

Water, air and sun for energy

Alternative power engineering to help Belarus save energy resources

By Alexander Nebukin

Belarusian power engineers have long pondered how to use wind, solar, geothermal and hydro power to maximum benefit, with alternative energy technologies piloted countrywide. However, these are yet to become widespread, with many only existing as single projects. Traditional gas, oil and oil products still dominate the domestic energy sphere and will continue to do so until alternatives are embraced on a more ambitious scale.

Over 80 percent of Belarusian energy resources are imported, with our country consuming almost 40m tonnes of conventional fuel annually. The figure has been falling (down from 63m tonnes in 1990) but we are still far from energy independence.

Süd-süd-west

Experts calculate that wind turbines account for just 0.008 percent in the country's energy balance. Because of the absence of special programmes to stimulate wind power, it will take at least 10 years, by some estimates, for

turbines to pay for themselves. However, specialists note that the country boasts powerful wind potential, so large and small wind farms could work efficiently.

Recently, one such unit began operations at Grodnoenergo while the CIS' most powerful (and tallest) wind turbine was launched near Novogrudok. In a short period of time, it has become evident that wind power really can bring dividends. Already, German investor Enertrag is helping implement a wind park project, with turbines located on the country's highest hills, in the Minsk Region's Dzerzhinsk District.

In fact, the payback period for wind power in Belarus is considerably lower than that in a number of European states. Investors hope that Dzerzhinsk's wind park will pay for itself within a decade. Anatoly Smirnov, a candidate of technical sciences, tells us, "Unfortunately, projects constructed on a small scale take longer to pay for themselves. However, the growing price of electricity speeds up the payback period of investment projects. Just five years ago,



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Energy workers build ambitious plans regarding search for alternative energy sources

wind farms were taking 20 years to recoup their costs."

Constant drips wear away a stone

Belarus' flat landscape is an undeniable fact, so how can hydroelectric stations really come into play, except on a very small scale? Several significant hydroelectric power stations are being constructed however, designed in our Republic.

Unlike wind power, water energy has long been used in the Belarusian power system, dating from the late 1950s, when over 150 small hydroelectric power stations were located by rivers and ponds. However, only four survived the USSR's collapse. Today, Grodno is building a hydroelectric power station on the Nieman River while Polotsk's hydroelectric power station is being built on the Zapadnaya

Dvina River. Specialists believe that around 800m kW/h of electricity will be produced by these two new stations, replacing 226m cubic metres of imported natural gas annually.

Rules of saving

Alternative energy is part of the 2011-2015 Strategy for the Development of Energy Potential, with the state pinning great hopes on renew-

able energy sources. These could become the basis of the country's energy security once technical barriers are overcome. By 2020, Belarus should have reduced its power consumption by up to 210-220kg of oil equivalent per \$1,000 of GDP, matching the level of developed European states. It's expected that, by 2015, GDP power consumption should be reduced by at least 50 percent.

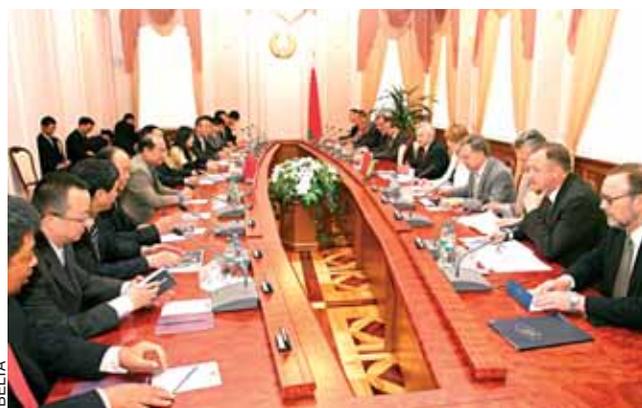
Pure trade shifts towards more substantial projects

Belarus already implementing \$6bn of investment projects jointly with China, with many more planned

By Oksana Shikunova

On meeting China's Deputy Minister of Commerce, Chen Jian, in Minsk, Belarus' Deputy Prime Minister, Anatoly Tozik, has stressed that Belarus and China are implementing joint projects worth almost \$6bn, of which \$3.5bn is on loan from Chinese banks. Speaking of specific projects, Mr. Tozik mentioned Minsk's TPP-2 — commissioned on June 29th. "This is the first successful project in the field of energy being realised jointly with a Chinese corporation," he said, adding that, in September 2011, another major project will be implemented at Minsk's TPP-5.

