially superior to Orenburg, with the possibility to export products via the Kama/Volga rivers, whilst at the same time it can sell surplus ethylene monomer on the Volga-Urals pipeline. Largely for these reasons, KazRosGaz is much keener on the idea of working with Nizhnekamskneftekhim than supplying a petrochemical complex at Orenburg.

SIBUR-Holding, Ust Luga
SIBUR Holding purchased 100% of the share capital of Portenergo at Ust Luga in the Leningrad region, and plans to construct a sea terminal for the export of liquefied hydrocarbon gases to West Europe. The new terminal is expected to start by 2008, with completion planned for 2010. The first part of the terminal will be capable of shipping 300-400 tpa of liquid hydrocarbon gases, which will be expanded in the second phase to 600-700,000 tpa.

Petrochemicals

Angarsk Polymer Plant-Rosneft
Following the sale of Angarsk Polymer Plant to Rosneft, as part of assets belonging to YUKOS, estimations have been made that the plant requires investments of around $455 million in the 2008-2012 period just to keep afloat. The EP-300 complex will need to be modernised at costs of around $170 million, which would raise capacity to 350,000 tpa for ethylene. At the same time, processing of light gases is planned to be increased up to 150,000 tpa at the expense of naphtha. The management of the company believes that the cracker project could be completed within three years, but it not yet known what the new owners Rosneft want to do. Rosneft expects to release more definitive plans for investment later in the year. New projects that have been singled out include a 50,000 tpa general purpose polystyrene plant, 150,000 tpa of polypropylene, and 150,000 tpa of LLDPE.

Omsk, Titan and TuranAlem
Titan and the Kazakh bank TuranAlem have reached agreement to merge two production sites at Omsk, involving Omsk Polymer and Omsk Kaucuk. The intention is to construct a new ethylbenzene and styrene unit to meet the demands of polystyrene production at Omsk. At present, Omsk Polymer depends on ethylbenzene supplied by Angarsk Polymer Plant.

Titan was created in 1998 based on the former petrochemical company Omsk Kaucuk and privately held company Ekoil. At the Omsk Kaucuk site, production involves propylene, selected grades of butadiene-alpha-methyl styrene natural rubbers, and benzene additives. Its major project under construction at present is for an 180,000 tpa plant for polypropylene. In November 2006, Titan also started the construction of a bioethanol unit at a cost of 7.3 billion roubles.

The Kazakh bank has controlled Omsk-Polymer since 2005, and has invested around 1 billion roubles in maintaining production. In May this year, Titan was known to want to buy this plant, but these plans have now changed to working together with TuranAlem bank to develop the petrochemical sector in the Omsk region.

The local administration believes that the agreement between the investors will revive the Omsk region as a centre for petrochemical production. Titan and TuranAlem will produce different grades of polystyrene, which are not produced domestically.

It is not clear if Titan will be capable of competing against larger polystyrene producers such as Nizhnekamskneftekhim which is planning a further 100,000 tpa unit. However, if Titan and TuranAlem can construct a vertically integrated petrochemical complex this may help to ensure that the benzene-styrene-polystyrene chain is competitive in the domestic market.

LUKoil-Neftekhim, petrochemical plans

LUKoil-Neftekhim is considering an expansion of ethylene capacity at Budyennovsk from 350,000 tpa to 600,000 tpa and is aiming to diversify its feedstock sources. The company has elaborated a programme for development for the period 2008-2017, in which it not only wishes to expand the capacity at Budyennovsk but also to construct a new feedstock processing and petrochemical plant in the Kalmikya region of the north Caspian. This latter project is the more complex and capital intensive, thus representing a greenfield project with little or no infrastructure in place at present. A sum of around $21 billion has been cited as a possible investment total, although the actual strategy has yet to be finalised.

