

Chapter 11: Energy

Introduction

Improving energy efficiency in industry, transport, electricity, buildings, and oil is still a major challenge on the local level. A lot of mutual benefits are gained from implementing energy efficiency policies in production and consumption sectors, including reducing energy demand, improving air quality, and decreasing green house gas emissions. Providing energy efficiency technologies to these fields will certainly support the efforts aiming at developing production and consumption sustainable patterns.

MSEA Achievements in the Field of New and Renewable Energy

First: Development of the White Paper “Transitioning to a Renewable Energy Future”

The ISES (International Solar Energy Society) white paper “Transitioning to a Renewable Energy Future” was translated into Arabic and published on the internet in the Arabic, English, French, Chinese and Czech languages. MSEA wrote an introduction to the paper on the significance of this issue in the light of the international efforts to eliminate green house effect. The paper was sent to the concerned ministers to benefit from it. In July 2005, the 2000 published copies of the paper were all sold out. In June 2006, another 2000 copies were published as a second issue. In a formal session during the proceedings of the fourteenth Session of the Commission of Sustainable Development held at New York, the paper content was discussed.

Second: Air Conditioning Using Solar Energy Project (2005–2009)

The project components are designed. Specification document is prepared for solar system components, part of which will be locally supplied and the part will be exported from Italy. Three locations are chosen for the installation of solar air conditioning systems: Ghazala Gardens Hotel in Sharm El Sheikh, Movenpick Hotel, and Hurghada RBO.

Third: Electric Interconnection and Energy Intra-Trade among Eastern Nile Basin Countries (Egypt, Sudan, and Ethiopia) (2006–2008)

1. The project aims at preparing environmental and economic feasibility studies for the construction of three dams and three hydroelectric power stations on the Blue Nile in Ethiopia.
2. Environmental and economic feasibility studies for electric interconnection lines in the three countries are developed and reviewed and feedback is given.

Fourth: Mediterranean Food and Agro-Industry Applications of Solar Cooling Technologies (MEDISCO) (2006–2008)

1. MEDISCO aims at studying the best solar cooling technologies for food and drink refrigeration and conservation industry. The project duration is 3 years and has started on 1st September 2006.
2. The project biannual report is prepared. It includes data on energy consumption in 15 industrial companies.
3. A report on the volume of the Egyptian refrigeration industry market has been prepared and discussed in MEDISCO steering committee meeting, comprising 10 experts from 8 countries, during the period from 23 to 25 May 2007 in Cairo.

Fifth: Energy Auditing of EEAA training centre in Sharm El-Sheikh (2006–2008)

1. Engineering and design studies have been developed to reduce energy consumption in EEAA training centre in Sharm El-Sheikh (solar air conditioning, thermal insulation of the center walls and ceilings using Japanese technology).
2. It is agreed that the Japanese party will be responsible for, at its own expense, the thermal insulation of Sharm El-Sheikh EEAA training center using Japanese technology.
3. Tender specification document for the supply, installation, operation, and maintenance of solar air conditioning system is prepared. The tender invitation has been published in newspapers and on MSEA/EEAA website on 10 September 2007.

Sixth: Establishment of the Energy Audit Agency

1. A study on improving energy efficiency in the sectors of industry, electricity, housing, and transport has been prepared.
2. Supreme Council of Energy has approved the proposal on the establishment of the Energy Audit Authority under MSEA control.
3. Presidential Decree approving the establishment of the Energy Audit Authority is drafted and sent to H.E. the Prime Minister in order to be submitted to the Supreme Council of Energy.

Seventh: Proposal of Project for Reducing the Volume of Burnt, Leaked, and Flared Gases in Gas, Oil, and Petrochemicals Sector in Egypt

1. A proposed project has been prepared. The project aims at reducing flared gas volume, accumulating and processing the gases accompanying the extracted oil through re-injecting them into the oil well bottom to keep the high pressure of the oil well during its lifetime, using gases to operate small power stations in the field, pumping gases into the field pipelines to be used in oil well tests, and improving combustion efficiency by using the best design, improving chimneys, flames, and pressure release valves.

2. The project proposal has been sent to UN Department of Sustainable Development and Department of Economic and Social Affairs, to be included within the final proposal of the project and approved and financed by the international donors.



Pictrure (11-1) Wind Power station in Zaafrana