Minutes OF THE 22nd ANNUAL MEETING of MEDELEC
Tunis–15 April 2014

Preamble:
All available presentations will be uploaded on the Medelec Website by Eurelectric, with the appropriate access codes to be sent to the participants. As this website is currently under modernisation and updating process we will inform our members as soon as the site will be ready.

I. Opening of the session and welcome speeches
The session was opened by Mr. Ridha Bouzouada, Director General of Energy, and by Mr. Abedelhakim Layas, Chairman of MEDELEC and Executive Manager of Gecol.

Mr. Rachid Ben Daly, General Manager of STEG, expressed his pleasure and honour to host this 22nd Annual Meeting.

Mr. Guillaume de Forceville, General Secretary of MEDELEC, Deputy Director for International Development Division at EDF, reminded everyone that MEDELEC’s aims and objectives are to provide a forum of dialogues and coordination where topics and problems are discussed in order to take /propose common positions in the interest of the members. He also mentioned that MEDELEC has signed the common declaration of the Euro-Med Energy Associations at the occasion of the Ministerial meeting of the Union for the Mediterranean on Energy (Brussels 11 December 2013). This common declaration signed by 8 Mediterranean Associations is a strong message to state that encouraging regional cooperation will pave the way to the building of a sustainable Mediterranean Energy community.

The agenda of the present meeting was approved by all participants.

The minutes of the Tripoli 21st meeting were approved by all participants (some corrections to figures concerning TEIAS presentation have been taken into account)

II. News from Unions

1 AUE: Main activities completed in 2013:

- Participation in several seminars & conferences (second electricity trading forum between Gulf countries in Dubai, Board of Directors meetings, Committees meetings....)

- The 4th AUE General Conference in Qatar, (including an exhibition and a seminar on Renewable Energy and smart Grids)
Workshops: renewable Energy (Jordan, March 2013) and nuclear energy (Tunisia June 2013)
Training courses in Algeria (November 2013)

Plans for 2014, include the following targets:

- Issuing statistical bulletin, power stations manual, Interconnection maps..
- Participating in MEDELEC, IRENA, LAS meetings and taking part in the studies currently being carried out,
- Organising Board of Directors and committee meetings,
- Signing a contract with a media company to publish and distribute “the Electricity Magazine”

As a conclusion, Mr Fawzi Kharbat, General Secretary of AUE, stated that it is now time to change general thinking and attitudes in the electricity sector, with regards to the cooperation between Europe and Arab Countries. Indeed, this cooperation should not be limited to the Arab Countries of the Mediterranean Region but to all Arab Countries including the GCC Countries

2 COMELEC news:

- The ONEE of Morocco has been appointed to the Presidency and SOMELEC of Mauritania to the Vice-Presidency for 2014/2015
- In the field of transmission networks planning: development of a planning tool (in partnership with Universities and Companies)
- In the field of optimisation of Renewable Energy’s integration on electrical networks: Approach Methodology
- Comelec contributed to the study on “global electrical interconnection between the Arab countries and the operation of natural gas” (launched by the Arab league). This study is divided into 3 parts: the first 2 are financed by AFESD and concern the implementation of a Master Plan and a cost-effective comparison between export of electricity and/or natural gas. The third part, financed by the World Bank concerns the grid codes and markets agreements.
- The 400 kV interconnection between Algeria & Tunisia (Chafia-Djendouba) is achieved (operation planned in 2014)
- Updating of statistical data on Renewable Energies in the Maghreb countries and release of the statistical bulletin (year 2012) in both Arabic and French

3 EURELECTRIC Presentation: Europe's Energy transition: What’s in for the MENA region?

(Eurelectric represents the EU electricity industry and is a pan European & internationally oriented Association, which covers the whole electricity value chain)
The status quo of EU Energy transition is a key challenge for the European electricity market:

- The energy transition costs are too high
- Increasing national and EU regulatory interventions
- The System risks and costs are growing due to slow progress in market integration and system solutions
- The lack of market perspective in defining energy policies resulting in costly policy choices

- Eurelectric visions on useful experiences from the EU transition:

### RES for less:

- Europe’s RES deployment has pushed for further cost reduction
- Cost of key RES technologies is expected to decrease by 60% to 2020
- This cost reduction is a good opportunity for MENA countries who can take advantage

### Cost-effective integration of RES is crucial:

- RES support reforms all over Europe in order to avoid overcompensation and limit market distortions

### European Utilities future relies on innovation in new segments

- R&D expenditure by large European utilities has nearly doubled over the last decade
- New downstream value pools have a high potential
- In 2030, the utility business model will be about delivering reliability of service

### Regional cooperation as the only way forward:

- Too many national patchwork of CRMs, RES support and CO2 regimes in Europe
- EU transition can only be successful with a regional approach, not a national one
- Requirement of a European –wide coordinated energy policy

### A sound regulatory framework and empowering governance is decisive for investments:

(Presentation of figures and diagrams)

### CO2 has no borders:

- Climate change is world-wide issue
- Climate policies must be cost-effective and therefore have several requirements
• Do not replicate EU’s 20/20/20 package
• Europe’s transition provides useful lessons (good & bad)

**Conclusion:**
EURELECTRIC supports its MENA members. A conference on investment in the MENA region will be organised by EURELECTRIC and MEDELEC in 2015.

**4 APUA (new name of UPDEA) news:**

**What is APUA?**
- Created in 1970, formerly known as UPDEA, APUA is the Association of Power Utilities of Africa. In French it is known as ASEA (Association des Sociétés d’Electricité d’Afrique). The new name was decided in December 2012. Its headquarters are located in Abidjan
- APUA’s mission is to bring together African power utilities and stakeholders in order to facilitate access to reliable and affordable Energy for the African population

**APUA: the Strategic Action Plan in order to implement Centres of Excellency (Centres d’excellence) for professional training:**

**History:**
- Poor Management of the African Electricity Utility (AEU)
- Retirement and departure of an important number of qualified resources
- Closing of several training centres including the “Ecole Supérieure Interafricaine de l’Electricité (ESIE)
- Important turnover of AEU’s top Management
- In 2012, organisation of a seminar in Yamoussoukro aiming to prepare and launch the project “Centres of Excellency for professional trainings of the Electricity utility”
- As a result of the seminar AFD (Agence Française pour le Développement Economique) decided to finance a feasibility study of the project
- The project was approved in June 2013

**Objectives of the study:**
- Improve the performance of the African Electricity Utilities (AEU) with the development of their mutual know how and putting together training Sessions? at regional and continental levels
- Give the necessary back-up to APUA for the implementation of the Excellency Centres
• Define training courses in the field of Generation, Transmission and Distribution of Electricity + customer Management

• Take into account Renewable Energies

Main Conclusions:

• 4 centres may be considered as Centres of Excellency (Eskom Academy of learning, Kafue regional Training Centre (ZESCO) IFEG (Sonelgaz), Centre de formation de l’ONEE)

• 5 centres have the potential to become Centres of Excellency (GTC (KenGen), Training Centre of Kenya Poxer, Training Centre VRA,CME (CIE), Training Centre of STEG. The General Assembly has decided to create the” Réseau Africain des Centres d’Excellence pour le Développement des Compétences et la Gouvernance en Electricité” (African network for Excellency Centres & development of knowhow and Management in Electricity)

• Afican Development Bank and AFD decided to jointly finance the next step of the project i.e, additional studies to prepare actions plans & conditions for the implementation of the network

5-OME: Regional Governance for Electricity Integration in the Mediterranean

A-Energy overview, focus on cross-border networks: trends, challenges and expected benefits

• Current energy trends in the Mediterranean are not sustainable

• Overall energy demand could grow by 40% to 2030

• Average of Electricity annual growth rate of about 2,8% but 5% in the south by 2030

• Fossil fuels will dominate the energy mix & natural gas will overtake oil

A real Energy challenge in the south

• By 2030, population growth in the north will be more or less flat but will increase by over 80 million of people in the south

• GDP per capita will increase by 75% to 2030

• 200 GW of new generation capacity to be installed

• €715 billion of investments by 2030

Need to reinforce or build new interconnections
**Priorities for EU Member states:**
- Market integration & reduction of congestions
- Higher penetration of RES
- Environmental impact
- Higher investments cost...