The general concept envisages connections between Kalmikya and locations at Volgograd and Astrakhan where petrochemicals could be produced. Feedstocks will be extracted from the Caspian and divided into four parts, including oil, gas, gas condensate and wide fractions of light hydrocarbons (SHFLU). Part of the SHFLU output will be sent to Stavrolen at Budyennovsk for ethylene production, whilst other parts of the SHFLU output will be processed locally at two plants in the Chernozemelsk region in Kalmikya. Further elaboration of these plans is expected to take place in the coming months.

Bashkirian petrochemical sector

Ufaorgsintez increased net profits two-fold in the first quarter of 2007, reaching 328,332 million roubles. Turnover increased only 36% in this period, to a total of 2.085 billion roubles. The steam cracker and the polyolefin facilities are

Russia's anti-monopoly service has cleared a deal for Gazfond, Gazprom's pension fund, to buy 100% voting shares in Salavatnefteorgsintez. Leader applied for authorization to buy the stake March 20, but was turned down over reports that Gazprom had illegally increased its stake in the producer to 73%. The anti-monopoly

service launched a probe into the allegations and has finally issued clearance. However, it comes with the provision that the company refrain from any activities that could limit competition on the petrochemical and related markets.

Polyolefins

Tobolsk-Neftekhim, polypropylene

SIBUR-Holding and Fluor are reported to have formulated plans for the polypropylene project at Tobolsk, based on propane dehydrogenation, with a capacity of 500,000 tpa. Novatek will collaborate in the project, with around a 30% stake. The planned site has been selected, with a subsequent completion date of December 2010. The project will involve up to $2 billion of investments and will allow Tobolsk-Neftekhim to add considerable value to the feedstocks it produces. Licences for the propane dehydrogenation unit and the polypropylene unit will be selected in the next few months, whilst Fluor plans tenders for the construction work by the end of the year.

Tomskneftekhim Production (unit-kilo tons)

Product	*May-07*	*May-06*
Ethylene	21.095	19.1
Propylene	11.035	10.65
LDPE	19.378	18.05
PP	10.451	10.09
BBF	6.327	5.83
C5	1.755	1.72
C9	0.607	0.55

This will become the largest plant in the world for the production of polypropylene, which at current consumption levels would satisfy Russian demand in full and allow exports. The local administration will grant tax privileges to project.

The programme for processing gases at Tobolsk-Neftekhim was formulated by SIBUR-Holding in March 2006. The plan to construct a polypropylene plant at Tobolsk can be traced back to the early 1990s through the Wespec jv, which was formed with Neste Petrochemicals. Following the construction of the polypropylene plant of 500,000 tpa, a large-scale polyethylene plant of 500,000 tpa is planned for construction at Tobolsk for the 2009-2012 timeframe. However, this project remains in the planning phase only.

Kazanorgsintez-Orenburggazprom

The conflict over ethane deliveries by SIBUR-Holding and Kazanorgsintez has now been resolved, after direct talks were conducted between Gazprom and Tatarstan. The new contract negotiations mean that Gazprom has concluded a deal with Kazanorgsintez for the processing of 139,000 tons of ethane prior to 1 February 2008.

According to the new agreements, Gazprom will continue to supply Kazanorgsintez on the basis that at least 50% of ethane should be directed towards polyethylene for SIBUR-Holding. Previously, OOrenburggazprom supplied Kazanorgsintez with up to 350,000 tpa of ethane, half of which was delivered on a tolling basis. For 2007, Gazprom guaranteed deliveries of 256,000 tons of ethane, whilst also SIBUR-Holding was to add 108,000 tons on a tolling basis. This agreement was broken when Kazanorgsintez failed to send SIBUR-Holding polyethylene.

The problems with the new contract for Kazanorgsintez is that the price of ethane is now at cost levels incurred by Gazprom, and not below cost as was the case before. In addition to this, Kazanorgsintez will have to sacrifice the income it gained from processing of ethane in January and February as s result of not sending SIBUR-Holding the shipment of 21,000 tons.

Ethane deficiencies in the period March to May were compensated by ethylene deliveries from Nizhnekamskneftekhim and Salavatnefteorgsintez.

