Chemical Information Resources for East Europe and CIS

CIREC MONTHLY NEWS

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

Edited by Andrew Sparshott | Tel +44 (0)20 8669 5126 | Email enquiries@cirec.net | Web www.cirec.net

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

Issue 206, 28 Jan 2008

Features from this issue

- PKN Orlen expects to close its ethylene and propylene unit at Plock for a maintenance turnaround in the second or third quarter this year.
- The Czech anti-monopoly office UOHS has approved Unipetrol's sale of its 50% stake in Agrobohemie to Deza.
- PCC Rokita expects to complete several projects in the early part of 2008.
- Gazprom filed a claim against the decision of the Federal Anti-monopoly Service (FAS) regarding the supplies of ethane to Kazanorgsintez
- In the period January-November 2007, Russian chemical production increased 6.5% according to the Ministry of Industry.
- Nizhnekamskneftekhim increased propylene production by 22.3% in 2007 over 2006, due largely to the increased usage of propane-propylene fractions.
- Kazanorgsintez has recently started the industrial production of LLDPE PE2NT18-11 under the Pallant trademark.
- SIBUR-Khimprom is constructing a new polystyrene suspension plant at a cost of 1.6 billion roubles.
- From the start of 2008, Kazan Synthetic Rubber Plant increased the price of polysulphide polymers due to the cost increases for raw materials and energy.
- In the first eleven months of 2007 Metafrax achieved a turnover of 6.574 billion roubles, a 20% increase on the same period in 2006.
- SIBUR-Holding is examining the possibility of reviving the uncompleted butyl rubber project at Tobolsk.
- BOPP producer Grinn at Kursk has been bought by Gazprom for between $80-100 million.
- Sayanskkhimplast reduced PVC production in the period January-November 2007 by 1.9% over 2006.
- UralMetanolGroup has concluded contracts for the detailed design and delivery of equipment for the gas-chemical complex.
- Togliattikaucuk is aiming to develop a single stage process for isoprene production, to replace the older two-stage process.
- Azot at Grodno plans in 2008 to start the reconstruction of the caprolactam plant.
- Uzbek plastics converter Dzhizak Plastmass has introduced a new production unit for polyethylene pipes with a diameter range of 315-630 mm and a capacity of 3,700 tpa.
- Construction of the new BOPP plant at Turkmenbashi will start in 2008.

CENTRAL & SOUTH EAST EUROPE

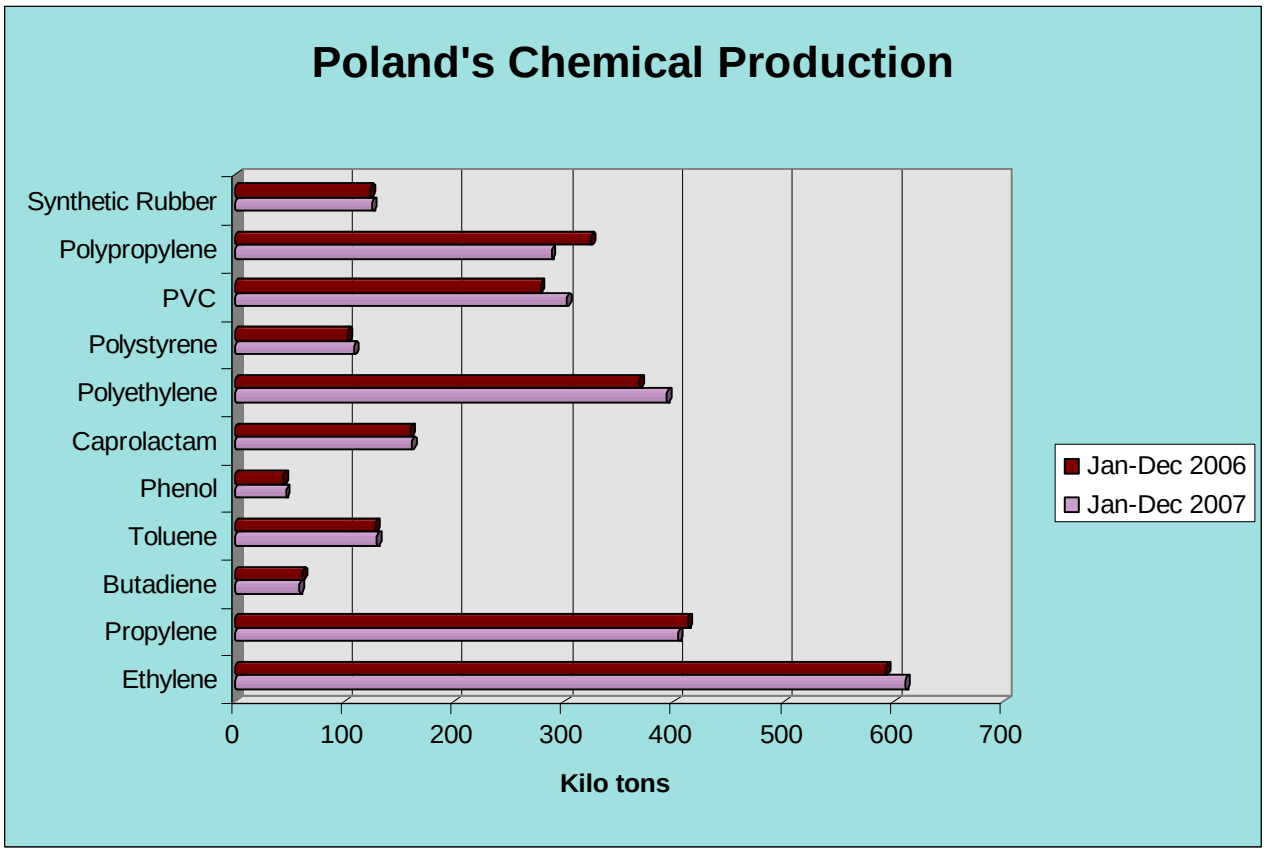
Petrochemicals

PKN Orlen-olefin plant maintenance 2008

PKN Orlen expects to close its ethylene and propylene unit at Plock for a maintenance turnaround in the second or third quarter this year; which quarter will ultimately be dependent on market conditions. The maintenance will require around a month to complete, whilst no other shutdowns in the petrochemical division are planned this year. The planned shutdown is likely to be the main factor offsetting results for 2008, whereas in 2007 it was the planned shutdown at Unipetrol and subsequent later enforced outage. PKN Orlen expects to report a fourth-quarter pre-tax profit ahead of last year's zl 160 million ($65.2 million) despite downtime at Unipetrol. External conditions, mainly refining margins, remained relatively unchanged from the third quarter.

Unipetrol has estimated that the prolonged maintenance of its petrochemical unit in Q3 2007 reduced its earnings before interest, tax, depreciation and amortisation (EBITDA) by Kc 2.5 billion ($140 million). Another PKN Orlen unit Mazeikiu Nafta carried out maintenance at the turn of the third and the fourth quarter. After the restructuring and expansions in capacity at Litvinov, Unipetrol is expected to see a much stronger 2008 than last year in terms of volumes and financial performance.

Results for the year are shown below measured against 2006. The cracker ran at over 100% capacity and output totalled 611,000 tons against 593,000 tons the previous year. Polyethylene production totalled 393,000 tons, although polypropylene dropped slightly.



Unipetrol project approval

Unipetrol RPA approved two investment projects in January, aimed at increasing monomer production and enabling better utilisation of products produced from the ethylene unit. The completion of both investment projects in Unipetrol's site at Litvinov is scheduled for 2010. The product portfolio will be expanded to include technical dicyclopentadiene and a non-hydrogenated C9 aromatic hydrocarbon fraction. Both products find use primarily as monomers in many applications, such as hydrocarbon resins.

Both products will be produced on the basis of the proprietary processes that Unipetrol RPA has developed in cooperation with the Institute of Chemical Technology in Prague and the Inorganic Chemistry Research Institute in Ústí nad Labem (a member of the Unipetrol Group). The new production units will use the existing equipment of discontinued processes such as tank sites, the control centre and filling stations. The projected production capacity is 20-26,000 tpa for technical dicyclopentadiene and up to 40,000 tpa for the non-hydrogenated C9 aromatic hydrocarbon fraction. The selection process for the contractors of these investments is expected to be finished by the end of 2008.

