

# Argus Russian Coal

TWICE MONTHLY

Volume V Issue No 20

Friday 15 October 2010

## Exports show mixed results

Russian seaborne coal exports are showing a decline on last year but remain higher than in 2008. In January-September 66.9mn t of coal was dispatched from the ports compared with 70mn t in the same period of 2009 and 61.8mn t in the same nine months of 2008.

Shipments to Asia this year are significantly higher than in the previous years although they are obstructed by railway problems. In September less than 2.6mn t was shipped through the far east ports compared with 3mn t in August 2010 and the same amount in September 2009 (see table p2). The largest far east outlet, Vostochny port, handled just over 1mn t — but part of the scheduled tonnage failed to arrive as a result of the railcar shortage and lack of coal, the port says. But the nine-month figure for the far east ports dwarfs the results of 2009 and 2008 (see chart p9).

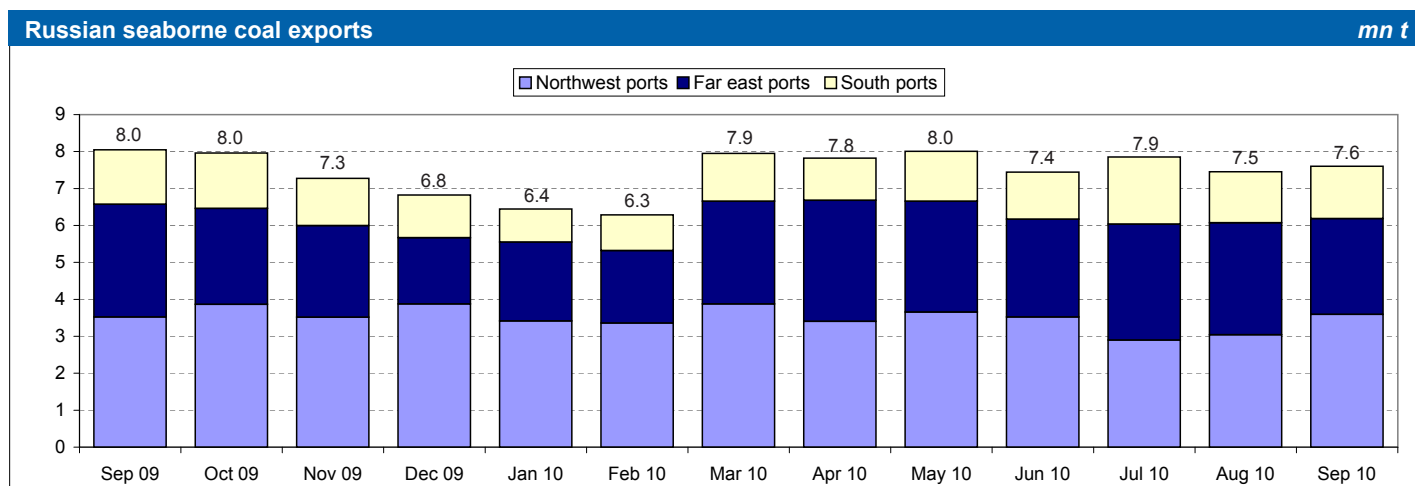
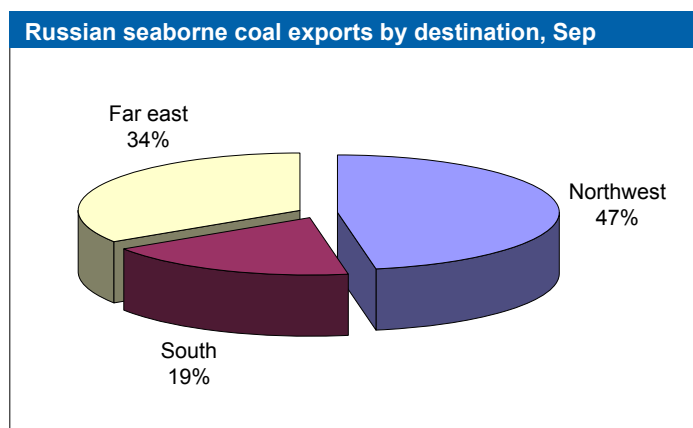
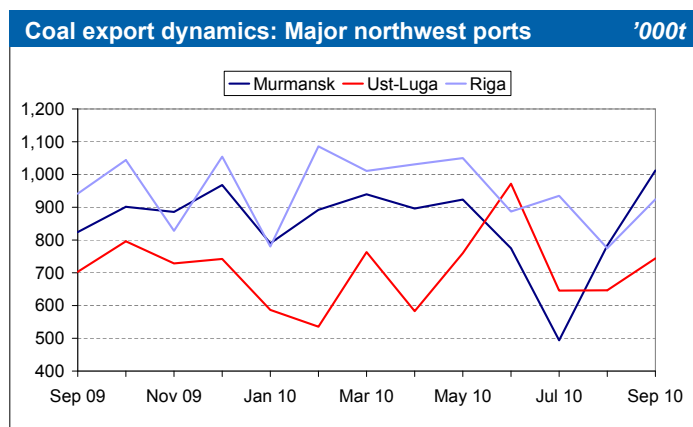
Exports to northwest Europe increased compared with the previous months to nearly 3.6mn t in September, and many ports were able to reduce their accumulated stocks.

The Black Sea market appears to be balanced. Exports of Russian coal through the ports of the Azov and Black seas remain stable from month to month and compared with last year.

In this issue	
Data: Russian seaborne coal shipments in September	2
Reform boosts rail rates	2
Poland's Barter ramps up imports	3
Special report: Far east	4-9
Data: Coal rail shipments in September	10-22

Monthly average prices*			
	fob Baltic	fob Yuzhny	fob Vostochny
Sep	90.8	95.0	101.7
Aug	90.8	95.2	104.0

\* 6,000 Kcal NAR, up to 1% sulphur, delivery in 90 days



Russian seaborne coal shipments '000t				
	Sep 10	% change	Jan-Sep 10	% change
<b>Northwest ports</b>				
<b>Russian ports</b>				
Murmansk	1,012.2	22.8	7,505.2	-20.9
Kandalaksha	74.0	-11.1	630.9	-24.2
Ust-Luga (Rosterminalugol)	626.3	4.4	5,206.8	2.1
Ust-Luga (UCL)	117.5	14.0	1,028.9	156.7
Vysotsk	191.8	64.8	1,659.9	-25.8
Vyborg	10.6	-74.2	59.5	-85.2
St-Petersburg	194.0	13.6	1,726.0	-11.7
Arkhangelsk	36.1	36.7	210.3	175.6
Kaliningrad*	31.0	-29.1	371.0	63.4
<b>Total Russian</b>	<b>2,293.5</b>	<b>14.2</b>	<b>18,398.5</b>	<b>-11.2</b>
<b>Ports of the Baltic countries</b>				
Riga*	924.0	-1.9	8,479.0	-23.2
Ventspils*	228.5	-37.4	2,701.6	-35.0
Tallinn*	148.0	-28.2	1,173.0	7.4
Latvia & Estonia Total	1,300.5	-14.0	12,353.6	-24.1
<b>Total northwest</b>	<b>3,594.0</b>	<b>2.1</b>	<b>30,752.1</b>	<b>-16.9</b>
<b>Southern ports</b>				
<b>Russian ports</b>				
Tuapse	218.0	-36.5	2,504.4	12.3
Temryuk	83.8	20.1	533.0	-45.5
Taganrog*	78.8	-9.6	617.9	6.6
Yeysk	86.5	62.0	661.1	51.0
Azov*	57.5	-52.8	886.9	22.5
Rostov*	114.5	53.7	900.7	203.0
<b>Total Russian</b>	<b>639.1</b>	<b>-14.8</b>	<b>6,104.0</b>	<b>16.3</b>
<b>Ukraine's ports</b>				
CSP Yuzhny	355.2	56.9	2,150.7	-3.8
TIS (Yuzhny)	132.5	na	646.7	na
Kerch	34.9	-65.6	440.6	-65.3
Mariupol	150.0	31.6	1,300.0	30.8
Nikolayev	28.6	-76.9	518.4	-28.8
Berdyansk	9.6	na	49.1	5,355.6
Izmail	66.7	-40.4	718.9	9.7
<b>Ukraine total</b>	<b>777.5</b>	<b>14.8</b>	<b>5,490.0</b>	<b>-12.2</b>
<b>Total south</b>	<b>1,416.6</b>	<b>-0.8</b>	<b>11,594.0</b>	<b>0.8</b>
<b>Far east ports</b>				
Vostochny	1,036.6	-27.9	10,822.3	-1.1
Maly port/Vostochny	95.0	33.6	963.0	5.4
Vostochny Lesnoy	5.1	na	195.6	138.2
Posyet	348.0	8.4	2,521.0	-2.0
Vladivostok Rybny	0.0	na	172.1	131.0
Vanino	88.5	-46.4	1,039.7	8.9
Vanino/Daltransugol	593.9	0.3	5,843.9	65.5
Nakhodka*	312.2	69.5	2,251.9	25.5
Sakhalin*	111.5	1.1	742.1	10.4
<b>Total far east</b>	<b>2,590.8</b>	<b>-15.1</b>	<b>24,553.3</b>	<b>14.0</b>
<b>Grand total</b>	<b>7,601.4</b>	<b>-5.0</b>	<b>66,899.4</b>	<b>-4.5</b>

## Reform boosts rail rates

Russia is rapidly nearing full liberalisation of the rail transport market — amid the railcar shortage and galloping rail rates.

State-owned rail operator RZD's new subsidiary VGK began operating on 30 September. The remaining state-owned railcar fleet will be transferred to VGK by the fourth quarter of 2011 — putting an end to the provision of transport services at regulated tariffs. The railcar transferral process has already started and is said to have contributed to the railcar shortage in the market. Over 156,000 railcars will be transferred to VGK.

"The railcars transferred to VGK either disappear from the market or become more expensive," according to one industry source. Many industry participants are convinced that RZD is responsible for deliberately creating the railcar shortage to boost rail rates.

The railcar shortage cannot be explained just by increased cargo traffic because traffic has so far not reached the level of 2008. Cargo traffic increased by 9pc year on year in January-September in Russia but the decline in January-September 2009 on the same period of 2008 was 19.5pc, according to RZD.

Meanwhile, rates charged by private rail operators have increased rapidly during the past few months supported by a shortage of rolling stock. They are now assessed as being about 18-20pc higher than the regulated tariff for each route. And some coal companies complain of even higher rates.

"Rates have nearly reached the pre-crisis level," a source with a private rail operator says. He confirms that his company increased its rates twice in the past three months. "We did it in line with the [transport services] market," he says.

With the formation of VGK there are two major players in the rail transport market — RZD subsidiaries PGK and VGK — and a number of private rail operators. Many big cargo holders, including steel and coal producers, have their own transport companies and railcar fleets.

VGK says it will charge rates at below market level in 2011. This is normal business practice for a company that is entering the market and needs to win clients, industry observers say. But rates are expected to increase by at least 9pc from January 2011 — when the government increase in rates for the infrastructure component comes into force. Any further growth will be determined by the market.

The shortage of railcars is also at least partially caused by the problems with traffic management that RZD has owing to the increase in the number of private railcars on the network. To cope with this problem RZD is offering to rent railcars from big cargo holders and private rail operators and take responsibility for their operation. But this proposal has met with little support from market participants.