Kazanorgsintez-KazRosGaz

Kazanorgsintez is considering an agreement for future feedstock supply with KazRosGaz, after the management of the gas company visited the complex in June. Another business proposal is to create a jv for the production of polyethylene pipes in Kazakhstan, using HDPE produced by Kazanorgsintez.

Kazanorgsintez-Gazprom

The Tatarstan government is giving consideration to the possible sale of equity in Kazanorgsintez to Gazprom, but negotiations are expected to last several months before any conclusions can be drawn. The

mutual advantages of Gazprom being linked to Kazanorgsintez is that the former does not need to invest in a processing plant for petrochemicals, whilst the latter gains secure access to ethane feedstocks.

TAIF owns 51.89% of Kazanorgsintez and Svyazinvestneftekhim 28.4%. A working group has been created to examine how Kazanorgsintez could potentially be integrated into the Gazprom process, although both sides are thought to have different views over how might this be possible. The decision will ultimately rest with the government of Tatarstan, but a rejection to Gazprom taking a stake could be an extremely risky move for the future survival of Kazanorgsintez. Gazprom has dangled the prospect of polyolefins being developed at Orenburg, which if pushed through would leave the Kazan plant dangerously exposed in terms of feedstocks. Conversely, if Gazprom achieves its goal then the Orenburg project is likely to be shelved for some considerable time.

Kazanorgsintez is planning further petrochemical projects, including 600,000 tpa of ethylene and 350,000 tpa of LLDPE and in order to achieve these projects it is dependent on Orenburg Gas Processing Plant.

Propylene derivatives

Volzhskiy Orgsintez-Q2 2007

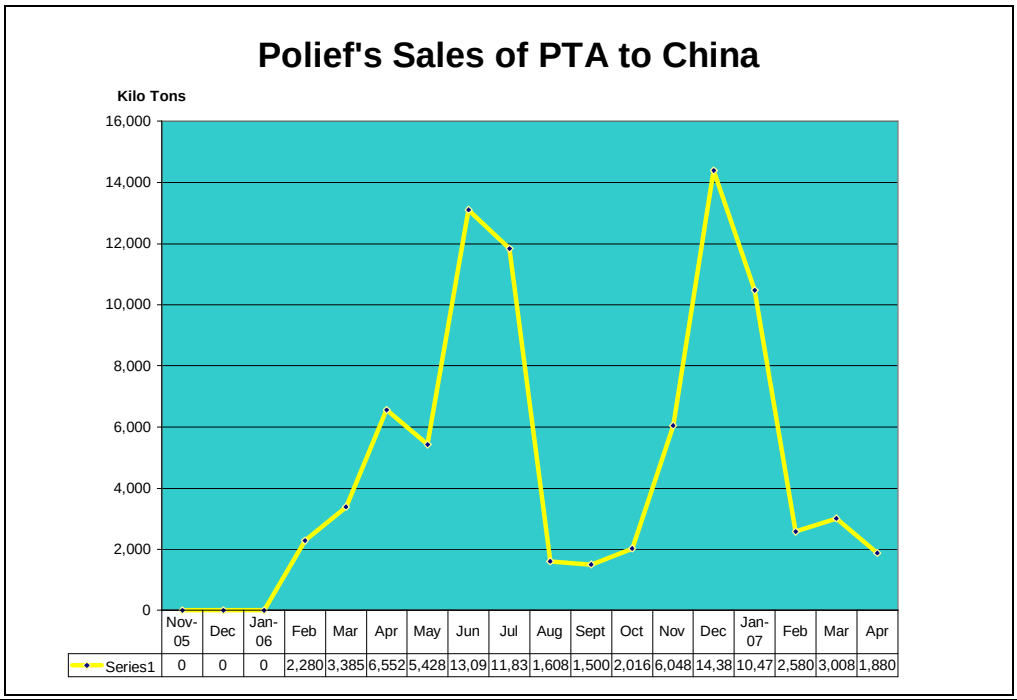
In the second quarter of 2007, Volzhskiy Orgsintez saw some important changes in raw material costs, in respect to both prices and volumes. Propylene prices have risen in response to higher costs for propane-propylene fractions, whilst in June a shutdown took place at SIBUR-Neftekhim thereby limiting the amount of propylene in the merchant market. Another factor to taken into consideration is the takeover of the Angarsk Polymer Plant by Rosneft, which has temporarily affected the distribution of propylene.

