



# NEWSLETTER

## AEE TUNISIA CHAPTER



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Tunisia's energy resources are relatively modest. Since 2000, Tunisia has been energy-deficient because of an increase in energy demand that exceeded that of national production. According to the Ministry of Energy, Mines and Renewable Energies, over the last few years primary energy resources decreased by about 6% per year (from 7.8 Mtoe in 2010 to 5.4 Mtoe in 2016).

Population growth and depleting gas resources the increase of energy consumption and the slowing down of exploration and research activities have had a significant impact on the country's energy balance to overcome the growing unbalance between energy demand and production the development of renewable energy has been seen as an important solution for securing Tunisia's energy future.

That is why, recently, the country has made visible efforts to support the deployment of renewable and energy efficiency projects. Those efforts are aligned with the ambition revealed on the national strategy to get 30% of energy generate by renewable and 30% reduction of the primary energy consumption by 2030.

### OBJECTIVES

3%

It's the part of renewable energy in national energy production.

12%

It's the intermediate goal of part of renewable energy in national energy production to reach by 2020

30%

It's the part of renewable energy in national energy production to reach by 2030



**AEE Tunisia Chapter Opening Ceremony**  
Tunisian chapter of Association Of Energy Engineers has held its opening ceremony announcing its official launch on the 20<sup>th</sup> January 2018

Page 2



### The International Conference on Accelerating the Implementation of Renewable Energy Projects

This conference took place on the 7th and 8th december under the aegis of Prime Minister Mr. Youssef Chahed allowed to expose the critical points slowing the implementation of renewable energy projects.

Page 4

# AEE Opening Ceremony

On January 20<sup>th</sup>, 2018, The AEE Tunisia Chapter held its official launch party in the prestigious hotel El Mouradi Gammarth and had distinguished guests representing all the major actors in the field of energy from all over the world.

An Extensive media coverage of our Opening Ceremony and Energy Awards by several well Known Media ( TV Reports, Radio, Magazines) including Interviews with AEE officers and leaders.

It was a great opportunity for many speakers to share their knowledge and experiences, to discuss and challenge some current practices and techniques to drive continuous improvement in energy field.



about the activities of the association of energy engineers and its new chapters.

The opening ceremony was followed by the lecture of Mr Samer Zwaydeh; General Secretary of AEE and Jordan chapter, in which he talked about the different activities of The Jordan Chapter and its perspectives to enhance capacity development in the Jordan training sector.

Then the presentation of Mr Rafik Bezzaouia: Tunisian Electricity Grid and Power Plants Tunisian Electricity and Gas Company (STEG), which was very interesting since it touched the actual energetic situation in Tunisia. The different topics presented by Mr Rafik were:

- The energetic situation in the previous year.
- Production, transport and distribution of electricity.
- Procurement, transport, distribution of the natural gas.
- The national energetic strategic.
- The future projects (thermal power station, TUN-IT, Smart Grid, etc.).

The last presentation was about the energy perspectives in Tunisia, and was presented by Mr Nafâa baccari: Deputy Director of renewable energy from the National Agency for Energy Management (ANME)

This presentation was very interesting since it talked about the actual energy situation, the perspectives of the renewable energy and energy efficiency in Tunisia.

*Opening Speech of Mr. Ayoub BABA, AEE Tunisia Chapter President*



## Conferences

The opening ceremony commenced with a speech by Mr. Larry good, AEE director of international chapters in which he talked



*M. Larry Good's conference, Director of International Member Development*

## Round Tables

During the Opening Ceremony of the AEE Tunisia Chapter , several **round tables** has been held simultaneously , all aimed to give an insight on the development of renewable energies, energy efficiency and the important role of universities and institutions in developing technologies and innovation

The first one was conducted by **Mr Larry Good** in which he discussed about How to finance sustainable energy projects. By attending this round table, participants have found out a very convenient method proposed by Mr Larry Good who has a great experience and that's how he developed this method in order to teach other engineers the proper way to negotiate with bankers and convince them of their own project.



