María Jesús Martín Martínez and Pablo Villaplana Conde point out that it is necessary to develop an Iberian natural gas wholesale market in line with the existing developments in Europe. Finally, the third part ends up with Aitor Ciarreta, Carlos Gutiérrez-Hita and Aitor Zurimendi with their article "Configuration and independence of the regulatory agencies in the energy markets".
The fourth part of demand, efficiency and security of supply starts with an article written by María Mendiluce Villanueva who explains the reasons behind the shift of the Spanish energy intensities and energy consumption trends in comparison with other EU countries. She is followed by Ibon Galarraga, Josu Lucas and Mikel González-Eguino who write about the "Economic assessment of the energy efficiency labelling: The case of washing machines in Spain" and Amparo Nieto Hernández with his article "The role of the demand management in the efficiency of the electricity wholesale market". Last but not least Laura Rodríguez Fernández and Javier García-Verdugo Sales elaborate on "The policies of security of energy supply".
Short English and Spanish summaries of each article help the reader to find his way into the subject.

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Politique et géopolitique de l'énergie: une analyse des tensions internationales au XXIe siècle

Author Samuele Furfari
Review by Helmut Schmitt von Sydow

The author displays much more than a profound political analysis of international tensions: namely technical knowledge (because he was trained as an engineer), legal and diplomatic experience (because he worked for 30 years at the European Commission), pedagogical skills (because he teaches at the Brussels university), and sentimental involvement (as shown by some anecdotes and references to his family, e.g. on page 435).
The result is a unique combination of a multidisciplinary approach with intellectual coherence and personal convictions. There are 21 tables, 167 graphs and maps, and 30 pictures, helping to assimilate the abundance of facts, figures, and arguments. Written by a single author, the text is very fluid and easy to read, without overlapping or contradictions. All the numerous technical explications have a sense and help to drive the point home.
Three introductory chapters set the scene.
Chapter (1) defines the notions of energy and geopolitics, recalls the history of energy (since the construction of the Babylon tower) and of the European Union, and announces the challenges to be overcome, including the challenge of political correctness.
Chapter (2) looks at indicators and forecasts in a clear and transparent manner as the author uses throughout his book one single unit of measurement, namely the ton oil equivalent. Thus he is able to compare primary energy demand and final consumption, showing that one third of energy is lost by thermodynamic transformation (p. 58). Installed capacities for renewables must not be mistaken for the much lower figure of real production output.
Chapter (3) devotes fifty pages to sustainable development, which seems to be a preoccupation of the rich. One (politically incorrect) recipe is to burn more waste which the author considers to be a renewable source of energy whereas ecologists tend to believe that we should produce not more but less waste in order to preserve nature. The author recalls the judaic-christian tradition that man should dominate the earth, whereas modern ideologists in the spirit of Rio say that man should venerate and obey nature (p. 106 to 111). The author's thesis is that the new philosophy leads to planetary collectivism and may even risk reintroducing communism by the back door (p. 132 ss).
Chapters (4) to (9) are devoted to individual energy sources, starting with the black gold of

"King Petrol". Numerous figures and graphs show the present and forecasted reserves (according to countries and petroleum types), the techniques and costs of exploration, exploitation and refining, the actors involved (including OPEP, IEA and the traders) and the future evolution of prices according to geopolitical and technical factors.

Natural gas is presented as the energy of the XXIst century, especially if one takes account of the surprising developments not only in America, but also in Europe; the recently discovered Blackpool field could cover British demand for 64 years. While gas exploitation must respect the EU legislation protecting environment and water, the advantages of this modern source of energy are evident, especially for sustainability. Eventually the author examines also the problems of gas transport and markets, including the EU legislative packages forcing the transition from an opaque system of "incestuous" relations between companies and national authorities versus full transparency and competition (p. 261).

As concerns coal the "mal-aimé", the author does not only recall its decisive contribution to energy supply and economic growth in the past, but also looks optimistically into the future. There are reserves for 118 years (p. 273), equally distributed among all continents, even if the Atlantic market is nowadays determined by spot prices whereas the Pacific market is still dominated by cartels and long-term prices (p. 279).

Nuclear energy is abundant and produces no CO2 (p. 290 to 309), but today's ecologists are reluctant to acknowledge its environmental benefits of nuclear, because their roots lie in the anti-nuclear movement of the sixties. Being an engineer, the author does not share their fears: Yes, there were thousand of victims in Fukushima, but they all died because of the earthquake and tsunami, none because of irradiation (p. 312), whereas 15,000 workers die every year in coal mines in China and elsewhere in the world (p. 268).

The first renewable source of energy stems from the discovery of fire (p. 313), and there is still plenty of potential - including hydroelectrical power in Africa. While acknowledging the renewables' benefit for security of supply, the author nevertheless doubts of their contribution to fight CO2 emissions (p. 338). He places more trust in the efficient use of energy, quoting the constructor of the promising solar powered plane: "SolarImpuls is not a project which innovated renewable energies, but one which innovated efficient use of energy" (p. 340).

Chapter (9) is devoted to electricity, with special emphasis on the past and future benefits of hydroelectrics. While we are no longer overwhelmed by the magic of electricity, other parts of the world are not so lucky. In Congo, 82% of the population have no access to electricity today. Worldwide, one billion three hundred millions of people will have no access even in 2030 (p. 374).

In the perspective of security of supply, the last chapter draws the conclusions of all the technical and economical arguments developed in the first 370 pages. The author scrutinizes all our neighbours, from South East Europe via Russia and Central Asia to the Southern Mediterranean and the gas fields in the triangle of Cyprus, Israel and Lebanon (cf. M. Charalambous infra p. 64). Energy is abundant, but geopolitical tensions will increase as more and more people strive for wealth and energy.

Throughout the book, the message of the author is as clear as it is sincere: Trust the scientific data, not the promises of ideologists! Europe is less polluted than 30 years ago! Sustainability should result from technological development, not from a sentiment of culpability! We must use energy more efficiently, but we must also be prepared to live with fossil and nuclear sources of energy! We should not be afraid of technological progress, but train more engineers and scientists!

Even those readers who may not share all the personal convictions of the author, will benefit from the wealth of pertinent informations, technical explanations, convincing figures, and intelligent arguments. Even those who do not master the French language perfectly, will be helped by the fluid style and the logical structure of the book; many technical expressions and all acronyms are also indicated in English.

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