

The report presents the main innovation players in Italy: *utilities*, among them Enel plays a key role together with ACEA, A2A, CIE, Edison, Eni, IREN and Sorgenia, and the key *R&D centres*: CNR, Enea and RSE. The views of these players are summarised in the report, as gathered through interviews with their representatives. The report provides an overview of the key R&D projects in Italy. In the main Enel appears to be the key player concerning innovation and development in this area. This brings about a first comer power as far as technology *standards* and innovation dynamics are concerned. At the same time, Enel is the prime mover, and makes possible continuous development of the Italian power system, among the most advanced worldwide.

As far as distribution is concerned, remote metering systems were widespread by Enel since the late nineties based on a company investment. In 2006 the Italian Energy and Gas Authority recognised the advantages on the end user side and made their installation compulsory in the whole of Italy. In 2000-'01 Enel deployed another large project for remote control of the medium voltage power grid, this makes possible fault isolation within secondary power substations and makes maintenance by far more efficient. Future developments of Smart Grids are the object of the ADDRESS project grouping 25 partners among distribution utilities, R&D companies, manufacturers and ICT suppliers to the aim of enabling active demand in the context of the smart grids of the future, i.e. active participation of small and commercial consumers in power system markets and provision of services to the different power system participants.

The **third part** of the report discusses how Smart Grids are impacting on the Italian economy: the main stakeholders are identified joint with their engagement in R&D and future application, and barriers to wider deployment are considered: how enable active demand, how to make data widely available, how to join efforts among several stakeholder categories, how stimulate investments in presence of imperfect benefit appropriation. In the main, as far as application perspectives are considered, the phase of conjecturing and scenario simulation seems to be overcome. However, the critical issues mentioned above make most stakeholders reluctant to engage in wider scale application although there are significant exceptions. While these issues may justify a cautious attitude, the fact that the Italian electric system is among the most advanced worldwide should be exploited as a competitive advantage.

While the US economy is widely investing on smart grids, engagement in the European union is not far beyond, and one must take into account that considerable part of the US investments are to recover the infrastructure gap as a far as physical grids are concerned (those are *older/more inadequate/more aged* than the EU ones). Despite these favourable conditions, the prevailing stakeholders attitude looks over cautious because, although technology appears mature, no one wishes to engage in the first step because of the critical issues that remain to be solved, the difficulty to forecast emerging scenarios (especially concerning standards) and the systemic nature of the technology.