New Urban Communities Authority

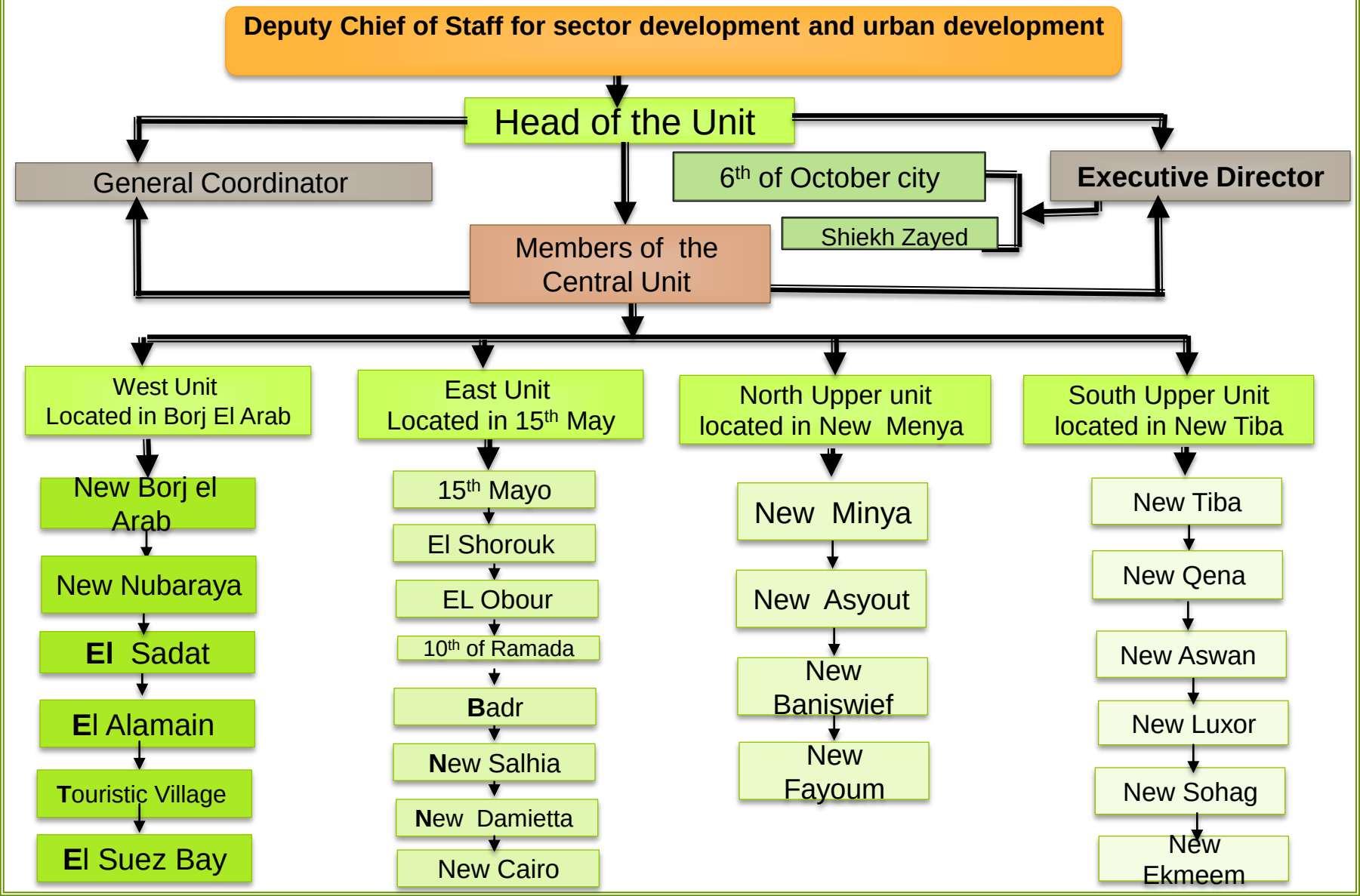
الوحدة المركزية للمدن المستدامة والطاقة المتجددة