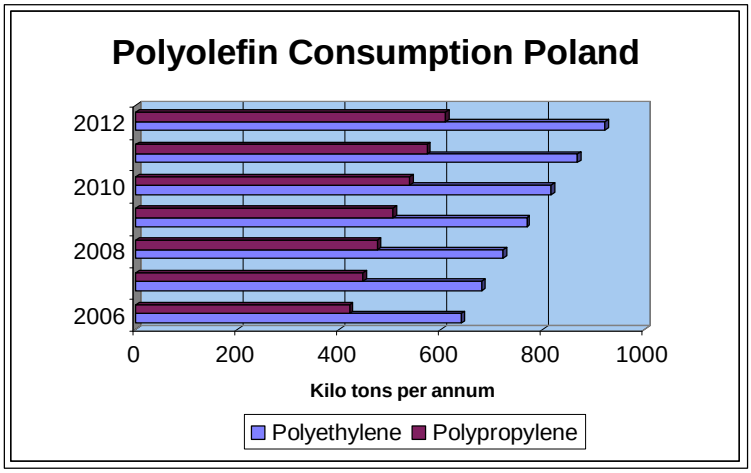
Unipetrol-Deza

The Czech anti-monopoly office UOHS has approved Unipetrol's sale of its 50% stake in Agrobohemie to Deza. Deza will become the sole owner of Agrobohemie. In October last year, Unipetrol signed an out-of-court settlement to a dispute with Deza over the transfer of Unipetrol shares in Agrobohemie and Synthesia. In the settlement, Deza agreed to withdraw all legal actions against Unipetrol, while Unipetrol agreed to sell its stakes in the chemical companies to Deza at a fair market value.

Apart from tidying up former disputes, the sale is also helpful in completing Unipetrol's divestment strategy, aimed at creating a more streamlined and integrated refinery and petrochemical business. The sale also includes future cooperation with the companies controlled by Deza in the sale and purchase of raw materials.

PKN Orlen petrochemical strategy to 2012

Although the main focus of PKN Orlen's investment strategy over the next few years is targeted on the development of aromatics and the PX-PET chain, it is noticeable also that olefin projects are coming under scrutiny. The construction of the paraxylene and PTA units forms the main drive of the current strategy, but the company is also looking to revamp its ethylene oxide and butadiene units at Plock.



The ethylene plant at Litvinov was expanded last year and this year is expected to run at a capacity of 511,000 tons, with a later expansion to 545,000 tpa. In view of the growing demand for polyolefins in Poland, PKN Orlen is giving thought to the expansion of the Olefin 11 complex at Plock, which was constructed primarily to meet the demands of the BOP polyolefin jv.

The ethylene capacity of the Olefin 11 complex is 360,000 tpa and this possibly could be raised to 700,000 tpa by 2012. This would at the same time double the capacity of propylene, but that may not be sufficient to satisfy the consumption requirements for polypropylene and other propylene derivatives. As a result, PKN Orlen is examining the possible construction of a 200,000 tpa propylene unit at the Mazeikiu refinery in Lithuania. In the past, polypropylene has been suggested as a possible project at Mazeikiu, and PKN Orlen is attempting to assess if that is a more practical option than shipping the product back to Poland for local consumption.

In terms of refining capacity, PKN Orlen easily exceeds the capacity of MOL but in petrochemicals the position is more balanced. Whereas PKN Orlen needs to expand its olefin production for domestic demand, MOL remains essentially export-oriented and apart from a possible revamp of the Slovnaft cracker is unlikely to seek expansions in olefin capacity.

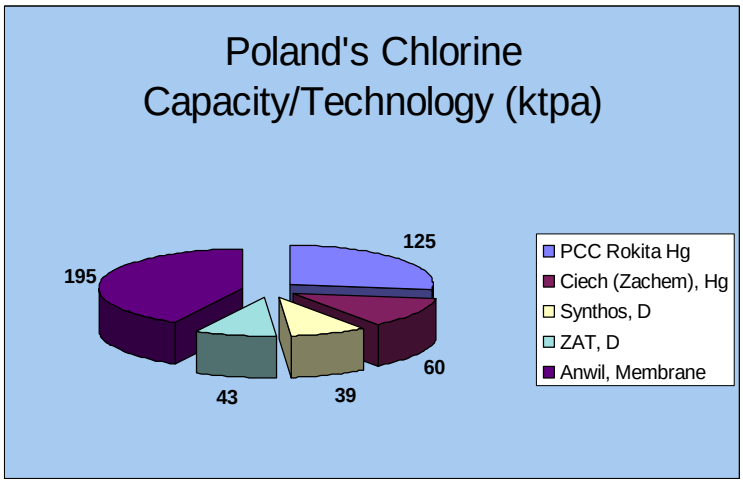
Chemicals

Central European news

PCC Rokita expects to complete several projects in the early part of 2008. Cinstruction of a new sulphonation plant started in September 2006, which is expected to be completed in the near future with a

capacity of 40,000 tpa. Other projects under construction include a new ethoxylates plant with a capacity of 30,000 tpa, a new polyols plant with a capacity of 60,000 tpa, a monochloroacetic acid plant with a capacity of 25,000 tpa and a new electrolysis plant with a capacity of 120,000 tpa. The conversion to membrane has to date only been undertaken in Poland to date at Anwil, although Zachem is also known to be planning a project aimed at reducing costs and addressing the environmental problems. Zachem's owner Ciech is planning large-scale investments in the next few years, which also includes at Zachem an expansion of TDI capacity.

In soda ash division, Ciech created Soda Polska at the end of 2007 through a merger of Janikowskie Zaklady Sodowe Janikosoda and Inowroclawskie Zaklady Chemiczne Soda Matwy. The newly established company is the sole producer of dense and light soda ash in Poland, with a 98% share of the domestic market. Soda Polska also produces sodium bicarbonate, calcium chloride, precipitated chalk, nitrite salt, salt tablets and carbon dioxide. In Romania, Ciech has granted €5 million credit to its subsidiary Uzinele Sodice Govora fro short-term financing. The creation of Soda Polska took place in 2007, the same time Ciech took control of the German soda ash producer Sodawerk Staßfurt.



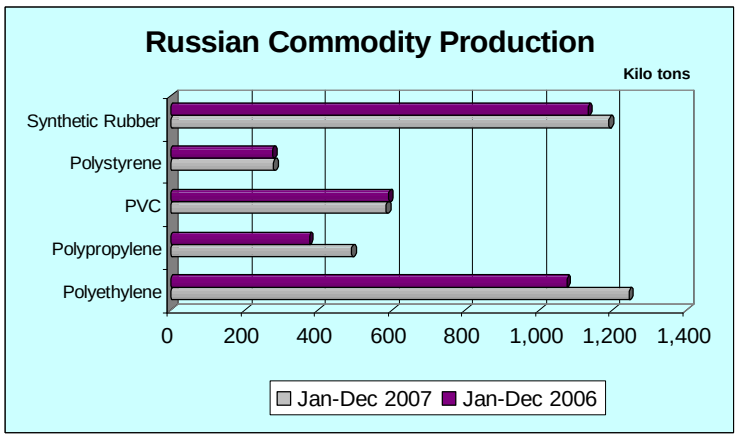
Spolchemie is increasing prices of alkyd resins from the start of February due to raw material price hikes. This follows an increase in September 2007. Spolchemie's BU RESINS division is the largest producer of synthetic resins in Central and East Europe. Together with its subsidiary EPISPOL it has full integrated epoxy resins production including the production of epichlorhydrin and bisphenol A, the production of alkyd and rosin based resins and portfolio of final products for construction applications.

Anwil has indicated an interest in buying Zaklady Azotowe Kedzierzyn and Zaklady Azotowe Tarnow, if it is able to raise sufficient funds through its planned IPO. Anwil may find competition from Ciech, which plans to boost its presence in the growing market for artificial fertilisers. PKN Orlen has suggested it will update plans to float Anwil in the near future.

