

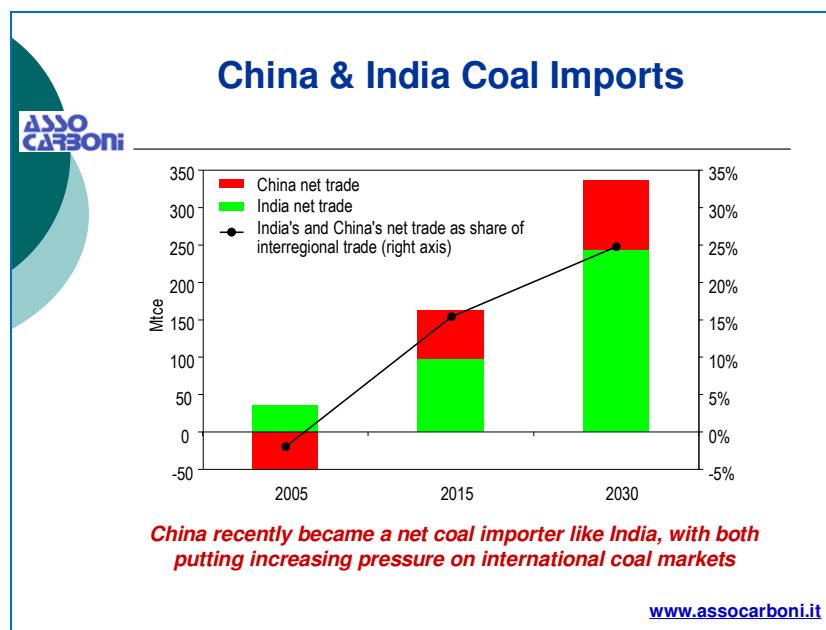
COAL'S ROLE IN ITALIAN AND INTERNATIONAL SCENARIOS

According to estimates in the International Energy Agency's (IEA) 2007 World Energy Outlook 2007 (IEA), worldwide demand for energy will grow from 11,4 billion TEP in 2005 to 17,7 billion TEP by 2030.¹

Over that same time period, fossil fuels will continue to act as the world's primary energy source, providing 84 percent of the total demand increase.

Coal is expected to see the highest demand increase, growing by 73 percent. Worldwide, the use of coal for primary energy will grow from 25 percent to 28 percent, thanks to Chinese and Indian demand, which is 4 or 5 times higher than the current values and represents 45 percent of total world demand. Overall, coal use will grow from 2,9 billion TEP in 2005 to 5 billion TEP in 2030.

Despite being primary producers, both China and India have significantly increased their demand for imports. Forecasts to 2030 suggest that Chinese imports will reach 133 million tons – or 3 percent of world demand. India is also expected to increase its imports of coal and coke from current levels of 39 million tons in 2005 to 54 million tons in 2015 and 151 million tons in 2030.



Natural gas use will also grow, shifting from 21 percent to 22 percent of world demand. Oil will continue to be the most used fossil fuel. However, world demand for oil will decrease from 35 percent to 32 percent. Italian energy infrastructure weaknesses are mounting and the structural weakness of our gas supply and storage system is a constant issue. Italy continues to rely on pipelines for 100 percent of its natural gas supply. This situation is unique throughout Europe as most countries rely on regasification of LNG for 50

¹ 1 MWh of electrical power = 0,285 TEP (Tonne Equivalent Petrol)