Rail shipments of Russian coal for export*				'000t
	Sep 10	±% 10/09	Jan-Sep 10	±% 10/09
<b>Northwest ports</b>				
<b>Russian ports</b>				
Murmansk	848.9	-8.6	8,183.1	-21.4
Ust-Luga	938.7	12.7	7,210.2	18.5
Vysotsk	264.3	55.5	1,798.1	-21.0
St Petersburg	188.8	18.0	1,624.4	-19.9
Arkhangelsk	39.5	30.8	247.9	131.0
Vyborg				
Kandalaksha	99.2	12.9	754.2	-23.1
Kaliningrad	11.5	4.9	89.6	11.1
<b>Total Russian ports</b>	<b>2,391.0</b>	<b>5.4</b>	<b>19,907.5</b>	<b>-11.1</b>
<b>Baltic countries</b>				
Riga	1,011.9	6.7	9,717.9	-15.6
Tallinn	94.3	-55.2	978.5	-28.4
Ventspils	385.4	-4.7	2,931.2	-32.4
<b>Total Baltic countries</b>	<b>1,491.6</b>	<b>-4.6</b>	<b>13,627.5</b>	<b>-20.9</b>
<b>Total northwest ports</b>	<b>3,882.6</b>	<b>1.3</b>	<b>33,535.0</b>	<b>-15.3</b>
<b>Far east ports</b>				
Vostochny	1,397.1	10.1	12,738.5	3.0
Nakhodka	227.9	-7.4	2,416.4	22.2
Posyet	302.3	-19.5	2,599.8	-4.0
Vanino	725.2	-20.0	8,363.6	43.1
Vladivostok	31.0	231.2	165.7	385.2
<b>Total far east ports</b>	<b>2,683.6</b>	<b>-4.4</b>	<b>26,284.1</b>	<b>14.7</b>
<b>Southern ports</b>				
<b>Russian southern ports</b>				
Tuapse	290.3	-12.8	2,918.0	19.8
Taganrog	88.7	-11.6	667.8	0.4
Yeysk	85.5	13.5	704.7	46.9
Azov	74.9	-44.4	930.0	21.5
Konstantinovsk				
Rostov-on-Don	140.3	32.9	1,047.6	141.9
Temryuk	44.4	92.1	504.0	-31.0
<b>Total Russian southern ports</b>	<b>724.1</b>	<b>-6.9</b>	<b>6,772.0</b>	<b>22.5</b>
<b>Ukrainian ports</b>				
Yuzhny	292.9	-0.9	2,635.3	-3.5
Mariupol	163.0	2.6	1,327.5	37.2
Izmail	93.1	-14.7	695.8	-16.7
Kerch	27.6	-63.8	280.0	-43.1
Nikolayev	15.3	-89.6	572.9	-27.2
Berdiansk	0.0	na	58.2	na
<b>Total Ukrainian ports</b>	<b>591.8</b>	<b>-24.8</b>	<b>5,569.6</b>	<b>-4.2</b>
<b>Total southern ports</b>	<b>1,316.0</b>	<b>-15.9</b>	<b>12,341.6</b>	<b>8.8</b>
<b>Total ports</b>	<b>7,882.1</b>	<b>-3.9</b>	<b>72,160.7</b>	<b>-2.3</b>
<b>Overland border crossings</b>				
<b>Finland</b>				
<b>Eastern Europe</b>				
Hungary	25.7	-57.6	158.5	-54.0
Poland	662.2	70.4	4,875.8	27.1
Romania	13.0	-19.9	86.1	10.3
Slovakia	77.0	-17.0	573.7	-55.0
<b>Total eastern Europe</b>	<b>777.8</b>	<b>39.4</b>	<b>5,694.2</b>	<b>2.9</b>
Korea	0.0	na	18.3	-21.5
China	5.4	4174.5	63.0	-86.1
<b>Total overland border crossings</b>	<b>783.2</b>	<b>40.0</b>	<b>5,775.4</b>	<b>-4.1</b>
<b>Grand total</b>	<b>8,665.4</b>	<b>-1.1</b>	<b>77,936.1</b>	<b>-2.5</b>

## Poland's Barter ramps up imports

Polish private-sector trading firm Barter plans to import about 2.5mn t of Russian coal in 2011, compared with at least 1.5mn t this year and 850,000t in 2009. The firm's recent purchase of a facility to store up to 500,000t of coal in the centre of Poland will help it to expand sales.

Barter is by far the largest importer of Russian coal among Polish trading firms. But it is outpaced by Russian major coal producer SUEK, which is said to have contracts with Polish customers for about 2.5mn t this year.

Barter sells coal mainly to households and small industrial consumers. The company was able to rapidly expand its coal sales in Poland by utilising its vast retail network that was originally developed for selling LPG.

Barter has the infrastructure to facilitate coal imports, including many terminals throughout the country where coal can be reloaded from railcars onto trucks to transport to small customers. The firm also owns a terminal at the Sokolka-Bruzgi border crossing with Belarus, where imported coal can be reloaded from Russian railcars to Polish ones — a requirement because of the different rail gauges in the two countries. Barter rents a similar terminal from Polish state-controlled rail firm PKP Cargo at the Malasheviche-Brest border crossing. Barter has 1mn t of coal storage capacity available throughout Poland, the company says.

The firm recently bought an industrial facility in Ostrowy in central Poland that has a vast concrete area suitable for storing up to 500,000t of coal. This storage site is located at the crossing of main roads and is convenient for increasing coal sales in the country.

### High demand

Demand for coal in Poland is booming as domestic consumers replenish stocks depleted by the unusually cold winter in 2009-10. The coming winter is also forecast to be cold.

Small heating companies usually buy coal in contracts of 20,000-40,000 t/yr, but this autumn they are opting to take an extra 2,000-3,000t to increase stocks ahead of the winter season, according to traders. Electricity demand in Poland rose by more than 4pc in January-August and large utilities are also replenishing their stocks. Coal-fired capacity accounts for 60pc of electricity generation in Poland.

Demand is being covered by imported coal because of a shortage of domestic output. Polish coal imports rose by 22pc year on year, reaching 7.1mn t in January-July, according to Poland's economy ministry. At the same time, domestic coal sales fell by 1.5pc on the year to 36.8 mn t. In January-September over 5.2mn t of Russian coal was transported by rail, according to rail data. Seaborne shipments of Russian coal to Poland through the Latvian terminals reached 670,000t in January-September.

## Far east ports prepare for more coal

As the Asian market continues to lure Russian coal producers with higher demand and better prices than in Europe the stevedores in Russia's far east are readying terminal capacity for increased coal exports.

Russian coal exports to Asia rose by nearly 30pc in 2009 on 2008 and continued growth this year. Coal shipments through the far east ports in January-August 2010 were about 19pc up on the same period of 2009. In January-August 2010 over 21.9mn t of Russian coal was shipped from the far east ports — that much was sent to Asia in the whole of 2008.

The ports were able to efficiently provide additional capacity, with the major coal terminals including Vostochny, Vanino and Posyet investing in technical upgrades to help boost capacity.

At the same time, numerous small outlets became available — especially in the Nakhodka region — where the stevedores welcomed coal amid a shortage of alternative cargoes. The main drawback of these small terminals is their low depths that only allow the use of small vessels with high freight rates, which undermine the profitability of coal exports. But many of these companies have development plans in place and some already have work under way, which promises to overcome this disadvantage in the near future.

But the greatest obstacle to eastward coal exports is inadequate rail infrastructure, which is already stretched. State-owned rail monopoly RZD has publicised its estimate of the huge sums required to expand and upgrade the rail infrastructure to cope with increased eastward traffic (see p8). When and where the investments may come from is uncertain.

### Vladivostok fishing port

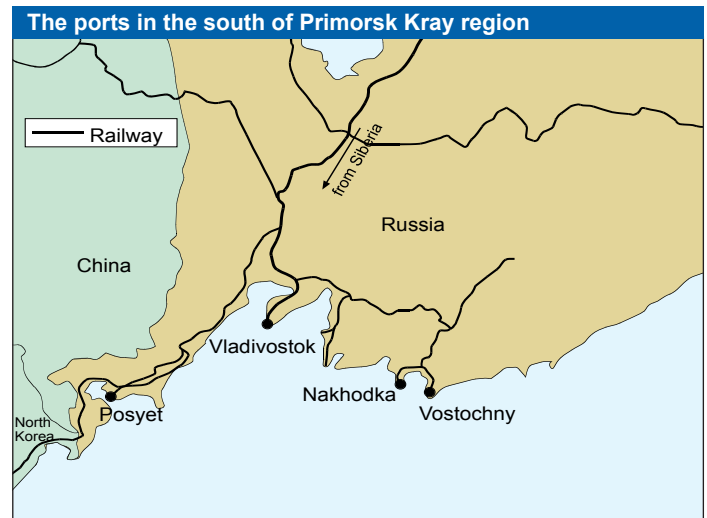
Vladivostok fishing port handles around 160,000 t/yr of fish at present compared with 1.5mn t/yr during the Soviet era. But it does not lack cargoes. "All the capacity is fully utilised. We do not have a spare square metre of territory," the port's commercial director Vladimir Buzanov says.

The port handles containers, scrap metal, food imports for the city — thanks to its vast covered storage capacity — and construction cargoes that are arriving in large quantities as Vladivostok prepares to host the 2012 Apec summit. The port operates 10 berths with a combined length of 2.02km. Depths vary from 9.8m to 12.4m.

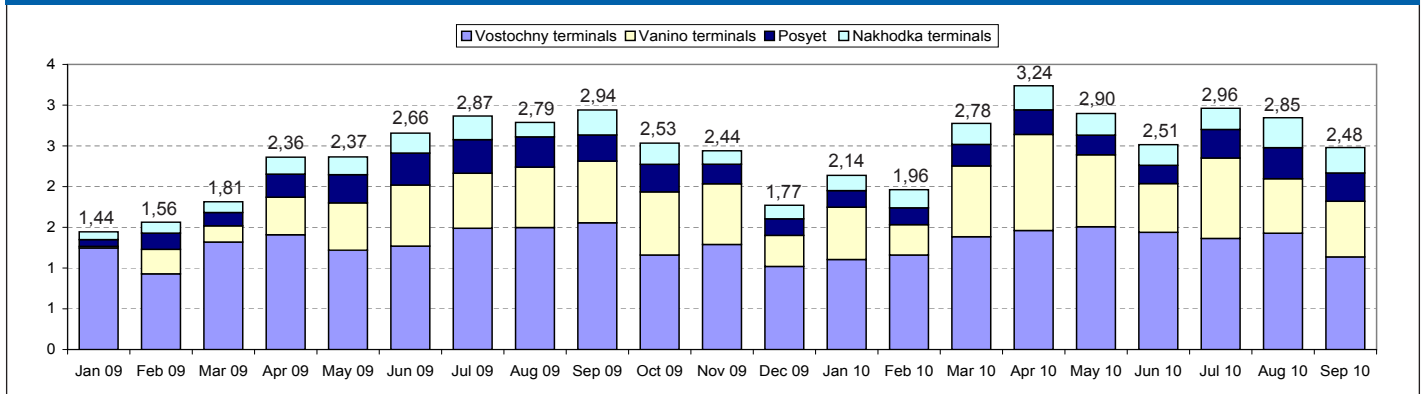
The fishing port began handling coal in 2009, when there was a temporary decline in other cargoes and one of the port's share-

holders, Switzerland-based trading firm Carbofer, was keen to handle coal. The port allocated berth 46 for coal, and its first client was Russian coking coal producer Rospadskaya. Following the accident at Rospadskaya mine in May 2010 the company stopped coal exports, but the fishing port found other sources of coal, which is sold by Carbofer on the international market.

