very well targeted towards creating the conditions for really debottlenecking the generation market."

Asked when it would be technically possible to see all the necessary debottlenecking completed, d'Agnese replied: "Technically it would be possible to solve the problems in a couple of years. But between one and two additional years are typically needed in order to achieve agreement and meet environmental and other local concerns. So all told, probably four to five years is a likely-to-optimistic assumption."

D'Agnese explained that siting power lines in Italy was even more difficult than siting power plants, since they were perceived in the areas they crossed as without the employment benefits of a generation project, but with all accompanying concerns.

Certain areas – such as Calabria, which has authorized capacity increases equal to four times its consumption, d'Agnese said – are well-disposed, which is why generation tends to be built in those same places. This, however only tends to increase the concentration of generation in two areas, in the north and in the south.

"Looking to the longer term, market power is not so much of a problem. Prices are going to fall as new capacity comes onstream and new entrants may affect the willingness of the incumbent to keep prices gently decreasing instead of sharply falling as soon as a critical level of capacity is reached.

"In the short term you have high prices, but in the long term you are creating the conditions for reducing costs and margins, which in the end all adds up to price reduction."

How is the power market run?

Electricity Market Operator GME, wholly-owned by independent system operator GRTN, was set up in June 2000 to manage the Italian electricity market. GME is responsible for issuing the electricity market rules and for submitting them to the Minister of Productive Activities for approval, after having sought the opinion of the electricity and gas regulator.

The electricity market consists of energy markets (day-ahead market and adjustment market) and of the ancillary services market. In the energy markets, electricity is traded between market participants. In the ancillary services market, system operator GRTN procures resources for its dispatching service. GME also operates the Italian Power Exchange (IPEX) which has been in test operation since March 2004.

GME, market operator

Professor Giorgio Szego, chairman

Besides being GME chairman, Professor Szego also teaches at La Sapienza University, Rome, where he was formerly Professor of Monetary and Financial Market Economics. He has also served as advisor to the World Bank, IMF and OECD.

"As regards your question about the progress of liberalisation of the energy sector in Italy, I can say that this process is developing both in the gas and in the electric power sectors, albeit at different paces: with electric power beating gas. Keep in mind that in a country like Italy, which is not self-sufficient, liberalization also implies liberalization of imports.

"I think the Decreto Marzano has played a significant role in this process because it has contributed to enlarging the category of eligible customers and to defining energy policy guidelines regarding the security, the flexibility and the stability of energy supplies.

"New legislative actions are expected to be adopted next year in order to implement the EU Directive on completing the liberalization process."

Professor Szego is not concerned about undue market dominance by former state companies. "I do not think that the presence of the former state companies in the market is a real entry barrier for other players. In fact, the recently adopted regulatory framework has deeply modified the market structure, opening the energy sector to new competitors able to attack the market shares of the former state companies.

New cross-border connections planned

"International connections are still a priority for us," Luca d'Agnese, chief executive of grid operator GRTN, told *Energy Economist*. "A new double circuit 380kV line capable of carrying 1,000MW between Switzerland and Italy will go into operation in January 2005," he said.

The line will link San Fiorano in Italy and Robbia in Switzerland, at a cost of €20 million. GRTN has plans to further increase capacity in the line at some time in the future, d'Agnese said.

Another double circuit 380kV line is also planned between Udine, in the northeast of Italy, and Okroglo in Slovenia. This will be operational "four years from now", d'Agnese said. The amount of power it will carry is still being studied and the exact route also remains to be decided, hence the cost is not yet clear.

There are "problematical areas" for achieving route approval, d'Agnese said, one a national park in Slovenia and another the wine-producing area of Collio in Friuli.

A further double circuit line increase is under discussion, to run between Cordignano, Italy, and Linz, Austria. This is "less urgent", he said, because before it can proceed line-strengthening would need to be carried out in both Austria and Italy. In Italy, there is at present significant opposition to this work in the scenic Veneto region, north of Venice.

An additional 800MW of line capacity is also planned within Italy, to go into operation next year probably.

