



# UNECE Weekly

United Nations Economic Commission for Europe

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## Question of the week ...

to Kaj Bärlund, Director of the UNECE



*Environment  
and Human  
Settlements  
Division*

*News reports in  
Geneva have drawn  
attention to the  
high levels of fine  
particles recently  
found in the air  
around the lake. In*

*Lausanne, 216 mg per cubic metre have  
been measured, more than four times the  
legal limit of 50. Should we be concerned?*

Such concentrations can occur under certain meteorological conditions, especially in valleys where emissions may be “trapped” and undiluted for several days. But fine particles are not just a local problem.

Internationally there is increasing concern about fine particles and their effects on human health. Work by WHO with UNECE's Convention on Long-range Transboundary Air Pollution has drawn attention to the

significant effects of fine particles on populations all over Europe. Calculations show that current exposure to man-made sources of particles leads to an average loss of 8.6 months of life expectancy in the EU region. This varies from around 3 months in Finland to more than 13 months in Belgium.

These average figures hide the fact that vulnerable groups in society, those with existing heart or lung disease, asthmatics, the socially disadvantaged and children, may suffer more serious consequences. Health effects are observed at all levels of exposure, not simply above legal limits - so some people are at risk even at the lowest levels. The severity of the effects, and the number of people affected, grow with increasing concentration of fine particulates.

We are still learning about the effects of fine particulates. But we now have many more measurements of pollution levels throughout Europe and we are beginning to understand that fine particles can travel great distances. The widely dispersed particles have long-term (chronic) effects

on large numbers of Europeans, but can be detected only by carefully conducted studies, lasting many years. The short-term very high concentrations, such as those recently reported around Geneva, may have more noticeable acute effects on those locally exposed. Studies showing the increase of a wide range of symptoms and diseases, and even an increase in number of deaths, have been conducted in hundreds of cities across the world, pointing to the harmful nature of the pollution.

The sources - industry, motor vehicles and domestic combustion - all contribute to the problem, and many European countries have already taken some steps to cut emissions from some sources. However, further action, nationally and internationally, is needed to reach the safer levels we know are possible. The UNECE Convention is currently looking into ways that we might achieve this through international agreement. Such steps would not only cut high concentrations locally, but also decrease the exposure of millions of Europeans to the lower but much longer-term concentrations from distant sources. ❖

## Energy Availability, Affordability and Security of Supply

Last week's article on Natural Gas Export Prices, Transit Fees and Security of Supply in Issue No. 157 generated much interest, particularly on the interdependency of energy availability, affordability and security of supply. The recent agreement reached between Gazprom (Russia) and Naftogaz (Ukraine) on future natural gas imports and transit through Ukraine is a case in point.

With this agreement, Naftogaz accepted an immediate doubling of natural gas import prices (from \$50 per million cubic metres to \$95). For Ukraine, this in turn triggered higher energy import costs, a deterioration of the terms of trade and could have a negative impact on real national income. On the other side of the ledger, the producing/exporting companies gave up revenues by accepting a price level below international prices (half the international price) for six months.

The five-year agreement guarantees the level of transit fees for the full five years. In

this case, Ukraine accepted transit fees of \$1.60 per thousand cubic metres for 100 kilometres. While this is the same as the fees set in Russia for natural gas transiting through Russia from Central Asia, it is about one-half the prevailing rate in some western countries. Likewise, with this agreement on transit fees, downstream countries can continue to benefit from reliable transit of Russian gas through Ukraine.

Indeed, this is a very good example of the interdependency among UNECE countries in the field of energy. Producing, transit and consuming countries are all dependent on each other to ensure that energy, and in this case natural gas, is available, is affordable and is secure. Give and take, compromise and trust are necessary ingredients to guarantee the continuous flow of gas across borders. Indeed, for well over 35 years, over 80% of Russian gas deliveries to western Europe have transited through Ukraine. Delegates to the Working Party on Gas, to be held in January 2007, will have the opportunity to discuss many of these issues at the Roundtable on “Securing

Reliable Natural Gas Supply in the Context of Sustainable Development in the UNECE Region”.

While countries can strengthen their energy security by taking various national measures, – such as, enhancing energy conservation and efficiency, expanding the type and variety of energy sources available to consumers, developing indigenous supplies, and promoting research and development in new and alternative sources of energy – they can also do so effectively by cooperating with each other in a multilateral environment on issues that directly and indirectly impinge on the energy security of all. The growing concern of UNECE countries about energy availability and security of energy supplies clearly calls for strengthening international relations and multilateral economic cooperation in the field of energy. The UNECE Committee on Sustainable Energy, including through its Working Party on Gas and Energy Security Forum, provides an ideal forum to facilitate this. ❖

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## UNECE turns attention to coal

The UNECE, with many large coal producers as members, has long been very active in promoting the sustainable use of coal. Currently two Ad Hoc Group of Experts and a Task Force address a range of issues for the coal industry – all three bodies met the week commencing 30 January.

