As a net importer of oil and natural gas, Italy is heavily dependent on imports to meet its energy needs. Net imports of petroleum and other liquids were over 1.1 million barrels per day (bbl/d) in 2013, according to data supplied by the U.S. Energy Information Administration (EIA).

However, the government has implemented its National Energy Strategy in 2013 which calls for renewables to provide 23% of primary energy consumption by 2020, up from 13% in 2012, says the EIA.

ELECTRICITY SECTOR

Until 1999, Italy's electricity market was held under monopoly by the state-owned company Enel. With market liberalisation post 1999, new mechanisms more suited to the new framework for power trade were introduced.

Today, the Italian electricity sector is regulated by the Energy Authority. The main objective is to "make the economics related to the electricity more competitive for the Italian industry," says Giuliano Monizza, Vice President of ANIE Confindustria (the National Federation representing the Italian electrical engineering and electronic industry).

The approach to the regulation is based on four main pillars, as Monizza explains: Unbundling, Quality and Security, Promoting competition and protecting the environment, and Research and Development.

With constant growth in energy demand worldwide, efficiency is the key word for the electrical industry.

"The Italian electricity system is undergoing a deep technological upgrading with the main objective of making it more efficient. This is possible thanks to the proficient collaboration between the Italian utilities and the electromechanical industry represented by ANIE Confindustria. The process involves a progressive streamlining of all the value chain of the electricity system: generation, transmission, distribution and final consumption," Monizza said. Regarding electricity consumption in Italy, Monizza says that it "has followed the national economic trend," with an average annual growth rate around 2% from 2000 to 2008. The highest electricity consumption was recorded in 2008 with 319 TWh. In terms of national forecasts, electricity consumption is expected to remain stable until 2024 with an average annual growth rate by 1%, with a possibly higher figure for South and Central Italy.

Giuliano Monizza

RENEWABLE ENERGY STRATEGY

In line with the global trend of utilising renewable energy sources as the basis for power generation, Italy's energy mix "is experiencing a trend dominated by a rapid development of renewable energy sources, especially PV which has grown from a 1% share in 2010 to a 9% share in 2014," Monizza explained.

In 2013, the country adopted a new National Energy Strategy which includes a 38% target for electricity consumption from renewable sources in order to fully comply with the EU targets and roadmap.

"In particular, in recent years, Italy has placed big efforts on developing PV and wind electricity generation plants. ANIE supported this process and as a result, Italy was able to install 21 GW of renewables in about 18 months. This had a huge impact on the skill and competen-

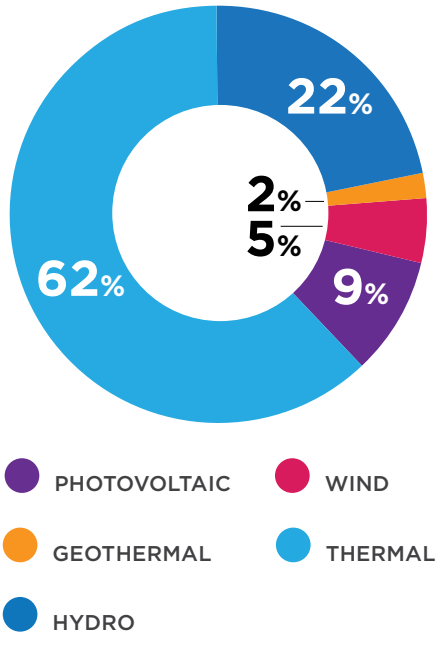
cies of the Italian industry and today we can claim to be, together with Germany, one of the most important countries in the EU with regards to MW installed as well as our renewable energy competencies," Monizza said.

SMART GRID TECHNOLOGY

Italy prides itself on always embracing new technologies in its power sector which is why the country is seen as a forerunner within Europe.

"Italy is a forerunner in the EU with regards to smart grid technologies for the grid integration of all renewable energy sources. This process is managed at the regulation level by the Energy Authority. The Italian utilities together with the Italian electromechanical industry have developed and deployed ad hoc projects in the smart grid sector allowing for proper scalability as well as replicability. These projects are also recognised at an EU level in the European Electricity Grid Initiative (EEGI) sponsored by the EU Commission. According to this institutional roadmap the Italian industry has made available all the technologies for the implementation of the smart grid in order to satisfy all targets of security and interconnection set at the EU level," Monizza explained. In terms of energy efficiency, ANIE prides itself as a leading industry player as it applies the efficiency concept across the entire value chain of the industrial production. "At the same time the Italian system of generation, transmission, distribution and consumption of electrical energy is one of the most efficient systems in Europe because of its continuous upgrading with new technologies such as smart grid as well as from the product point of view (energy efficiency)," said Monizza. All of Italy's technological solutions are in line with the Eco Design Regulation as well as the Energy Efficiency Directive issued by the European Commission in Brussels

ELECTRICITY GENERATION IN ITALY FROM RENEWABLES



(% share by sources) Year 2014