Parameters of berth 46	
Length	192m
Draught	8.6m
Coal storage	50,000t
Average vessel deadweight	25,000t
Capacity	40,000 t/month



Coal exports through the far east terminals (excluding Sakhalin) mn t



Vladivostok fishing port sends coal mainly to China. A few cargoes were sent to Japan this summer and one was expected to leave for Taiwan this month.

The port targets about 40,000 t/month of coal throughputs but sometimes handles far less — between September 2009 and September 2010 it handled just 200,000t.

The main problem is rail transport. The priorities of the far east railway include transporting crude oil to the Kozmino terminal, construction materials for the Apec summit to Vladivostok, and fish, which cannot be stored for long. As a result, applications for coal transport to the fishing port are often cut or turned down. In addition, the port faces congestion at the Mys Churkin rail station, which once served the port alone and now has 12 stevedoring companies as clients.

The port owns three locomotives and six rail tracks that can accommodate railcars so can manoeuvre the railcars itself. This allows it to deal with transport problems at least partially. Berth 46 is



### Focus on China

Many small outlets handling coal in Russia's far east have much in common — they turned to coal in 2009 amid the economic recession when other cargoes dried up while coal exports to China boomed.

Chinese buyers did not worry much about cleaning coal from contaminating substances — the service that small terminals could not provide. The draft restrictions were not a big problem either as prices in China at that time allowed for \$18-20/t freight costs as coal was carried in 5,000t vessels. The railways had spare capacity in 2009 as the traffic declined because of the economic slowdown in Russia.

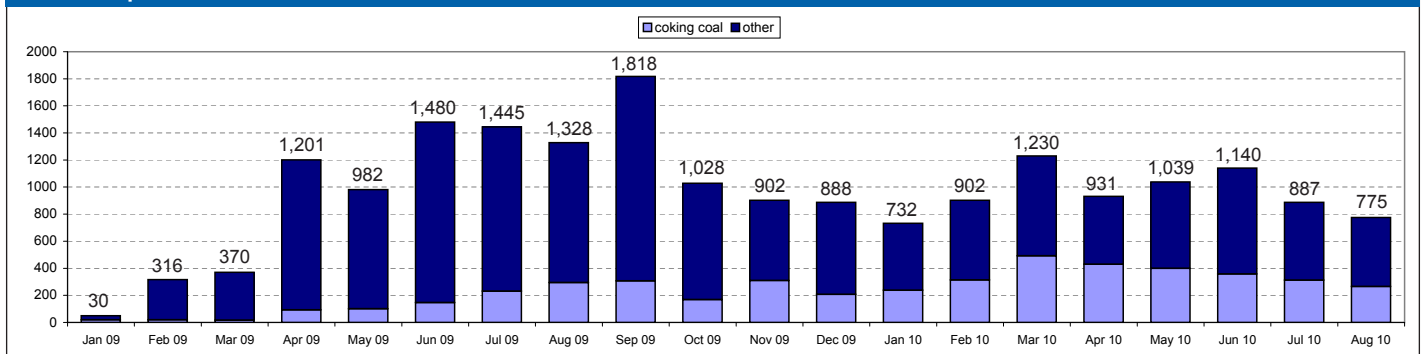
The situation changed in 2010 as Chinese prices fell and the railways began to suffer from congestion. But terminal owners with no alternative cargoes were determined to stick to coal and have started to make improvements to adapt to new conditions and tap new markets such as Japan and South Korea.

Handling rates at the far east terminals, which can accommodate 5,000t vessels, average \$16-18/t, while terminals with bigger depths can set rates even higher, sources say. Until very recently the terminals were able to meet demand for capacity despite these high rates. But now it looks like the number of small terminals is starting to exceed the demand for their services and competition could force them to cut rates.

RZD subsidiary PGK, for its part, offers a solution to the railway problem, at least for a limited number of clients. The rail operator offers a “full package” service involving rail transport and terminal handling fee to at least some of the far east ports — those where it has signed a relevant agreement with the stevedore. The service is more expensive for cargo holders than paying separately for transport and for handling but offers guaranteed delivery of coal.

China is likely to remain an important market for Russian coal despite the current slump in prices. Chinese investors are involved in financing at least two terminal expansion projects in Russia's far east.

### China's imports of Russian coal '000t



close to the port's entrance, which helps with faster coal unloading.

The port could make berth 50 available for coal as well. The berth has convenient open storage space with a concrete surface and could provide throughputs of about 50,000 t/month of coal, Buzanov says. The port would need to obtain a permit to handle coal at berth 50, but the greatest problem is whether the railway could cope with any additional cargoes.

The fish port could increase coal throughputs when construction in Vladivostok for Apec 2012 is completed and related cargoes abate, freeing up berth and rail capacity. In theory this may be expected in 2012.

### Nakhodka region

The shores of Nakhodka harbour are covered with berths owned by different companies (see map below). Many of them have switched to handling coal in the absence of other cargoes.

### Nakhodka commercial sea port

Nakhodka commercial sea port (NCSP) is by far the largest enterprise in the harbour — its berth line is 3.3km long and stretches along both sides of the harbour. It is owned by metals giant Evraz and handles mainly its own cargoes, primarily steel but also coal from last year.

Coal offset a decline in other cargoes at NCSP that occurred at the end of 2008 and helped it to raise throughputs by 6pc in 2009 on 2008. Coal accounted for 26pc of total throughputs last year.

The share of coal rose to 28pc in January-August this year and could be higher should the port free up more capacity for this cargo. Many coal companies are said to be willing to rent capacity at NCSP, but few have been given the chance. The port will only handle coal produced by Evraz supplier Yuzhkhuzbassugol starting from this October.

NCSP offers bigger depths compared with the other companies operating in the harbour and this is its main advantage. Berths 9 and 10, where coal is handled, have undergone reconstruction work that involved moving the wharf forward into the harbour by 50m through land reclamation. This increased the depths at berths 9 and 10 to 11m and increased storage space. Now 70,000t of coal can be stored at each of the berths. The loading rate at the berths is 10,000 t/d.

NCSP started to reconstruct berth 8 in the same way in 2008 but work was suspended. Evraz now plans to continue with it.

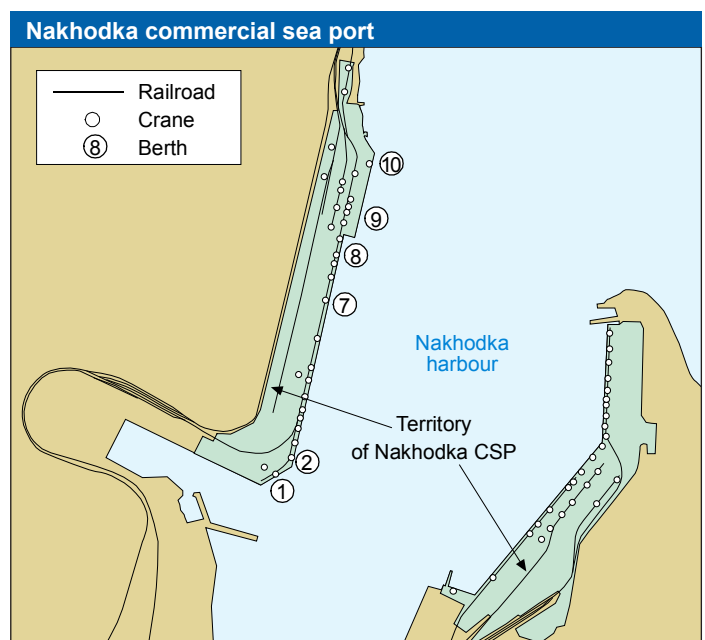
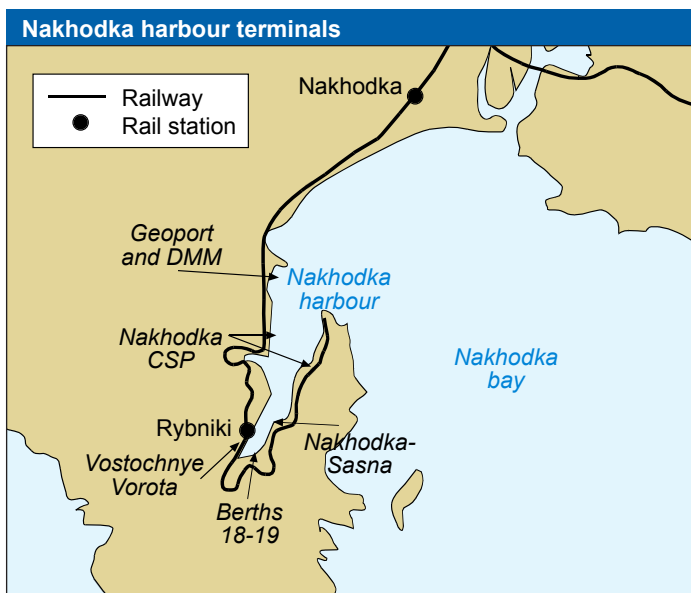
Coal is also handled at berth 7, which has a depth of 9.5m and can store 25,000t of cargo. The loading rate at the berth is 7,000 t/d. In January-August the port handled 1.36mn t of coal.

After switching to handling more coal NCSP is now buying the necessary equipment. These include two mobile units with clamshell grabs for unloading coal and two Powerscreen coal sorting machines of 3,000 t/d capacity, which are already operating at the port. NCSP has signed a contract for two Komatsu WA 420 loaders for handling coal, which should be delivered at the end of this year.

In addition, the port repaired the rail infrastructure on its territory this year, including 1.5km of tracks. This should serve to increase the port's capacity. NCSP normally unloads 140 railcars/d carrying coal in summer and 110 railcars/d in winter.

### Attis Enterprise

Stevedoring company Attis Enterprise, which has operated since the early 1990s, rented two berths at the entrance of Nakhodka harbour in 2005. One of the berths had formerly been used by the geological survey fleet and the other for assembling equipment such as floating cranes — but both were abandoned. The berths retain their names — Geoport and DalMorMontazh (DMM).



Attis carried out some reconstruction work and began handling timber, but when this business waned it switched to coal. Coal has been handled at the Geoport berth since May last year and at the DMM berth since October last year. In January-August 2010 Attis handled 441,200t of coal.

The convenient location of the terminal at the entrance to the harbour means that it is closest to the rail station compared with the other Nakhodka stevedores (*see map*). This facilitates receiving the railcars. The location offers it another advantage — it has access to greater depths. The navigating channel in the Nakhodka harbour has a depth of 12.5m but with some dredging and reconstruction work the Geoport berth could offer depths of 14m. Attis plans to carry out this work.

### Universal port

The Geoport berth convenient location and the high demand for coal handling services prompted Attis to draft vast development plans for the terminal. The plans are focused on construction of the Universal Port of Nakhodka (UPN), based on the Geoport berth. A new company has been registered to operate the terminal and construction plans for capacity of 4mn t/yr have already been drafted (*see scheme*).