Central Unit for Sustainable Cities

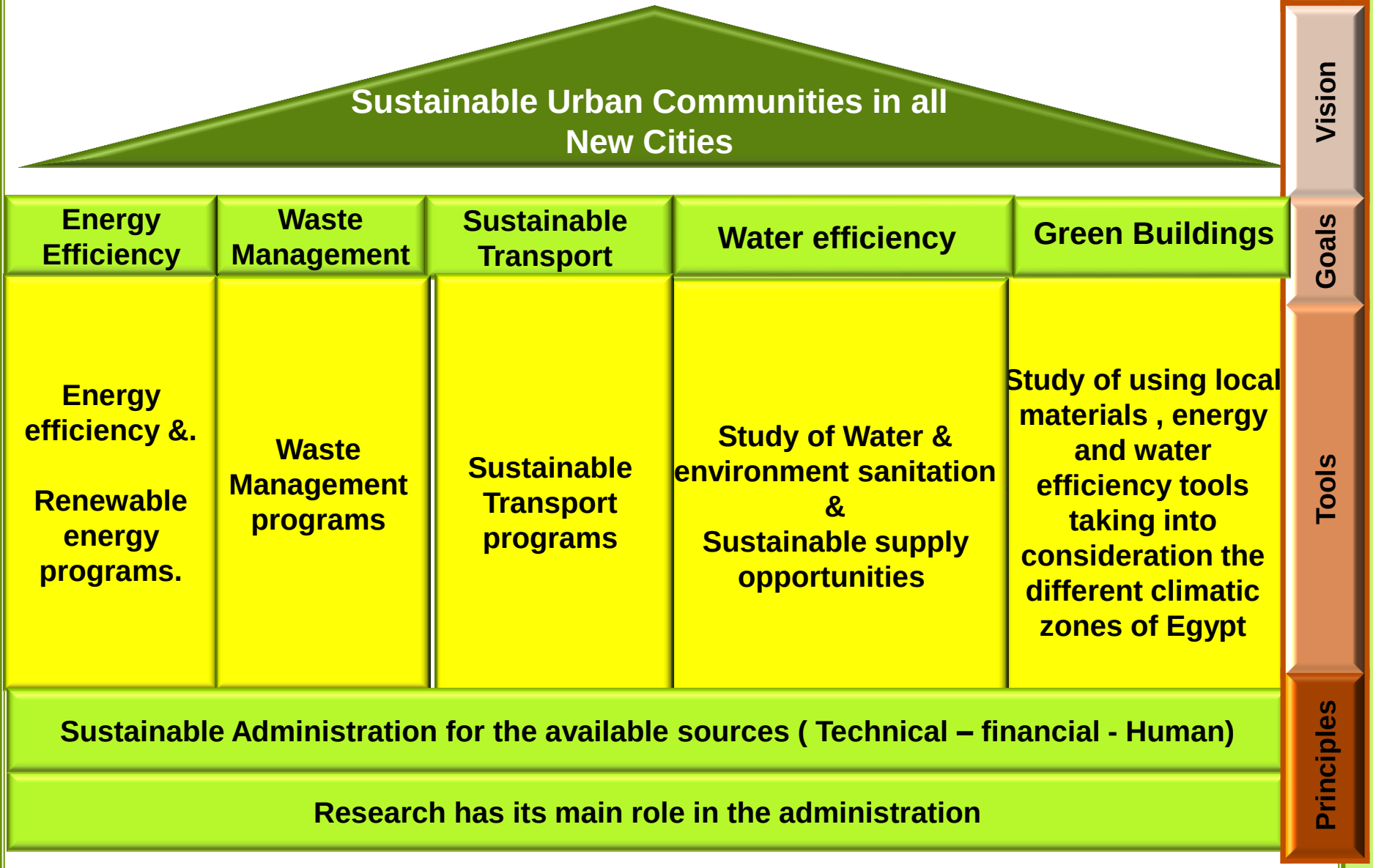
&

Renewable Energy

Organizational Structure The Central Unit for Sustainable Cities & Renewable Energy



Strategic map for the Unit



Current Projects in the field of Energy Efficiency and Renewable Energy in the New Communities

1st: Current Projects in the field of Energy Efficiency and Renewable Energy in the New Communities

Street Lighting	Solar Energy	Energy Efficiency
Using PV cells and Led lamps in the streets	Using PV on the roof tops	Using Led in Lightening
	Using Solar energy in the new cities	Dissemination of the energy efficiency Concept in the new cities
	Using solar heaters on the roof tops	