RUSSIA

Russian production-trade in 2007

Russian chemical production increased 6.5% in the period January-November 2007, according to the Ministry of Industry and this is likely to be the end-year figure. Plastics and resins saw the largest increase in 2007, rising 22.5% over 2006. Methanol production rose 12.5% and benzene 7.9%. In the production of bulk polymers, polypropylene increased sharply by 54.8%, polyethylene by 18.3% and polystyrene by 2.6%. PVC actually fell by 1.4% due largely to the accident at the EDC unit at Sayanskkhimplast in August. Fibre production dropped 4.7% to 134,700 tons, despite new capacity, whilst synthetic rubber production fell 2.1% due mainly to a shortage of divinyl.



Import revenues continued to outstrip export revenues in 2007 over 2006. Some products saw increases in export revenues, and the value of export revenues from chemical products rose

23.3% in 2007. Methanol, revenues rose 30.2% to $436.2 million in 2007, whilst physical volumes rose 20% from 1.423 million tons to 1.708 million tons. Ammonia exports were reduced by 10.2% to 2.988 million tons against 3.328 million tons in 2006, whilst revenues increased 2.9% to $668 million (from $649 million in 2006). Exports of synthetic rubber amounted to 603.400 tons.

Russian chemical company IPOs

A number of Russian chemical companies are setting their sights on IPOs as a form of attracting finance of investments and generally expanding business potential. The past year saw the first western IPO, which was taken out for Uralalkali in the fertiliser sector. Other IPOs in the pipeline could take place for lesser known companies Nitol Solar, Uralkhim and UCP Chemicals; whilst at the other end of the spectrum SIBUR-Holding is also considering how to launch itself on the stock market.

Nitol Solar, which plans to produce silicon used in the creation of electricity producing solar panels, plans to raise about $400 million in a London share listing. This is expected to take place on 7 February. Nitol Solar is part of the Nitol Group, which owns several chemical plants in Russia and was created in the 1990s.

UCP Chemicals AG is based in Vienna and is the main shareholder of Uralkhimplast, which produces plastics and resins. UCP has employed the help of UniCredit Markets & Investment Banking to examine the feasibility of an initial listing on the Vienna Stock Exchange and to prepare for a possible capital market transaction. The main production base for UCP Chemicals is in Nizhniy Tagil, posting revenues of €97.7 million for the first nine months of 2007. This represented an increase of 21% over the same period in 2006.

Uralkhim (United Chemicals) is a company established by former SBUR CEO Dmitry Mazepin, and has merged several Russian mineral fertiliser producers into a holding and is now preparing for an IPO. Dmitry Mazepin is the sole owner of Uralkhim, which owns 77.3% interest in Kirovo-Chepetsk Chemical Combine, 77.84% of Berezniki-based Azot and 100% of transport arms Uralkhim Trans and Uralchemfreight. The holding is thought to be looking to float an IPO on the LSE in 2008. However, Uralkhim is unlikely to float more than 25% of its stock in the IPO.

Petrochemicals

SIBUR-Holding Production 2007 & Targets for 2008

Production (kilo tons)	*2007*	*2008*	*Change*
Wide fractions of light hydrocarbons	2,811	3,200	14%
Stable gas benzin	677	693	2%
Liquefied hydrocarbon gases	2,862	3,189	11%
Monomers, liquid and monomer content fractions	1,996	2,174	9%
Synthetic rubber	553	595	7%
Polymers	501	507	1%
Organic chemicals	1,135	1,142	1%
Mineral fertilisers	1,598	1,661	4%
Fuels and lubricants	823	992	21%
Miscellaneous	941	936	-0,5%
Total	**13,897**	**15,090**	**8,6%**
Dry topped gas, billion cubic metres	11,415	13,296	16%

SIBUR-Holding 2008

SIBUR-Holding plans to invest in the range of 40.9 billion roubles in 2008, after investing a total of 19.9 billion roubles in 2007. Investments this year will be targeted on areas in both feedstocks and petrochemicals. A sum of 8.7 billion roubles has been allocated for expanding and modernising capacity for gas processing at its various sites in West Siberia. 17.7 billion roubles has been allocated for investments in plastics and organic chemicals. In 2008, construction is scheduled to start on the propylene-polypropylene project at Tobolsk, with other projects being started for PVC at Kstovo and polystyrene at Perm.

SIBUR's synthetic rubber sector is estimated to need roughly 4.3 billion roubles of investments in 2008, whilst at the same time further examination of projects will take place in the product areas of thermoelastomers and halogenated butyl rubber. Project work will continue on the transfer of polybutadiene production at Voronezhsintezkaucuk to a new catalyst system. In 2007, SIBUR-Holding produced 13.897 billion tons of petrochemicals, whilst dry topped gas totalled 11 415 million cubic metres. This year the group plans to produce 15.090 million tons of petrochemicals and 13 296 million cubic metres of dry topped gas. The group is known to have considered entering into an IPO at some stage, and that may even be in 2008 although there seem to be more factors against it happening than for it.

Gazprom-Kazanorgsintez

Gazprom filed a claim in December against the decision of the Federal Anti-monopoly Service (FAS) regarding the supplies of ethane to Kazanorgsintez. Kazanorgsintez accused Gazprom's subsidiaries Orenburggazprom and SIBUR into forcing it to process ethane under tolling arrangements and later demanded that Orenburggazprom increase supplies under purchase-sale arrangements. The FAS took the side of Kazanorgsintez and imposed stringent conditions over ethane contract prices. Orenburggazprom was required to deliver ethane under prices from an earlier agreement. The losses incurred by Kazanorgsintez following the problems incurred from the ethane stoppages in the first half of 2007 exceeded 580 million roubles.

At the end of 2006, Orenburggazprom agreed to supply Kazanorgsintez in 2007 with 126 500 tons of ethane with part payment made through polyethylene deliveries. However, at the start of 2007, Kazanorgsintez proposed to Gazprom to exclude the tolling arrangement and to increase the volume of ethane deliveries from 126,500 to 421,280 tons. This would have allowed Kazanorgsintez to run at full capacity, but Gazprom refused the proposal, which culminated in the disputes, stoppages of ethane deliveries and finally court action.

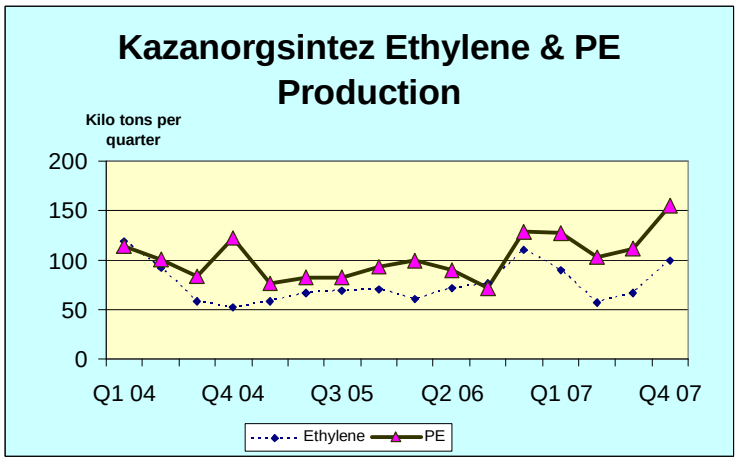
The Tatar prime minister has confirmed that Gazprom "is ready and waiting" to take over Kazanorgsintez, with pledges of investment and increases in ethane deliveries. Whilst the Tatar government does not want to relinquish control of Kazanorgsintez it can not provide enough ethane for ethylene production without the support of Gazprom. At current levels, Tatneft can only supply around 120,000 tpa of ethane from the Minnibayevo plant in Tatarstan, whilst current needs exceed 400,000 tpa. Tatneft plans to increase the capacity of the Minnibayevo plant to 180,000 tpa, but this will still be insufficient to meet the current and future ethylene capacity. Another factor that might encourage the Tatar government that this provides the best option for Kazanorgsintez is the plan by SIBUR-Holding to construct a polyolefin complex at Orenburg which would not only give direct competition but also may result in the termination or reduction of ethane deliveries.

TAIF owns 52.02% of shares in Kazanorgsintez, with another 28.4% controlled by the government. The charter capital of the company is 1.9 billion roubles, with turnover in 2006 totalling 15.38 billion roubles. Efforts have been underway to try and take back some of the minority shares, which would help to provide Gazprom with a majority stake or as much control as possible. Ultimately, the fate of Kazanorgsintez depends on the relationship with Gazprom whether it be as an owner or as a feedstock supplier.

