

CHANGE OF ENERGY PARADIGM

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Rezumat. *Ne găsim la începutul unei schimbări de paradigmă în sistemele de energie ale întregii lumi. Atât resursele noi ce sunt găsite și exploatare cât și tehnologiile de conversie, transport și distribuție de energie și sistemele de inteligență artificială asociate acestora sunt pe cale să creeze noi tipuri de viitoruri, cu alte valori de viață, pentru cea mai mare mașină creată de om: sistemul energetic. Câteva elemente importante sunt prezentate în lucrare alături de poziția și perspectivele României.*

Abstract. *We are at the beginning of a change of paradigm in the energy systems of the whole World. Both new resources being found and exploited and the new technologies for energy conversion, transport and distribution, along with the associated artificial intelligence systems, are starting to create new futures, with different living values, for the greatest machine created by men: the energy system. Some relevant elements are presented in the paper along with the position and the perspectives of Romania.*

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1. Introduction

If Edison would have invented the infrared goggles instead of the incandescence lamp, the World would be different today with owners of infrared goggles being energy rich and those who cannot see in the dark being energy poor. Moreover, if Tesla would have not shown how to transport energy in high voltage lines in alternative current, probably there would be local generators of electrical energy at a street or a residence level, making again a difference between owners of energy and those who do not have it.

As seen from above the World has more than one energy future but several, depending; on the type of technologies available and the choice we make among them at any given moment, on the energy resources and on how much we can access, on the way energy fluxes interact with money fluxes and with information ones.

2. New resources and technologies

We are living a period of change of the energy paradigm. The distribution of resources in the World is changing: the USA that till not long ago were an importer of energy fuels, are becoming an exporter of coal and, soon, an exporter of natural gas (liquefied). In the last 15 years China has increased the imports of oil and gas more than ten times, arriving at looking for resources in wide areas in

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