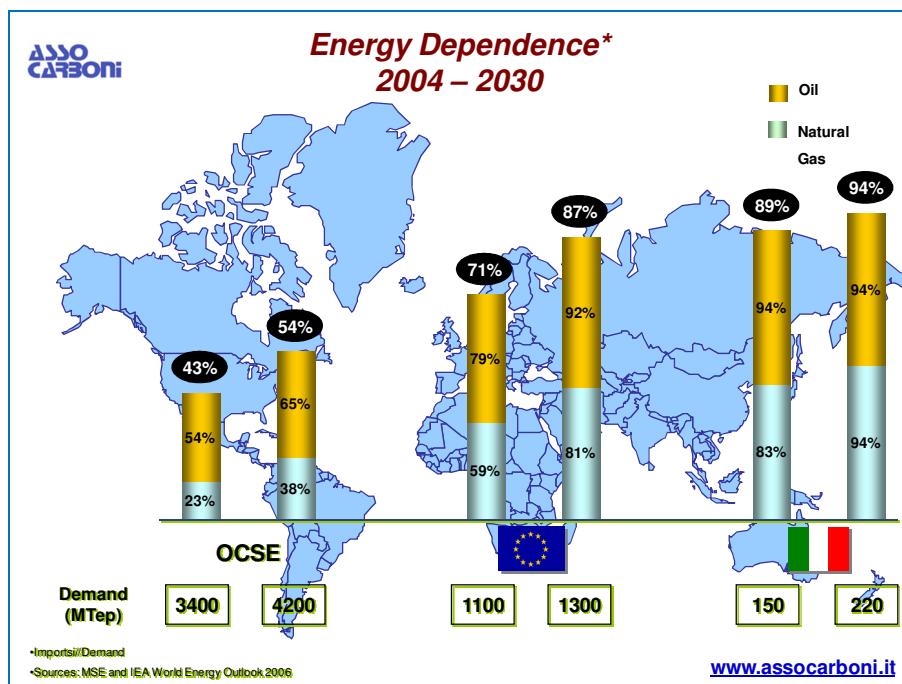
percent of their total consumption. Over \$22 billion will need to be invested in infrastructure upgrades to meet growing demand. Financing these investments clearly represents one of industry's main challenges.

Adding to the challenge, neither Italy or the rest of Europe were prepared to deal with an activist Russian energy policy, or its tendency to reinforce demands for gas and oil industry re-nationalization and downstream integration of European markets, or its impacts on gas and oil prices.

To address these challenges, European policy must first check the entire gas cost chain – from extraction to final consumers – as a means of reinforcing market power, profits, and demand reliability. Second, policy makers must “encircle” the European market by signing an “iron deal” with Algeria that can guarantee up to 70 percent of imports and 50 percent of the total European demand.

Attacking Russian and Algerian is difficult as their supplies are irreplaceable in the European market. But, this is something that we should have seen coming. We could have prevented the European power system from relying so heavily on imported natural gas.

As the impacts of this crisis diminishes, Italy still depend on two methane pipelines and two suppliers – Russia’s Gazprom and Algeria’s Sonatrach – for more than 60% of our total gas supply. It is no surprise then that, according to Eurostat data (1st July 2007), Italy pays 55 percent more per MWh of electricity than the other 25 European countries. These higher costs and decreased energy security are why Assocarboni is asking the Government again in 2009 for to allow coal to play a larger role in power production. With more coal in the energy mix, Italy can enjoy lower costs and obtain a better geopolitical diversification of supplying sources.



Assocarboni strongly supports the “German” example, of more renewable sources (which are, however, expensive and subsidized by taxpayers) and more coal (far less expensive and not subsidized). Together with nuclear, this mix provides Germany with a safe and competitive electricity supply.

Continuing to rely only on renewables and natural gas ensures Italy will have high-priced electricity and reduced development. In today’s open market, this policy also places Italy at the mercy of the most shrewd European producers.

Assocarboni is also demanding greater reliability for our electricity producers. We believe they should be helped, rather than, encumbered in their activities. This is why we supported the conversion of Civitavecchia’s plant Torrevaldaliga, from fuel oil to coal, despite the continuous bureaucratic and administrative obstacles. Those obstacles ensured the final cost of the plant was higher than originally expected. However, Italy now has one of the most advanced and ‘eco-compatible’ coal plant in the world. Even the European energy commissioner, Andris Piebalgs, noted the advanced technical features of the plant, stating that it would help the EU “combat climate change.”

