

“Mediterranean Investment Facility- Egypt”

- Creating a Strategy and Paving the way for the Deployment of Distributed Renewable Energy Technologies in Egypt



MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE





1. Project Background



MED DESIRE

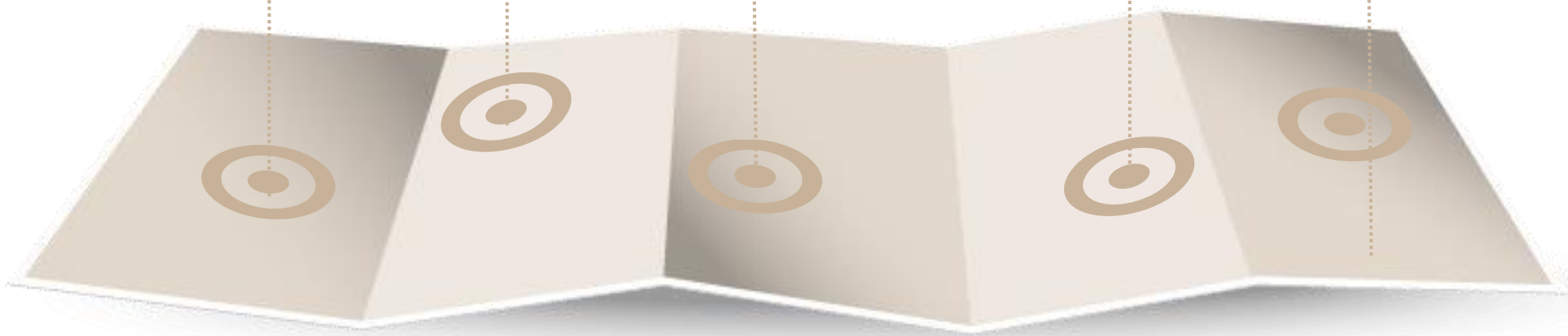


The Mediterranean Investment Facility (MIF) - EGYSOL

Leveraging on the Partnership and Pool of Expertise



Solar ordinances





2. Project objectives

- Support **ENERGY PLANNING**: scenarios for future energy mixes with high penetration of renewables
- Support the design, implementation and monitoring of **renewable ordinances on SWH** and **efficient air conditioning**
- Support the **SWH MARKET DEVELOPMENT** through the implementation of a **SOLAR ORDINANCE** and a **FINANCING MECHANISM** involving the local banks/ Finance institutions



3. Project components

SUPPORT ENERGY PLANNING

(component 1)

- Scenarios for future energy mixes with high penetration of renewables
- Investment roadmap

SOLAR ORDINANCES/ LEGISLATIVE ORDINANCES

(component 2)

- Support the design, implementation and monitoring of renewable ordinances on SWH and efficient air conditioning
- Provide Technical assistance to Policy makers on Solar Ordinances and Capacity building to Market Agents



SUPPORTIVE INCENTIVES

MECHANISMS FOR THE

DEPLOYMENT OF SWH

TECHNOLOGY- PRIVATE SECTOR

ENGAGEMENT

(component 3)

- Market transformation of SWH technology, through capacity building, awareness raising and financing support mechanism involving commercial banks
- 136,000 m² of solar collector installed within the project timeframe (20% of actual total installed collector area)



Component 1- Analyzing and simulating the national energy system (in terms of Energy Mix)

Component Rational

Define an optimum future energy supply scenario for Egypt: focus on demand reduction, peak electricity shaving and high renewable penetration in both, electricity and heating and cooling sector.

Expected Results

- Possible scenarios for future energy mixes with high penetration of RE are assessed.
- Analysis with best progressive scenarios in techno-economic, environmental and social terms.
- The results analysis delivered as a basis for policy makers to take energy-related and investment decisions.

