OIL, CLIMATE CHANGE AND ENERGY TRANSITION

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The **nuclear crisis** open in Japan as a consequence of the earthquake and subsequent tsunami on March 11 marked a turning point in the international debate on this source of energy. It has been a very hard blow for the nuclear industry at a time when it thought it would improve its acceptance in public opinion. The governments that in an uncritical and sometimes irresponsible way have opted over the years to give new impetus to the energy of the atom now have to confront their public opinions with the weakness of the arguments about its security. Three Mile Island, 1979, Chernobyl, 1986, Fukushima, 2011, have shown that atomic energy is inherently unsafe. Nuclear represents only 6% of the total world primary energy and a discreet 17% in electricity generation. In an orderly, planned and intelligent way, it can and should be changed. **It is not worth bearing this threat to our security**.

The nuclear debate is part of the broader one of the **energy model**. Oil is the fuel that literally runs the world. It accounts for 37% of primary energy, ahead of coal, 25%, and gas, 23%. The recent events in the Arab countries and their direct repercussions on the crude oil market have highlighted the situation of dependency and vulnerability of the Spanish economy. The current tensions in said market are part of a background current that must be read properly.

The **global energy system** has entered a transition phase for two decades, both in terms of the type of fuel and its geographical origin, and in terms of the search for more efficient energy sources. clean. The potential for geopolitical, economic, and technological transformation of this transition is extraordinarily important (Global Trends 2025. National Intelligence Council). This forces Spain to equip itself with a long-term vision and strategy, 2050, fully aligned with Europe, which allows it to reduce its energy dependency and vulnerability, while strengthening its position in the pool position of the countries that are leading the What has been called the third industrial revolution, which will be based on radical efficiency, renewable energy and distributed generation, with gas (not nuclear) as support in the transition.

The signs of **dysfunctionality of the energy model** are evident. In the first place, the international destabilization due to the open confrontation for the control of oil. Thus, since 1990 there have been two wars in the Middle East, Kuwait and Iraq, motivated by the control of crude oil, as well as numerous local conflicts. Libya's current **war** is not over oil but to prevent a crazed dictator from massacring his own people.
Secondly, the increasing **physical depletion of conventional oil resources**. The International Energy Agency in its Energy Outlook 2010 report points out that conventional oil production will reach a plateau of around 67-68 million barrels per day in 2020, but will never reach the maximum of 70 m/b per day in 2006 again. Of course, there are still reserves but they are increasingly inaccessible, therefore more expensive to extract, and a good part of them are of the so-called unconventional, much more polluting. Recent studies estimate that while in 1997 an investment of 1,000 dollars was enough to obtain 350 barrels of crude oil, today 7,000 dollars are needed to obtain the same result. The Brent barrel price curve indicates that since 1997-1998 there has been a basic trend towards the progressive increase in crude oil prices, having gone from $15 in 1998 to $148 ten years later. As a consequence, there are large transfers of income from consumer countries to producer countries.

Third, the **oil market is anything but an open, liberalized, transparent market**, capable of efficiently allocating resources through prices. Today, more than 80% of the known reserves are in the hands of state companies. And it is that oil and gas are not only commodities that are traded in the markets, they are vectors of geopolitical power. To this must be added the high speculative component existing in the oil market that ends up distorting the dynamics of price formation.

Finally, the **climate crisis**. The current energy model based on the combustion of fossil fuels has

set in motion a process of global climate change. The scientific community has been warning since 1990 of the risks of climate destabilization in the event that greenhouse gas emissions continue to accumulate in the atmosphere. The year 2010 has been the hottest and most humid since 1880. The massive combustion of coal, oil and gas leads inexorably to crossing the safety thresholds, 2º C, identified by the scientific community, entering a climate scenario of very high risk.

This is how the **European Union** has understood it, leading the efforts of the international community to move towards a low-carbon economy, laying the technological, economic, industrial, social and environmental foundations of the third industrial revolution. . In terms of employment, in the European Union more than one and a half million people work in the renewable energy sector and it is expected that by 2020 it will reach three million.
In emissions mitigation, Europe presents very significant results. In 2010 they were 17% lower than in the reference year, 1990, exceeding the commitments of the Kyoto Protocol. It has been endowed with an integrated policy on energy and climate in the 2020 horizon and, recently, the Commission has presented a long-term proposal, Road Map 2050, which proposes an efficient path to achieve 80-95% mitigation in 2050, in accordance with the commitment approved by the Heads of State and Government in 2009.

Within this frame of reference, **Spain** faces the challenge of articulating a long-term strategy, 2050, that allows it to position itself among the group of European countries that are leading this transition. The starting point has notable weaknesses, but also important strengths. It imports 440 million barrels of oil per year, which at current prices means a direct transfer of income of 50,000 million euros per year. Dependence on primary energy reaches 80% and the energy efficiency of its economy remains low - 12% less than the EU-27 community average. Now, for the first time in the last 250 years, Spain is a relevant actor in a transition of the international energy model. It is the fourth in the world in terms of installed wind power and renewables have reached a structural position in the electricity generation mix, contributing 35% in 2010. What is equally important, it has generated an advanced industrial and technological fabric with export projection of global reach.

This has been possible thanks to a regulatory framework that, beyond specific problems, has known how to give priority to different technologies in their journey through the learning curve. The annual premiums for renewables are around 4,700 million per year, below the 6,000 million that an increase of 10 dollars a barrel of oil costs the Spanish economy. Socially, the support of citizens for these technologies is very majority. Renewables are the way, including in the medium and long term the progressive electrification of the transport system.

There are no comments yet.