**Priorities in SEMCs**
- Enhance security of supply
- Improve technical performances
- Share investment costs
- Have common rules on capacity allocation, congestion management...
- Reinforce or redesign local grids
- Take into account the impact of GW injection from the south on the EU transmission grid

**B- Regional Governance and Institutional framework**
- Develop Technical coordination in order to make possible the integration of cross-border networks
- Independent national regulatory Authorities should be established
- Strengthen political cooperation between Mediterranean countries
- Have a bottom-up approach

**C-OME Recommendations**
- Cooperation should be oriented towards open electricity markets
- Independent regulators should be established
- Strengthen political cooperation
- Avoid stop and go policies

**III. STEG: The Status of the Tunisian Power System**

**A- History of the Energy policy**
1960/70: STEG was established in the 60s. It is a 100% state owned utility in charge of the whole electricity & gas sector:
Development of electrification and operation of El Borma field

1980s: Strong development of rural electrification, construction of the transcontinental gas pipe, creation of the National Agency for Energy Saving (Agence Nationale pour la Maîtrise de l’Energie)

1990s: Operation of several gas fields and launching of the Combined Cycle technology and of a private investment IPP project.

2000s: Structural Energy deficit, development of wind farms and Renewable Energies connected to the network, new regulation for encouraging self production in RE

B- Current situation:

(Presentation of some figures on resources, primary energy consumption, evolution of the natural gas demand..)

47% of the Gas is imported from Algeria. 97% of the electricity mix in 2013 was based on thermal (natural gas) and 3% on hydro and wind. 49% of the generation is produced from Combined Cycle.

Exchanges and interconnections with neighbouring countries are limited: 5 lines with Algeria, the Interconnection with Libya is not energised; the interconnection with Italy is currently under review?

Launching of a real Energy Savings Policy (2% of savings per year, new regulations and laws, creation of the Energy Savings Agency (ANME))

C- Economical Impacts:

The price of gas has quintupled in 10 years.

Subsidies represented 49% of the kwh cost in 2012

D- Stakes and challenges:

Strategic stakes: Security of supply (natural resources are declining and energy demand is growing)

By 2030 Develop an electrical mix composed of 30% Renewable and 70% thermal (with a possible introduction of clean coal)

E- The main thrust of the strategy:

Develop resources and energy infrastructures

Reinforce Energy Efficiency & Renewable

Implement a new tariff policy

Reinforce interconnections with neighbouring countries (Maghreb/Mediterranean)

Reinforce regional and international cooperation (Transfer of technology, training, R&D..)
IV. **JDECo (Jerusalem District Electricity Co): An overview of JDECo, Electrical System, the current situation and future plans:**

**General presentation**
The vision, missions, Goals & policies.;
- Continuous improvement of company performance
- Looking for new sources of energy, encouraging clean energy projects , protecting the environment..
- Reduce the debt and losses by using smart grid technology

**Key figures:**
Presentation of figures and diagrams on Energy purchases, peak load, loss percentage, Employee and customer numbers, bulk supply points...

**Summary of achievements during the last 10 years:**
- Renewal of company infrastructures
- Building and renewal of 26 main substations, installation of 800km of LV networks, of distribution transformers...
- Creation of a SCADA control centre
- Accommodation of modern systems for prepaid and remote reading meters + smart grid
- ISO 9001 certification
- Live working networks and modernisation of maintenance equipment
- Setting up a solar power station (300KVA) in Jericho...