Current projects in Energy Efficiency

-Using LED lightening in the New Urban Communities Authority building

-Developing an energy efficiency plan and using Led in all new cities

Current projects in Energy Efficiency

1-Using the LED lightening in the New Urban Community Authority building

Financing Sides (Funders)	**-50% scholarship from improving energy efficiency program UNDP** **-5o% scholarship from Shamsk ya Masr Initiative** **-Energy efficiency unit , Ministerial council ..**
Monitoring & Evaluation for the project	**-in cooperation with improving energy efficiency (UNDP)** **-Energy Rationalization Unit . Ministerial Council** **-All measurements & evaluation will be done for all the building**

Current projects in energy Efficiency Field

1- Number of exchangeable lamps in the NUCA building

Place of installation	Number for importing	Power watt	Type(LED)	م
internal	3625	9	60 CM	1
internal	250	18	120 CM	2
internal	515	7	Equivalent to Halogen	

Existing Lighting System Power (calculated) (kW)	**143.5 kW**
New Lighting System Power (calculated) (kW)	33.1 kW
% of calculated savings in power	**76.5%**
Annual consumption before changing (from electricity bills) (kWh)	651276
Annual consumption after changing (from electricity bills) (kWh)	490488
% of saving in consumption	**24.7 %**
Annual Cost Savings (LE)	**69943**
Investment Cost (LE)	239140 LE
Payback period (Month)	**3.4**

هيئة المجتمعات العمرانية الجديدة

Current projects in Energy Efficiency field

Projects in energy Efficiency& Using LED in Local authorities

-Changing the lighting system in the local authority building for new Tiba City

- A study made by each local authority for the energy efficiency of all the buildings

Projects in Solar Energy

1- A solar energy station on the surface of Tiba local authority of the power of 90 kw

2- A solar energy station for the new Urban Community building by the power of 50 kw per hour

3- Solar energy station in the local authority building of 10th of Ramadan city by the power 3 kw per hour

4- PV cells above the local authority building of Borj el Arab by power of 65 kw per hour

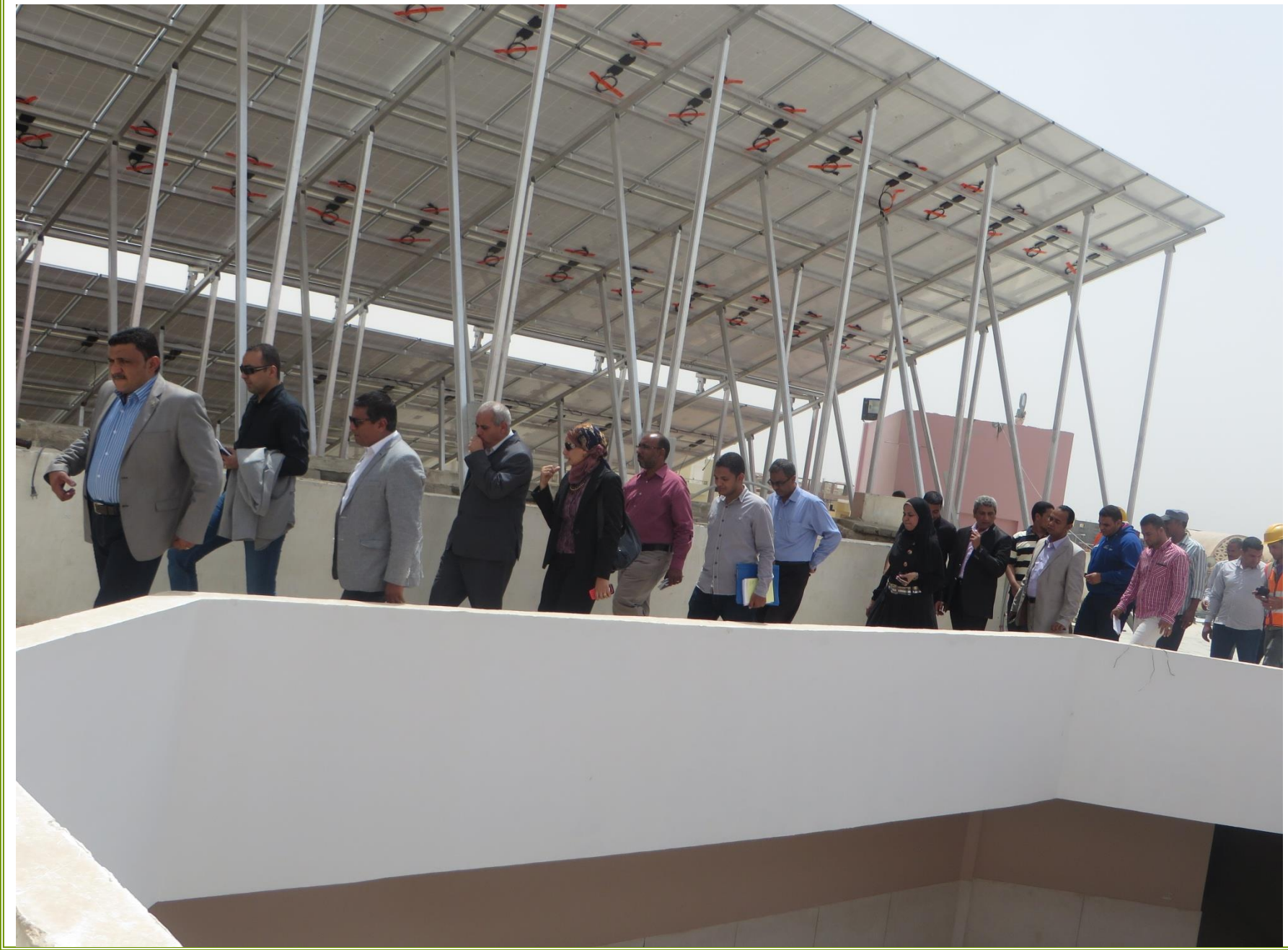
5- PV cells above 15th of May local authority building by the power of 45 kw per hour