Kazanorgsintez-ethylene expansion

Work will continue this year on the expansion of ethylene capacity at Kazanorgsintez, which represents the key to full utilisation of the polyethylene plants and further expansion of capacity. In late 2007, Kazanorgsintez started operations of the new gas furnace which was supplied by Technip Benelux, and has been installed at the no II gas separation line of the E-100 plant. The first new furnace was installed by Linde based on liquid feedstock cracked gas furnace. Furnace construction is one of the stages of expansion of the ethylene capacity from 400,000 tpa to 605,000 tpa by 2012.

The new furnace supplied by Technip Benelux in 2007 uses ethane at 35.86 tons per hour, including ethane recycling of 14.5 tons per hour and propane recycling of 200 kg per hour. Both new furnaces together produce 18,300 tons per hour, or 160,000 tpa. Other units currently give Kazanorgsintez a capacity of around 450,000 tpa. Technip is currently designing the E-500 plant, based on the expansion of the E-100 plant. Gas separation sections are being installed, whilst the cold box for the E-100 unit will be reinstalled.



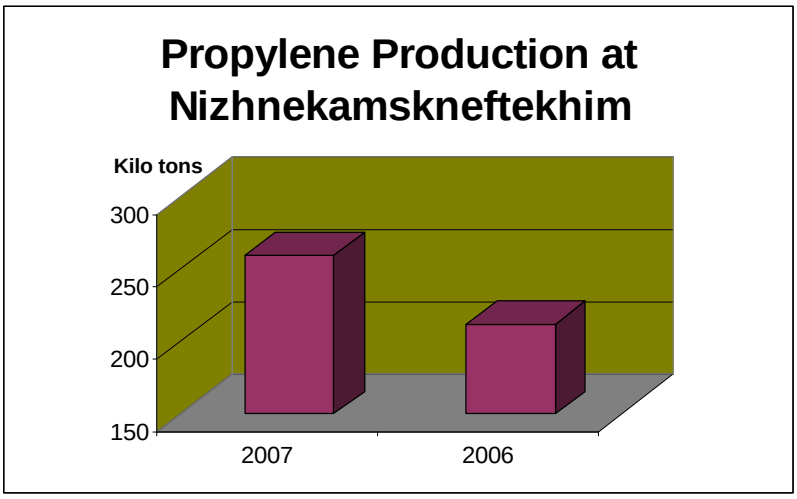
As illustrated in the graphic opposite, polyethylene production in Kazanorgsintez has risen in the past 18 months, with the fourth quarter in 2007 yielding 155,000 tons. Ethylene output still remains at the same level and so the shortfall is being purchased mainly from

Nizhnekamskneftekhim, but that may be situation that is likely to change at some stage in view of the new polyethylene plant coming on stream at Nizhnekamsk. Full production numbers for Kazanorgsintez and Nizhnekamskneftekhim for 1998-2007 can be viewed at www.cirec.net/report.

Kazanorgsintez has recently started the industrial production of LLDPE PE2NT18-11 under the Pallant trademark. The polyethylene is intended for processing by thin-slot extrusion for making highly transparent cast-film. The main aim of Kazanorgsintez is to produce products for import substitution. Such LLDPE grades have not been produced before in Russia.

Nizhnekamskneftekhim increases propylene production by 22.3%

Nizhnekamskneftekhim increased propylene production by 22.3% in 2007 over 2006, due largely to the increased usage of propane-propylene fractions. Increases in propylene have been necessary to comply with the demands of the polypropylene plant, whilst at the same time feeding the oligomer and propylene oxide divisions at Nizhnekamskneftekhim.



Ethylene production rose 6.2% in 2007 following the expansion in the latter part of the year, and the company exceeded 500,000 tons for the first time. In the second half of 2008, the new HDPE plant should be ready to start up at Nizhnekamskneftekhim and at the same time reduce the surplus available for sale to Kazanorgsintez. Thus, this year it seems feasible that further large scale ethylene plans at Nizhnekamsk will be given more serious thought in order to address the pending deficit in monomers that is likely to be seen in 2009-2010.

Salavatnefteorgsintez-ethylene & project plans

Salavatnefteorgsintez is in the planning stages for a number of petrochemical projects, one of which includes the modernisation and expansion of the ethylene plant. The aim is to raise capacity to 380,000 tpa by 2012, after an interim rise to 310,000 tpa by 2009. The problem that faces the company is that 310,000 tpa will be insufficient to cover the demand for the new polyethylene plant, which is expected to be completed by the end the year. With a capacity of 120,000 tpa, the new HDPE plant will place pressure on the ethylene balance which also includes requirements for ethylbenzene and ethylene oxide. Other projects in the petrochemical division at Salavat include the construction of an impact polystyrene plant. The expansion in ethylene capacity to 380,000 by 2012 is expected in part to be achieved through adding ethane based furnaces, which will mean that propylene capacity will only be increased marginally. The existing propylene design capacity at Salavatnefteorgsintez is based on the olefin cracker and the cat cracker, although the latter produces little these days. Nearly all the propylene at Salavat is consumed in the production of oxo alcohols, with a small surplus sold on the open market. Kaustik at nearby Sterlitamak is a main customer, using the propylene for epichlorohydrin.

Ethylene balance for Salavatnefteorgsintez 2009	
Product	***Ktpa***
Ethylene capacity	310
Maximum potential captive consumption	
Polyethylene	169.26
Ethylbenzene	56.784
Ethylene Oxide	52
Total	**278.044**
Kaustik's annual ethylene intake	117.6

Kaustik is mainly dependent on Salavatnefteorgsintez for ethylene supplies to its main product area VCM-PVC, and requirements for ethylene will increase with the pending expansion in VCM capacity from 165,000 tpa to 240,000 tpa. This could be ready in either 2009 or 2010, but either way Kaustik will probably need to buy more ethylene from other sources in view of the feedstock constraints at Salavatnefteorgsintez.

Regarding financial performance, a recent study conducted by Aksion BKG (Moscow) suggested that Salavatnefteorgsintez could increase its profits dramatically in the petrochemical division by reducing

maintenance downtime, reducing labour costs associated with maintenance and at the same time by increasing labour productivity per employee. Some of these points are quite obvious, but one of the more radical suggestions was a cut in administrative staff by 30% and a cut in operational staff by 18%. Staff cuts of such proportions are normally seen at Russian plants. Proposals were put forward for a restructuring of the company with the aim of improving profitability, and thus it seems increasingly likely that the complex at some stage could be broken up and reformed.

Renova-Orgsintez-Neftekhimya, propylene investments

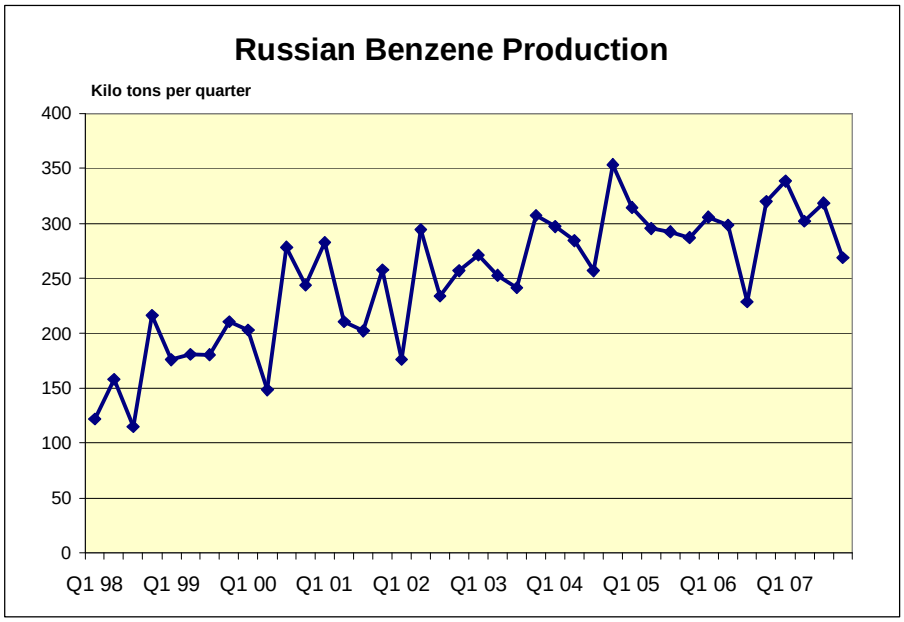
Renova-Orgsintez invested around 200 million roubles into the propylene unit at Neftekhimya at Novokuibyshevsk during 2007, whilst also modernising the ethanol unit. The main focus of investment will allow the company to sell commodity grade propylene on the pen market. Neftekhimya was taken over by Renova-Orgsintez in December 2006, with modernisation of the propane-propylene section starting in March 2007 in order to raise the purity of the propylene to 95-97%, which makes it possible to sell to consumers. The last few years has seen production at very low levels, i.e., 1-2,000 tpa, due largely to fact that there was no market for low quality product. The capacity of the propylene plant is 33,000 tpa, having been increased slightly following modernisation, and the gross benefits from the investments could amount to around 1 billion roubles per annum. Additional propylene has been in demand in Russia, from refineries and other sources, since the start-up of polypropylene units at Nizhnekamsk and Budyennovsk.