"Obviously this process needs enough time to be completed. At the end the energy sector will be surely less concentrated than now. The Antitrust authority is keeping a close eye on the problem."

He explained the position of the Italian Power Exchange, IPEX. "With IPEX, as you know, right now only producers can access the [wholesale] market, while the demand side is totally expressed by the buy orders introduced in the system by GRTN, the Italian system operator."

(Until the market is fully liberalized, Acquirente Unico, the single buyer, purchases power in the market to cover the demand of consumers in the regulated sector of the market. It will cease to exist in July 2007, when the final market segment is opened.)

"Starting from next year [date set is 1 January] all eligible customers will be admitted to the market," Szego went on. "Eligible customers are now testing our trading system and their skill in electricity consumption forecast. This test activity is continuously monitored by our staff in order to assure an immediate feedback."

He is confident that the planned capacity increases in the Italian market should produce lower prices. "Regarding energy prices, I believe that they will fall in the future.

"First of all I expect the price of oil will be lower next year because of the slowing down of oil demand expansion in China; secondly, investments in new power plants will enable increased electric power production in a few years; thirdly, improvements to the generation mix will reduce the dependence on oil."

He is concerned, though, that public opinion could prove a brake on progress. "The worst enemies to this scenario are the Greens; they do not want wind power plants because they are too noisy, they do not want coal-fired plants, they do not want power lines, in particular the ones that could make possible an increase in imports, and do not even mention nuclear power. Their only interest seems to be to defend the status-quo.

"The development of international grid connections is a key factor for Italy because of its reliance on imports," he stressed.

International cooperation is key to avoiding infrastructure problems, he thinks. "It is now necessary to build a European monitoring centre that can collect all the data from national networks in order to avoid information problems between national TSOs (transmission system operators). A European action line can be defined even without new EU legislative provisions."

GME is keenly involved in co-operation with east-central and southern European power organizations aimed at reconstruction of infrastructure in the Balkans and southern Europe, through ItalEnergy, an organisation set up jointly between GME, GRTN and the interim Single Buyer (AU). "ItalEnergy is a not-for-profit association of all the major Italian companies active in the energy sector," Szego explained.

"It was established under the sponsorship of the Ministry of Productive Activities, with the main goal of promoting cooperation between Italian and foreign players to improve infrastructures, systems and management in the energy sector of high growth countries. ItalEnergy's activities will cover, mainly but not exclusively, central-Eastern European countries and the Mediterranean including Turkey."

Enel, former state power company

Fulvio Conti, chief financial officer

In general, for a former incumbent, Enel seems pretty comfortable with the market situation it finds itself in at present.

Asked whether he was pleased with the results of the recent Enel IPO, which reduced the state stake to just over 30%, Fulvio Conti, chief financial officer, said: "The operation was a great success from every point of view and, as such, a strong endorsement from the market of Enel's decision just two and half years ago to re-focus on its core electricity and gas businesses.

"This has resulted in a more solid group, capable of delivering consistently strong results and able to sustain an attractive dividend policy. Investors and the general public bought Enel because they saw it as a safe haven offering high returns." (It has been estimated, according to Italian newspapers, that one Italian in every 100 bought shares.)

"If you look at the numbers, they speak for themselves: the Treasury sold 20% of Enel, raising €7.5 billion, with demand exceeding the offer 2.5 times. Consequently the allocation to Italian retail investors was set at 40% and the green shoe provision (an extra allocation, to be sold only should exceptional demand justify it) was fully taken up.

"The placement was also priced at the maximum possible level of €6.64 per share and the stock continued to move upwards after the offering closed on October 22," Conti said.

Now the scheduled one-off disposals and unbundling have come to an end, what does that mean for company strategy? "Enel's cost of production will be 30% lower in the next few years. Since the extraordinary and non-recurring items (unbundling and disposals required under the EU Directive) have been completed, the company is focused on cash generation from underlying activities to support its dividend flow.

"This will come from cost-cutting and efficiency improvements, with a primary focus on reducing the cost of energy production by using low cost fuels, like coal,