

Innovation as sustainable source

Innovation, energy efficiency, sustainable sources: these are the fundamental challenges for our Country in the years to come

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Innovation, energy efficiency, sustainable sources: I am deeply convinced that these are the fundamental challenges for our Country in the years to come. Challenges that undoubtedly have to do with the country's economic and productive growth, yet they are above all cultural. The stakes are enormous: a shift in the employment paradigm to address the challenge of climate change. An unprecedented challenge.

In recent years, our Country has recorded significant growth in the renewable energy sector. At the end of 2015, the share of gross final consumption stood at 17.5% versus 13% in 2010, and this percentage is expected to grow. Italy has met the 2020 targets in advance, so that the new national energy strategy has set a new target share of 27% threshold by 2030. Decarbonisation itself, which still remains one of the priori-

ties of energy policies, is considered as an achievable target by 2030. This means a considerable effort, both in terms of policies to be put in place and of economic investment, which should be made and encouraged if we believe – and personally I do – that this is the best way, I would say the only practicable way, to get an energy efficient system, accessible to all – citizens, families, businesses – at sustainable cost.

This commitment determines a change in culture and vision, in order to fully grasp the opportunity offered by the increasing sensitivity and attention of citizens to the issues of environmental protection and, specifically, the balance between economic development, emissions reduction and energy saving. Wide-ranging strategic vision and planning capability, resources, innovation: these are the keywords. Translated into actions they mean sustainable

mobility, urban and historical-cultural heritage regeneration, energy efficiency, development of useful and necessary skills to govern and manage such important change.

In this sense, I am convinced that a 'culture' of energy efficiency should be based on greater information and awareness raising of businesses and families. Italy boasts the European primacy for the largest number of energy diagnoses of large enterprises: more than 15,000 have been run by over 8,000 companies. Also Italian families, in less than 10 years, have invested almost 28 billion euros in order to make their homes more energy efficient, with 2.5 million requalification actions. It is not enough, perhaps, but it is the sign of that growing attention to sustainable urban systems that can allow and support the necessary change of the paradigm.

In this framework, the dynamics



of urban complexity takes on an increasingly remarkable role that needs to be properly considered and understood in its implications. Today more than 50% of the world's population lives in the cities. Over the next thirty years this share could reach 70%. Finding an intelligent energy mix, based on the use of innovative technologies applicable to different areas of city government – from waste management to public lighting to transportation – is not only necessary but mandatory in order to be able to reason in terms of a system based on efficiency and energy saving. These are the areas in which technological innovation and research activities have multiple connections and increasing possibilities of application, also in terms of providing advanced services to businesses, public administrations and citizens. In this context, above all I recall the

commitment to the implementation of Legislative Decree 102/2014, and therefore the Program for Energy Regeneration of Public Administration buildings: 350 million euros in the period 2014-2020. So, in May 2016, the revision of the Thermal Account that simplified access to incentives for businesses, households and public entities; the decree on white certificates recently published in *Gazzetta Ufficiale*, with the new national energy efficiency targets; the Stability Law 2017 extending, and in some cases increasing, the tax deductions for energy-saving interventions on buildings. Urban regeneration, however, in my opinion, also means a way to contrast energy poverty. It seems incredible, and it is certainly unacceptable, that even today a share of Italian families cannot afford any access to energy because of its high costs. I say it straightforwardly: access to energy

is a right to be protected and guaranteed quite as much as others already recognized. The efficiency of the energy market is also measured on this, in terms of fair distribution of benefits between producers and consumers. In this direction, the Government has taken important steps. I am thinking about popular buildings and the interventions provided for in the 2017 Budget Law, with the release of the tax deduction for energy adjustments of common parts and works on ordinary buildings and the possibility to actually extend the scope of the measure to numerous families in the state of energy poverty. However, and I like to stress the concept in view of Astana's Expo, this is a challenge we have also posed globally. Just a few weeks ago, during the side G7 event on Africa's energy development, I emphasized the role of access to sustainable resources, which the continent is rich in, as

an important tool for increasing the energy capacity of population and, consequently, the economic development and overall growth of that territory.