Attis is moving ahead quickly with its plans. The project's pre-feasibility study and geological survey have already been completed. The firm has announced a tender for the engineering design and is now talking to banks and equipment producers. Attis hopes to execute the project with a partner and plans to finalise financing this month. The company plans to start construction in winter.

Attis has a development plan for the DMM berth as well, but it is likely to be implemented at a later stage. The berth stretches into the sea, which is why it is only 45m long. Attis wants to extend it along the shore. It has depths of up to 9.5m but needs to be strengthened to accommodate vessels of greater deadweight.

Parameters of Geoport berth	
Length/Vessel accommodation	136m/up to 120m long
Depth	6.0m
Coal storage	50,000t
Average vessel deadweight	5,000t
Can accommodate for unloading	18 railcars
Capacity	100,000 t/month

Parameters of DMM berth	
Length/Vessel accommodation	45m/up to 100m long
Depth	6.2m
Coal storage	50,000-70,000t
Average vessel deadweight	5,000t
Can accommodate for unloading	20 railcars
Capacity	100,000 t/month

After these improvements have been made the berth will be able to handle up to 2mn t/yr of coal.

Attis does not want to build a specialised coal terminal but would rather have the option of switching to other cargoes. For that reason cargoes will be handled by crane.

### Vostochnye Vorota

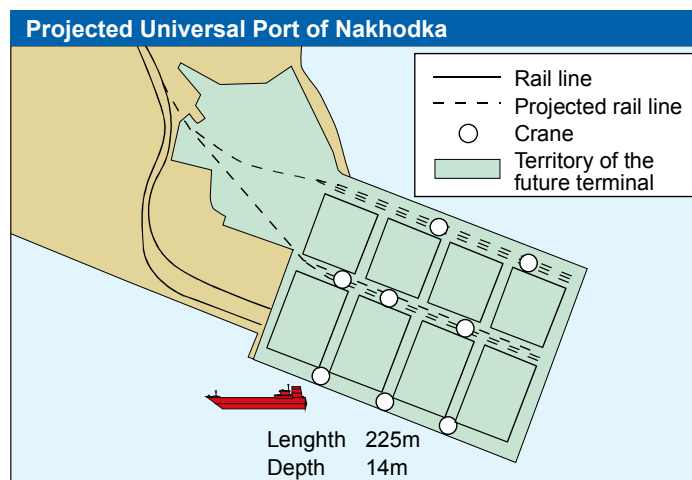
The port of Vostochnye Vorota is located in a huge area of the Primorsky ship repair yard in the farthest part of Nakhodka harbour. The ship repair yard lost most of its business in the 1990s so organised a small port based at a few berths to handle timber to survive. The other berths as well as numerous workshops and warehouses were falling into disrepair. Timber exports ceased in 2008 and Vostochnye Vorota tried switching to coal but without much success. It shipped only about 150,000t of coal between August 2009 and August 2010.

The port blames the low throughputs on railway problems, coal freezing in winter and unreliable suppliers.

The port has a licence to handle coal from berths 10 and 11. The depths there are 6.5m so vessels of up to 7,000t deadweight can be accommodated. The berths are equipped with just two ageing cranes and the storage area can hold no more than 30,000t of coal.

In summer the berths can handle 10 railcars/d for unloading and 30 unloaded railcars/d, but in winter the terminal struggles with frozen coal. The company uses the ship repair yard's 10km of rail tracks to store railcars carrying frozen coal before they can be unloaded. One advantage Vostochnye Vorota has is its two locomotives that can take railcars from the rail station and manoeuvre them itself.

A further problem for the terminal is that berths 10 and 11 are located close to the residential area, just 150m from the recreation park, which encourages extra scrutiny from the ecological controlling bodies with regard to coal dust. There is no real dust problem as Nakhodka has a damp climate that prevents coal dust from



spreading and besides, Vostochnye Vorota handles low-volatility coal, port director Gennady Kurilkin says. Vostochnye Vorota has ordered an environment protection design, part of which means dust concentration measurements will be taken regularly. This may help to ease the concerns of the controlling bodies.

### Joint project

An investment project that is already under way could improve the outlook for Vostochnye Vorota.

The port, jointly with a Chinese investor, is now rehabilitating berths 18 and 19 to handle coal. The berths have a length of 146m and a depth of 8.5m, so the new terminal will be able to accommodate 10,000t vessels and handle up to 300,000 t/month of coal. The berth repairs are nearly complete after which the port will acquire equipment and hire personnel.

### Nakhodka-Sasna

Nakhodka-Sasna operates a new terminal specifically equipped for handling coal. The stevedoring company, like many others, turned to coal in the absence of other cargoes and leased a berth from Primorsky ship repair yard.

The company invested in the berth's rehabilitation and the pur-

### Inspectorate settles in Nakhodka

An increase in coal exports to Asia is leading to more demand for various services, including the independent inspection of cargoes in the ports.

The international inspection and testing company Inspectorate opened a coal testing laboratory in Nakhodka last year, joining SGS and Incolab, which have been operating in Russia's far east for many years and have laboratories in Vostochny.

Inspectorate's laboratory is equipped to determine the size, moisture content, volatility level, sulphur, fixed carbon and ash content, and calorific value of coal. It has a spectrometer to allow the chemical analysis of coal ash.

On 30 August 2010 Inspectorate's laboratory in Nakhodka received accreditation from the national standardisation service as a competent and independent analytical centre, which means that its certificates can now be used in international arbitration. Inspectorate has offices in China and South Korea as well as in Russia's Kuzbass region — the source of the bulk of coal exports — which allows it to provide coal quality control throughout the supply chain.

This September Inspectorate became part of Bureau Veritas, a global provider of services including the inspection and certification of commodities.

chase of equipment. The terminal has two mobile units with clam-shell grabs for unloading coal, a mobile conveyor for transporting coal to and from the storage area, and a small shiploader, which is unique in Russia. The shiploader can operate at a speed of up to 500 t/h and its mechanical hand can extend to allow the loading of vessels up to 24m wide.

The terminal occupies an area of 5,000m<sup>2</sup>, which has a concrete surface and can accommodate 20 railcars/d for unloading. The berth is 140m long, with a depth of 6.5m, which limits the draught at 6.3m. The terminal hopes to handle about 40,000 t/month of coal, although as yet it has no clients.

### RZD holds key to the Asian market

Russia's railway infrastructure poses the greatest problems to increasing coal exports to the Asian market and the pace of its development will largely determine the scope of export growth.

Eastward traffic in Russia is growing rapidly and despite continuous repairs and upgrade work rail capacity is stretched. Cargo traffic to the far east ports is now 30pc above the historic maximum level achieved in 1988, state-owned rail operator RZD says.

RZD invested Rbs12bn (\$400mn) in rail infrastructure in the far east last year and is investing Rbs13bn this year.

The main projects completed in 2009 include a railway bridge across the Amur river near Khabarovsk, the Lagar-Aul railway tunnel on the Trans-Siberian railway (Transsib) and infrastructure near the crude export terminal in Kozmino bay. This year RZD is reconstructing Obluchensky tunnel on Transsib and upgrading 135km of rail tracks and three railway stations, all on Transsib.

The large-scale repairs together with the start of crude export shipments to Kozmino in December 2009 are responsible for congestion on Transsib this year, which came to a head in August when 170 trains were left standing idle on the way to the far east ports.

### Vanino route

Separately, RZD is investing in the expansion of the line between Khabarovsk and the ports of Vanino and Sovetskaya Gavan. The line is part of the other major eastward route — Baikal-Amur railway (BAM). RZD plans to invest Rbs60bn in the project in the period until 2015, which will result in an increase in capacity to 32mn t/yr. The line can transport about 13mn t/yr of cargoes at present and any increase in coal shipments through Vanino terminals remains impossible until the expansion project is completed.

But all of these projects and investments are insufficient to resolve the existing problems and meet cargo holders' needs. According to the investment programme drafted by RZD this year, investments of Rbs193bn until 2015 into Transsib and Rbs870bn until 2020 into BAM are needed to allow both routes to cope with projected traffic. It remains unclear where these funds would come

from. RZD's operating profit is not enough to cover these investments. Existing legislation allows for the introduction of an investment component to the rail tariff but this would mean much higher transport costs for cargo holders. An increase in the rail tariff may be absorbed by some other cargoes but it could undermine the economics of coal exports.

A decision on these massive investments could be taken after the coal sector development programme is prepared by the end of this year. The programme is supposed to co-ordinate the development of new terminal and rail capacity.

**Chinese factor**

Some of the investments could come from China based on official preliminary agreements made in August. Beijing offered to provide a \$6bn credit facility — secured against future coal supply — to finance coal projects of mutual interest including the development of rail and port infrastructure. But an intergovernmental agreement was not signed during the visit of President Dmitry Medvedev to China at the beginning of September, contrary to the expectations of the Russian side. And the projects to be financed by any Chinese funds have not yet been identified.

Both countries are keen to develop cross-border trade and increase rail capacity to enable that, but China so far appears unwilling to support rail exports of coal. The execution of the contract between Russia's major producer SUEK and Chinese energy company Datang, signed during Medvedev's visit, will serve as an indicator of whether Beijing is prepared to change its stance on rail coal imports. The contract envisages the supply of 1mn t of coal between November 2010 and November 2011 to China through the Zabaikalsk border crossing. SUEK had a similar contract with Datang on rail coal deliveries in 2007 but only a trial shipment of 1,000t was sent.

RZD wants to expand the capacity of the Zabaikalsk border crossing to 45mn t/yr from around 10mn t/yr now, but it is more concerned with developing the transport of goods in containers by its subsidiary TransContainer through this route than coal. China is also interested in exports of its goods to Russia.

**Priority cargo**

Spare capacity is already emerging at Zabaikalsk as crude oil is being diverted from rail to a new pipeline to China. The administration of the neighbouring Chinese province, which is facing a loss of income because of the termination of crude rail shipments, is said to be lobbying the central government to allow coal shipments instead.

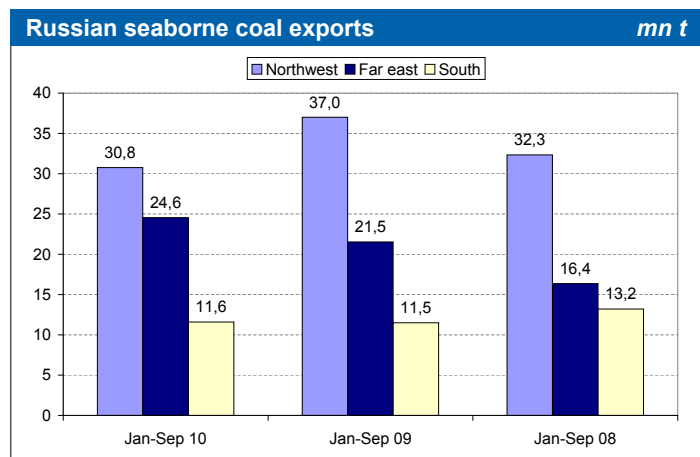
Spare capacity should also emerge on Transsib in 2012 when the Skovorodino-Kozmino oil pipeline is completed. Crude oil is being transported by rail on this route at present. But these hopes may prove futile as RZD is said to want to keep rail crude transit in addition to pipeline supplies or to transport petroleum products.