· *M. Samer Zwaydah, AEE Jordan chapter's General Secretary presenting the round table about the Energy efficiency in buildings*

The other round table was presided by **Mr Chiheb BOUDEN** and **Mr Sadok Guellouz** in which they talk about the contribution of universities in the Energy Sector, prospects and regulatory framework for renewable energy in Tunisia and tried to explain the importance of supporting universities to deliver formations that are adapted to industrial needs.

The third round was conducted by **Ms Christine Soler** ( Spanish chapter ) , **Ms Yolanda Delange** (South Africa Chapter) and **Mr Alain Aoun** ( Lebanon Chapter ) to talk about the International experience in renewable energy ,innovation ,technology ,transfer and the contribution of technologies

in the Energy Sector and the contribution of AEE. It was a great opportunity to discover the renewable energies nowadays, mentoring projects in Spain and energy efficiency. It was a great chance for our participants to find solutions to their energy problems in their companies.

The last one was about Energy efficiency in buildings, Conducted by **Mr Samer Zwaydah**. In this table, **Mr Samer** talked about the energy efficiency in buildings, Heating and cooling, lighting, hot water and Jordanian codes.

## Energy Awards 2017

The launch party of the AEE Tunisia Chapter had a rich program in which a competition has been held. It was a great opportunity to honour our Tunisian experts and engineers.

Through our **Awards Programs**, AEE shines the light on the important work that is being done in energy by individuals, organizations, government, agencies, and corporations.

Seven awards were offered to our winners:

- **Energy Engineer of the year 2017: Oumeima AYEDI** who has several skills that enabled her to manage two of Clarke Energy potential projects in all their aspects.
- **Corporate Energy Mangement of the year 2017: Sitex** for it investigation in a cogeneration unit that allowed us to generate electricity and exploit the heat generated by the engines to generate steam.
- **Research/ Graduation Project in Energy: ZRIBA Amani** who has made very in-depth studies in the field of solar drying and she was

able to design a functional prototype of a solar dryer for the heat treatment of the wood in order to reach her degree of doctor in energetic engineering.

- **Energy Project of the year: Carthage Grains** for its Cogeneration power plant.
- **Women in Energy Award: Dalila AMMAR** for the special role played as a female in leading a project in the energy Services Company.
- **Energy Manager of the year: Housseem MKAOUAR** for his seriousness and his attention to his work as an Energy plant manager in Delice Danone.
- **Energy Innovator of the year: Zaafour Kaouther** who is CEO and Founder Company Zaafour International Consulting – Environment & Bioenergy / Start-up En-ZAAF.



*Energy Engineer of the year 2017: Oumeima Ayedi*

## Diner Jazz & Networking

The last part of the launch party was an **international dinner and JAZZ party** that enabled the participants to discuss and have fun in a great harmony. The atmosphere was magical and all participants were extremely satisfied.



## RELIVE THE OPENING CEREMONY

Relive the opening ceremony in video on our website : [www.aee-tunisia.com](http://www.aee-tunisia.com)

# The International Conference on Accelerating the Implementation of Renewable Energy Projects



In order to cope with high energy deficit coupled with a strong consumption growth and a strong dependence to natural gas, Tunisia adopted in 2014 an energy transition policy.

This policy comprises a certain number of legal and organizational measures that aims to increase the share of renewable energy in energy production to 30 by 2030, with a stage of 12% in 2020.

The International Conference on Accelerating the Implementation of Renewable Energy Projects which was held on December 7th and 8th, 2017, allowed the various governmental actors, experts and investors to expose the problems encountered the implementation of renewable energy projects and proposing appropriate solutions.

## Introductory session

Within the framework of the Tunisian Solar Plan, an axial project, which will achieve the production targets of Renewable Energy, the government, aims to install an additional capacity of 1000MW between 2017 and 2020.