A considerable increase was seen in the second quarter in butanol prices which increased by 3-5,000 roubles per ton and reached levels. Prices were affected by propylene, and the outage at the Salavatnefteorgsintez plant. In June, all three Russian butanol producers have focused solely on export with no availability for the domestic market.

Aromatics & derivatives

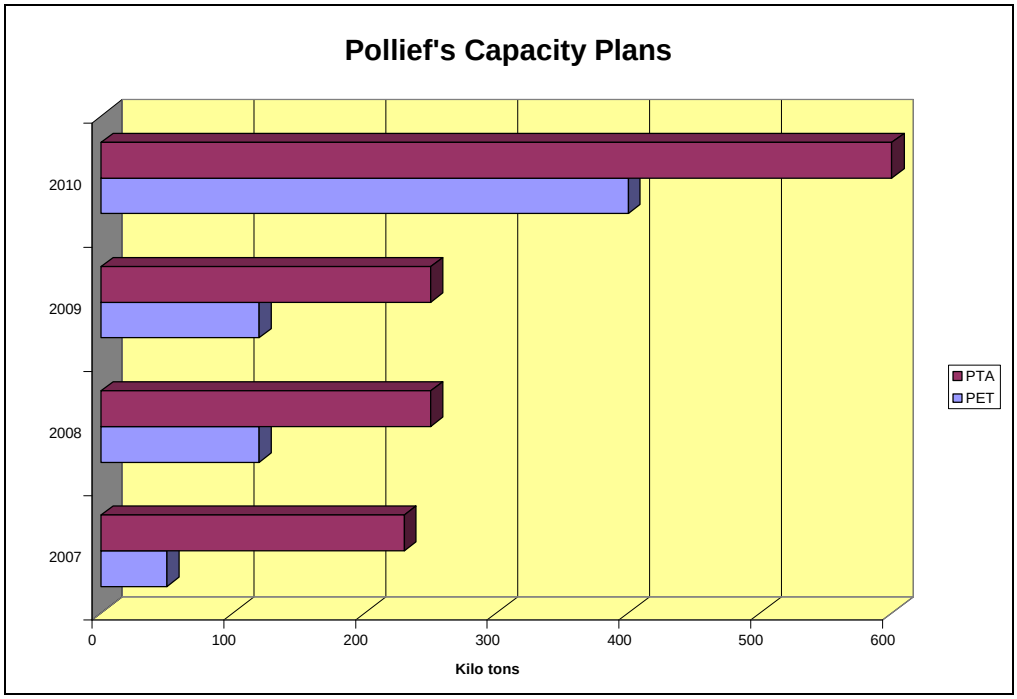
Polief-PET project

The PET project at Blagoveshchensk is expected to be completed in the third quarter of 2007, with some of the most important parts of the project already completed. PTA exports to China have been falling this year as more product is consumed by the domestic market, and are expected to stop after the start-up of the PET plant at Blagoveshchensk.



At present, preparatory works have been concluded in the departments of polymerization and solid-phase polycondensation. In the raw materials section, reservoirs have been built for storing ethylene glycol and diethylene glycol, whilst the shop of wastewater purification is ready to operate.

At this stage of Polief's project development programme, the PTA-PET plants should be capable of meeting their full design capacities. Still to be resolved, however, is the question of paraxylene supply which is an integral part of Polief's expansion to 600,000 tpa of PTA and 400,000 tpa of PET. One potential new source of paraxylene is from Atyrau in north west Kazakhstan where plans have been developed to construct a 235,000 tpa paraxylene plant, as part of the aromatics complex to be completed by 2010-2011.



