

## Europe re-walks nuclear energy path with Finland reactor

Clicking endlessly with a digicam like a trigger-happy brat inside the sanctum sanctorum of one of the most sophisticated nuclear plants in Nordic Europe, one feels privileged to have a day out in an otherwise forbidden zone.

There is safety paraphernalia galore before one enters the unbelievably sanitised nuclear plant at Olkiluoto after donning white robes, blue helmets and socks like researchers in an infectious disease lab. But for an Indian journalist on this nuclear mission, it is a virtual kid's corner inside, thanks to the permissiveness of the authorities.

So the cameras of the media team click and zoom on the blue light waters of the advanced nuclear reactor and mind-boggling maze of equipment like on sultry models at a fashion show.

Olkiluoto, about 200 km from Finnish capital Helsinki on the Baltic Sea coast, is a picture of the same openness and gusto with which Nordic [Europe](#) is pursuing its nuclear energy agenda to counter rising oil and gas prices and meet energy needs, especially in a country with a cold climate, long distances and energy-intensive industry.

With the legacy of the 1986 Chernobyl disaster and rising environmental concerns clouding the nuclear horizon, EU nations stopped building nuclear plants for 15 years.

But Finland ended that moratorium in 2005 by starting the construction of a third-generation pressurised water reactor at Olkiluoto, designed by the French company Areva. It's to come on-line in 2009.

'It is currently the most advanced reactor in terms of competitiveness, safety and environmental protection,' said Anneli Nikula, senior vice-president, communications, TVO (Teollisuuden Voima Oy), a private limited company established in 1969 to produce electricity for its shareholders at cost price.

Overlooking the vast blueness of the Baltic Sea and verdant forests, Olkiluoto is home to two of Finland's four nuclear power plants and the fifth is being built. The ongoing project - now known as Olkiluoto 3 - is the first EPR (European Pressurised Reaction) plant by TVO.

'Economic growth in Finland is higher than the US, European Union (of which it is part) and Japan. Energy consumption is growing and we cannot increase hydro electricity anymore while wind power is not reliable. Nuclear energy is the only option,' said Penna Urrila, a senior official of the Confederation of Finnish Industries EK.

The Areva-Siemens consortium, entrusted by TVO with the job of building the Olkiluoto 3 nuclear power plant, hopes to commission the new one during the second quarter of 2010, with electricity to be generated for the first time at the end of 2009.

The Olkiluoto 3 by EPR is the world's first Generation 3 reactor.

Martin Landtman, senior vice-president, project, said: 'The construction of the third nuclear plant at Olkiluoto is one of the biggest ever industrial investments. More than 60 companies are involved in

the construction of Olkiluoto 3 and the electricity generated by the new plant will be used in every corner of Finland.'

'The third unit now under construction is a European Pressurised Water Reactor (EPR) with a capacity of around 1,600 megawatt. It is a more advanced version of the latest French and German N4 and Konvoi power plant units, and represents state-of-the-art nuclear power technology,' he said.

Olkiluoto has also been determined to become the site of disposal of Finnish nuclear waste.

A visit to the huge nuclear waste disposal site Onkalo here is a mind-boggling experience in itself. 'We are maintaining the highest safety measures here,' said Nikula.

Finland sources 27 percent of its electricity needs from its four nuclear reactors, the first operating since 1977.

But the new emphasis in Europe on nuclear energy has met with opposition from the environmentalists and organisations like Greenpeace.

'All operational reactors have inherent safety flaws, which cannot be eliminated by safety upgrading. Highly radioactive spent fuel requires constant cooling. If this fails, it could lead to a catastrophic release of radioactivity. They are also highly vulnerable to deliberate acts of sabotage, including terrorist attack,' said a Greenpeace campaigner.

But Europe is reconsidering the nuclear option again for reducing greenhouse gases, with Finland showing the path for their cost-effectiveness.

There are 173 nuclear reactors producing power in Europe (excluding Russia), with four under construction and others planned. Though some countries like Germany and Spain, are committed to phasing out nuclear power; others like Britain are considering which way to proceed. Several others, including Ukraine and Finland, are building new power plants

According to a report in CBS News, though nuclear power plants remain unpopular with a majority of Europeans, who are worried about what happens to the radioactive waste, industry officials are playing on the public's competing worries about the effect of greenhouse gases on global warming. Nuclear plants, they point out, emit practically no CO2.

'Nuclear is the only game in town if you are serious about cutting greenhouse gases as the European Union has pledged to do under the Kyoto Protocol,' Ian Hore-Lacy, spokesman for the World Nuclear Association, was quoted by CBS.

With India's civil nuclear deal with the United States and plans for more reactors afoot, nuclear energy seems a natural choice for most nations worldwide.

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