A. Definition of the Project

A.1 Title	Renewable Energy for Dounya Park

A.2 Type of project	
Wind	X
Photovoltaic	X

A.3 Stakeholders	Italian Ministry for the Environment and Territory Algerian Ministry for the Environment Italian National Agency for the Protection of the Environment and for Technical Services (APAT) Italian University of Tuscia ENI Tecnologie

A.3 Location of the project	
City / Town / Village	Algiers
Brief description of the location	City of Algiers and its surrounding area, in total 250 ha crossed by the Algiers-Tipasa motorway

A.4 Forecasted Planning for the project			
Status of the project	Phases	Status	Forecasted timing
	Idea / concept Pre feasibility study On going Done	 x	

B. Stakeholders

B.1 Main promoters	
Name	Italian Ministry for the Environment and Territory
Type of organisation	Governmental
Address	Via Cristoforo Colombo, 44 - Rome
Contact person	Fiamma Valentino
Telephone/ fax	Tel: +39 06 57228164 Fax: +39 06 57228177
e-mail	valentino.fiamma@minambiente.it

C. Technical description of the project

C.1 Technical description of the project

The Dounya Park energy requirement will be supplied by renewable energy.
The power system will be type Photovoltaic/Wind, inclusive of tree wind generator each of 20 kW, mounted at the height of 25 m on an apposite tubular pylons, and a photovoltaic generator located onshore near the Didactic Centre for studies and training activities on renewable energy technologies.
The energy system will be equipped with a monitoring system able to give information about the status of the installations, the power generation, failures, etc.
The hardware and software equipments for the control, the management and the monitoring of the energy produced in the Park will be installed in the Didactic Centre, and will be set up in order to facilitate the data reading for visitors and students.
The Didactic Centre will be also equipped with a laboratory for studies on renewable energy sources allowing the acknowledgement and the diffusion of the most advanced and efficient technologies for the production of energy from renewable sources, their designing, installation and management.
The renewable energy production system will be grid connected, sending to the grid the energy produced.

Photovoltaic installation

Realisation of energy production system by photovoltaic generator. Power outcome will be utilised for the park grid connected.

Wind generators

Realisation of energy production system by wind generators. Power outcome will be utilised for the park grid connected.
Both systems will be controlled with appropriate monitoring system with hardware/software parts able to give information's about status of systems, power generation, failures etc.

C.2 Photo/drawing of the project/building:

C.3 Typical indicators	Investment – thousand euros	1 380 000
	Power installed – MW	PV system 0.150 (150 kWp Grid connected) Wind 3x 0.02 (60 KW grid connected)
	Energy produced – MWh / year	PV system 178.8 MWh/year (net Grid connected) Wind 67 MWh/year*
	Cost of energy produced from the project - euro cts/kWh	PV system 83 (Grid connected) Wind 9,5
	Cost of conventional energy - euro cts/kWh	1 (referred to steam plant supplied with natural gas)
	Price of sold energy – euro cts/kWh	**Industry** Normal hours: 1.5* Rush hours: 6.5 Families From 0 to 125 kWh: 1.5 More than 125 kWh: 4.5
	Population concerned	**~900 people (Wind+PV grid connected)** Medium consumption pro capite: 275 kWh/year

C.4 Detailed technical indicators	
M² installed of PV	1.500 sqm. Net surface for 150 kWp, not included distances for no-shadowing
PV Power per m²	> 100 WP
Wind - soil occupation m^2	50 (amount)
Wind – diameters m	20 m
Wind – Height m	25 - tubular pylon
Delivered power	**Grid connected**: 178.846 kWh/Year **Wind** 67.000 kWh/Year **Total** PV (grid connected) + Wind: 245.846 kWh/year at the net of losses (PV maximum losses calculated: 25%)

D. GHG emissions: reduced / avoided

D.1 Type of GHG reduced or avoided	
CO_2	128.4t/year*
CH4	-
N_2O	-
HFCs	-
PFCs	-
SF_6	-

D.2 Base line	
Description of the level of reference	The annual production of power = 0,245.846 MWh will be equivalent of saving about: Gas = 65 775 Nm3= 54 TEP

D.3 Total emission reduction per year	
In Tons CO^2 equivalent	128.4

D.4 Estimated CER gains – thousand euros			
Estimated price (euros/t) - Tons CO_2 equivalent	5	7	10
Total estimated gain*	72,125	100,975	144,250

* Project lifetime: 25 years

E. Financial aspects

E.1 Estimated costs - thousand euros	
Total investment	1 380 €
Allocation	
Development costs	
Installation	
Operation and maintenance	
Other costs	

F. Contribution of the project to sustainable development

Natural environment	Wind Energy and Photovoltaic systems diffusion will result in reduced impact on the natural environment from traditional energy sources
Social	Development of common understanding of problems involved with the integration

(employment, health, education, ...)	of wind energy and Photovoltaic Systems into the electricity national system; Awareness rising and promotion of other projects in public infrastructure in the country; Opportunities of employment for future renewable energy installations.
Economy (local, national, …)	Diversification of energy supply in the country; Awareness of investors about the business opportunities and risk coverage related to the implementation of renewable energy projects; National and local economy will be potentially impacted by new wind energy/photovoltaic installations.

G. Other relevant information	
List of available documents	MoU between IMET and AMET, signed on June 17, 2002 Addendum to Mou, between IMET and AMET, signed on June 17, 2004 Minute of the Steering Committee March 8, 2005 2° MoU between IMET and AMET, signed on June 8, 2005