Over 20 Chinese corporation and subsidiary offices operate in Belarus at present. According to Mr. Tozik, Belarus and China have reached a new phase in their bilateral relations: the opening of joint companies and implementation of mutually beneficial projects using direct investments. In his words, the joint venture producing white goods — Midea-Horizont —



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Useful talks at Minsk's meeting

is quite a success in Belarus. "In the near future, we plan to reach production of three million microwave ovens, while building several more plants to produce household appliances in Belarus," Mr. Tozik stressed. A joint company producing hydro-mechanical transmissions for heavy trucks has also been set up in Belarus.

Joint companies using Belarusian capital also operate in China, such as one joint venture producing chassis for heavy trucks — including military machinery, which has been there for almost 15 years. A joint facility to produce dump trucks has been

established and, in Harbin, we have joint production of forage harvesters; this year, over 1,000 vehicles will be produced there. Moreover, the joint assembly of high powered tractors has been launched; according to Mr. Tozik, this machinery has good prospects on the Chinese market.

Mr. Tozik stressed positive trends in the two states' mutual trade, saying, "In 2005, figures reached \$800m. This year, trade is expected to reach \$3bn." He noted that our countries have recently shifted from pure trade to the realisation of major investment projects.

Corporation ready and eager to become potential partner

Indian investors could be attracted to develop brown coal deposits in Belarus

Opportunities for the participation of Indian companies in such projects were discussed at a recent meeting between the First Deputy Minister of Natural Resources and Environmental Protection of Belarus, Vitaly Kulik, and an Indian delegation led by Coal Min-

ister Sriprakash Jaiswal. The Press Service tells us that "the meeting focused on the use of natural resources and prospects for attracting Indian investment into the development of brown coal deposits in Belarus. Special attention was paid to a project to construct a mining enterprise at Lelchitsy brown coal deposit".

Neyveli Lignite Corporation Limited — engaged in

the exploration of deposits of brown coal in India and construction of corresponding mines — could be a potential partner.

India is the seventh largest producer of brown coal in the world, mining in the Indian states of Tamil Nadu, Rajasthan, Kashmir and Gujarat. Work is underway to explore and develop brown coal deposits in other areas of the country.

Government intends to use membership of IMF to utmost

Belarus' International Monetary Fund quota increased

The Government has agreed to increase Belarus' Special Drawing Rights from the International Monetary Fund to 681.5m (SDR), following the 14th General Review of Quotas by the IMF Board of Governors on 15th December, 2010. The Finance Ministry will implement measures to raise this quota.

Belarus has been an IMF member since 1992 — among the defining factors for our financial-economic co-operation. IMF activity in Belarus focuses on three

main areas, the most important of which is collaboration with the Government and the National Bank in the preparation of economic policy programmes, focusing on macroeconomic issues: fiscal and monetary policy; and exchange rate and trade policy.

Belarus has twice applied to the IMF for loans: \$217.2m through the Systemic Transformation Facility (SFT) and \$77.4m under the mechanism of Stand-By Arrangements. In February 2005, Belarus fully repaid these loans. In late 2008, the Belarusian authorities addressed the IMF with a

request for a stand-by agreement, leading to the IMF Executive Board approving a 15 month programme on January 12th, 2009. This issued a loan of nearly \$2.46bn to Belarus. After the first review, new parameters were set and, in line with Belarus' request, the loan was increased to \$3.46bn. The programme completed in April 2010, enabling Belarus to ensure positive economic and monetary-credit dynamics.

The Belarusian authorities and the IMF are currently negotiating a new programme and stand-by loan for Belarus.