At the moment crude oil takes substantial capacity on the approach to the ports of Nakhodka and Vostochny. Smolyaninovo rail station allows the passage of only 36 trains/d, port sources say (see map). Of those, 12 trains carry crude oil, another 12 carry coal to Vostochny port and 12 are left for all other cargoes destined for these ports, including coal to many other terminals, containers, steel items and others.

Nakhodka stevedores observe this arithmetic with scorn as it leaves them no hope of expanding their coal business. Crude oil has priority over all other cargoes as the project is under close government scrutiny. "When [deputy prime minister Igor] Sechin was here he said bluntly — crude must go to Kozmino without delay, and we do not care about anything else," a source at one of the Nakhodka terminals says.



See next issue for Vostochny port terminals survey.



Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
<b>Northwest ports</b>				
<b>North-west ports of Russia</b>				
<b>Murmansk</b>				
Vostochno-Beiski opencast (Suek)	Hard coal D	Kamyshta	Khakasia	24.99
Suek	Hard coal D	Baikaim	Kemerovo region	1.04
Suek	Hard coal D	Chelutay	Buryatiya	22.00
Suek	Hard coal D	Chernogorskiye Kopi	Khakasia	6.51
Suek	Hard coal D	Terentyevskaya	Kemerovo region	161.68
Suek	Hard coal D	Yerunakovo	Kemerovo region	145.45
Suek	Hard coal G	Baikaim	Kemerovo region	13.26
Suek	Hard coal G	Leninsk-Kuznetski-1	Kemerovo region	6.28
Suek	Hard coal G	Leninsk-Kuznetski-2	Kemerovo region	124.89
<b>Total Suek</b>				<b>506.11</b>
Zenkovskiy mine	Hard coal T	Zenkovo	Kemerovo region	9.80
Topprom	Hard coal G	Polosukhino	Kemerovo region	9.66
Siberian Anthracite	Anthracite	Linevo	Novosibirsk region	43.96
Salek (Sibirski Delovoi Soyuz)	Hard coal D	Terentyevskaya	Kemerovo region	19.36
Proropyevskaya preparation factory	Hard coal G	Prokopyevsk	Kemerovo region	17.36
Promugol servis (Kuzbassrazrezugol)	Hard coal G	Yerunakovo	Kemerovo region	32.83
Mezhdurechye (Sibuglemt)	Hard coal T	Kiyzak	Kemerovo region	15.77
Kuzbass engineering company (Coeclerici)	Hard coal T	Kaltan	Kemerovo region	38.87
Belovopogruztrans (Belon)	Hard coal D	Meret	Kemerovo region	4.85
Alfa-Partner	Anthracite	No data	No data	1.50
No data	Various	No data	Kemerovo region	75.32
No data	Various	No data	Khakasia	0.13
No data	Various	No data	No data	73.39
<b>Total Murmansk</b>				<b>848.91</b>
<b>Vysotsk</b>				
Promugol servis (Kuzbassrazrezugol)	Hard coal G	Yerunakovo	Kemerovo region	4.72
Kyrgaiskaya mine (Taldinskaya)	Hard coal G	Yerunakovo	Kemerovo region	209.98
Kolmogorovskaya-2 mine (Promuglesbyt)	Hard coal D	Belovo	Kemerovo region	6.71
No data	Various	No data	Kemerovo region	2.65
No data	Various	No data	No data	40.29
<b>Total Vysotsk</b>				<b>264.35</b>
<b>Ust-Luga</b>				
Suek	Hard coal D	Terentyevskaya	Kemerovo region	18.79
Suek	Hard coal D	Yerunakovo	Kemerovo region	42.44
Suek	Hard coal G	Leninsk-Kuznetski-2	Kemerovo region	29.41
<b>Total Suek</b>				<b>90.63</b>
Promugol servis (Kuzbassrazrezugol)	Hard coal G	Yerunakovo	Kemerovo region	17.68
Kuzbassrazrezugol	Coking coal K	Latyski	Kemerovo region	8.93
Kuzbassrazrezugol	Hard coal D	Belovo	Kemerovo region	11.60
Kuzbassrazrezugol	Hard coal D	Leninsk-Kuznetski-2	Kemerovo region	89.21
Kuzbassrazrezugol	Hard coal D	Yerunakovo	Kemerovo region	262.53
*excluding shipments to CIS and Baltic states				

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
Kuzbassrazrezugol	Hard coal G	Yerunakovo	Kemerovo region	14.11
Kuzbassrazrezugol	Hard coal SS	Bochaty	Kemerovo region	65.46
Kuzbassrazrezugol	Hard coal SS	Latyshi	Kemerovo region	38.64
Kuzbassrazrezugol	Hard coal SS	Razrez	Kemerovo region	40.77
Kuzbassrazrezugol	Hard coal SS	Tyrgan	Kemerovo region	41.03
Kuzbassrazrezugol	Hard coal T	Malinovka	Kemerovo region	4.97
Kuzbassrazrezugol	Hard coal T	Sarbala	Kemerovo region	26.32
Kuzbassrazrezugol	Hard coal T	Tyrgan	Kemerovo region	67.63
<b>Total Kuzbassrazrezugol</b>				<b>688.90</b>
Belovopogruztrans (Belon)	Hard coal D	Meret	Kemerovo region	4.85
No data	Various	No data	Altai	0.07
No data	Various	No data	Kemerovo region	86.02
No data	Various	No data	No data	68.25
<b>Total Ust-Luga</b>				<b>938.72</b>
<b>St Petersburg (Avtovo)</b>				
Vostochno-Beiski opencast (Suek)	Hard coal D	Kamyshta	Khakasia	12.78
Suek	Hard coal D	Terentyevskaya	Kemerovo region	66.62
Suek	Hard coal D	Yerunakovo	Kemerovo region	43.37
Suek	Hard coal G	Leninsk-Kuznetski-2	Kemerovo region	32.36
<b>Total Suek</b>				<b>155.13</b>
Topprom	Hard coal G	Polosukhino	Kemerovo region	9.62
Proropyevskaya preparation factory	Hard coal G	Prokopyevsk	Kemerovo region	6.96
Novosibirsk electrode plant (Siberian Anthracite)	Other hard coal	Linevo	Novosibirsk region	0.10
Belovopogruztrans (Belon)	Hard coal D	Meret	Kemerovo region	4.85
No data	Various	No data	Kemerovo region	2.04
No data	Various	No data	No data	10.08
<b>Total St Petersburg</b>				<b>188.79</b>
<b>Kaliningrad</b>				
Siberian Anthracite	Anthracite	Linevo	Novosibirsk region	3.54
No data	Various	No data	Kemerovo region	3.06
No data	Various	No data	Khakasia	4.88
<b>Total Kaliningrad</b>				<b>11.48</b>
<b>Kandalaksha</b>				
Taltek	Hard coal D	Yerunakovo	Kemerovo region	86.98
No data	Various	No data	Kemerovo region	0.21
No data	Various	No data	No data	12.05
<b>Total Kandalaksha</b>				<b>99.23</b>
<b>Arkhangelsk</b>				
Yuzhny Kuzbass (Mechel)	Anthracite	Kiyzak	Kemerovo region	26.41
Yuzhny Kuzbass (Mechel)	Hard coal T	Kiyzak	Kemerovo region	9.20
<b>Total Mechel</b>				<b>35.61</b>
No data	Various	No data	Kemerovo region	0.14
*excluding shipments to CIS and Baltic states				

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
No data	Various	No data	No data	3.77
<b>Total Arkhangelsk</b>				<b>39.52</b>
<b>Total north-west ports of Russia</b>				<b>2,390.99</b>
<b>Ports of Baltic countries</b>				
<b>Riga (Bolderaja)</b>				
Yuzhny Kuzbass (Mechel)	Other hard coal	Mezhdurechensk	Kemerovo region	1.66
Yuzhny Kuzbass (Mechel)	Various	No data	No data	0.14
<b>Total Mechel</b>				<b>1.80</b>
No data	Various	No data	No data	2.35
<b>Riga (Mangali)</b>				
Salek (Sibirski Delovoi Soyuz)	Hard coal D	Yerunakovo	Kemerovo region	14.98
Kiselevski opencast (Sibirski Delovoi Soyuz)	Hard coal SS	Uglerod	Kemerovo region	6.65
Chernigovets (Sibirski Delovoi Soyuz)	Hard coal SS	Zaboischik	Kemerovo region	5.95
<b>Total Sibirski Delovoi Soyuz</b>				<b>27.58</b>
No data	Various	No data	Kemerovo region	0.21
No data	Various	No data	No data	5.88
<b>Riga (Kраста)</b>				
Salek (Sibirski Delovoi Soyuz)	Hard coal D	Yerunakovo	Kemerovo region	123.10
Kiselevski opencast (Sibirski Delovoi Soyuz)	Hard coal SS	Uglerod	Kemerovo region	88.21
Kiselevskaya mine (Sibirski Delovoi Soyuz)	Hard coal G	Cherkasov Kamen	Kemerovo region	9.38
Kiselevskaya mine (Sibirski Delovoi Soyuz)	Various	No data	No data	0.07
Chernigovets (Sibirski Delovoi Soyuz)	Hard coal SS	Zaboischik	Kemerovo region	88.37
<b>Total Sibirski Delovoi Soyuz</b>				<b>309.13</b>
Promugolservis (Kuzbassrazrezugol)	Hard coal G	Yerunakovo	Kemerovo region	34.64
Kuzbassrazrezugol	Hard coal D	Belovo	Kemerovo region	40.81
Kuzbassrazrezugol	Hard coal D	Leninsk-Kuznetski-2	Kemerovo region	23.75
Kuzbassrazrezugol	Hard coal D	Meret	Kemerovo region	32.94
Kuzbassrazrezugol	Hard coal D	Yerunakovo	Kemerovo region	145.46
Kuzbassrazrezugol	Hard coal G	Yerunakovo	Kemerovo region	91.26
Kuzbassrazrezugol	Hard coal SS	Bochaty	Kemerovo region	24.75
Kuzbassrazrezugol	Hard coal SS	Latyshi	Kemerovo region	7.79
Kuzbassrazrezugol	Hard coal SS	Razrez	Kemerovo region	30.58
Kuzbassrazrezugol	Hard coal SS	Tyrgan	Kemerovo region	29.45
Kuzbassrazrezugol	Various	No data	No data	0.21
<b>Total Kuzbassrazrezugol</b>				<b>461.62</b>
Siberian Anthracite	Anthracite	Linevo	Novosibirsk region	54.05
Bungurski-Severny opencast	Hard coal T	Novokuznetsk-sort.	Kemerovo region	8.44
Belovopogruztrans (Belon)	Hard coal D	Meret	Kemerovo region	39.40
Apanasovski opencast	Hard coal T	Novokuznetsk-sort.	Kemerovo region	3.29
No data	Various	No data	Kemerovo region	9.99
No data	Various	No data	No data	88.16
<b>Total Riga</b>				<b>1,011.90</b>
<b>Tallinn (Muuga)</b>				
Kuzbassrazrezugol	Hard coal D	Yerunakovo	Kemerovo region	67.17