Urban regeneration also means, however, stating the urgency of a clean, efficient and, therefore, more sustainable mobility. This is a hot topic in Europe, also as a development factor. It is precisely in this sector – involving more than 11 million workers at European level – that research and innovation are and must be strongly supported to achieve ever less polluting transport systems. Efficient, secure, sustainable transport policies, with important impacts on the development of a more competitive industry capable of generating new employment and well-being. It is in this framework that the European Directive no. 94 of 2014 on the development of a large alternative fuels market was adopted by Member States, which have established their own National Strategic Framework aimed at implementing the relevant infrastructure and introducing a series of minimum measures set out by the directive. In Italy, the EU Directive has been transposed by means of Legislative Decree No. 257/2016 which identifies the minimum requirements for the realization of alternative fuel infrastructures and presents the National Strategic Framework. The Budget Law itself has set out a National Strategic Plan for sustainable mobility aimed at renewing the local and regional public transport bus fleet and promoting and improving air quality through innovative technologies. In addition, the Plan provides for a set of interventions to implement the competitiveness of goods and services companies in the produc-

tion of tire public transport vehicles and intelligent transport systems, encouraging investments aimed at the transition to more modern and sustainable forms of production. All this is witnessed not only by the strong attention of our Country and Government to the subject, but also by the concrete and financially significant commitment.

On this front, the Government is investing a lot – even in terms of resources: the evidence is, among other measures, the decree of June 23, 2016 on renewable resources other than photovoltaic. An investment of around 430 million euros annually for the next 20 years, of which 50% for near-equilibrium technologies such as wind power, 25% for frontier technologies such as thermodynamic solar power, and another 25% for circular economy, such as biomass and waste resources. Energy efficiency measures from 2005 to 2015 led to, nearly 10 million tons of oil equivalent per year saving, avoiding 26 million tonnes of carbon dioxide emissions and 3 billion euros of fossil fuel expenditure.

In this context, energy efficiency developed with the support of advanced technologies appears to be an essential infrastructure for what, without fear of exaggerating, we have called the Fourth Industrial Revolution, Industry 4.0. We are investing energy, resources, expertise, on digital and technological growth of our production network. 2017 and 2018 will be decisive years: the stakes are worth 20 million euros this year, of which 10 are to be invested in technological transformation, innovation and creation of new skills. For this to happen, companies have to rely on advanced energy systems that will enable them to be competitive not only in terms of costs but

also of production efficiency.

This is, I am sure, the role of Institutions throughout the whole chain: to definitely focus their action on the conditions enabling enterprises to work, experiment and develop.

From this point of view, the government of change puts forward the theme of competences and (old) new occupation. We will inevitably face the shift in employment which will mean an increase in new sectors - renewables, intelligent networks - and decrease in traditional sectors - e.g., thermoelectric energy from fossil resources or the upstream productive sector. According to GSE data in Italy, between 2012 and 2015 part-time (direct and indirect) jobs given in terms of full-time equivalent jobs have experienced a sharp decrease due to the switch toward the full operation of the plants. However, in the same period, there was a positive variation for permanent employees engaged in maintenance and management activities. This is to say how much attention needs to be paid to the enhancement, updating and development of new skills essential to address the energy transition and the epochal change that is already at hand, and that the new national energy strategy evokes very clearly. Infrastructures, economic resources, and material conditions are just one side of the issue.

Industry 4.0 can be the driver for the development and the enhancement of expertise and talents on very advanced research frontiers on which, I say with pride, we have excellences that are unmatched in the global scenario. Only recently I did appreciate the presentation of the supermagnet for nuclear fusion, created by an Italian company together with ENEA: the confirmation of the excellence and the high degree of specializa-

tion that our enterprises are capable of in a context as advanced as that of nuclear fusion, and the confirmation of the great opportunity offered by partnerships between private and public actors. In this case, a real strategic alliance between companies of the private sector and advanced public research. The fact that strategic components, made in Italy on the basis of leading technologies, are exported all over the world under

the stimulus of great international research projects, is a source of great satisfaction and confirmation of the quality we are capable of.

It is with this wealth of experience, resources and investment in the future that Italy is participating in the Astana Expo. A precious opportunity for knowledge, comparison, dissemination and at the same time learning of good practices for institutions and enterprises. But, above all, Italy

takes part in this international event to highlight our excellences, to support them in winning even more and better the global scene, to emphasize the outstanding examples of our research, to identify and support new international partnerships, to bring out our talents and know-how.

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