



A gentle cough about where electricity comes from

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Topic: [Supply/Production](#)

Tags: [moscow coal basin](#), [natural gas](#), [russia](#), [sakhalin](#), [shtokman](#) [[list all tags](#)]

[Jerome a Paris](#) seems to feel that I am being somewhat hard on Gazprom, and that I should recognize that they are a good provider with a more than adequate reserve, and that I should therefore, I suppose, shut up.

At the risk of being a tad repetitive, let me therefore explain, and clarify, some of my concerns. To begin let me state that very obviously Gazprom and Russian interests are not the same as those of the West. Gazprom has every right to run their business to their own advantage, and that is not the major point of concern. However, what has to be of concern to the governments of each nation that it supplies with natural gas, is the reliability and price of the product that it is marketing. If those countries come to rely increasingly on Russian supply, then any disruption in that supply can have significant domestic consequences. Typically these shortages seem to fall in the winter, at a time where, as we learned from Colorado last spring, severe weather can limit production from gas fields. It is at those times that domestic power consumption goes up. And while not trying to teach my grandmother to suck eggs, I have to cough gently and point out, to some of our readers (though not Jerome), that electricity does not magically appear out of an outlet.

The power shortage that I wrote of that concerns the Moscow mayor will cascade back to the fuel that powers the generator stations. And that, increasingly, is [natural gas](#). I was told, on one of my visits over there, that the Moscow Coal Basin is no longer that productive, and the coals are lignite and [low grade bituminous](#) and the major mines of the Don Basin are now in Ukraine. Thus one finds that power stations in the region are largely [powered by gas](#)

As a major power-generating center, the region has six electric power plants, including the Shchekino Novomoskovsk and Cherepets thermal power plants (Shchekinskaya, Novomoskovskaya, and Cherepetskaya GRES) and the Aleksin, Pervomaisk, and Efremov cogeneration plants (Aleksinskaya, Pervomaiskaya, and Efremovskaya TETs). Power generated by the region meets 60-65% of regional demand, while the shortfall is purchased on RAO UES of Russia's (RAO EES Rossii) wholesale market.

Three of these power plants use natural gas and coal from the Moscow basin as fuel, one of them operates on gas and fuel oil, one on gas only, and one on imported coal and fuel oil. Gas makes up more than 92% of the fuel balance of AO Tulenergo's power plants, coal makes up about 6.5%, and fuel oil makes up the remainder. At Cherepets, the region's most powerful thermal plant, coal from the Ekibastuz, Kuznetsk, and Karaganda basins makes up 85.5% of the fuel and fuel oil, 14.5%.

It is one of the concerns, not mainly for Russia, since they do have the natural gas for their own plants, but it has to be of concern to those countries, whether in Europe or America, where an increasing number of power stations are being persuaded to use natural gas as their primary power source. The limitations on this supply, which Dave in particular has articulated in several cogent articles, and the reliance on a single source, or pipeline to provide that supply, is not prudent.

I can understand that Gazprom want the reassurance of having a confirmed customer before they make the major investments that will be needed in new fields. It is, as Jerome [says](#)

Neither big pipelines nor big LNG projects are built on the basis of market mechanisms. They require long term "take-or-pay" contracts (i.e. the buyer has to pay whether it needs the gas or not) that cannot be cancelled; price formulas set for the whole duration, and strict contractual terms on all parties in the chain: the gas provider, the transporter and the buyer. This is the only way to finance these investments, as they need a minimum of visibility for anyone to pitch in the multi-billion dollar amounts needed before a single molecule can flow. All oil&gas companies know this, and use the same kind of contracts, because it's the only way this business works.

However that concern goes both ways, and it is the long-term reliability of supply that has to concern governments. Stating that Britain has some [cause for concern](#)

the UK is running out of natural gas faster than expected, as North Sea production is now in rapid decline. This has created, in the absence of available alternatives (and also due to an accident at a storage facility) some brutal natural gas price spikes (up to the equivalent of 240\$/bl of oil equivalent - see Countdown to 100\$ oil (22) - gas shortages in the UK - 240\$/boe), and panic within the Blair government, worried that it would be blamed for its lack of foresight. (see EU Energy reform = give Britain access to the continent's cheap spare capacity);

means that, regardless of cause, they now have to find an answer. Can sufficient natural gas be supplied to the UK in the face of their declining supply and increasing demand?

And what about the longer term concerns in the US about supplies of LNG? As Nate [pointed out](#) the announcement that Exxon will not be allowed to book the new [reserves at Sakhalin](#) that they are finding beyond the limits of the current leases, raises a worry. Not that Russia don't have the right to do this. But when this is added to the pressures that Shell are seeing with Sakhalin 2, and the fact that Russia is now considering China as a more significant customer, has to give those who might have been counting on Russian LNG a bit of concern, for where else might they find an alternative supply?

I guess, now that they are re-opening talks on [developing Shtokman](#), we will find out whether this is a general attitude change, or just due to local issues. Though if American companies are frozen out, it will just add to the concerns as to where the needed supply might come from in the quantities required.

And again an apology that, while I would like to continue this discussion further, for the 3rd Sunday in a row I will be over the Atlantic, and, I suspect, with very limited Internet access for the next short while. But I hope to pick this up, perhaps with some additional viewpoints, after a couple of weeks.



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