\*excluding shipments to CIS and Baltic states

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
Kuzbassrazrezugol	Hard coal G	Yerunakovo	Kemerovo region	22.12
Kuzbassrazrezugol	Various	No data	No data	0.14
<b>Total Kuzbassrazrezugol</b>				<b>89.43</b>
No data	Various	No data	Kemerovo region	0.76
No data	Various	No data	No data	4.14
<b>Total Tallinn</b>				<b>94.32</b>
<b>Ventspils</b>				
Zarechnaya mine (Zarechnaya)	Concentrate	Leninsk-Kuznetski-2	Kemerovo region	171.14
Zarechnaya mine (Zarechnaya)	Hard coal D	Leninsk-Kuznetski-2	Kemerovo region	79.54
<b>Total Zarechnaya</b>				<b>250.68</b>
Yuzhny Kuzbass (Mechel)	Anthracite	Kiyzak	Kemerovo region	68.63
Bungurski-Severny opencast	Hard coal T	Novokuznetsk-sort.	Kemerovo region	27.04
No data	Various	No data	Kemerovo region	1.52
No data	Various	No data	No data	37.50
<b>Total Ventspils</b>				<b>385.37</b>
<b>Total ports of Baltic countries</b>				<b>1,491.60</b>
<b>Total north-west ports</b>				<b>3,882.59</b>
<b>Far east ports</b>				
<b>Vostochny</b>				
Suek	Hard coal D	Chelutay	Buryatiya	139.35
Suek	Hard coal D	Chernogorskiye Kopi	Khakasia	9.84
Suek	Hard coal D	Yerunakovo	Kemerovo region	76.03
Suek	Hard coal G	Baikaim	Kemerovo region	31.83
Suek	Hard coal G	Leninsk-Kuznetski-1	Kemerovo region	32.69
<b>Total Suek</b>				<b>289.74</b>
Mezhdurechye (Sibuglemet)	Concentrate	Kiyzak	Kemerovo region	45.01
Mezhdurechye (Sibuglemet)	Hard coal T	Kiyzak	Kemerovo region	128.47
Bolshevik mine (Sibuglemet)	Concentrate	Polosukhino	Kemerovo region	13.42
Antonovskaya preparation factory (Sibuglemet)	Concentrate	Bardino	Kemerovo region	74.65
<b>Total Sibuglemet</b>				<b>261.55</b>
Yuzhny Kuzbass (Mechel)	Hard coal T	Tomusinskaya	Kemerovo region	44.56
Yakutugol (Mechel)	Hard coal SS	Neryungri	Yakutiya	61.40
<b>Total Mechel</b>				<b>105.96</b>
Promugolservis (Kuzbassrazrezugol)	Hard coal G	Yerunakovo	Kemerovo region	80.13
Kuzbassrazrezugol	Hard coal D	Belovo	Kemerovo region	57.07
Kuzbassrazrezugol	Hard coal D	Yerunakovo	Kemerovo region	99.02
Kuzbassrazrezugol	Hard coal G	Yerunakovo	Kemerovo region	9.00
Kuzbassrazrezugol	Hard coal SS	Bochaty	Kemerovo region	123.58
Kuzbassrazrezugol	Hard coal SS	Latyshi	Kemerovo region	43.64
Kuzbassrazrezugol	Hard coal T	Tyrgan	Kemerovo region	44.60
<b>Total Kuzbassrazrezugol</b>				<b>457.05</b>
Siberian Anthracite	Anthracite	Linevo	Novosibirsk region	33.35
Proropyevskaya preparation factory	Hard coal G	Prokopyevsk	Kemerovo region	8.80
Kyrgaiskaya mine (Taldinskaya)	Hard coal G	Yerunakovo	Kemerovo region	4.47

\*excluding shipments to CIS and Baltic states

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
Kuzbasskaya Toplivnaya Kompaniya (KTK)	Hard coal D	Meret	Kemerovo region	173.45
JV Erel	Hard coal Zh	Neryungri-gruz.	Yakutiya	11.55
No data	Various	No data	Buryatiya	0.49
No data	Various	No data	Irkutsk region	0.07
No data	Various	No data	Kemerovo region	5.32
No data	Various	No data	Khakasia	1.42
No data	Various	No data	Krasnoyarsk region	0.28
No data	Various	No data	Yakutiya	0.28
No data	Various	No data	No data	41.98
No data	Various	No data	Amur region	1.38
<b>Total Vostochny</b>				<b>1,397.15</b>
<b>Nakhodka</b>				
Zarechnaya mine (Zarechnaya)	Concentrate	Leninsk-Kuznetski-1	Kemerovo region	18.02
Zarechnaya mine (Zarechnaya)	Concentrate	Leninsk-Kuznetski-2	Kemerovo region	14.67
<b>Total Zarechnaya</b>				<b>32.69</b>
Siberian Anthracite	Anthracite	Linevo	Novosibirsk region	36.65
Proropyevskaya preparation factory	Hard coal D	Prokopyevsk	Kemerovo region	13.32
Bungurski-Severny opencast	Hard coal T	Novokuznetsk-sort.	Kemerovo region	19.46
Belovopogruztrans (Belon)	Hard coal D	Meret	Kemerovo region	14.87
Abashevskaya central preparation factory (Evraz Group)	Hard coal G	Obnorskaya	Kemerovo region	92.61
No data	Various	No data	Kemerovo region	0.35
No data	Various	No data	Khakasia	0.20
No data	Various	No data	Krasnoyarsk region	0.07
No data	Various	No data	No data	10.58
No data	Various	No data	Amur region	0.48
<b>Nakhodka (Rybniki)</b>				
Apanasovski opencast	Hard coal T	Novokuznetsk-sort.	Kemerovo region	5.93
No data	Various	No data	Kemerovo region	0.14
No data	Various	No data	No data	0.56
<b>Total Nakhodka</b>				<b>227.91</b>
<b>Posyet</b>				
Yuzhny Kuzbass (Mechel)	Concentrate	Mezhdurechensk	Kemerovo region	18.25
Yakutugol (Mechel)	Concentrate	Neryungri	Yakutiya	261.89
<b>Total Mechel</b>				<b>280.14</b>
No data	Various	No data	Kemerovo region	0.07
No data	Various	No data	Khakasia	0.07
No data	Various	No data	Krasnoyarsk region	0.07
No data	Various	No data	Yakutiya	0.56
No data	Various	No data	No data	21.01
No data	Various	No data	Amur region	0.42
<b>Total Posyet</b>				<b>302.34</b>
<b>Vanino</b>				
Vostochno-Beiski opencast (Suek)	Hard coal D	Kamyshta	Khakasia	5.00

\*excluding shipments to CIS and Baltic states

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
Suek	Hard coal D	Chelutay	Buryatiya	258.15
Suek	Hard coal D	Chernogorskiye Kopi	Khakasia	29.58
Suek	Hard coal D	Terentyevskaya	Kemerovo region	8.95
Suek	Hard coal D	Yerunakovo	Kemerovo region	31.28
Suek	Hard coal G	Baikaim	Kemerovo region	17.98
Suek	Hard coal G	Chegdomyn	Khabarovsk region	57.79
Suek	Hard coal G	Leninsk-Kuznetski-1	Kemerovo region	110.89
<b>Total Suek</b>				<b>519.63</b>
Permyakovski opencast (Stroiservis)	Hard coal D	Belovo	Kemerovo region	9.91
Mine No. 12 (Stroiservis)	Hard coal T	Cherkasov Kamen	Kemerovo region	14.71
<b>Total Stroiservis</b>				<b>24.62</b>
Mezhdurechye (Sibuglemet)	Anthracite	Kiyzak	Kemerovo region	41.76
Mezhdurechye (Sibuglemet)	Hard coal T	Kiyzak	Kemerovo region	2.75
<b>Total Sibuglemet</b>				<b>44.51</b>
Topprom	Hard coal G	Polosukhino	Kemerovo region	13.40
Nerungriugol	Coking coal K	Neryungri-gruz.	Yakutiya	11.57
Berezovski opencast	Hard coal T	Prokopyevsk	Kemerovo region	5.36
No data	Various	No data	Buryatiya	0.21
No data	Various	No data	Kemerovo region	5.80
No data	Various	No data	Khabarovsk region	0.21
No data	Various	No data	Khakasia	1.29
No data	Various	No data	Krasnoyarsk region	0.07
No data	Various	No data	No data	98.31
No data	Various	No data	Amur region	0.21
<b>Total Vanino</b>				<b>725.18</b>
<b>Vladivostok (Mys Churkin)</b>				
Belovopogruztrans (Belon)	Hard coal D	Meret	Kemerovo region	18.41
No data	Various	No data	Kemerovo region	8.50
No data	Various	No data	Khakasia	0.07
No data	Various	No data	No data	4.02
<b>Total Vladivostok</b>				<b>31.00</b>
<b>Total far east ports</b>				<b>2,683.59</b>
<b>South ports</b>				
<b>South ports of Russia</b>				
<b>Tuapse</b>				
Shestaki opencast (Stroiservis)	Hard coal SS	Razrez	Kemerovo region	5.00
Barzasskoye fellowship (Stroiservis)	Hard coal SS	Biryulinskaya	Kemerovo region	4.44
<b>Total Stroiservis</b>				<b>9.44</b>
Kuzbassrazrezugol	Hard coal SS	Bochaty	Kemerovo region	64.40
Kuzbassrazrezugol	Hard coal SS	Cherkasov Kamen	Kemerovo region	40.01
Kuzbassrazrezugol	Hard coal SS	Latyshi	Kemerovo region	81.50
Kuzbassrazrezugol	Hard coal SS	Razrez	Kemerovo region	35.17
Kuzbassrazrezugol	Hard coal SS	Tyrgan	Kemerovo region	26.53
Kuzbassrazrezugol	Various	No data	No data	0.13
*excluding shipments to CIS and Baltic states				

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
<b>Total Kuzbassrazrezugol</b>				<b>247.74</b>
Mezhdurechye (Sibuglemet)	Hard coal T	Kiyzak	Kemerovo region	3.55
No data	Various	No data	Kemerovo region	3.49
No data	Various	No data	No data	26.04
<b>Total Tuapse</b>				<b>290.27</b>
<b>Azov</b>				
Suek	Hard coal D	Chernogorskiye Kopi	Khakasia	60.04
Suek	Various	No data	No data	0.13
<b>Total Suek</b>				<b>60.17</b>
Sibenergougol	Hard coal T	Novokuznetsk-sort.	Kemerovo region	4.60
Sibenergougol	Various	No data	No data	0.07
No data	Various	No data	Kemerovo region	1.31
No data	Various	No data	Khakasia	4.03
No data	Various	No data	No data	4.72
<b>Total Azov</b>				<b>74.90</b>
<b>Yeysk</b>				
Salek (Sibirski Delovoi Soyuz)	Hard coal D	Yerunakovo	Kemerovo region	14.35
Kiselevskaya mine (Sibirski Delovoi Soyuz)	Hard coal G	Cherkasov Kamen	Kemerovo region	4.69
Chernigovets (Sibirski Delovoi Soyuz)	Hard coal SS	Zaboischik	Kemerovo region	53.76
<b>Total Sibirski Delovoi Soyuz</b>				<b>72.80</b>
Bungurski-Severny opencast	Hard coal T	Novokuznetsk-sort.	Kemerovo region	2.20
Belovopogruztrans (Belon)	Hard coal D	Meret	Kemerovo region	4.57
No data	Various	No data	Kemerovo region	1.52
No data	Various	No data	No data	4.39
<b>Total Yeysk</b>				<b>85.48</b>
<b>Taganrog</b>				
Taltek	Hard coal D	Yerunakovo	Kemerovo region	3.51
Polyany (Taltek)	Hard coal T	Krasnyi Kamen	Kemerovo region	2.77
<b>Total Taltek</b>				<b>6.28</b>
Kuzbassrazrezugol	Hard coal SS	Bochaty	Kemerovo region	10.03
Kuzbassrazrezugol	Hard coal SS	Latyshi	Kemerovo region	31.83
Kuzbassrazrezugol	Hard coal SS	Tyrgan	Kemerovo region	11.00
Kuzbassrazrezugol	Various	No data	No data	0.13
<b>Total Kuzbassrazrezugol</b>				<b>52.99</b>
Zenkovskiy mine	Hard coal T	Zenkovo	Kemerovo region	2.91
Sholokhovskoye PTU	Concentrate	Grachi	Rostov region	2.53
Sholokhovskoye PTU	Hard coal T	Grachi	Rostov region	0.82
Salek (Sibirski Delovoi Soyuz)	Hard coal D	Terentyevskaya	Kemerovo region	1.03
Oktyabrinski opencast	Hard coal SS	Krasnyi Kamen	Kemerovo region	1.58
Mine No. 12 (Stroiservis)	Hard coal SS	Cherkasov Kamen	Kemerovo region	8.03
Berezovski opencast	Hard coal T	Prokopyevsk	Kemerovo region	7.01
No data	Various	No data	Kemerovo region	1.35
No data	Various	No data	No data	4.15
*excluding shipments to CIS and Baltic states				