The large-scale investment plans that Renova-Orgsintez envisaged for the Samara region are still under examination. At the end of December Neftekhimya and Samaraorgsintez reached agreement on usage of joint facilities on which both companies depend from the former Etanol plant. The Etanol plant was divided into Neftekhimya and Samaraorgsintez several years ago, but Samaraorgsintez depends on the infrastructure which is located in the control of Neftekhimya which has led to disputes in the past eighteen months. Now with Renova-Orgsintez influential in both companies the situation has improved, and should in theory at least ensure normal phenol and acetone production at Samaraorgsintez.

Aromatics & derivatives

Russian benzene market

Benzene supply has been reasonably stable over the past few months, with no shutdowns at either the refineries or the crackers. As a result, production rose by 12% in the first three quarters of 2007 against 2006. Refineries in Russia tend to account for around 50% of benzene production, with cracker sources accounting for between 30-35% on average. Cracker based benzene tends to be consumed captively, with little surplus sold externally, whilst most of the long-term contracts are done by consumers with the refineries.



Coke based benzene accounts around 10-15% of total production, but despite the small share still plays an important part in the overall supply/demand balance. Koks at Kemerovo is the main producer of coke, benzene and resin in the Kuzbass region. Benzene sales were amounted to 25,000 tons on the first ten months of 2007, 15% higher than in 2006.

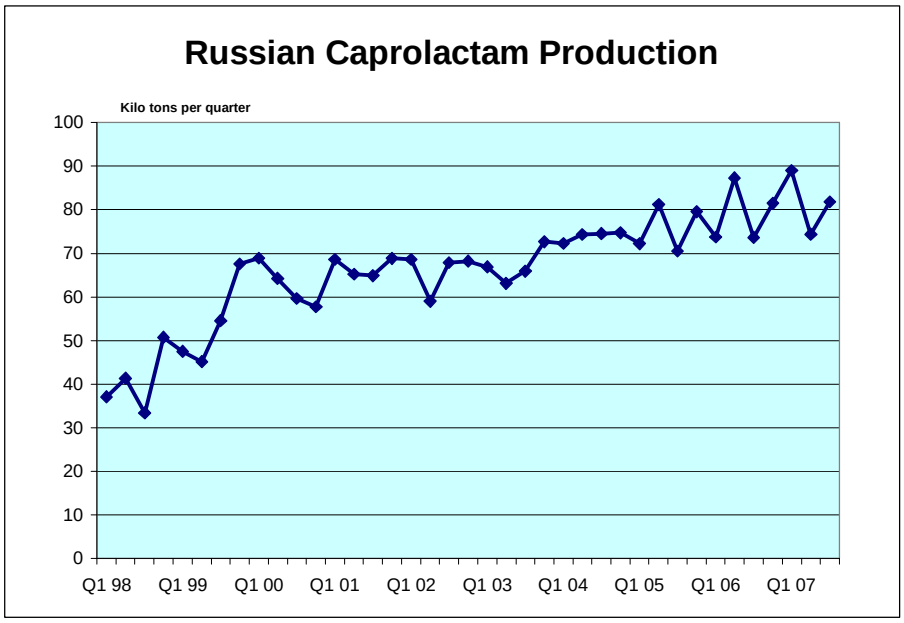
Another Siberian producer Altai-Koks plans to increase benzene capacity in 2008, as part of its investment programme between 2007-2011. The benzene division will be revamped through improving the quality of cleaning coke gas. In 2006, Altai-Koks increased coke production vs. 2005 by 8.7% up to 2.9 million tons, whilst benzene production totalled 31,900 tons. This

rose 18% to 37,600 tons in 2007 and the aim for 2008 is to increase production to 41,900 tpa. Altai-Koks produces around 10% of entire Russian coke production.

Russian caprolactam market

Caprolactam is produced at three plants in Russia, Kuibyshevazot, Azot at Kemerovo and Shchekinoazot. Capacity totalled 295,000 tpa at the start of 2007, with production exceeding 100% and reaching 312,000 tons in 2006. In view of the slow growth of the polyamide sector in Russia, the emphasis of all three caprolactam producers is on export activity, although Kuibyshevazot is now producing large volumes of polyamide which it is exporting to China. A total of 66% of Russian caprolactam production went for export in 2006, mainly to north east Asia.

Polyamide-6 is produced by six plants in Russia at present. This includes Kuibyshevazot, Khimvolokno at Shchekino, and Khimvolokno Amtel Kuzbass at Kemerovo, SIBUR-Volzhskiy, Kurskkhimvolokhno and Metafrax. Kuibyshevazot and Metafrax are the two producers that have invested recently in new capacity.



In 2006, the production of polyamide-6 technical threads in Russia totalled 26,600 tons which was 9.8% down against 2005. The main reason for the fall was the reduction of output at Barnaul. The share of Kuibyshevazot in technical thread production was 5.8%. Exports of threads amounted to 9,500 tons, whilst imports were 3,900 tons.

From 2004, Kuibyshveazot has been producing high-strength technical thread and cord fabric. This thread has higher strength in comparison with the production of other Russian producers of synthetic fibres and corresponds to world standards. The company produced 4,200 tons in 2006 of which 65% was directed captively for the production of cord fabric. The main competitors to Kuibyshevazot for caprolactam, polyamide-6 technical threads and cord fabrics include Azot at Kemerovo, Shchekinoazot, Chernigov Khimvolokno, and Grodno Khimvolokno. The main foreign competitors include BASF, DSM, CPDC, Rhodia, Radici, etc.

Kuibyshevazot-Kurskkhimvolokhno

Kuibyshevazot secured the purchase of Kurskkhimvolokhno on 19 December 2007. The acquisition of this fibre complex corresponds to the long-term strategic programme of KuibyshevAzot, which is an increase in processing caprolactam in Russia. The aim is that after an increase in capacities at Kurskkhimvolokhno, imports of caprolactam based derivatives will start to fall.

Bulk polymers

SIBUR-Holding considers Astrakhan for a large scale polyethylene project

SIBUR is investing 238 million roubles into financing exploratory research into the viability of constructing a polyethylene plant at Astrakhan. The capacity of the plant has been suggested in the range of 450-500,000 tpa and would be based on raw materials provided by Astrakhangazprom. Over the next few months close co-operation with Astrakhangazprom will focus on a detailed economic and technical assessment of the project. Gazprom will make the final decision whether the project will go ahead or not. Should the decision be affirmative SIBUR-Holding would like to see the plant operational by 2012. Polymers forms a key part of the holding's investment strategy, with a number of important projects at various stages in the planning phase.

SIBUR-Khimprom-polystyrene
SIBUR-Khimprom is constructing a new polystyrene suspension plant at a cost of 1.6 billion roubles. The plant is expected to be completed by the second half of 2010, and will have a capacity of 50,000 tpa rising to 100,000 tpa. Detailed project engineering will begin in 2008. As SIBUR-Khimprom already produces ethylbenzene and styrene, the move to produce polystyrene has been considered for some time.

RusVinyl, construction start in 2008?
According to reports from late January, construction of the new RusVinyl PVC plant at Kstovo could start in the third quarter of 2008. A key to the project is the parallel expansion of the Kstovo cracker, which will move up to 360,000 tpa to provide sufficient ethylene for the PVC plant with a capacity of 330,000 tpa.