Kaliningrad PET project

The Kaliningrad PET project could benefit from feedstocks from a Russian refinery, after plans have been advanced to ship raw materials from the Volga region to Kaliningrad. In May, the MDM bank and the European Fortis bank opened a credit line for the PET project and supplies of equipment from Uhde worth €12.5 million. Alco-Naphtha's plant is expected to be on stream by 2009.

A western company is currently undertaking an assessment of a revamp at the Mari refinery in the Upper Volga region of Russia, with a view towards supplying feedstocks to the Kaliningrad plant by river and sea. The region is sandwiched between Tatarstan and Nizhniy Novgorod. The refinery will be developed with the aim of improved processing of oil, and increasing the production of aromatic fractions. The refinery assessment should be completed by August 2007. Even if this source of feedstock does not materialise, the Kaliningrad project has a big advantage over some of the other PET projects planned in Russia due to its coastal location.

Caprolactam markets
One of the main problems of Russian caprolactam production in 2006 was the shortage of benzene. Although the first quarter in 2007 proved marginally better for benzene availability, recent trends have made supply more difficult for consumers to find and secure. Shchekinoazot posted a tender in the middle of June for 5,250 tons of benzene, which would keep the caprolactam plant running for around a month. Shchekinoazot's production fell below the total in 2005 due to domestic shortages of benzene. The longer-term picture is not very favourable due to very little new benzene capacity coming onstream.

At the start of April, Azot at Kemerovo received a crystallizer prepared by Khimmash at Kemerovo, which will increase the crystallization of caprolactam from 1,700 tons to 3,200 tons per month. Installation was completed in the second half of May. Packaging of caprolactam at Azot is done through polyethylene.

Kuibyshevazot-raw material problems
Kuibyshevazot continues to struggle with feedstock supplies, for benzene and phenol, which is affecting the company's financial performance. Benzene availability has been affected in the second quarter in Russia due to the prolonged stoppages at the Omsk refinery and developments at the Angarsk Polymer Plant. The Stavrolen plant at Budyennovsk is also down until July for a turnaround.

Kuibyshevazot has suffered mostly from the stoppages of phenol production at Samaraorgsintez, from which it buys around 65- 70% of its supply. Samaraorgsintez has been affected by the dispute with nearby company Neftekhimya at Novokuibyshevsk, and Neftekhinya's owner Renova-Orgsintez.

As a result of the stoppage by Samaraorgsintez in the second quarter, the Russian domestic phenol market has seen prices rise by 15,000 roubles to 44,490 roubles in the first half of the year. Imports can be achieved at 37,000 roubles, but Kuibyshevazot is trying to avoid making purchases from abroad. If Samaraorgsintez restarts production, then market prices of the phenol will probably fall. Samaraorgsintez produces around a fifth of phenol sold on the domestic market, and its stoppage will direct sales away from exports (i.e., China). Russian phenol production totalled around 220,000 tons in 2006 with the domestic market valued at 170,000 tpa. Samaraorgsintez produces 40,000 tpa of phenol and 27,000 tpa of acetone.

Kuibyshevazot has attempted to solve the shortfall in phenol by buying more benzene, but domestic prices for benzene have also been rising. The market situation could change over the summer months as some consumers have built up enough stocks of benzene that may give them more bargaining power with producers. Thus, whilst second quarter prices for benzene rose 1000-2000 roubles per ton, the third quarter may see the opposite trend occurring.

A project is currently in the planning stage for Kuibyshveazot involves 100,000 tpa of benzene, which once operational would solve Kuibyshevazot's feedstock dilemma. Other benzene projects planned in Russia include Kazanorgsintez with 12,000 tpa in 2008 rising to 35,000 tpa by 2012, and the Nizhnekamsk refinery with 80,000 tpa, which should be on stream by 2010. As with the Kuibyshevazot project, these projects are both integrated and no extra product is expected to be made available for the domestic market on a regular basis.