It also emerged from this session that it is necessary to help private investors to invest in this sector given the high costs and the long amortization of these investments. Hence, the need to mobilize the banking sector in order to provide suitable credit offers as well as reinforcing the evaluation of renewable energy projects.

## Mode of the concessions, how to speed up its implementation?

The regulation of the concession mode stipulates that the investment contracts relating to the production of renewable energy must be submitted to a special Committee of the assembly of representatives of the people and then be submitted to the Validating of the ARP. The complexity of these procedures could considerably slow down the implementation of the projects.

It should be noted, however, that the concessions regime, aiming at projects with a higher installed power 10MW for photovoltaic and 30MW for wind turbines, will now concern installations with an installed electrical capacity more than 100 MW for both wind and PV during the period 2017-2020 according to Opinion No. 1-2016 published by the Ministry of Renewable Energy.

This session culminated in the implementation of a timetable for the finalization of the framework for the implementation of projects affected by the concessions regime and the use of contracts prepared by the ANME/PNUD cooperation with the aim of accelerating this finalization.

It is also necessary to clarify the roles of each organization and to strengthen their capacity.

## Power purchase agreement in the authorization regime

A majority of the funders, interested in financing renewable energy projects, believe that the electricity purchase contract by the STEG is not bankable because it does not protect investors enough from certain risks, including legal and financial types.

The principal gaps of the PPA are:

- Delays in setting up exploitation: lack of guarantees and absence of a precise timetable for the authorization of the commercial exploitation. The producer should be protected if the exploitation is delayed due to a foreign factor.
- No compensation in case of non-removed Energy: indemnify the producer in case of alleged exploitation or in case of force majeure.
- Exemption of the ministry in case of Change of law: to give more flexibility and guarantees to the producer in case of change of the law (termination of contract, indemnities in case of exceeding a monetary threshold).
- Sovereign Guarantee: guarantee the purchase of electricity by the STEG.
- The entry of the PPA must take place before the start of the projects and their financial closure in order to limit the risks of failure.

## Electric self-consumption projects by renewable energy

The total power installed in Tunisia for self-consumption projects are less than 50 MW and generally concerns subscribers to low-voltage infrastructures.

In fact, the regulation of self-consumption projects linked to medium and high-voltage networks is the subject of long and laborious procedures.

In addition, the metering system and electricity purchase rates do not promote an attractive return on investment, as the redemption of surplus is limited to 30% of annual production.

At this session, an improvement of the current regulatory framework was proposed with in particular a revision system of counting and redemption tariffs electricity.

Finally, the incentive for consumer projects goes through reductions in taxes and tariffs for photovoltaic and wind energy components and the tax exemption of income from the sale of surpluses.

### The Land tax: Constraints for the development of renewable energy projects.

Renewable energy infrastructure projects are area-intensive, require suitable spaces and legal status and must be close to the electricity grid.

Apart from the scarcity of land which meets the area and location criteria, the law does not provide for a regime applicable to the grounds relating to the production of renewable energy despite of the inadequacy of the common law applicable to agricultural grounds and their legal status.

### Procedures for setting up private electricity generation projects

This session highlighted the remaining gaps in the procedures for setting up private electricity generation projects. It is important to improve certain points of the Authorization Procedure Manual.

The French Cooperation Institute (IFC) also raised ambiguities and proposed solutions for the STEG Connection Manual: inappropriate costing,

For the connection requests, it would be necessary to provide more details on the processing elements of applications, to include a confidentiality clause and to clarify the deduction approach for the processing of requests.

The IFC pointed out that the bridge agreement does not specify the technical and financial responsibilities of each party for the construction and maintenance of connection facilities.

### Solar Tunisian Plan (PST) funding

The representatives of international development banks and international organizations made some recommendations regarding the PST funding:

- Capacity building of the Tunisian financial institutions, the energy Transition Fund and the ANME
- Integration of the self-production regime of companies into the FTE
- To ensure the financing of the STEG to strengthen the electricity networks, their interconnection and the pumping stations.

