

World Nuclear News, 500 words

Armenia will build new reactor but who's paying?

By Mark Godfrey, in Yerevan

Financing appears the crunch issue in Armenia's newly announced plans to build a new unit at its Metsamor nuclear power plant. The VVER 1000 reactor to be built in a 50/50 joint venture with Russia's Atomstroyexport will, according to Armenian government sources, be operational by 2018.

Yet the US\$5 billion price tag is a big ask for a country whose GDP shrunk 15% in 2009 due to the global economic crisis. Armenia plans to source 60% of the cost of the reactor from private foreign investors, and has been reaching out to Middle Eastern sovereign wealth funds. Russia has a 20% stake in the project under an agreement signed between the two countries' presidents.

Deputy Minister for Energy and Natural Resources Areg Galstyan said that while Armenia has chosen the 1060 megawatt capacity Russian reactor the new project, set to break ground next year, "is open for other investors." Local media have quoted American diplomat Daniel Roseblum, Co-Chairman of US-Armenia Joint Economic Task Force (USATF), as saying American firms would be interested in tendering for supply of equipment to the new plant. Promising international tenders Ashot Martirosyan, chair of the Armenian State Nuclear Regulatory Committee, says participation of multiple international bidders "is to be encouraged."

Management of the construction stage of the new plant appears complex. The Armenia Nuclear Power Plant Co has been appointed by the Department of Atomic Energy to oversee Metsamor though a 50/50 joint venture called Metzamorenergoatom will build the plant. Australian engineering firm Worley Parsons, has gotten a US\$460 million contract to oversee construction, while Atomstroyexport has been named as the principal contractor. It's not clear what role will be kept for RAO UES and Rosenergoatom, two entities which currently jointly operate the plant.

Armenia remains dependent on Metsamor, which supplies about 40% of its annual electricity needs. Nuclear power is a cornerstone of the country's Energy Sector Development Strategy published in 2005, which has also made the country a regional pioneer of solar and wind energy. Armenia wants to resurrect its role as a technology hub of the USSR. To justify the expense and sustainability of a new reactor local experts point to the accumulation of atomic expertise in Armenia – which was the launch pad for planned (but never built) nuclear power plants in Azerbaijan and Georgia during Soviet times, explains Armen Gevorgyan, research head at the Department of Atomic Energy under the country's energy ministry.

This mountainous country has few energy choices beyond nuclear. With no end in sight to its dispute with Azerbaijan over the latter's ethnic-Armenian province of Nagorno Karabakh, Armenia has no access to its neighbour's abundant gas and oil resources. Hence nuclear power

and gas pipelines from Iran are key parts of Armenian president Serzh Sargsyan's battle for energy independence.

It seems obvious that Russian suppliers will win the bulk of any new contracts. Armenia's biggest trade partner by a long shot, Russia remains the country's economic and diplomatic lifeline. Located 30 kilometres west of the capital, Yerevan, Metsamor was originally shut down after a 1988 earthquake that devastated Armenia but one of its two VVER 440 USSR-vintage reactors was relaunched after a six year hiatus to rescue the country from severe energy shortages due to a blockade by neighbours Azerbaijan and Turkey.

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Deputy Minister for Energy and Natural Resources Areg Galstyan said that while Armenia has chosen the 1060 megawatt capacity Russian NPP92 reactor the new project, set to break ground next year, "is open for other investors." Local media quoted Daniel Roseblum, Coordinator for U.S. Assistance to Europe and Eurasia and Co-Chairman of U.S.-Armenia Joint Economic Task Force (USATF), as saying American firms would be interested in tendering for supply of equipment to the new plant. Promising international tenders Ashot Martirosyan, chair of the Armenian State Nuclear Regulatory Committee, says participation of multiple international bidders "is to be encouraged."

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The VVER 440 has been termed as the oldest and least reliable of the 66 Soviet-era reactors by the EU and US - pressure from both has been a big factor for Armenia whose southerly neighbour Iran will soon operate a reactor also supplied by Atomstroyexport.

The IAEA recently inspected several safety projects on the existing plant through 2010, largely financed by the UK government and Russia, though the IAEA officer attached to Armenia, Andrei Chupov, refused to comment.

That's of course if the country's sources the cash to pay for the project. Government is reluctant to pass on the cost to consumers in the form of electricity tariff hikes. Armenia, which gets up to 20% of its GDP in emigrant remittances, mostly from Russia, saw GDP per capita slide to US\$2,900 in 2009.

Given the global financial crisis the country is not likely to mend its finances anytime soon. It's not implausible that Armenia may draw some funds from the EU or US, key donors. Nuclear safety is a driver of the first EU-Armenia Sub-committee meeting on energy, nuclear safety, transport and environment will took place in Yerevan in October. Armenia ranks second among recipients of US aid spending per head of capita and the US Energy Association has provided assistance to help Armenia upgrade its electricity grid.

The most likely source of private investment thus far however appears to be the Middle East seeking investment-not illogical move considering UAE firms have invested in construction and real estate projects in the country.