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
<b>Total Taganrog</b>				<b>88.69</b>
<b>Rostov-on-Don</b>				
Salek (Sibirski Delovoi Soyuz)	Hard coal D	Yerunakovo	Kemerovo region	14.98
Kiselevski opencast (Sibirski Delovoi Soyuz)	Hard coal SS	Uglerod	Kemerovo region	38.10
Kiselevskaya mine (Sibirski Delovoi Soyuz)	Hard coal G	Cherkasov Kamen	Kemerovo region	0.28
Chernigovets (Sibirski Delovoi Soyuz)	Hard coal SS	Zaboischik	Kemerovo region	51.60
Chernigovets (Sibirski Delovoi Soyuz)	Various	No data	No data	0.07
<b>Total Sibirski Delovoi Soyuz</b>				<b>105.03</b>
Yuzhtrans	Anthracite	Gukovo	Rostov region	3.67
Rover	Hard coal SS	Biryulinskaya	Kemerovo region	9.67
Rover	Various	No data	No data	0.06
Quant	Hard coal T	Krasnyi Kamen	Kemerovo region	1.23
Quant	Various	No data	No data	0.07
Kuzbass engineering company (Coeclerici)	Hard coal T	Kaltan	Kemerovo region	5.55
Belovo company	Hard coal D	Belovo	Kemerovo region	0.35
No data	Various	No data	Altai	0.07
No data	Various	No data	Kemerovo region	1.70
No data	Various	No data	Rostov region	0.07
No data	Various	No data	No data	10.10
(ныстро)	Hard coal T	Obnorskaya	Kemerovo region	2.76
<b>Total Rostov-on-Don</b>				<b>140.34</b>
<b>Temryuk</b>				
Yuzhny Kuzbass (Mechel)	Hard coal T	Kiyzak	Kemerovo region	2.23
Yuzhny Kuzbass (Mechel)	Hard coal T	Myski	Kemerovo region	33.69
<b>Total Mechel</b>				<b>35.93</b>
Taltek	Hard coal D	Yerunakovo	Kemerovo region	7.28
No data	Various	No data	No data	1.23
<b>Total Temryuk</b>				<b>44.44</b>
<b>Total south ports of Russia</b>				<b>724.11</b>
<b>Ports of Ukraine</b>				
<b>Yuzhny</b>				
Zarechnaya mine (Zarechnaya)	Concentrate	Leninsk-Kuznetski-2	Kemerovo region	67.38
Zarechnaya mine (Zarechnaya)	Hard coal D	Leninsk-Kuznetski-2	Kemerovo region	37.60
Zarechnaya mine (Zarechnaya)	Hard coal G	Leninsk-Kuznetski-2	Kemerovo region	1.52
<b>Total Zarechnaya</b>				<b>106.50</b>
Salek (Sibirski Delovoi Soyuz)	Hard coal D	Yerunakovo	Kemerovo region	9.38
Chernigovets (Sibirski Delovoi Soyuz)	Hard coal SS	Zaboischik	Kemerovo region	32.14
<b>Total Sibirski Delovoi Soyuz</b>				<b>41.52</b>
Kuzbassrazrezugol	Hard coal D	Leninsk-Kuznetski-2	Kemerovo region	22.99
Kuzbassrazrezugol	Hard coal D	Yerunakovo	Kemerovo region	80.49
Kuzbassrazrezugol	Hard coal G	Yerunakovo	Kemerovo region	14.59
Kuzbassrazrezugol	Hard coal SS	Bochaty	Kemerovo region	10.03
<b>Total Kuzbassrazrezugol</b>				<b>128.10</b>
*excluding shipments to CIS and Baltic states				


Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
No data	Various	No data	Kemerovo region	4.78
No data	Various	No data	No data	11.98
<b>Total Yuzhny</b>				<b>292.88</b>
<b>Mariupol</b>				
Kuzbassrazrezugol	Hard coal T	Malinovka	Kemerovo region	12.80
Kuzbassrazrezugol	Hard coal T	Sarbala	Kemerovo region	5.03
Kuzbassrazrezugol	Hard coal T	Tyrgan	Kemerovo region	3.02
<b>Total Kuzbassrazrezugol</b>				<b>20.85</b>
Zarechnaya mine (Zarechnaya)	Concentrate	Leninsk-Kuznetski-2	Kemerovo region	10.02
Yuzhtrans	Anthracite	Gukovo	Rostov region	9.52
Sibenergougol	Hard coal T	Novokuznetsk-sort.	Kemerovo region	35.56
Rover	Hard coal SS	Biryulinskaya	Kemerovo region	4.00
Polyany (Taltek)	Hard coal T	Krasnyi Kamen	Kemerovo region	34.55
Kuzbasskaya Toplivnaya Kompaniya (KTK)	Hard coal D	Meret	Kemerovo region	9.60
Belovopogruztrans (Belon)	Hard coal D	Meret	Kemerovo region	10.03
Alfa-Partner	Anthracite	No data	No data	3.85
No data	Various	No data	Kemerovo region	0.66
No data	Various	No data	Khakasia	0.63
No data	Various	No data	Rostov region	20.21
No data	Various	No data	No data	3.50
<b>Total Mariupol</b>				<b>162.98</b>
<b>Izmail</b>				
Suek	Hard coal D	Chernogorskiye Kopi	Khakasia	22.98
Suek	Hard coal D	Terentyevskaya	Kemerovo region	3.00
Suek	Hard coal D	Yerunakovo	Kemerovo region	4.46
<b>Total Suek</b>				<b>30.44</b>
Kuzbassrazrezugol	Hard coal D	Yerunakovo	Kemerovo region	9.97
Kuzbassrazrezugol	Hard coal SS	Bochaty	Kemerovo region	10.03
Kuzbassrazrezugol	Hard coal SS	Tyrgan	Kemerovo region	10.08
Kuzbassrazrezugol	Hard coal T	Tyrgan	Kemerovo region	8.61
<b>Total Kuzbassrazrezugol</b>				<b>38.69</b>
Chernigovets (Sibirski Delovoi Soyuz)	Hard coal SS	Zaboischik	Kemerovo region	4.97
No data	Various	No data	Kemerovo region	4.73
No data	Various	No data	Khakasia	11.20
No data	Various	No data	No data	3.11
<b>Total Izmail</b>				<b>93.14</b>
<b>Kerch</b>				
Chernigovets (Sibirski Delovoi Soyuz)	Hard coal SS	Zaboischik	Kemerovo region	18.76
Bungurski-Severny opencast	Hard coal T	Novokuznetsk-sort.	Kemerovo region	4.89
No data	Various	No data	Kemerovo region	3.69
No data	Various	No data	No data	0.21
<b>Total Kerch</b>				<b>27.55</b>
*excluding shipments to CIS and Baltic states				

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
<b>Nikolayev</b>				
No data	Various	No data	Rostov region	15.22
No data	Various	No data	No data	0.07
<b>Total Nikolayev</b>				<b>15.29</b>
<b>Total ports of Ukraine</b>				<b>591.85</b>
<b>Total south ports</b>				<b>1,315.96</b>
<b>Total ports</b>				<b>7,882.13</b>
<b>East Europe</b>				
<b>Poland (Brest)</b>				
Vostochno-Beiski opencast (Suek)	Hard coal D	Kamyshta	Khakasia	15.00
Suek	Hard coal D	Chernogorskiye Kopi	Khakasia	51.39
Suek	Hard coal D	Terentyevskaya	Kemerovo region	4.99
Suek	Hard coal D	Yerunakovo	Kemerovo region	39.79
Suek	Hard coal G	Leninsk-Kuznetski-2	Kemerovo region	14.97
<b>Total Suek</b>				<b>126.15</b>
Salek (Sibirski Delovoi Soyuz)	Hard coal D	Terentyevskaya	Kemerovo region	6.66
Chernigovets (Sibirski Delovoi Soyuz)	Hard coal SS	Zaboischik	Kemerovo region	11.99
<b>Total Sibirski Delovoi Soyuz</b>				<b>18.64</b>
Zadubrovski opencast (Russian coal)	Hard coal D	Meret	Kemerovo region	3.05
Yevtinski opencast (Russian coal)	Hard coal D	Meret	Kemerovo region	5.00
<b>Total Russian coal</b>				<b>8.05</b>
Promugolsevis (Kuzbassrazrezugol)	Hard coal D	Yerunakovo	Kemerovo region	0.53
Kuzbassrazrezugol	Hard coal D	Belovo	Kemerovo region	4.84
<b>Total Kuzbassrazrezugol</b>				<b>5.37</b>
Zarechnaya mine (Zarechnaya)	Hard coal D	Leninsk-Kuznetski-2	Kemerovo region	4.98
Siberian Anthracite	Anthracite	Linevo	Novosibirsk region	2.51
Semicoking plant	Hard coal D	Leninsk-Kuznetski-1	Kemerovo region	0.13
Sayano-Partizanski opencast	Hard coal G	Sayanskaya	Krasnoyarsk region	1.98
Proropyevskaya preparation factory	Hard coal D	Prokopyevsk	Kemerovo region	3.11
Kuzbasskaya Toplivnaya Kompaniya (KTK)	Hard coal D	Meret	Kemerovo region	75.02
Krona-S	Hard coal D	Meret	Kemerovo region	0.46
Krasnoyarskkraiugol	Brown coal	Kilchug	Krasnoyarsk region	0.95
Khakmet	Brown coal	Uzhur	Krasnoyarsk region	0.83
Belovo company	Hard coal D	Belovo	Kemerovo region	2.97
No data	Various	No data	Kemerovo region	9.05
No data	Various	No data	Khakasia	17.07
No data	Various	No data	No data	0.47
<b>Poland (Bruzgi)</b>				
Vostochno-Beiski opencast (Suek)	Hard coal D	Kamyshta	Khakasia	14.97
Suek	Hard coal D	Terentyevskaya	Kemerovo region	8.02
Suek	Hard coal D	Yerunakovo	Kemerovo region	23.57
<b>Total Suek</b>				<b>46.56</b>
Zadubrovski opencast (Russian coal)	Hard coal D	Meret	Kemerovo region	6.49
Yevtinski opencast (Russian coal)	Hard coal D	Meret	Kemerovo region	1.72
<b>Total Russian coal</b>				<b>8.21</b>
*excluding shipments to CIS and Baltic states				