**The future:**
- Increase electrical system efficiency, reliability, and Improving the quality of service indicators through operating of 161KV substation
- Increase the generation of solar energy up to 5 MW During the next five years.
- Replace electricity meters with smart types by Installing about 20000 smart meters yearly.
- Accommodate new technology to reach DMS through completion of GIS/NIS system in addition to improve SCADA system.
- Accommodate new ERP system (SAP).
- Adoption of contingences & disaster plans
V. **Agence Nationale de la Maîtrise de l’Energie: The policy of Energy efficiency in Tunisia**

**Why is Tunisia consuming better?**

- The Energy situation of Tunisia has moved from the status of surplus to the deficit and imports. This is due to the decline in oil & gas national resources.
- The cost of energy supply is continually increasing.
- Subsidies put a serious strain on the national budget and alter the choices of technology with a negative impact on energy savings efforts.
- Increasing needs of investment in generation means are required
- The peak load is increasing continuously

**The concept adopted:**

- Energy savings: Promote all actions to reduce energy consumption with a guarantee of quality
- Energy Substitution: Substitute one energy supply with another in order to support technical, economical and environmental improvements
- Promote Renewable Energies

**The tools used:**

- Creation of the “Agence Nationale pour la maîtrise de l’énergie (ANME) in 1985 with a consolidation of its activities in 2004, thanks to the new law on energy control & savings
- Creation of several tasks forces
- Implementation of several support structures
- Implementation of regulatory tools (audit, regulations & controls on buildings, equipment, devices, incandescent lamps…)
- Financial incentives

VI. **Joint presentation of ONEE & EDF: Integration of variable Renewable Energies in a Master Plan:**

Morocco is at the electrical crossroads between Africa and Europe. The power generation installed capacity is diversified with an ambitious programme of Renewable Energies (wind farms & solar: 4000MW by 2020)

**The Morocco Electrical System:**
The current generation: organisation and production

The big challenges

The strategy of the Electricity sector

The solar & wind farms programmes

**The generation & variable energies Master Plan:**

- Objective of the Master Plan: Determine the most optimised investment in the generation means to be in operation by 2025 & secure a good integration of Renewable Energies. In 2020, RE will represent 46% of the total installed capacity.


- Two methodologies with different approach: 1) The global & simplified approach 2) The detailed simulation of the total installed capacities approach (bottom-up)

- Methodology and software used

- Important & essential data: The power & generation curves linked to wind & solar resources

**VII. RTE: The Demand Response Mechanism in France**

- DSM is often thought only to correspond to « emergency » solutions.

- With the roll out of new technologies, new players emerge with different business cases and more economic solutions, i.e DSM may become a credible alternative to generation in some cases (energy value)

- There must be a dedicated framework (market design / regulatory provisions)

**Balancing & Reserves:**

- The French balancing mechanism: (Reserves Procurement, balancing activation, Contracted availability..)

**Capacity Market:**

- The French Capacity Market is a capacity obligation: (capacity wide, technology neutral, no capacity target, decentralized market, no public money)
• 2 possibilities of demand response contribution to security of supply (in the French capacity market): 1) Explicit participation through certification 2) Implicit participation through obligation reduction

Energy Market:
• Portfolio optimization
• Rationale for independent DSM operators
• Challenges & solutions; (Open competition, technical issues..)
• Proof of concept

Conclusions:
• Demand Side Management is central to the energy policy in France, with strong political support (« Brottes law »).
• The potential for Demand Response is high, stakeholders evaluate the potential capacity to several GW (aggregated & industrial).
• Demand Response development requires full participation to all aspects of the market design.
• Social welfare gains from energy market integration estimated at €10 to €50 Million/year
• Challenges:
  o Assessment, certification, performance monitoring
  o Data management : commercial confidentiality & privacy protection
  o Dealing with Load shifting (operational & market design considerations)
  o Regulatory framework, economic parameters, determination