The IFC is considering an option to purchase a 3.6% stake in Kuibyshevazot for $15 million. Credits have been given in the past to Kuibyshveazot for specific projects,

Synthetic Rubber

Voronzhsintekaucuk-thermelastomers
Voronezhsintezkaucuk, a subsidiary of SIBUR-Holding, is planning to expand its capacity for the production of thermoelastomers due to increases in domestic demand. The company aims to construct a new facility, possibly with a capacity of 40,000 tpa, which it hopes will be onstream by the end of 2009. Even with the new plant in place, consumption is rising quickly enough in Russia for a shortfall in domestic production to be seen by 2011. SIBUR-Holding is currently examining the details of the new project.

In the early part of the decade Voronezhsintezkauchuk focused little on the domestic market and concentrated mostly on exports. For many years it supplied 300-400 tons per month of elastomers to Italy, to the shoe producing group Francetti to add to 500 tons per month it sent to Germany. It now proves difficult to maintain export contracts, as the domestic market starts to expand. Voronezhsintezkauchuk began close cooperation

with the SIBUR group in the middle of 1999, and is now majority owned by SIBUR-Holding. It competes against Shell, Petrofina and EniChem in the thermoelastomer market. The company uses Petrofina licence with various contents of styrene.

Kaucuk Volzhskiy-investments
SIBUR subsidiary Kaucuk at Volzhskiy plans a series of projects involving feedstocks and petrochemical production in the 2007-2009 period, involving isobutylene. Kaucuk wants to invest in isobutylene trimers, derived from isobutane and also to convert MTBE to ETBE. Kaucuk is investing large sums into lowering costs of production to ensure that it remains the second most important producer of MTBE in Russia. One of the most important projects is the expansion of storage space for gas hydrocarbons, whilst regarding production

Tatneft-Continental
Tatneft-Neftekhim has concluded a sizeable contract with Continental for the purchase of metal-chord tyre-manufacturing technologies for Nizhnekamskshina. The German company will sell its technology for the manufacture of tyres and provide technological maintenance support. The new line will produce 1 million pieces per annum of lorry tyres and the value of the contract is around $100 million.

PVC

SIBUR-Holding, Solvay jv
SIBUR-Holding and Solvay were expected to conclude a jv on 28 June for the proposed PVC project, which is to be constructed in the Nizhniy Novgorod region. The plant will be located at Kstovo, with construction starting in 2008 and expected to be finished by 2010. The project has been under review for the past 6-9 months due to concerns over the environmental effects of the plant, in area where there is already a large scale chemical industry. SIBUR-Holding has guaranteed that the new plant will use a contemporary and safe technology, that will not be harmful for the local area. Initially, the PVC plant was planned to be located at Dzerzhinsk, but Kstovo was decided as a better site due to proximity to the steam cracker. The capacity of the new PVC plant will be 330,000 tpa, with the prospect for an increase to 500,000 tpa.

Gas based chemicals

Uralkhimplast-formaldehyde upgrade
Uralkhimplast is in the early stages of a project to upgrade its 50 year old formaldehyde plant at Nizhniy Tagil. Part of the programme includes the reduction of methanol costs, as a result of the construction of its jv plant with Itera, and also to develop methanol-free formaldehyde grades.

Metafrax-Karbolit
Metafrax has bought 82% of Karbolit at Orekhovo-Zuyevo in the Moscow region, which is a producer of formaldehyde and urea-formaldehyde resins. The purchase of Karbolit is part of the strategy employed by Metafrax towards increasing domestic consumption of methanol. It also means that Metafrax is close to the Moscow market, which accounts for the largest share of Russian consumption.