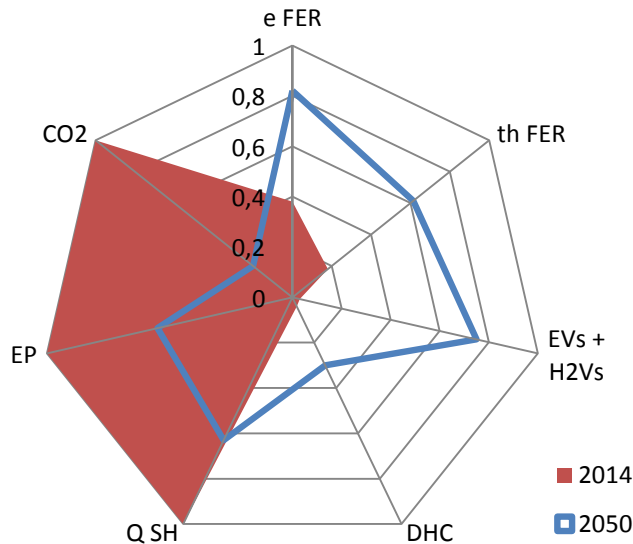
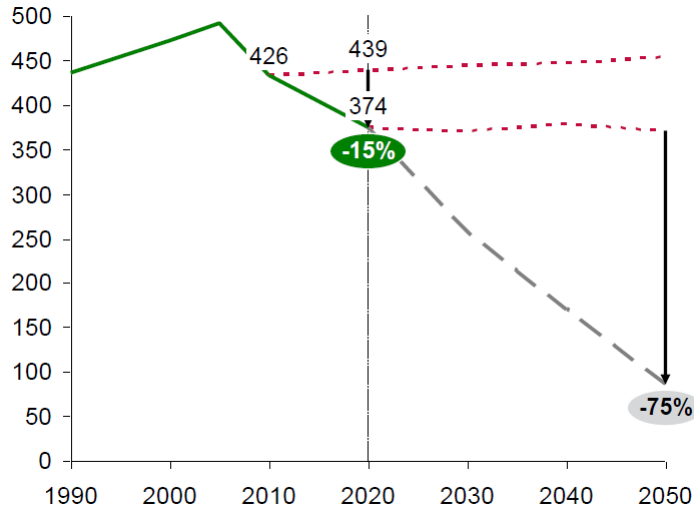


Component 1- Analyzing and simulating the national energy system (in terms of Energy Mix)

Activities

- 1.1 Data collection about current energy framework in Egypt
- 1.2 Techno-economic simulations of energy mix at 2030 and 2050
- 1.3 Assessment of the contribution per energy source and vector (a special focus will be on PV and SWH technologies)
- 1.4 Dissemination of the results to the interested public authorities and private Entities

Modeling and simulating energy systems



- stop climate change and its effect
- drastically reduce **CO₂ emissions**
- do it in a sustainable manner



- need to **modelling the energy system as a whole** (fuel, heat and electricity needs)
- take into account all technical limits (technological, **local potentials and constraints**)



- **evaluate all impacts** (economic, social, environmental): **Multi Criteria Decision**
- build the **pathway to achieve the optimal solution**, thanks to correct policies



Component 2 - Support the design, implementation and monitoring of renewable ordinances

Component Rational

Support the design, implementation and monitoring of renewable ordinances, addressing solar water heaters and reduction of air conditioning demand and consumption

Expected Results

- A legislative ordinance for AC tailored on Egyptian needs.
- Technical assistance to the ordinances for SWH and AC.
- Help desk: technical and administrative services to the market actors.
- Demonstration projects to comply with the ordinances.



Component 2 - Support the design, implementation and monitoring of renewable ordinances

Activities

- 2.1 Definition of a legislative ordinance for air-conditioning
- 2.2 Implementation and monitoring of the solar ordinances for water heating and of the air conditioning ordinance
- 2.3 Design and Implementation of demonstration project to comply with the ordinances
- 2.4 Establishment of a help-desk

Component 3 : Supportive incentives mechanisms for the deployment of SWH technology