Russian PVC market
Russian PVC production fell by 1.4% in 2007 against 2006 and by contrast PVC consumption is estimated to have risen 14%. The Russian PVC market has been seeing imports rising gradually over the past couple of years and that position is unlikely to change until the new RusVinyl plant is onstream in 2010. Planned capacity increases are taking place at Kaustik at Sterlitamak and Plastkard at Volgograd, but these expansions will not be sufficient to affect the market balance significantly.

Growth in consumption rose even faster in 2006 than in 2007, rising 31% over 2005 to total 747,800 tons against 582,000 tons. Exports of Russian PVC dropped to 24,700 tons in 2006, whilst on the other hand, imports rose 2.5 times over 2005 to 180,400 tons. In 2007, PVC supplies from Asia saw a noticeable increase, with the major importers being Xingjian Tianye, LG, Hanwha, Formosa and Tianjin. A large share of this material is acetylene based.

Russian Caustic Soda Production & Trade (unit-kilo tons)

Producer	*Location*	*Jan-Nov 2007*	*Jan-Nov 2006*
SIBUR-Neftekhim	Dzerzhinsk	79.3	81.8
Khimprom	Novocheboksarsk	86.5	84.8
Kaustik	Volgograd	210.2	194.6
Khimprom	Volgograd	79.7	82.4
Kaustik	Sterlitamak	226.7	226.7
Usolyekhimprom	Usolye-Sibirsk	87.9	86.2
Sayanskkhimplast	Sayansk, Irkutsk	147.8	96.6
Azot	Novomoskovsk	38.2	56.2
Khimprom	Kemerovo	38.1	40.1
Kirov-Chipetskiy	Kirov	71.9	55.7
Others		65.7	79.2
Total		1,132.0	1,084.2
Exports		225.1	174.4
Imports		18.3	22.3

Full year production results available at www.cirec.net/report

The European producers remain the main suppliers of emulsion grade PVC, such as Solvin, Vinnolit, Hydro Polymers, Vestolit and Ineos. The market has become tighter since the emulsion plant at Novomoskovsk stopped producing in the middle of 2007.

Sayanskkhimplast reduced PVC production in the period January-November 2007 by 1.9% over 2006, down to 223,050 tons. This was due to the accident that took place at the EDC [lant in August, which prolonged the shutdown. Whilst PVC dropped at the same time caustic soda production increased 52.5% to 147,800 tons as a result of the capacity expansion in late 2006. Sayanskkhimplast is controlled by Renova-Orgsintez, whilst the main shareholder is an organisation called Yanden Enterprises Ltd in Cyprus.

Synthetic Rubber

Togliattikauchuk-modernisation
Togliattikaucuk is aiming to develop a single stage process for isoprene production, to replace the older two-stage process. This will increase capacity from 90,000 tpa to either 110.000 or 120,000 tpa. SIBUR-Holding has also indicated interest in constructing a plant at Togliatti for the production of halogentated butyl rubber. Togliattikaucuk already produces butyl rubber, whilst the only current producer of HBR in Russia is Nizhnekamskneftekhim. Togliattikauchuk is also preparing for the introduction into the industrial operation the block of extractive rectification in the shop D-4. When completed in 2010 it will be capable of producing 60,000 tpa of divinyl. One of the basic goals of Togliattikauchuk in 2008 is increasing the production capacity of butadiene from 60,000 tpa to 120,000 tpa. Around half of the production from the 120,000 tpa plant will be consumed captively, with the remainder to send to another SIBUR subsidiary.

Tobolsk-Neftekhim, butyl rubber
SIBUR-Holding is examining the possibility of reviving the uncompleted butyl rubber project at Tobolsk. Rising global demand, particularly in such regions as south east Asia, could yield good sales opportunities whilst the Russian domestic market remains modest by comparison. A project to construct a butyl rubber plant was first considered in 1988 at Tobolsk as part of the now defunct jv Sovbutital. The project included 90,000 tpa of butyl and halobutyl rubber, but was stalled following the departure of the Italian partners Pressindustria in 1997. Around 65-70% of the design was completed, whilst the construction was only started when the project was abandoned. SIBUR-Holding is now ready to revive the project.

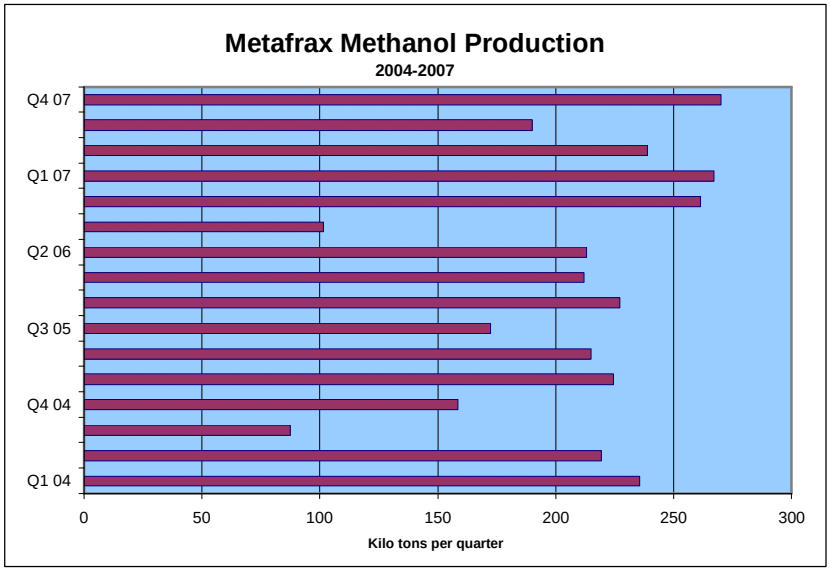
Nizhnekamskneftekhim-polybutadiene
Nizhnekamskneftekhim increased the production of polybutadiene rubber by 15% in 2007 over 2006, reaching 81,400 tons. The increase followed an improvement of the technology. Nizhnekamskneftekhim has developed a new catalyst for producing isoprene, which should increase output slightly. Other developments in the synthetic rubber division at Nizhnekamskneftekhim include the isomerization of n-butylene into isobutylene at the divinyl complex. This has made it possible to increase isobutylene availability for derivatives such as butyl rubber and MTBE. In 2007, Nizhnekamskneftekhim increased total turnover by 23% over 2006 to reach 58.6 billion roubles ($2.37 billion).

Kazan Synthetic Rubber Plant
From the start of 2008, Kazan Synthetic Rubber Plant increased the price of polysulphide polymers due to the cost increases for raw materials and energy. The company is heavily oriented towards export, with around 45% of production being sold outside of Russia. Kazan Synthetic Rubber Plant has sited a number of factors for uncompetitenesss, which include the high ratio of obsolete equipment, and problems with transportation and energy.

Methanol & gas based chemicals

Uralkhimplast-methanol project
UralMetanolGroup has concluded contracts for the detailed design and delivery of equipment for the gas-chemical complex. The period of construction required is expected to be between 22-24 months, and the capacity of the plant will be 600,000 tpa. This represents a strategic project for Uralkhimplast that will supply methanol for captive consumption and reduce the costs of production of formaldehyde. The cost of the projects Is estimated at €260 million, with a start-up date set for 2010.

Metafrax-production increases
In the first eleven months of 2007 Metafrax achieved a turnover of 6.574 billion roubles, a 20% increase on the same period in 2006. Exports accounted for 43% of the turnover, with methanol representing the main commodity sold. The company produced 879,000 tons of methanol in the period January-November 2007, 26% higher than 2006, whilst formaldehyde 37% production rose 30% to 258,000 tons. Urea-formaldehyde production rose 8% to 180,000 tons, with pentaerythitol rising 17% to 17,000 tons and utropin rising to 14,000 tons.



Metafrax has signed a contract with Air Liquide for the supply of a new gaseous nitrogen unit at a cost of €7 million. The delivery of equipment and construction will require around 19 months, and the new nitrogen unit will be put into use at the end of 2009. Metafrax uses gaseous nitrogen in the technical processes, for the fire extinguishing, and also calibrations of laboratory instruments. The new installation of gaseous nitrogen will provide 5,000 cubic metres an hour and 4,000 cubic metres of compressed air.

