



LUIS CRESPO, Secretary General of PROTERMOSOLAR

The power of tomorrow

Since the 1970s, power has become one of the top priorities on the agendas of industrialised nations. The two consecutive oil crises of the time highlighted the vulnerability of their economies to sudden variations in one of the main inputs in their production. Less known, but equally transcendent, was the abandonment, in the early 70s, of the nuclear alternative for power generation, which after receiving political backing, turned out to be disastrous for the investors. It wasn't the accidents at Three Mile Island (79) or Chernobyl (86) that caused the nuclear slowdown, but the lack of profitability in the projects, which caused new orders to peter out after 1973 and the cancellation of many orders in course. In Spain, the nuclear moratorium, against the message that was coined, allowed to overcoming the economical difficulties that electrical utilities had at that time with the approval of the rate supplement which has been paid until now.

In addition to its economic impact, the hazards of energy vulnerability have become dramatically patent in Europe recently with the geopolitical problems associated with Russian gas distribution. Spain cannot ignore this considerable potential threat, although it uses relatively diversified sources, since it depends 90% on energy from abroad.

But only in more recent years, with the recorded increase of CO₂ levels in the atmosphere, has humanity started to perceive the consequences of continuing to burn fossil fuels. The leading industrialised countries have marked out a proactive path for the gradual replacement of fossil fuels with renewable power sources, with the Kyoto protocol as their starting point. In this sense, Europe is ahead of the commitments, described in detail in the recent Renewable

Energy Directive, but certain notable absences of commitment remain in other geographical areas. This decision to increase the use of renewable energies together with measures for energy efficiency and distributed generation, the increasing number of high-capacity interconnections and the electric alternative in the transport industry, provide a road map with no return on the way to a new energy model.

Although the changes in our consumption patterns must be applied to all forms of final power consumption in every domain –household, industrial, transport– the generation of electric power is where the change can be most paradigmatic.

Among all the renewable sources of electricity generation, thermal solar power will foreseeably cover the most part of the generation mix, due to both its massive potential in sunny countries such as Spain and its unique characteristics. This technology provides stability for interconnected electric systems and, thanks to its manageability, is capable of adapting to the demand curve, by means of thermal storage or hybridisation with biomass or natural gas.

It is true that renewable power needs economic support in the early stages of its implementation –as all the other conventional sources received in the past and even continue to receive to this date– but many analyses tend to leave out the fact that renewable power sources, in particular thermal solar power, give back to society more than any assistance they receive.

There are few success stories like that of thermoelectric solar power in our country. The undisputed position of the Spanish industry as world leader has been made possible thanks to the support received for R&D and pricing conditions that have enabled this extraordinary take-off, at a very appropriate time when the rest of the world is considering its own ambitious implementation plans (USA, Northern Africa, Arab states, Australia, China, India, etc.).

Furthermore, the recent European Directive allows statistical imports of renewable electricity within Europe, to ensure the 2020 goals are reached in any given Member State, as long as said country offers financial support for projects built in another country. This represents a true historical opportunity that Spain must not miss out on.

This process of gradually replacing fossil fuels with renewable sources will encounter many difficulties, given the powerful economic interests tied up in the conventional power industries such as gas and coal, but we are sure that there is no turning back on this road, due to its advantages in terms of energy security and social, labour, and environmental sustainability.

With this gradual roll out, renewable power will gradually reduce its costs until, in a few years, it can compete with conventional generation. In fact, some technologies are already competitive under specific circumstances.

For all these reasons, we can state with full certainty that the power of tomorrow will be renewable. ■■



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