

A.P.F.R.E.E. ,

Commission

**Smart Grids & Smart Cities
Enable RE integration**

in Arab Countries



APFREEE ARAB PLATFORM
FOR RENEWABLE ENERGY
AND ENERGY EFFICIENCY

APFREE essentials

Arab Platform For RE & EE

Int. NGO Launch **Feb 2010** registered **Apr 2012**
Stakeholders **Governments** Private **PARASTATE** **Academia**
from **Europe & Arab region** → collaborate in
Trans-Mediterranean Tech. Exchange in **RE & EE**
btw **Arab countries** (**10 Africa / 12 Asia**)

APFREE essentials

Professional Opinion- & -Policy-makers media scholars

OSE* CSO CAPTURING

1-Transition 2-Climate Change 3-Industries 4-JOBS
5- business-societal transformations
6-trainings 7-GeoPolitics 8-research 9-SMART GRID

*** *Organizations of Social Economies***

APFREE essentials

Think-tank, forum for businesses and information sharing and exchanges, AND PLATFORM for projects & technical expertise (carbon footprint financial alleviation on deprived and poor end-users energy access with micro-finance projects)

APFREE *Commissions*

CONVENTIONAL

Solar // Wind & tide // E.E.

Geothermal

Bio-energy

GHG emissions

Policy

BREAKTHROUGH

WATER Social Economy & Employment
Electricity Supply & Demand
Management

SMART GRIDS & SMART CITIES
ENABLE R.E. INTEGRATION

SMART GRIDS TOPICS

SGrids mandatory perspective in Arab Countries & economic impact

- a.** Opportunities and constraints of Demand Response in increasing of Renewable energy in Arab countries*
- b.** Economic and financial impact*

SMART GRIDS TOPICS

Smart Grids Architecture in Arab Countries

- a.** Towards distributed architectures including the move from distribution to distribution+collection*
- b.** The storage issue including technological trends in hot countries, architectures and costs*
- c.** Advance Metering: the consumption side of Smart Grids. Which model in Arab Country?*

SMART GRIDS TOPICS

Smart Cities / Smart Buildings:

- a.** Smart Cities: the challenge of sustainable and connected cities. How to address this issues*
- b.** Smart Buildings: the competitive perspective of Low-consumption building and Energy positive building in Arab cities*

THANK YOU

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What is the Smart Grid?

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a developing ***network of new technologies, equipment, and controls*** working ***together*** to ***respond immediately*** to our ***21st century demand*** for ***electricity*** - ***new kind of electric grid***, one that is ***built from the bottom up*** to ***handle*** the ***groundswell*** of ***digital*** and ***computerized equipment*** and ***technology*** dependent on it—and ***one that can automate and manage the increasing complexity and needs of electricity in the 21st Century***

What makes Grid “Smart”?

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digital technology that allows for **2-way communication** between the utility & its customers & **sensing** along transmission lines

Like **Internet “Smart Grid”** will consist of **controls, computers, automation & new technologies & equipment working together with the electrical grid to respond digitally to our quickly changing electric demand**

What does Smart Grid Do?

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unprecedented opportunity to move the energy industry into a new era of reliability, availability, and efficiency that will contribute to our economic and environmental health

Smart Grid Benefits

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More efficient transmission of electricity

Quicker electricity restoration after power disturbances

Reduced operations and management costs for utilities & ultimately lower power costs for consumers

Reduced peak demand, will also help lower electricity rates

Increased integration of large-scale Renew-Energy systems

Better integration of customer-owner power generation systems including renewable energy systems

Improved security

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المجمع العربي للطاقة المتجددة وكفاءة الطاقة

Arab **P**latform **F**or **R**enewable **E**nergy & **E**nergy **E**fficiency

Plateforme Arabe pour les Énergies Renouvelables et Efficience Énergétique



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