### Governance of the PST

Since the PST is the major axis of Tunisian energy policy, its governance is an essential factor in its success, so that it was important to define precisely the roles and responsibilities of the organizations involved (MEMER, STEG, ANME).

This session notably highlighted the absence of a regulator of the electricity sector protecting the interests of the various actors and ensuring the transparency of the management of the PST and the establishment of a unique reference dedicated to all the investments in the field of RE.



# The Energetical Tunisian future

Facing the energy deficit which risks becoming hollow deeply in 2030, the implementation of a renewable energy development plan establishes itself as a strategic choice today aiming at making spring up this deficit. This plan is characterized by 3 major axes: the Tunisian solar plan, the desert development project and the SMART Grid project.

## The dual objective of Tunisian solar plan: wealth and job creation

Renewable energy development projects consist on the one hand of the installation of photovoltaic power plants in Tozeur (under construction: 10 Mw) and others in Médenine, Kebili, Skhira, Sidi Bou Zid, Kasserine. On the other hand they consist in the elaboration of the specifications of the wind power plants in particular at Kebili with a planned installation of 80 MW.

This is an ambitious government project that reflects the strategic aspect of the renewable energy sector and which also allows to exploit the high rate of sunshine until then untapped.

## The Desert Development project

This is a project about international cooperation between Tunisia and several countries whose objective is the recovery of the desert for the benefit of the agricultural sector and this through the exploitation of energy, available on the sites in question, for the extraction of groundwater resources. This project would also increase job creation.

This project which takes into account the renewable energy component by the installation of 1000 MW in photovoltaic, the agricultural component as well as the infrastructure component which will consist of road links as well as an improvement of the military airport of Remeda.

## SMART GRID

This project intended above all for companies and which consists in integrating the concept of the intelligent economy of electric power and this through the association of Electrical infrastructure to data-processing technologies what allows the production and the decentralized storage of electricity by adjusting electricity flows between producers and consumers.

The intelligent network will be initiated in 2018 among 400000 customers in the region of Sfax, then generalized in 2020.

The intelligent counting system will then allow an optimization between supply and demand as well as a reduction of losses and therefore the improvement of the billing system. It also aims to reduce the impact of the electrical system on the environment.

## The role of AEE Tunisia in the Tunisian energy field future

The AEE Tunisia chapter, gathering the various actors in the energy sector in Tunisia, aims to provide the necessary support in order to structure and develop the efforts which converge towards the promotion of this sector.

*«The Certified Energy Manager (CEM) training session is proposed by AEE Tunisia for the first time in Tunisia and North Africa»*

The choice of the creation of the AEE Tunisia chapter denotes a willingness to ensure the objectives based on two main axes: the contribution of the expertise as well as the development of the competences already available in Tunisia.

## International Experience

The first axis of the AEE Tunisia's contribution to the energy transition is the contribution of the international experiment. It is within this framework that the four round tables were held during the opening ceremony of the association. They were based on the

exchange of experiences in the energy transition with countries whose energy situation is relatively comparable to that of Tunisia.

The most striking example was that of South Africa, which, having knowing a 2 weeks blackout in 2015, had no choice but to implement an energy transition with objectives comparable to the current Tunisian objectives.

The association is also committed to the development of Tunisian skills in the industrial and energy sector as well as their alignment with the international context. The AEE offers dozens of certifications recognized by the industry and recognized as being the standard.

## First CEM certification session in North Africa

It is within this framework that the Certified Energy Manager (CEM) training session proposed by AEE Tunisia for the first time in Tunisia and North Africa will be enrolled. This session will take place on June 30th, 2018, and will provide the North African market with the first energy managers certified by the AEE.

In particular, an information Session was conducted on 25th March to inform and educate potentials interested in CEM training. The benefits of this certification were presented by Mr Ayoub BABA, president of AEE Tunisia and Mr Nassreddine GUERFALA, CEM, and elected as energy manager 2017 in Toronto by video conference from Canada.



*Info session on CEM session with MR Nassreddine Guerfala on skype from Canada.*