

*France-Israel Dialogue on:
Sustainable Energy options*
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The Jerusalem Institute for Israel Studies

Abstracts

Session 2: "Promotion of innovative technologies for low carbon"

- *Mr Jean Pierre Hauet, Former Chief Technology Officer of the ALSTOM Group – President KB Intelligence*

Smart grids: buzzword or change of paradigm? The French vision

The notion of smart grid hinges on adding and integrating a diversity of digital communication technologies and services with the power-delivery infrastructure. Bi-directional flows of energy and two-way communication and control capabilities will enable an array of new functionalities and applications which will improve reliability, security and efficiency of the electric grids.

Smart grids, notably thanks to a better transmission and distribution grid management, will contribute to peak-shaving. They will also facilitate deployment and integration of distributed generation including renewable

resources. More generally smart grids will participate in the limitation of CO₂ emissions.

Smart grids will affect the everyday life of citizens, thanks to the services offered by advanced metering infrastructures, enabling customer awareness of electricity pricing on a near real-time basis. They may also permit the implementation of demand side management solutions providing the customers agree with them. Smart grids are also a prerequisite for a large scale development of electrical vehicles. On the other hand, smart grids may suffer from cyber-vulnerability if sufficient attention is not paid to the risks of cyber-attacks. Smart grids involve a lot of advanced technologies, notably in the field of communications and automation. In all the countries, they constitute a challenge for the coming years and have received a high degree of priority in governmental stimulus plans.

The presentation will introduce smart grids concept in general and as perceived in France. Priorities notably differ from those retained in other countries, such as USA. The presentation will discuss feasibility and potential impact. It will elaborate on France's strategy and initiatives, notably regarding advanced metering, renewable energies integration and electrical vehicles. Economical and technical challenges will be discussed.

- *Benoit Lefèvre, PhD, Economist, Research Fellow, IDDRI, Sciences Po Paris*

Climate sustainability of urban transportation: Transport technologies and decision-helping tools

The urban explosion is undeniably one of the main environmental challenges of the century. The current tendencies of urban dynamics are alarming in terms of climate change, because they are giving an increasingly important role to cars, to the detriment of public and non-motorized transport.

Yet this is the type of energy consumption that is expected to grow the fastest, in business-as-usual scenarios. How can these market-based urban trends be influenced? What level of emissions reduction can be achieved? In view of rapid demographic growth and limited financial capacities, will technologies accessible to cities decrease trajectories of energy consumption and CO₂ emissions due to urban transportation?

Lefèvre shows that first, there is a relevant and urgent need to tackle the urban dynamics of cities focusing on the “transport–land uses” couple, and second, that existing transport technologies and decision helping tools are already available to take up the climate change challenge.

- *Dr Ofira Ayalon, Senior researcher at Neaman Institute, Technion Institute for Technology and at Department of Natural Resources & Environmental Management Graduate School of Management, University of Haifa*

The role of the state of Israel in promoting innovative technologies for low carbon economies

- *Dr Doron Lavee, Economist, CEO of "Pareto Engineering Ltd", Senior researcher at Tel-Hai College*

Benefits for Israel from investment in cleantec. How to promote cleantec in Israel – Government means to stimulate the private sector.

- *Mr Sagi Dagan, Economist, National Commission for Economy and Society, Prime Minister's Office on reducing dependence on oil*

What is the Israeli interest in reducing world oil usage, and how can Israel use its technology and innovation to promote its interests. How can Israel efficiently reduce its GHG emissions while inducing domestic innovation and knowledge based industries.