### Resurgence of interest in coal

In recent years, the emphasis on sustainable energy development has centred on natural gas, hydrogen and renewable energy sources such as hydro, solar and wind power. In contrast, due to its lack of environmental credentials coal's future was in question even though it meets 25% of global energy demand and is the fuel for some 40% of the world's electricity generation. Today, however, a resurgence of interest in coal can clearly be seen. This turnaround for coal is based on many factors, but some of the more notable include the higher petroleum and natural gas prices, the renewed economic vigour in transition economies and rapid economic growth in developing countries such as China and India. The coal industry in many countries is undergoing a very painful, but often necessary restructuring process resulting in the closure of unprofitable mines. In addition, energy security is once again a primary concern and coal can be found in plentiful supply on every continent. Whilst natural gas has for many years been the fuel of choice, its competitive position for power generation is deteriorating due to the current higher gas prices and despite significant political commitment, the contribution of renewables to meeting overall energy demand is likely to remain relatively small.

### Reduce environmental impact

Although coal is an abundant, reliable and secure fuel, the industry recognizes that it cannot rest on those laurels alone and that, in particular, it needs to continue to reduce its environmental impact throughout the supply chain. In the carbon constrained world of today, coal without carbon capture and storage has no future and hence this topic features high on the agenda for discussion by the Ad Hoc Group of Experts on Coal in Sustainable Development. Continued emphasis on improving mine safety is also very important, and industry restructuring is not yet complete in every country. ❖



### Coal mine methane

The *Ad Hoc Group of Experts on Coal Mine Methane* was established in 2004 to address the growing concern over methane emissions from the coal sector in the UNECE region. Methane is a greenhouse gas 23 times more potent than carbon dioxide, yet it is also often a wasted energy resource that is discharged and simply emitted to the atmosphere. Coal seams often contain methane, and the methane is released into the mine when the coal is fractured. To maintain safety and avoid explosions the methane is removed from the mine. The UNECE member countries are among the world's largest producers of mine methane, and there is a great desire for technical cooperation to reduce these

emissions through effective recovery and use programmes. The Group of Experts will focus on promoting the financing of mine methane projects in the CIS and Central and Eastern Europe and on technical issues such as development and deployment of technologies capable of utilizing low quality mine methane.

### Mine safety

In response to requests to place more emphasis on methane degasification for improved mine safety, UNECE

created a *Task Force on the Economic Benefits of Improving Mine Safety through the Extraction and Use of Coal Mine Methane*. This small technical working group will develop general guidelines for improved methane drainage programmes. Case studies of actual projects will be prepared in 2006, leading to a series of best practices to be incorporated into guidelines designed to aid the coal industries in all countries to make informed decisions on how best to deal with mine methane.

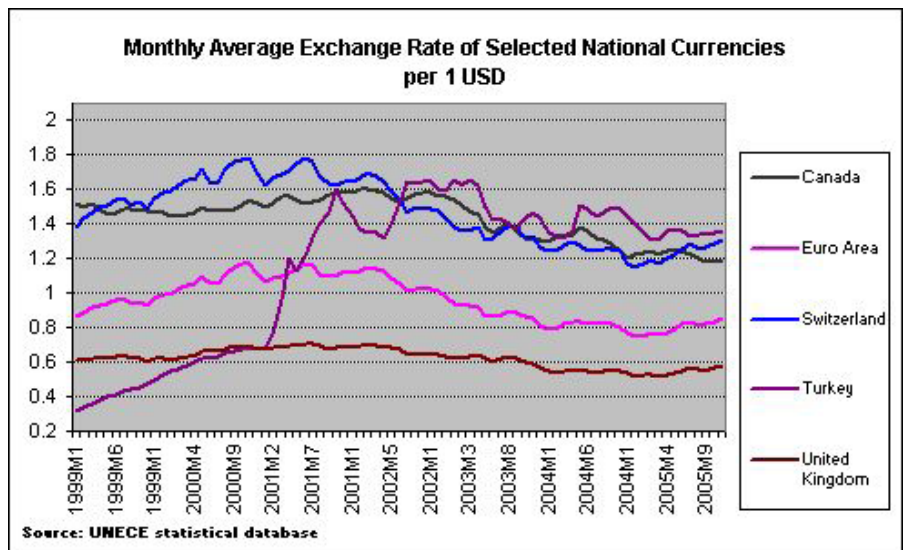
### Sustainable development

The *Ad Hoc Group of Experts on Coal in Sustainable Development* identifies critical issues for the industry and works to resolve these by facilitating cooperation and communication among member countries and other affected parties. The issues vary with time, but coal supply and demand, industry restructuring, technology transfer, and market development have been major drivers in the past. With the recognition that power markets and carbon constraints are now driving demand for coal, the Group of Experts is shifting its focus to address carbon capture and storage and clean coal technologies. ❖

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## Coming up ...

7-9 February Inland Transport Committee



The above graph shows monthly movements in the value of United States Dollar (US\$) against selected national currencies since the beginning of 1999. With the exception of the Turkey New Lira, during the period between January 1999 and November 2005 the US\$ depreciated against all the selected currencies. During this period the US\$ depreciated 22.4% against the Canadian Dollar, 1.2% against the Euro, 5.1% against the Swiss Franc and 4.9% against the Pound. During the same period the US\$ appreciated 325.0% against the normalised Turkey New Lira.

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