Uralkhim-gas supply
Uralkhim has signed a long term agreement for gas supplies with Gazprom up to 2012. The agreement guarantees the subsidiaries of Uralkhim with gas for the immediate future. The main beneficiaries of the gas will be the Kirov-Chipetskiy Chemical Combine and Azot at Berezniki. Gazprom will use Mezhregiongaz to supply 1.8 billion cubic metres over 2008-2009. Most of the gas will be supplied in 2009, whilst at the end of the year arrangements with the current supplier Novatek for gas supplies will come to an end.

Uralkhim was created by former SIBUR CEO Dmitry Mazepin who has merged several Russian mineral fertiliser producers. Dmitry Mazepin is the sole owner of United Chemicals Company Uralkhim, to which he had assigned a 77.3% interest in Kirovo-Chepetsk Chemical Combine (KChKhK), 77.84% of Azot at Berezniki and 100% of transport arms Uralkhim Trans and Uralchemfreight. A source close to the company said that the holding is looking to float an IPO on LSE in 2008.

The company's revenue in 2008 is projected to come in at over $700 million and EBITDA to top $190 million. Mazepin set about establishing the chemical holding about three years ago and since that time his Konstruktivnoye Bureau has consolidated nearly 100% of Galogen and approximately 44% of Mineral Fertilisers (Perm). Galogen and Kirovo-Chepetsk Chemical Combine Polymers Plant will be merged into a polymer producing holding at a later date.

Novatek-methanol project
In December 2007, Novatek-Yugranefegaz signed an agreement with Russian company Metaprocess for the supply of a turnkey methanol plant with a capacity of 40,000 tpa. Under the terms of the agreement Metaprocess will undertake the construction and delivery of the equipment, and launching the installation. In accordance with the agreement, the installation needs to be started by November 2009, and the cost is valued at 1.55 billion roubles.

Novocherkassk Synthetic Products Plant
The new owners of Novocherkassk Synthetic Products Plant (NSPP) will be expected to reconstruct the methanol plant, with the aim to increase capacity to between 400-500,000 tpa. This would be a major increase on current production levels, which are around 160,000 tpa. The commission for selecting the contractors and suppliers of equipment has already been established, whilst the project will require between $350-400 million depending on technology and equipment.

Most of the current methanol output is sold on the merchant market, but the company is now keen to invest in downstream derivatives plants associated with methanol production. A site for a new methanol plant has already been decided, and the aim is that after the construction of the new plant the old plant will be closed.

The company selling NSPP, RusInkor, wanted to produce methanol from synthesis gas, which had to be obtained from the processing of coal supplied from its mines in the east Donbass. However, it is expected that any new owner will seek to use gas supplied by Gazprom as a new pipeline link is being constructed which should reach Novocherkassk by 2010. NSPP also intends to study the possible increase in the profitability of production through the reduction in gas consumption of gas, electrical and thermal energy. Energy accounts for around 15% of the company's costs.

The sale of the assets is open to tender which will be closed at the end of January, and at this stage it is not clear which company will be the winner. Rusnikor, through its subsidiary Orion, purchased NSPP at the start of 2006, paying 299 million roubles. The decision to sell has been forced by the costs of the project, which exceeded expectations.

Other methanol plant news
Akron increased turnover by 23% in 2007 and totalled 21.674 million roubles against 17.642 million roubles in 2006. The net profit rose by 136% to 3.212 million roubles against 1.363 million rubles in 2006. The EBITDA in the first three quarters rose by 77% to 5.317 million roubles against 2.997 million roubles in 2006.

Shchekinoazot has increased production capacity of dimethyl ether from methanol. The company already sends product to the Ukrainian market. Shchekinoazot continues to expand its co-operation with Hexion

Chemicals, which as a jv is constructing a plant for the production of formaldehyde resins. Hexion is providing the equipment for the project which is being constructed at Shchekinoazot in the Tula region. Currently, Hexion is examining the delivery method for raw materials for the plant. Shchekinoazot has been awarded ISO 9001, after an examination by SGS that it met the required standards for production and health and safely.

Azot at Nevinnomyssk increased turnover by 29.9% in 2007 over 2006, totalling 15.2 billion roubles. In terms of physical production, fertilisers were up 1.6% to 848,000 tons and ammonia up 1.9% to 1.086 million tons. Methanol increased 0.6%, acetaldehyde by 1.2%, polyvinyl alcohol by 37.8% and butyl acetate by 10.9%.

Salavatnefteorgsintez-Meleuz Fertiliser Plant
Salavatnefteorgsintez has acquired a 51% stake in Meleuz Mineral Fertilisers after it had received approval from the Federal Antimonopoly Service to purchase the company's controlling stake. However, question marks remain over the future balance of Salavatnefteorgsintez and whether it can remain a company with so many diverse interests such as fertilisers and oil refining. The owner of the controlling stake in Salavatnefteorgsintez is ZAO Leader, which is the managing company of Gazfond, Gazprom's pension fund. Salavatnefteorgsintez has taken control over Meleuz Mineral Fertilisers, as it supplies ammonia to Meleuz which does not possess its own in-house ammonium production. Additionally, a strategic alliance with the gas supplier is the only acceptable scenario for Meleuz Mineral Fertilisers, with consideration to its negative margins and the government's plans to raise gas tariffs.

According to the recent statements, Salavatnefteorgsintez is a core-asset for Gazprom and the holding has plans to integrate it in its business. Gazprom, presently, also does not plan to unbundle Salavatnefteorgsintez into core activities but this position could change.

Uralalkali
Uralalkali increased production by 23% in 2007, totalling 5.119 million tons. Production was affected in 2006 by the potassium mine accident which reduced output by 22% against 2005 to 4.2 million tons. Uralkali is the fifth largest global producer of potassium fertilisers, with the only competitor on the Russian market being Silvinit. By 2015, Uralkali hopes to have expanded production to 9.5 million tpa.

Plastics/Chemicals

Alabuga-plastics' projects
This year a number of plastics projects will start to lay foundations in the Alabuga special economic zone in Tatarstan, including one key project between Tatneft and Price Daimler for the production of glass fibre. Russia's fibreglass industry has received little investment over many ears. The biggest investment in the special economic zone, however, will involve the construction of a new PET plant in conjunction with KP Chemical of South Korea. Three other smaller projects are to be launched in plastics processing.

Grinn-BOPP
BOPP producer Grinn at Kursk has been bought by Gazprom for between $80-100 million. The sale has been caused by the result of a conflict with the local authorities over tax. The company will be re-registered in the Orel region whilst at the same time the plant will benefit from being part of Gazprom and benefiting from lower raw material prices. Gazprom or SIBUR-Holding do not yet produce polypropylene, but Gazprom is better suited to secure lower prices than Grinn. Grinn is a multi-faceted company and started its first BOPP production line in 2005. The capacity was 17,500 tpa, which was doubled to 35,000 tpa by the introduction of a second line in 2006. Tatneft was seen as the most logical buyer of Grinn as it can already supply the polypropylene and does not yet own a BOPP plant. BOPP production could become more interesting for Gazprom if the government reduces or eliminates the 15% export tariff on plastics, as this would allow BOPP film to be exported competitively. The BOPP market in Russia is currently valued at around 120,000 tpa, with growth placed at 10%. Producers with access to raw material are considered to be better placed in the market.

Anti-oxidants, paints
Sterlitamak Petrochemical Plant produced 143,800 tons of petrochemicals in 2007, including 43,300 tons of antioxidants and 28,400 tons of MTBE. Sterlitamak Petrochemical Plant is the main producer of anti-oxidants in Russia, and uses raw materials such as isobutylene, formaldehyde, dimethylamine, etc.

Russian Coatings (Russkie Kraski) sold 44,903 tons of paints in 2007. 5.2% up on 2006. The company saw the biggest increases in water based decorative paints production and also volumes at its Yaroslavl Plant of Powder Paints The Yaroslavl plant iincreased production by 9%. Russian Coatings operates in the decorative, automobile, motor vehicle repair and industrial segments of market. Most of the output is sold domestically.

Empils, based at Rostov, produced 76,000 tons of decorative coatings in 2007 and 14,000 tons of zinc oxide, against 75,000 tons and 13,000 tons respectively in 2006. Around 16% of zinc oxide production was sold domestically last year and 27% of decorative coatings. The main export markets for Empils were the other CIS republics and several European countries such as Finland, Germany Poland and Italy. The company invested $1.5 million in modernisation in 2007, whilst at the same time obtaining the new international certificate ISO 9001:2000 in the field of development, production and sale of paints and zinc whiting.