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
Zarechnaya mine (Zarechnaya)	Concentrate	Leninsk-Kuznetski-2	Kemerovo region	10.02
Taltek	Hard coal D	Yerunakovo	Kemerovo region	1.94
Promugol servis (Kuzbassrazrezugol)	Hard coal D	Yerunakovo	Kemerovo region	10.30
Permyakovski opencast (Stroiservis)	Hard coal D	Belovo	Kemerovo region	16.09
Kuzbasskaya Toplivnaya Kompaniya (KTK)	Hard coal D	Meret	Kemerovo region	65.51
No data	Various	No data	Kemerovo region	4.12
No data	Various	No data	Khakasia	1.35
<b>Poland (Izov)</b>				
Yevtinski opencast (Russian coal)	Hard coal D	Meret	Kemerovo region	1.00
Suek	Hard coal D	Chernogorskiye Kopi	Khakasia	12.02
Novosibirsk electrode plant (Siberian Anthracite)	Other hard coal	Linevo	Novosibirsk region	0.04
Kuzbasskaya Toplivnaya Kompaniya (KTK)	Hard coal D	Meret	Kemerovo region	5.06
No data	Various	No data	Khakasia	0.97
<b>Poland (Mamonovo)</b>				
Vostochno-Beiski opencast (Suek)	Hard coal D	Kamyshta	Khakasia	22.96
Suek	Hard coal D	Chernogorskiye Kopi	Khakasia	17.95
Suek	Hard coal D	Terentyevskaya	Kemerovo region	5.03
Suek	Hard coal D	Yerunakovo	Kemerovo region	7.51
Suek	Hard coal G	Leninsk-Kuznetski-2	Kemerovo region	9.07
<b>Total Suek</b>				<b>62.51</b>
Zadubrovski opencast (Russian coal)	Hard coal D	Meret	Kemerovo region	3.00
Yevtinski opencast (Russian coal)	Hard coal D	Meret	Kemerovo region	9.21
<b>Total Russian coal</b>				<b>12.21</b>
Promugol servis (Kuzbassrazrezugol)	Hard coal D	Yerunakovo	Kemerovo region	11.25
Kuzbassrazrezugol	Hard coal D	Leninsk-Kuznetski-2	Kemerovo region	1.42
Kuzbassrazrezugol	Hard coal SS	Latyski	Kemerovo region	4.26
<b>Total Kuzbassrazrezugol</b>				<b>16.93</b>
Zarechnaya mine (Zarechnaya)	Hard coal D	Leninsk-Kuznetski-2	Kemerovo region	3.01
Vostsibugol (En+)	Hard coal D	Kasyanovka	Irkutsk region	3.74
Trudarmeiski opencast (Nordal)	Hard coal D	Trudarmeiskaya	Kemerovo region	2.31
Salek (Sibirski Delovoi Soyuz)	Hard coal D	Terentyevskaya	Kemerovo region	9.02
Prokopyevsk transport company	Hard coal D	Prokopyevsk	Kemerovo region	3.00
Permyakovski opencast (Stroiservis)	Hard coal D	Belovo	Kemerovo region	3.50
Kuzbasskaya Toplivnaya Kompaniya (KTK)	Hard coal D	Meret	Kemerovo region	17.28
No data	Various	No data	Irkutsk region	0.82
No data	Various	No data	Khakasia	23.86
No data	Various	No data	No data	3.21
<b>Poland (Svisloch)</b>				
Promugol servis (Kuzbassrazrezugol)	Hard coal D	Yerunakovo	Kemerovo region	12.53
Kuzbasskaya Toplivnaya Kompaniya (KTK)	Hard coal D	Meret	Kemerovo region	12.73
No data	Various	No data	Khakasia	3.62
<b>Poland (Yagodin)</b>				
Trudarmeiski opencast (Nordal)	Hard coal D	Trudarmeiskaya	Kemerovo region	2.14
Sholokhovskoye PTU	Hard coal G	Grachi	Rostov region	0.99
Kuzbasskaya Toplivnaya Kompaniya (KTK)	Hard coal D	Meret	Kemerovo region	2.99
No data	Various	No data	No data	0.27
*excluding shipments to CIS and Baltic states				

Rail shipments of coal to ports and border crossings*, Sep 10				'000t
Destination/Sender	Coal grade	Point of loading	Region of loading	Volume
<b>Poland (Zheleznodorozhny)</b>				
Promugolservis (Kuzbassrazrezugol)	Hard coal D	Yerunakovo	Kemerovo region	4.53
<b>Total Poland</b>				<b>662.15</b>
<b>Romania (Dyakovo)</b>				
Suek	Hard coal D	Yerunakovo	Kemerovo region	8.86
Kuzbassrazrezugol	Hard coal SS	Latyshi	Kemerovo region	2.20
Chernigovets (Sibirski Delovoi Soyuz)	Hard coal SS	Zaboischik	Kemerovo region	1.96
<b>Total Romania</b>				<b>13.02</b>
<b>Slovakia (Uzhgorod)</b>				
Kuzbassrazrezugol	Hard coal SS	Latyshi	Kemerovo region	18.80
Kuzbassrazrezugol	Hard coal T	Malinovka	Kemerovo region	1.18
Kuzbassrazrezugol	Hard coal T	Sarbala	Kemerovo region	19.64
<b>Total Kuzbassrazrezugol</b>				<b>39.62</b>
Yuzhtrans	Anthracite	Gukovo	Rostov region	0.53
Sibenergougol	Hard coal T	Novokuznetsk-sort.	Kemerovo region	0.28
Ksem (Nordal)	Hard coal D	Meret	Kemerovo region	0.94
Krasnoyarskkraiugol	Brown coal	Kilchug	Krasnoyarsk region	1.50
Abashevskaya central preparation factory (Evraz Group)	Hard coal G	Obnorskaya	Kemerovo region	12.60
No data	Various	No data	Khakasia	19.99
<b>Slovakia (Chop)</b>				
Siberian Anthracite	Anthracite	Linevo	Novosibirsk region	1.53
<b>Total Slovakia</b>				<b>76.99</b>
<b>Hungary (Batevo)</b>				
Kuzbassrazrezugol	Hard coal SS	Latyshi	Kemerovo region	3.00
Kuzbassrazrezugol	Hard coal T	Malinovka	Kemerovo region	0.63
<b>Total Kuzbassrazrezugol</b>				<b>3.63</b>
Zarechnaya mine (Zarechnaya)	Hard coal D	Leninsk-Kuznetski-2	Kemerovo region	12.12
Suek	Brown coal	Zaozernaya	Krasnoyarsk region	8.01
Krasnoyarskkraiugol	Brown coal	Kilchug	Krasnoyarsk region	0.89
Kolmogorovskaya-2 mine (Promuglesbyt)	Hard coal D	Belovo	Kemerovo region	1.03
<b>Total Hungary</b>				<b>25.68</b>
<b>Total east Europe</b>				<b>777.84</b>
<b>China</b>				
No data	Various	No data	Kemerovo region	5.04
No data	Various	No data	No data	0.35
<b>Total China</b>				<b>5.39</b>
<b>Grand total</b>				<b>8,665.36</b>
*excluding shipments to CIS and Baltic states				

Russian coal specification				
Type of coal	Coal grade	Vitrinite reflectance index (Ro) %	Volatile matter %	Plastic layer thickness (Y) mm
Anthracite	A	>2.2	<8	
Brown coal	B	< 0.6	10-48	
Long flame coal	D	0.40-0.79	>30	<6
Long flame gas coal	DG	0.50-0.79	>30	6-9
Gas coal	G	0.50-0.99	>30	6-12
Gas fat semi-lean coal	GZhO	<99	<38	10-16
Gas fat coal	GZh	0.50-0.99	38	16-25
Fat coal	Zh	0.80-1.19	28-36	14-26
Semi-lean caking coal	OS	1.30-1.79	<20	6-12
Lean caking coal	TS	1.40-1.99	<20	<6
Weakly caking coal	SS	0.70-1.79	>20	<6
Lean coal	T	1.30-2.59	8-18	none
Coke fat coal	KZh	0.90-1.29	24-30	>18
Coke coal	K	1.00-1.69	24-28	13-17
Coke semi-lean coal	KO	0.80-1.39	24-28	10-12
Coke weakly caking low metamorphic coal	KSN	0.80-1.09	>30	6-9
Coke weakly caking coal	KS	1.10-1.69	<30	6-9

 <p><b>Argus offices:</b></p> <p><b>London (head office)</b> Tel: +44 20 7780 4200 Fax: +44 20 7780 4201</p> <p><b>Moscow</b> Tel: +7 495 933 7571 Fax: +7 495 933 7572</p> <p><b>Singapore</b> Tel: +65 6496 9966 Fax: +65 6533 4181</p> <p><b>Tokyo</b> Tel: +81 3 3524 5086 Fax: +81 3 3524 5088</p>	<p><b>Houston</b> Tel: +1 713 968 0000 Fax: +1 713 622 2991</p> <p><b>Washington</b> Tel: +1 202 775 0240 Fax: +1 202 872 8045</p> <p><b>Founder:</b> JA Nasmyth <b>Publisher:</b> Adrian Binks <b>Chief operating officer:</b> Neil Bradford <b>Global compliance officer:</b> Jeffery Amos</p> <p><b>Business development:</b> Peter Caddy, Barbara Kalu, Jim Nicholson (Europe, Middle East, Asia-Pacific), Caroline Gentry, Daniel Massey, Miles Weigel (Americas), Paul Hienkens, Joost Korver (downstream Europe), Charles Davis</p>	<p>(downstream US), Mikhail Perfilov, Vyacheslav Mischenko (CIS) <b>Commercial manager:</b> Jo Loudiadis <b>Editor in chief:</b> Ian Bourne <b>Executive editors:</b> Euan Craik, Jason Feer <b>Managing editor:</b> Cindy Galvin <b>Editor Argus Russian Coal:</b> Natalya Bortsova Tel: +7 495 933 7571 <a href="mailto:coal@argusmedia.com">coal@argusmedia.com</a></p> <p><b>Customer support and sales:</b> Moscow: Yelena Timofeeva, Dmitry Pokhlebayev Tel: +7 495 933 7571 London: Richard Cretollier Tel +44 20 7780 4200</p>	<p>Singapore: Dewati Kurniawan Tel: +65 6496 9967 Washington: Zachary Rhonheimer Tel: +1 202 775 0240 <a href="mailto:sales@argusmedia.com">sales@argusmedia.com</a> <a href="mailto:support@argusmedia.com">support@argusmedia.com</a></p> <p><b>ISSN 1753-0857</b> <b>Copyright © 2010 Argus Media Ltd</b> <b>All rights reserved</b> <i>Notice: By reading this publication you agree that you will not copy or reproduce any part of its contents (including, but not limited to, single prices or any other individual items of data) in any form or for any purpose whatsoever without the prior written consent of the publisher.</i></p> 
---	--	--	--