



# الجمعيّة العلميّة الملكيّة Royal Scientific Society

في خدمة الوطن منذ ١٩٧٠ • 1970 For Jordan

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## National Energy Research Centre

Established in 1972, the National Energy Research Centre (NERC) consists of four main divisions focusing on photovoltaic energy, energy efficiency and solar thermal energy, wind energy, and bioenergy.

The Centre houses a spectrum of specialties, from solar thermal energy, photovoltaics and solar desalination to oil shale, biogas, geothermal energy, wind energy, and energy efficiency.

At NERC, we believe in knowledge transfer and information dissemination and are continuously enhancing the abilities of the Centre and the country in renewable energy and energy efficiency fields through collaborating with local, regional and international institutions.

We are accredited according to ISO 17025 as well as ISO 9001.

### What we do:

- Perform studies, research, and pilot projects in the fields of renewable energy and energy efficiency
- Complete development of national and regional renewable energy and energy efficiency projects
- Manage and operate energy efficiency, energy labelling and renewable energy systems testing laboratories
- Solar radiation and wind speed data collection
- On-site and off-site trainings in the above-mentioned fields

### We provide:

- Specialised technical services, consultations and projects supervision in the following fields:
  - Energy efficiency audits for industrial, commercial and water facilities
  - Assessment of renewable energy (solar, wind, bio energy) potentials for various facilities / areas
  - Water pumping utilizing photovoltaic and mechanical wind pumping systems
  - Thermal imaging of buildings and electrical installation for fault detection and prevention
  - Techno-economic feasibility studies and financial models for Clean-Tech investments
  - On-site testing and commissioning services
  - Maintenance of photovoltaic systems
- Laboratory testing, verifications as well as performance monitoring of photovoltaic and energy efficiency systems
- Capacity building, training courses, seminars and workshops





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#### Examples of our recent projects:

- Solar Pumping Systems for 320 farming units in the Jordan Valley and the Highlands
- Full development for mega-scale photovoltaic plants
- Full development for the Royal Initiative of Schools Heating Project (200 schools throughout Jordan)
- Self-sufficient Renewable Energy Air-Conditioning System for Mediterranean Countries Project (REACT)
- Combined Solar Power and Desalination Plants: Techno-Economic Potential in Mediterranean Partner Countries (MED-CSD)
- The MENA Region Initiative as a Model of NEXUS Approach and Renewable Energy Technologies (MINARET)
- Accelerating 0-emission building sector ambitions in the MENA region
- Energy efficiency audits for water utilities
- Conceptual design of biogas utilization in wastewater utilities

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#### Some of our recent publications:

- Assessment of Feasibility and Roadmap for Development of Biogas Projects in Jordan
- “Barriers Removal Through Resources Assessment and Regulation of Renewable Energy in Jordan”
- Action plan for High-Priority Renewable Energy Initiative in Southern and Eastern Mediterranean Region
- “Feasibility Studies for Wind Parks in Jordan”

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#### We were the first to:

- Develop a “green building” in the region – The Solar House
- Establish a village completely powered by renewable energy – Jurf Al Daraweesh
- Install and operate a wind turbine on a commercial basis in Jordan
- Build a digester in Jordan for converting farm waste into energy
- Improve the efficiency of a solar thermal collector by using Nano paint

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#### Facts about our centre:

- Our energy labelling photovoltaic and solar water heaters laboratories are unique to Jordan
- The Centre installed more than 100 renewable energy systems in remote areas for water pumping, schools electrification, clinics, police stations in 1980s and 1990s
- Our centre addresses sustainable development goal (SDG) 7: Affordable and Clean Energy
- We were awarded the “Energy Globe National Award by the Energy Globe Foundation” in 2016
- We were awarded the “King Hussein Fund for Innovation” Renewable Energy award in 2016