Uralkhimplast modernising PVC plasticizer plant
Uralkhimplast has started the technical revamp of the PVC plasticizer plant, which is being conducted by the Italian company BAUSANO & FIGLI SpA. This will lead to an increase in capacity by around 40%, whilst at the same time resulting in an increase in quality. The revamp should be completed by March 2008.

Veka-window profiles
Veka at Novosibirsk produces 15,000 tpa of profiles for which demand in Russia is rising rapidly. Around 25% of window profiles produced go towards replacing old windows, but the majority are used in new construction. In 2008, Veka plans a 300% increase in capacity, taking it up to 22,000 tpa. Veka's Moscow plant produces profiles for the European parts of Russia, whilst the Novosibirsk plant produces for the Urals and further east.

Belarus

Azot-Grodno, caprolactam revamp
Azot at Grodno plans in 2008 to start the reconstruction of the caprolactam plant. The aim is to increase the capacity to 140,000 tpa by 2009. As part of the reconstruction process the company is to finish building a new cyclohexane unit with a capacity of 80,000 tpa, and this will be ready by the end of 2008. Construction started in 2005, after Azot concluded a contract in 2004 with Lurgi for the unit. This project is part of the company's modernisation programme of the caprolactam plant, which is the main source of raw materials for polyamide producer Khimvolokno at Grodno. The current capacity of the caprolactam plant at Azot is 111,200 tpa and the modernisation plans consist of replacing old worn out equipment.

Belarus considers Gazprom as the main potential partner for building a new production facility at Grodno Azot. The project for setting up a new fertiliser production facility in Grodno Azot should be co-ordinated with the participation of a raw materials supplier, such as Gazprom.

Ukraine

Ukrainian markets
The new Minister for Industrial Policy announced his intention to cancel the VAT for chemical plants. The rise of gas prices this year creates a negative influence on the chemical industry, and that by removing VAT it would help to reduce the effects. The Ukrainian chemical industry consumes about 8.3 billion cubic meters of natural gas per annum. The largest chemical plants are Stirol, Azot Cherkassy, Dniproazot, Rivneazot, Odessa Portside Plant and Severodonetsk Azot. Cancellation would significantly reduce the production costs of Ukrainian chemical plants, all mainly Fertiliser producers.

Karpatneftekhim has been struggling to find customers in Europe to buy ethylene. Following Stirol's expansion in polystyrene capacity at Gorlovka, imports of styrene into Ukraine have risen sharply in 2006 and 2007. Polystyrene capacity was increased in 2006, which resulted in a rise of 31% production against 2005 reaching 33,669 tons. Production in 2007 totalled 33,780 tons. Stirol increased sales overall by 18.8% in 2007 over 2006, reaching 3.998 billion hryvnia. Aside increases in fertiliser production and sales, a 25.4% increase was noted in plastics processing, totalling 14,806 tons.

A number of Ukrainian and Russian companies have shown interest in acquiring the Odessa Priportniy Port. of which 99.52% is currently up for sale. The new investor would be required to pledge investment funds for the modernisation of each of the units in the company. Gazprom through its fertiliser subsidiary SIBUR-Mineral Fertilisers was seen as the most probable buyer initially. but other players have come into the picture. Dniproazot from Dneprodzerzhinsk inquired about the Odessa Portside Plant, which would at least keep it in Ukraine. The Odessa Priportniy Port is the largest ammonia plant in Ukraine. with nearly all output exported.

Central Asia/Transcaucasus

Uzbek gas & petrochemicals
Examination is continuing of the polyethylene project in the Ustyurt region where there is considerable gas reserves. A plant of 360.000 tpa and 80.000 tpa of polypropylene has been considered with Kogas, although the project remains under review. The experience gained in the Shurtan complex will used as a basis for constructing the new plant. At present, plans are underway for the expansion of the polyethylene plant at Shurtan to 225.000 tpa and ethylene to 250.000 tpa. This 80% increase in capacity will increase consumption of gas by 4 million cubic metres per annum. Uzbekistan together with Turkmenistan is the most important producer of natural gas in Central Asia obtaining more than 60 billion cubic metres per annum.

Uzbek company news
Uzbek plastics converter Dzhizak Plastmass has introduced a new production unit for polyethylene pipes with a diameter range of 315-630 mm and a capacity of 3,700 tpa. This has expanded the company's position as a polyethylene processor, with the demand for pipes rising rapidly in the domestic market. Around 75% of production from the plant will be targeted in the Uzbek market, where pipes could be anywhere from 22-45% cheaper than steel. Dzhizak Plastmass is the largest producer of polymer films and pipes in the region. Raw materials for the plant are largely supplied by the Shurtan Gas Chemical Complex, which started polyethylene production at the end of 2001 with 125,000 tpa of capacity. Dzhizak Plastmass has the capacity to produce 18,200 tpa of polyethylene film and 10,800 tpa of polyethylene pipes. Demand is expected to increase in line with the regional gasification programme and domestic construction activity.

Navoiazot has introduced a programme aimed at reducing production costs and improvement in ecological standards at a cost of $40-42 million. Part of the modernisation programme will involve the reconstruction of the ammonia plant which was built in 1970, whilst also the nitric acid plant will be revamped at a cost of $20-25 million.

Turkmenistan-BOPP project
Construction of the new BOPP plant at Turkmenbashi will start in 2008. Following the contract signed on 29 July 2007 with the French company DMT the new BOPP plant will be located at the refinery adjacent to the polypropylene plant. It is part of the investment programme which increases the level of integration, and allows the refinery to move from catalytic cracking to plastic film production. Turkmenistan has been considering the expansion of the polypropylene plant at Turkmenbashi. in conjunction with Japanese investors that financed the construction of the original plant.

Kazakhstan

Kazakhstan-Orenburg Gas Processing Plant
The government of Kazakhstan has the ratification of the agreement with Russia about collaboration at the Orenburg gas-processing plant. The agreement provides for mutually advantageous terms for processing hydrocarbon raw materials from Karachaganak at Orenburg, and long-term cooperation in the gas sector.

KMG-IPIC, Atyrau
KazMunaiGaz (KMG) and Arabian International Petroleum Investment Company (IPIC) signed a memorandum of understanding in which they agreed on future participation of IPIC in the Atyrau petrochemical complex. The project provides for constructing the Atyrau complex with capacities of 800,000 tpa of polyethylene and 400,000 tpa of polypropylene based on Basell technology. The investment value of the project totals $5.3 billion, with the project scheduled to be completed by 2013. It has also been suggested that Basell plans to acquire 35% stake in Kazakhstan Petrochemical Industries (KPI) from the

holding company Sat & Co. After this acquisition, Sat & Co will continue to be the largest shareholder with 50% and KazMunaiGaz will hold the other 15%.

Atyrau petrochemical technical park

A free economic area called National industrial petrochemical technical park is planned to be established at Atyrau, which is part of the programme helping Kazakhstan move away from its dependence on raw material exports and adding value to its oil and gas production. However, environmental issues are under review over the creation of the technical park and what impact it will have on the local region.

By creating special economic zones. the Kazakh government aims to attract large and small investments into the petrochemical sector. Two main special economic zones have been formed in the Atyrau and Mangistau regions. The Atyrau zone is located 33 km to the north-east of Atyrau and 8 km north of Karabtan. It comprises an area of 1267.2 hectares, including 967.2 hectares devoted to petrochemicals. An area of 300 hectares has been allocated for the production of aromatic hydrocarbons, including benzene and paraxylene. The Mangistau special economic zone, which is further south, includes the construction of a new gas processing plant based on gas pipeline deliveries from the Karabatan field.

Relevant Currencies

(Czech crown. Kc. $1= 18.050. €1 = 26.784): (Hungarian Forint. Ft. $1 = 173.46. €1 = 257.39): (Polish zloty. zl. $1 =2.4832. €1 =3.6848): (Romanian New Lei. $1 = 2.4380. €1= 3.6130). (Ukrainian hryvnia. $1 = 5.0450. €1 = 7.4863): (Rus rouble. $1 = 24.329. €1= 36.102)

Contents Issue No 206