



University of Pavia
Ph.D. School in Electronics, Computer Science and Electrical Engineering
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SEMINAR

The long journey of energy efficiency in Italy: limits, biases, policies, results

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Seminar Room “Blue”

Zoom link: <https://us02web.zoom.us/j/88115749384>

Abstract: In order to manage the energy transition - a global plan to reshape the entire energy infrastructure due to the depletion of fossil fuels, security of supply and anthropogenic climate change - states promote the rational use of energy, a complex of actions concerning energy saving and the development and use of renewable and endogenous sources. Energy saving can in turn be pursued through technological or non-technological means. The former makes use of more energy-efficient equipment or installations, while the latter acts on tariffs and quotas on energy use, reduces energy wastes, changes the behaviour of end users. European and national legislation has stimulated over the last few decades the increase of energy efficiency in end-use, intended as the main tool for containing the energy consumption: this is the European Commission's *Efficiency First* approach. However, the practices introduced through laws and regulations in Italy and in Europe are based on premises that are not always scientifically acceptable, producing a certain vagueness in the quantification of the results achieved. The seminar will touch upon various problematic aspects of the entire subject, from the rebound effect to the effects induced by the second principle of thermodynamics, from the non-linearity of technological progress to the diatribe between saving and sacrifice of energy, from incentive policies to technological trajectories, with the aim of fuelling a debate that, on the subject in question, is often directed by bias, myths and commonplaces.

Bio: Nino Di Franco, mechanical engineer (Rome 'La Sapienza' University, 1983), after a career in ENEA - the National Agency on Energy, New Technologies and Sustainable Economic Development - is currently Professor in Electrical Energy at the Faculty of Engineering of the University of Pavia. First as a researcher and later as Director of Energy Efficiency Dept in ENEA, he has cooperated with Ministries, Local Authorities, and national and international associations in the development of regulations, preliminary activities, studies and research in the field of rational energy use. He has carried out activities 'in the field' to support small-medium-large companies and industrial districts, for energy diagnoses, assessments and feasibility studies. Engaged in training (courses, seminars, lectures) and dissemination activities (conventions, conferences, etc.), both in the academic sphere (various universities, tutoring for degree theses) and in the institutional sphere in favour of interested parties (energy managers, professionals, Public Administration officials, associations, etc.). He has spoken on the subject of energy efficiency on five continents [Europe (various nations), America (Mexico), Asia (China), Africa (Egypt, Algeria), Oceania (New Zealand)]. He has written six books, the 'Energy Efficiency' entry for the Encyclopaedia Treccani, an unknown number of articles published in national newspapers and magazines, as well as technical reports; he has appeared on several occasions on TV and radio programmes with national coverage. As director of internal services and departments at ENEA, he managed activities worth several million euros, while introducing modern management techniques of a communicational and motivational nature for the involvement and enhancement of employees. He is a SECEM UNI-CEI 11339 certified EGE-Expert in Energy Management.

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Seminar in Italian