

Italy wrestles with nuclear energy



Photo: Alessandra Benedetti/Corbis

The Italian government has announced that it will push for the building of a new nuclear power plant by 2013. But nuclear power will continue to face major obstacles in Italy. 'Italians will use nuclear energy in Italy, as long as it is produced in any other country other than their own'.

| by Maarten Veeger

Prime Minister Silvio Berlusconi of Italy, which has been nuclear energy-free since 1987, was already certain of Italy's new energy politics during his election campaign in the spring. 'The Chernobyl days are over...nuclear energy must replace the production of electricity through oil and gas,' he said. Minister Claudio Scajola, responsible for Italy's energy policy, said something similar after being sworn in as minister. 'We can no longer be solely dependent on oil and gas. We must realise an energy mix that also includes nuclear

from the fright of two nuclear accidents (Three Mile Island in the US and Chernobyl in the former Soviet Union) the majority opted for a ban in Italy and for a ban on state-owned company Enel investing in nuclear activities abroad.

Initially, brushing nuclear energy aside had no major repercussions for Italy. But Kyoto and rising oil and gas prices have changed that. Since 1990, CO₂ emissions in the country have increased by 13%, making Italy one of the poorest performing countries in the EU. And high energy

if a decision is made this year with respect to the reintroduction of nuclear energy, power from the plants won't be available until 2019.

But Italy's biggest policy problem is the long-term vision required for nuclear energy. 'We must create a market for the long term,' stated Tulio Fanelli, board member of Italian energy authority AEEG during a conference at Bocconi University in Milan about the reintroduction of nuclear energy in Italy. 'It is firstly a political decision. Our politicians can change our legislation to make it attractive for businesses. Today, any companies that want to undertake something with nuclear energy will more often than not fall foul of Italian law because they will very quickly break the law. A credible policy must be presented. Otherwise companies will not get on board.' According to Fanelli, Europe has a major task in ensuring that, in its liberalised market, the right investments are made. 'It takes too long to recover your investment money in the energy market. What entrepreneur nowadays thinks in terms of 20-year projects?'

Silvio Berlusconi: 'The Chernobyl days are over'

energy and renewables.' Scajola later reiterated his position at a meeting of the industry group Confindustria in Rome.

With only a growth of 0.5% this year, the Italian economy has virtually come to a halt. The reasons for this stagnation include Italy's lack of innovation, its oppressive bureaucracy, bogged-down infrastructure, high labour costs and high energy prices. Italy's electricity is the most expensive of all the European countries, mainly due to its costly energy mix. With 17% of its electricity production fuelled by oil and 33% by gas, it is no wonder that the cost of producing electricity in Italy is substantially higher than that of many other countries. 17% of its energy production is fuelled by coal, 18% by renewables, and 17% is imported. The vast majority of renewables come from hydro-electric power stations built decades ago. There is a structural increase in demand for electricity and gas in Italy and grid operator Terna has predicted an increase of 2.2% per year up to 2017, followed by a slight drop. Total energy requirement in 2007 was 194.45 million tons of oil equivalents, of which 85% had to be imported in the form of oil, gas, coal. Part of that import was subsequently used for the production of electricity.

The population of Italy opted in a referendum held in 1987 for a ban on nuclear energy. Not yet having recovered

prices are affecting the entire country where entrepreneurs and citizens alike are grumbling about their power bills.

Procedures |

And so covetous glances are being thrown at what is going on across the border. Renewed interest in nuclear energy has even resulted in new reactors being planned on Three Mile Island, reported the newspaper *Corriere Della Sera*. Enel itself has circumvented the ban on participating in nuclear energy and invests actively in foreign power stations and even owns stations in Spain, Russia and Bulgaria.

The largest Italian energy companies have indicated that they are keen on nuclear energy in their own country. The chairmen of the boards of Enel, Edison (supervised by nuclear energy giant EdF) and northern Italian distributor A2A let slip time and again that nuclear would be the best solution to high prices and CO₂ emissions and for a better energy mix.

Major local resistance, however, to projects like LNG installations and the high-speed train will most likely mean the population is not going to accept the building of nuclear power plants. Then there's the red tape. President Giuliano Zuccoli of A2A told *Corriere della Sera* that 24 permits must first be acquired, after which another five to six years are required before building can commence. Edison has calculated that

Knowledge and supervision |

But any introduction of nuclear energy in Italy must contend with yet another obstacle – the country's lack of its own, effective supervisory organisation. 'Italy keeps up its knowledge and supervision of nuclear energy,' says manager Roberto Mezzanotte of APAT, the nuclear department of the government organisation for environmental protection. 'But our supervision system is inadequate. We employ 130 people here as compared to 450 in 1987. But it is inconceivable that we will leave the supervision to a foreign authority.' Mezzanotte expects that Italy will not dare move towards nuclear energy, no matter how eager some people may be. 'If we do it then we have to do it properly – not with one or two power stations but straight away with ten. And in my opinion there is not one country that would approve such a thing, especially not Italy where we feel very strongly about this matter.' It is also unlikely that Italy will know what to do with the waste produced by nuclear plants, particularly as major



The 1979 accident at Three Mile Island caused the Italians to rethink their nuclear policy. Photo: Owen Franken/Corbis

cities often have problems with everyday garbage disposal. In Naples, for example, household rubbish and industrial waste can lie in the streets for weeks on end – clearly not an option for nuclear waste.

For now, the large Italian energy companies are preparing for a future without nuclear energy in their own country. But even then they are faced with resistance. Moncada, the large wind turbine company of Sicily,

park for which the Albanian government granted Moncada a building permit late last year. It will be the largest wind park in Europe.

Middle of nowhere |

Enel hopes to be able to build coal-fired power stations in Albania. Edison is building an LNG installation at Rovigo, which is 15 km off the coast and so has

Enel is allowing the portion of coal in its own energy mix to increase to 33%. This summer the oil-fired power station of Civitavecchia will be replaced by coal, thus reducing the CO₂ emission by 18%. Enel opted for coal instead of gas for price reasons and because coal will continue to be available in the very long term. The percentage of coal in the energy mix will exceed 50% in the next few decades.

Edison has calculated that in order to meet the Kyoto agreement, no more conventional-capacity power plants can be built in Italy. 'So we must look for other technologies. Nuclear energy is an option,' says the company. However, the solution will probably be a typically Italian one. Enel and others are being encouraged to invest more in nuclear energy in foreign countries. And meanwhile the cross-border transport capacity is expanding substantially. Ultimately, Italians will use nuclear energy in Italy – as long as it is produced in any country other than their own. ■

Mezzanotte expects that Italy will not dare move towards nuclear energy

is building wind turbine parks in Albania because Italy is too slow in issuing permits – if they're issued at all. Early this year the green light was given to lay an electricity cable from Albania to Italy on the bed of the Adriatic Sea. The 145 km long cable will connect the Italian grid to a 500 MW wind

attracted little resistance. It is, to date, the only LNG installation under construction in Italy. Projects for other installations, such as in Brindisi and Sicily, are being obstructed at regional or local levels. Lastly, gas pipelines are being constructed from Greece to Italy and from Algeria to Italy.