Earlier this year Metafrax decided to construct a 100,000 tpa formaldehyde plant at Orekhovo-Zuyevo region. The project will be co-ordinated jointly with the Russian-Finnish jv Karbodin, which consists of Karbolit and Dynea. Equipment for the formaldehyde plant is being provided by Perstorp Formox, with a project evaluation of €16-17 million. Formaldehyde will be used by Karbodin for the production of urea-formaldehyde resins

Methanol developments
Akron has presented its plans for an expansion of its methanol plant at Novgorod in north west Russia. The project was illustrated to the local administrative bodies in Novgorod, including the local government. The original methanol plant was constructed in 1967 and was upgraded in 1995. The plan of the company is to expand capacity to 192,000 tpa, whilst at the same time improving the technology. Akron's main problem is gas prices, which are on the rise. Currently, the company is paying 580 roubles per thousand cubic metres, prior to VAT, which is remarkably low at only $22. However, it seems almost impossible that these low prices will continue as Gazprom is expected to introduce hikes for domestic consumers in both 2008 and 2009.

The methanol project at Nizhniy Tagil, which has been initiated by the UralMetanolGroup jv, is currently under construction by Lurgi. The plant capacity could be higher than the original 400,000 tpa, possibly 600,000 tpa

of which around 120,000 tpa would be used in the production of formaldehyde by Uralkhimplast. The remainder would be used for the production of polypropylene, based on MTO technology. The other partner in the UralMetanolGroup jv, Itera, plans to invest 4.74 billion roubles in the next few years in the Sverdlovsk region. Itera will supply around 20 billion cubic metres of gas to the Sverdlovsk region on an annual basis to 2015, rising to 38 billion afterwards.

Shchekinoazot completed a plant turnaround in June on schedule. The repair of tubular pole and areas of torch installation were carried out in the methanol unit. New equipment was added to the cyclohexane unit, used for the production of caprolactam.

Belarus

Naftan-xylene expansions
Naftan completed its tender in March for equipment and contractors for the reconstruction of the paraxylene and orthoxylene plants at Novopolotsk. The programme of development for Naftan includes an increase in capacity of the orthoxylene and paraxylene plants to a capacity of 100-110,000 tpa. Lakokraska at Lida will consume the orthoxylene in the production of phthalic anhydride, and the paraxylene will be sent to Moglievkhimvolokhno for the production of DMT. At the same time as the expansion of orthoxylene and paraxylene, benzene capacity will be increased to 75,000 tpa, in order to provide more feedstock for the production of caprolactam at Grodno.

Ukraine

Karpatneftekhim
Karpatneftekhim has been affected recently by the shortage of the cisterns for transporting benzene, due to late return from customers. The lack of cisterns halted production on 11 June, whilst caustic soda faces the same dilemma.

In 2007, Karpatneftekhim expects to use less feedstock than in 2006 due to technical improvements made last year. Karpatneftekhim increased its cracker utilisation from 89% to 97% from 1 June, thereby increasing production of ethylene and polyethylene.

Karpatneftekhim has reached agreement with the Khmelnitskiy nuclear power station for supplies of energy for the new caustic soda plant under construction at Kalush. The capacity of the new caustic unit, under construction, is 200,000 tpa. Construction started on 1 June and completion is now expected for somewhere between April-June 2008, later than the original target of December 2007. Chlorine capacity will be increased as part of the project from 110,000 tpa to 180,000 tpa.

Azot Severodonetsk
In the first quarter of 2007 Azot at Severodonetsk saw profits fall by 42.5% against 2006, down to 7.825 million hryvnia. This follows a fall in the whole year of 2006 against 2005 by 87.5%. Gas prices are cited as the main reason for the falls in profitability.

Efforts to privatise the company are still progressing at governmental level, with particular focus on reviving production at the polyethylene plant. Worldwide Chemical has already invested large sums and plans to invest much more over the coming years. Products likely to receive investment attention in the near term include formaldehyde, urea-formaldehyde resins. acetic acid and ammonia.