VIII. STEG: The working Group on Energy Efficiency. Review of the study and perspectives:

Introduction:
The decision to set up a Working Group (WG) on energy efficiency was taken during the 21st Annual Meeting held in Tripoli (April 2013)
The main objective is to share experience and exchange in order to promote Energy Efficiency among MEDELEC members.
The launching of the study was delayed due to organisation problems.
By end 2013, it has been decided to appoint STEG as coordinator of the WG. Several members confirmed their interest and participation:
EETC (Egypt), GECOL (Libya) KARAMAA (Qatar), ONEE (Morocco), SEC (Saudi Arabia), STEG (Tunisia).
The proposed programme:
1) Assess the current situation of the different companies/countries (the structure, the policy/strategy, the projects...)
2) Focus on a specific topic: Energy Efficiency may have a significant impact on the peak load
3) Set up workshops

Objectives of the WG:
1) Promote DSM
2) Analysis of the load curve
3) Compare the different DSM programme
4) Collect data from participants concerning EE tools, objectives and applications
5) Determine the cost-effective and environmental measures
6) Planning of the agenda (deliverables, meetings..)

IX. MEDELEC General Secretariat: Prospective consideration on MEDELEC: Its missions, objectives, internal status, update of web site..

Presentation of the History & Achievements of the Association.
Globally, MEDELEC has promoted common actions and exchanges on up to date information, mostly in the field of Electrical Energy and networks.

Today, the global context of the Electrical Energy sector has deeply evolved:
- In the North, monopolistic state-owned utilities had to face deregulations and unbundling..
- Renewable Energy is now a major challenge for the EU in particular with the ambitious target of 20/20/20 by 2020.
- Countries in the south have taken into account that production from renewable, diversification of energy sources and promotion of various investments in generation and transmission are necessary to meet the constant increase of their domestic demand

What about the future:

MEDELEC General Secretariat proposes an exchange with its members in order to receive ideas and suggestions on concrete possible future actions.
Several topics were listed:
- Energy Efficiency
- The new technologies in transmission system
- Distribution of electricity
- The new technologies in the field of generation, generation costs, fuel policies, new technologies for storage

Some actions were proposed

- Keep the organization of an annual meeting
- Keep the idea of a working group on specific topics of common interests (at the condition of a serious involvement and a feedback of the participants)
- Common organization with other association(s) of a workshop/seminar of common interest for MEDELEC members (ref, the workshop of tomorrow with AUE & DII)

The website:

MEDELEC web site is hosted free of charge, by EURELECTRIC since 2001.

With the help of EURELECTRIC, It _the current website will be cleaned up through the removal of obsolete information. In addition -a proposition was made to prepare a new version of the website that is more modern and attractive.

MEDELEC Internal Organization

The document stating that the Association of Electricity Companies have decided to set up a liaison committee for meeting together was signed in December 1997 by EURELECTRIC, AUPTDE, UCPTE, UPDEA, UNIPEDE and COMELEC . General objectives and mean of actions were written? Decided upon? together with a brief description of the committee organization. Since that time, no changes, updating or addendum to this document have been made.

MEDELEC has no Statute/Articles of Associations and no internal organization. For practical reasons, after 17 years, and taking into account the regular changes of person within the associations and the companies, the general Secretariat proposes to draft an internal organization chart in order to clearly define by written the following:

- The activity of the association,
- the appointments of the General Secretary, the President and Vice-President,
- the terms of the mandates, the replacements, their duty,
- the general rules for the organization of: the Annual Meetings, special meetings…..

After getting the feedback from all, a draft will be presented and discussed during the next 23rd Annual Meeting in 2015.
X. Date and location of the next Annual Meeting and Conference

EURELECTRIC proposed to host next 23rd Annual Meeting in Brussels (Belgium). The provisional date will likely be around the beginning of May 2015.