6- Solar heaters above the buildings in (new Tiba – Asyout –Sohag -Badr) cities

7- guideline model with private sector

Current projects in Solar Energy

1- Solar energy station on the roof of Tiba local authority by the power of 90 kw



Current projects in Solar Energy

PV cells above the local authority building of Borj el Arab by power of 65 kw/ h

Opening of Borj el Arab solar energy plant by H.E Ministry of Housing & Urban Communities..

Solar Energy plant above El Sadat Local authority building, 65KW/h

Solar Energy plant above 15th of May Local authority building by 45 KW /h

Current projects in Solar Energy

3. Project of installing solar power station with a capacity, 50 kw on the NUCA Building

-50% of the NUCA's budget -50% donation from the Initiative Chmsk ya Masr - Unit of energy conservation – the Ministerial Council	**Funders**
-In cooperation with the unit of energy conservation and the Ministerial Council -Doing work measurements and follow-up and evaluation of the building	**Follow-up and evaluation of the project**

Solar Energy plant above New Menya Local Authority building by 45 KW/h

محطة الطاقة الشمسية قدرة 45 ك .وات مدينة 15 مايو

العائد المادى من محطة الطاقة الشمسية من تاريخ 2015/9/19 وحتى 2016/1/28	17023جنية
الطاقة الانتاجية للمحطة من بدء التشغيل وحتى تاريخه	18707كيلو وات
الطاقة المنتجة شهرى	4253.9 كيلو وات
المساهمه فى تخفيض التلوث البيئى بمادة ثانى اكسيد الكربون	ما يعادل 10 t ثانى اكسيد الكربون
متوسط الطاقة الفعلية المنتجة من المحطة	35.2 كيلو وات
متوسط انتاج الخلية الواحدة	4.01 كيلو وات/ساعة/م2

قبل تركيب المحطة متوسط الاستهلاك الشهرى من خلال شبكة شركة الكهرباء (11500) كيلو.وات

بعد تركيب المحطة متوسط الاستهلاك الشهرى من خلال شبكة شركة الكهرباء (7900) كيلو.وات