TNA for Egypt within Med-Desire identified **SWH as key technology**

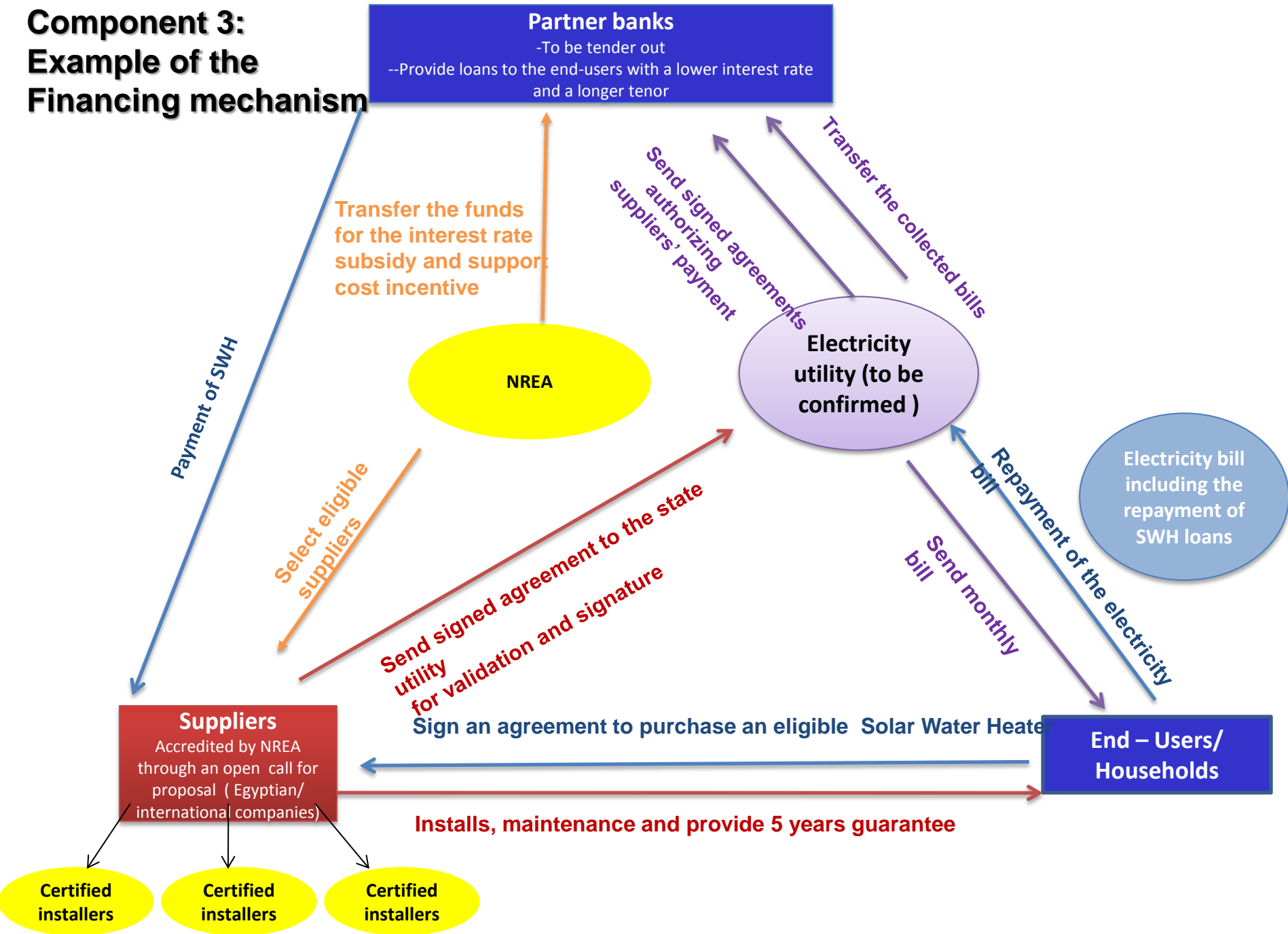
Interest of Local banks assessed within Med- Desire . Banks are very interested in providing **loans at preferential terms** when a **national institution** coordinates all the project's partners and insures the follow up of the **Manual of procedures- Need to develop specific modalities to execute and define the application processes of the general features of the financing mechanism**

Tailored financing mechanism with **reduced interest rate and longer payment period** to **increase the commercial viability** of the SWH systems for households in Egypt and reduce **the up-front cost – based on PROSOL experience**

Increased awareness: SWH systems in residential sector will showcase **Economic benefits**; **risk perceived** by domestic banks is reduced through involvement of Gov entity

improved professional **capacity in domestic banks** in managing a wide **RE loan portfolio** and SWH suppliers on **quality and performance standards**

Component 3: Example of the Financing mechanism





Component 3 - Supportive incentives mechanisms for the deployment of solar water heating technology through the involvement of local banks

Activities

- 3.1 Specific modalities to execute and define the application processes of the financing mechanism
- 3.2 Enhanced awareness of the targeted end-users to facilitate the deployment of SWH: Marketing plan/ National marketing campaigns
- 3.3. Technical assistance for technology providers and enforcement of the use of standards
- 3.4 Financial **support- direct cost sharing**: Combination of incentives and financial support to end-users provided through local banks

Multiple Benefits of the project

Energy Efficiency and Access:
Air conditioning is adopted
in 80% of new apartment as
a result of RES Ordinance

→ **8300 ToE** saved
annually and peak
shaving of **19 MW**



Local and Renewable Sources:
136,000 m² of solar collectors
installed (SWH)
→ **23550 ToE** annually
saved



Meet Tomorrow's Energy Needs
Through the Design and Effective
Implementation of Solar
Ordinances and Finance
Mechanism

**Green
Economy:**



**GHG Mitigation
Improved Air Quality:**
100.000 tons of CO₂ avoided
annually

\$ 22,4 million mobilized from
Commercial banks
\$ 1,9 million of fossil fuel subsidy
annually saved

Thank you for your attention

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More information

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