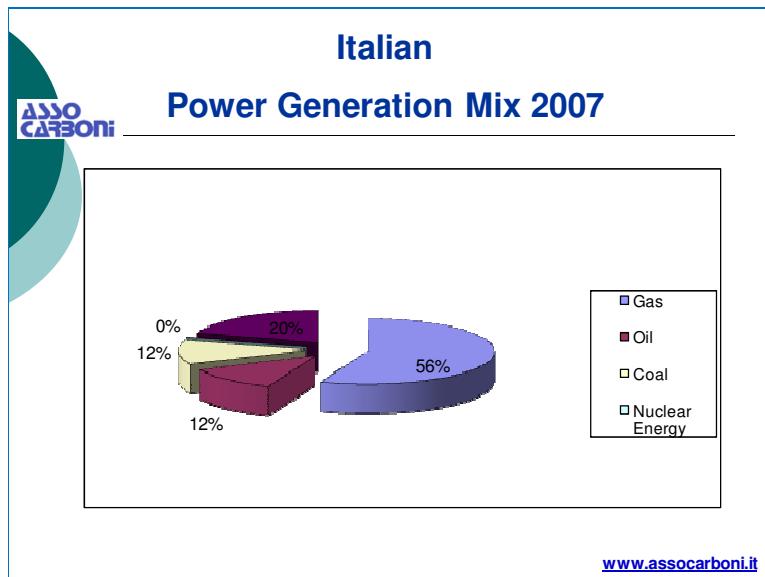
Coal keeps on being the fuel with an unchallenged role in the world electricity system which supports the economic growth of developing countries by providing not only electricity but also highly competitive energy. Producing electricity from coal is appropriate and necessary for Italy. Natural gas prices are tied to the rapidly fluctuating price of oil and Italy relies on gas for nearly 60 percent of our electricity supply. Coal’s low cost and security/safety of supply make it an obvious international energy choice. Additionally, coal is supported by the development of advanced *clean coal technologies*, which drastically reduce CO₂ emissions and will allow for carbon capture and storage in the near future.

Italy depends on energy and it has limited natural reserves. While Europe bases 60 percent of its electricity supply on a mix of coal and nuclear for , Italy produces the same percentage with natural gas. Not surprisingly, that choice has profound implications on reliability and competitiveness of supply channels.

Our primary energy supply comes from politically unstable regions and follows a rising cost trend. Additionally, our energy choices contradict the Markowitz portfolio theory, which is based on the idea that investments should be diversified. This theory was previously used on financial securities but also suits the energy portfolio of a country. Markowitz theory claims that in order to obtain a successful portfolio we need to identify a combination of assets able to minimize risks and maximize total yield by covering the single asynchronous trends. In the same manner we could refer to the Italian energy mix: diversifying sources on the basis of risks and advantages of each and choosing raw materials with inversely related prices. Then, where should we diversify in order to get a higher reliability of provisions and their competitiveness? Last generation nuclear may definitely be a solution, but time is lengthy for Italian public opinion to accept this option, maybe only a barrel at 300 \$ is likely to find that full consent, which is still very weak at a more international level. As a matter of fact, with the exclusion of China, very little nuclear power plants are going to be settled all over the world within the next decade. Coal remains the only

option followed by the whole world. All the main international energy players announced their investments in coal energy power plants in Europe.

To this end, Assocarboni's solution for a better-balanced energy mix in Italy encourages the use of coal in line with European levels, by pushing it up to 20 percent, instead of the current 12 percent. We also support the construction of new nuclear generation capacity, a strong push to renewable sources, and the construction of new LNG regassification equipment to help diversify our system away from the Russian and Algerian oligopolies.



Italy must press ahead with new coal projects to create jobs, stimulate the economy and prevent investment capital going abroad. Last year was positive, with Tirreno Power receiving towards the end of 2008 the environmental authorization to build a new 460-MW coal-fired unit at Vado Ligure (in the northwest coastal province of Savona). The unit will have a very high efficiency of 47%: Tirreno's plan includes 180-MW of renewables, so the total investment will be €800 million, out of which €200 million will be for renewable. Globally, although capacity will rise, emissions including CO₂ will be reduced. At present the Vado Ligure site has two 330-MW coal units and a new CCGT of 760-MW; with the new coal unit total site capacity will rise to around 1,800-MW. Now some local resistance must be addressed, and Tirreno is negotiating terms with local municipalities. We look forward to starting work soon because construction would involve 1,000 workers over four years and provide 250 jobs thereafter.

Meanwhile at Porto Tolle, Enel's 2,000-MW oil-to-coal conversion project in Veneto, has finally obtained in April 2009 the environmental approval: it is a further step towards the energy mix diversification and a chance of a high-quality employment in such a hard moment for the Italian and global economy.

Andrea Clavarino, Assocarboni President.