حوالى40 % من الاستهلاك يتم من خلال الطاقة الشمسية

Total Production from April 2015 – Jan 2016

214 MW

Saved Money since April 2015

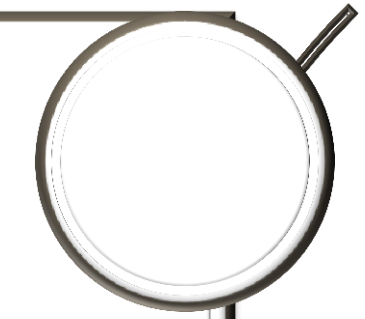
205322 LE

CO2
132 ton was reduced

Projects in the field of solar energy

Installation of solar heaters on the rooftops of buildings in new Tiba , Sohag , Asyout & Badr

It is an integrated system for the implementation mechanisms of solar water heaters in new cities with guided with the Tunisian Expert in collaboration with the Egyptian unit of energy conservation and the German Committee for renewable energy, energy efficiency and coordination with the Renewable Energy Authority..



- The terms of reference of the technical specifications and codes

Document quality and accreditation systems of solar heaters in the housing and control mechanisms that complement the document specifications and requirements of foundations and organizations and uses of solar water heaters in the buildings sector (document can display all the details of the discussion)

- Preparation of a draft ministerial decision for the dissemination of solar heating in the domestic service sector gradually use

Installation of Solar Heaters in New Tiba City

Installation of Solar heaters above 4 Social buildings in Tiba City in cooperation with energy Efficiency Unit (Shamsk ya Masr)

Number of 3 half centered water solar heaters system working by natural loop & opened circle using the flat solar collector

Central Solar water heater working by forced loop & opened circle using the flat Solar Collector

Current projects in the Street Lighting

1-Lighting the west Road for Tiba- Qena of 4 km , using PV cells and Led lamps

2-lighting Nile sat Road by 6 km PV + Led off grid

3-Exchanging the Led lamps in the main Road in front of New Tiba local authority building

Projects in the street lighting

Replacement of LED on the main road in front of New Tiba local authority and other new cities

It has been replaced in street lighting the power of the Scouts sodium 400 Watt by LED power of 100 watts.

Project to replace sodium bulbs with LED in 7 new cities

Coordination with the National Service of the Armed Forces device to replace some of the existing street lighting headlamp of sodium and mercury implemented since long periods by LED costing 80 million pounds in the cities (6th of October - New Cairo- El Shorouk - El Obour – 10TH of Ramadan- Shiekh Zayed- New Borj el Arab)

The City	The number of LED lights, which will be replaced
El Obour	10,000
El Shorouk	3,500
New Cairo	5,000
Borj El Arab	3,500
6th of October	5,000
El Sheikh Zayed	1,500
10th of Ramadan	1,000

وزارة الاسكان والمرافق والتنمية العمرانية
هيئة المجتمعات العمرانية الجديدة
جهاز مدينة طيبة الجديدة
المحطة المركزية للطاقة الشمسية
لمدينة طيبة الجديدة

طيبة
ارض الخير

طيبة
أرض الشمس

Case Study
Towards a Green Neighborhood in Zayed

Board of Trustees in Zayed	Zayed City	Ministry of Environment	NUCA

الوحدة المركزية للمدن المستدامة
والطاقة المتجددة
SCRE

مدينة الشيخ زايد

Environmental Measurements & Awareness Workshops

وزارة البيئة
جهاز شئون البيئة
الإدارة العامة للتنمية البيئية
مدينة الشيخ زايد
جهاز مدينة الشيخ زايد
SCRE
الوحدة المركزية للمدن المستدامة
والطاقة المتجددة
هيئة المجتمعات العمرانية الجديدة
المركز الثقافى البيئى الأخضر
(مشروع حديقة البيئة)
إشراف جهاز مدينة الشيخ زايد
مقاولة شركة الأهرام للإنشاءات الحديثة

Feb 2016

Feb 2015

Environmental Culture Center in Zayed City
"Zero energy Building"

02.02.2016 11:24

Furniture

مدينة الشيخ زايد
02.02.2016 11:41

02.02.2016 11:29

02.02.2016 11:34

02.02.2016 11:38

04.02.2016 11:39

الوحدة المركزية للمدن المستدامة
والطاقة المتجددة
SCRE
AC Power
الوحدة المركزية للمدن المستدامة
و الطاقة المتجددة
معا.. نحو مدن خضراء مستدامه

” الحمد لله الذي هدانا لهذا و ما كنا لنهتدي لولا أن هدانا الله“

THANK YOU

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