

LETTER OF INTENT
FOR THE STARTING OF THE JOINT ITALIAN-ISRAELI LABORATORY
ON SOLAR AND ALTERNATIVE ENERGIES
AND FOR ITS RESEARCH ACTIVITIES ALONG THE PERIOD OF
THE BIENNIUM OF THE ITALIAN-ISRAELI COOPERATION
IN SCIENCE AND TECHNOLOGY

Following the constitution of a Joint Italian-Israeli Laboratory on Solar and Alternative Energies, as for agreement of the Mixed Italian-Israeli Committee for the implementation of the Government to Government Agreement on industrial, scientific and technological cooperation, and following the Memorandum of Understanding undersigned by the Italian Ministry of Foreign Affairs, the ENEA, and the Ben Gurion University of the Negev, the foreseen Committee for the implementation of the Laboratory's research activities (composed by Profs. Moti Herskowitz, David Faiman and Dr. Iris Visoly-Fisher from the side of the Ben Gurion University of the Negev, Drs. Andrea Quintiliani, Anna De Lillo and Francesco Roca from the side of ENEA, and Dr. Stefano Boccaletti, as the member designated by the Italian Ministry of Foreign Affairs) met in Jerusalem, Israel, on day 2nd of February, in connection with the works of the First Italian-Israeli intergovernmental Summit.

In the attempt to directly link the mission and activities of the Joint Laboratory to the more general framework of the Biennium of Italian-Israeli cooperation in science and technology, the Committee agreed on the following declaration, that is assumed to constitute the basis for all the activities that will be run in the Joint Laboratory during the period 01.01.2010-31.12.2011:

"The Joint Italian-Israeli Laboratory on Solar and Alternative Energies (ILSE-Joint Laboratory) set up by ENEA and Ben Gurion University aims to carry out R&D activities to overcome some aspects of the current limits to the development and diffusion of solar technologies for energy production, such as:

- *low efficiency/density power (W/m^2);*
- *high costs and availability of raw materials for photovoltaic applications;*
- *low production throughput unable to sustain an increasing market,*
- *energy production discontinuity.*

The domain of activity of ILSE-JL encompasses initially the following Thematic Areas:

- *Solar Devices: Development of innovative photovoltaic solutions based on emerging technologies, such as 3rd generation nano-structures, organic and hybrid devices, carbon based inorganic devices;*
- *Solar systems & Balance-of-System: development of reliable, long-term, stable and low-cost solutions for photovoltaic systems, such as mirrors, lenses and optical devices, tracking technologies and systems;*

- *Smart grid Management: simulation studies of interactions with the grid discontinuous sources; grid-development policy; future grid operating strategies;*
- *Innovative storage: Advanced energy storage systems such as flow batteries, supercapacitors and combinations, and their potential applicability for PV-grid use.*

The bi-national Scientific Board will promptly define a detailed programme for R&D activities to be carried out in the collaboration, highlighting objectives and expected results, specific activities to be carried out, resources to be committed, managerial and reporting aspects.

R&D activities will be carried out also through a group of young Italian scientists that will benefit of the grants offered by BGU. An initial selection of this personnel will be promptly made by ENEA and details of individual visits will be worked out.

The laboratory will also carry out a feasibility study on the introduction of renewable energy systems in selected buildings of the Italian Public Administration. For this purpose, a complete diagnosis of the energetic balance will be jointly performed by the two partners on one or several selected buildings of the Italian Public Administration. Possible actions will be identified and general plans will be outlined to use the best available innovative technologies, and particularly those addressed by the R&D activities of the Joint Laboratory, to achieve significant results in terms of energy efficiency.

Finally, a bi-national event will be organized each years to draw together a certain number of scientists from Italy and Israel to discuss the scientific topics of the Joint Laboratory"

The Committe furthermore agreed to orient the future activities of the Joint Laboratory in a way to strictly follow the general and strategic cooperative policy that the two Governments would jointly individuate in the forthcoming years, as well as to assume as a steering policy for the Joint Laboratory that to make it an instrument offered for the support of all those initiatives that the Joint Committe will individuate for the promotion and the strengthening of cooperation between the two Countries, in the implementation framework of the Government to Government agreement on industrial, scientific and technological cooperation.

This document is written in English, and signed in five copies in Jerusalem, on day 2nd of February, 2010.

For the Italian Ministry of Foreign Affairs
Dr. Stefano Boccaletti
Scientific Attache'

The Italian Embassy in Israel

For the ENEA

Drs. Andrea Quintiliani, Anna De Lillo and Francesco Roca
(designated members of the Steering Committee)

For the Ben Gurion University of the Negev

Profs. Moti Herskowitz, David Faiman and Dr. Iris Visoly-Fisher
(designated members of the Steering Committee)