Central Asia

Uzbek chemical sector privatisation
The State Property Fund of Uzbekistan has given plans to sell all large chemical producers in the near future. In May, Spanish company Maxam Corp bought 49% of Elektrokhimprom at Chirchik for $22 million. At the current time, tenders are being prepared for the privatisation of Navoiazot and Ammophos. The most likely buyer for Navoiazot is Kaustik at Volgograd, which is already involved a in a jv to construct an 80,000 tpa caustic plant at Navoiazot. A PVC plant of 120,000 tpa is also being built. Other privatisation prospects include the potential sale of shares in the Fergana based chemical plants, including Fergana Azot and the fibres and furan plants. The Samarkand chemical plant is also up for sale. The chemical sector in Uzbekistan

benefits from cheap gas in the production of fertilizers. Mitsubishi entered several projects at the start of the year at several plants t0 improve gas consumption at specific plants.

Kazakhstan

Petrochemical project stages in Kazakhstan
Petrochemical projects in Kazakhstan, based on Caspian deposits, can be divided into five main phases. It will include products such as ethane, butane, hexane, ethylene, etc. A total of $5.7 billion is planed for investment in petrochemicals over the fives phases, which are detailed below.

Petrochemical Project Schedule in Kazakhstan

Project 1.

Construction of petrochemical complex in the Atyrau region with capacities of 800,000 tpa of polyethylene and 400,000 tpa of polypropylene. The cost of the project is estimated at between $4.6-5.2 billion.

Project 2.

Construction of processing unit for natural and associated gas. The cost is estimated at $96 million.

Project 3.

Construction of a bitumen plant at Aktobe with a capacity of 300,000 tpa and a propylene unit with a capacity of 15,000 tpa. The cost is estimated at $110 million.

Project 4.

Construction of an aromatics complex at Atyrau, involving 151,000 tpa of benzene and 235,000 tpa of paraxylene. The cost is estimated at $452 million.

Project 5.

Construction of a tyre plant in southern Kazakhstan with a capacity of 3-4 million pieces per annum. The cost is estimated at $256 million.

Benzene and paraxylene projects at Atyrau
Project plans were developed in 2005 as part of the programme to increase added value on oil production and processing. KazMunaiGaz, together with Cosmo Oil and Marubeni, developed a project plan for the construction of a benzene plant at Atyrau. As part of the revamp of the catalytic reforming unit, which will increase capacity of straight run gasoline production to 745,000 tpa, benzene production will be possible in large volumes. Other aromatic compounds, such as xylenes and toluene, are also possible products, including a proposal for 235,000 tpa of paraxylene.

Benzene production at Atyrau will be divided between two plants, a 26,000 tpa unit for which Uhde has provided the license, and 125,000 tpa units from hydrodealkylation for which Axens is providing the licence. Benzene is expected to be sold to the Aktau Plastics Plant in west Kazakhstan. In addition to 151,000 tpa of benzene, the Atyrau complex will also produce 367,000 tpa of aromatic fractions, from which plans exist to produce paraxylene. There will be also 82,000 tpa of raffinate. The aromatics complex at Atyrau is expected to start in 2009, and will facilitate a revival of ethylbenzene production at Aktau. Distances between Atyrau and Aktau are considerable, but there is a railroad terminal and river port at Atyrau which makes it possible to ship benzene easily.

The Atyrau refinery is part of the special economic zone, which will provide tax and other economic advantages for petrochemical production. This has raised the issue of producing paraxylene, which is a product that could be in short supply in Russia over the next few years. In the polyolefin area, Atyrau is

already planned to become a major centre for production, including 800,000 tpa of polyethylene and polypropylene.

Currencies

(Czech crown, Kc, $1= 21.078, €1 = 28.388)
(Hungarian Forint, Ft, $1 = 186.52, €1 = 250.77)
(Polish zloty, zl, $1 =2.8327, €1 =3.8084)
(Bulgarian leva, $1 =1.4537, €1 =1.9544)
(Ukrainian hryvnia, $1 = 5.0300, €1 = 6.726)
(Rus rouble, $1 = 25.889, €1= 34.807)

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