From COP21 to COP22: Renewables & Mediterranean Integration

Discussion 1

The Policy & Regulatory Framework Of The Energy Union & the Mediterranean Integration”

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The Context

European Union
- Energy Demand Growth ≈ 1%
- RES Integration
- Energy Market Integration

North Africa
- Energy Demand Growth ≈ 5.4%/y up to 2030
- RES Objectives 30-50%
- Huge Oil & Gas Resources

Turkey
- Energy Demand Growth ≈ 5.4%/y (2004-2014)
- RES objectives 30% (al 2023)
- Relevant Infrastructural Projects

Israel
- Limited Growth
- Huge Gas reserves (1Tmc)

Source: BP Statistical Review
The Context: Electricity

- **33,000** km of new lines (AC, DC)
- **30 Billion €** investment plan over 10 years
- New **generation capacity** of about **150 GW** (15% RES)
- Planned investment of **220-250** Billions € in 10 years
- Priority: developing interconnections South-North & South-South, jointly with reinforcement of internal network

*Source: MEDTSO*
The Context: Gas
The Context: RES

RENEWABLE ENERGY INVESTMENTS**
Cumulative public and private investments in RES power plants to reach country targets

€ 10 Billion  
MOROCCO

€ 6 Billion  
TUNISIA

€ 2 Billion  
JORDAN

€ 10+ Billion  
EGYPT

Source: RES4MED

*Target as % of: total electricity and thermal energy (Lebanon); primary energy (Jordan), RES4MED elaboration. Investment figure for Tunisia (STEG data)
Barriers and challenges for investments

- Different socio-economic contexts and institutional arrangements in the energy sector
- A small number of countries have “de facto” an independent & competent regulator
- Governments’ influence on electricity exchanges and generation mix
- Absence of secure and stable legal framework among countries
- Significant subsidization and cross-subsidization of pricing
- Stable, secure and long-term regulation needed to support investments (EE, RES, Networks, Fossil generation)
- Lack of information on market prices and transmission availability
- Absent of transparent and non-discriminatory access to the networks

Source: MEDREG
Unclear institutional architecture at national level: regulators, TSOs, operators and other actors should cooperate with clear distinction of roles at national level. Sometime considerable conflicts of interest occur, heavily affecting the credibility of the country face to foreign investors.

Lack of transparency: Mediterranean energy markets are mainly managed by state-owned monopolies that influence prices and trading conditions. For this reason, foreign investments tend to be discouraged by scarce information on market prices and available transmission capacity. This problem is coupled with a lack of legal obligations for the monopolist, which makes increasingly difficult for a third party to access the market.
Significant subsidization: in some non-EU Mediterranean countries consumers tend to rely on heavily subsidized domestic prices, without any market mechanism. This hinder the development of cost-reflective energy prices, which are key to foster private investment in the energy sector.

Lack of cost-benefit analysis (CBA) and cross-border cost allocation (CBCA) methodologies: some Mediterranean countries have no effective methodologies, thus affecting investments for new infrastructures. CBA and CBCA analyses provide investors and countries with a clear view on the economic value of interconnections projects for each involved subject.
MEDREG Investment Report

**Highlights**

- Promotion of a **sound legal and regulatory framework** to increase the chance that infrastructure projects receives investment;

- **Rationalization and coordination** of activities aiming at improving the climate of energy investments in the Mediterranean region,

- Business models to be tailor-made to the specific needs of the region;

- Clear **price signals and removal of subsidies** preconditions to any business model;

- **Regional Cooperation** is a key to integrate systems and economies;

- Proposed **infrastructure projects** always evaluated on a cost-benefit analysis and include a crossborder cost allocation to highlight the interest that each country has in the projects;
MEDREG Investment Report

How regulation can incentivize investments

- Definition of quality standards for transmission and distribution
- Setting the levels and structures of the tariffs to use infrastructures
- Promoting competition and efficient market structure
- Clear and non-discriminatory licensing and permitting
- Provision of reasonable alternatives to subsidies
- Data collection from the regulated companies
How GOOD regulators can incentivize investments
Mediterranean Financial Advisory Panel for Energy Regulation (MED-FAP)

MEDREG has recently launched *Mediterranean Financial Advisory Panel for Energy Regulation (Med-FAP)* animated by representatives of the bankers and investors community to provide MEDREG with opinions and advice upon request, in particular concerning the impact of regulatory changes in the energy sector on financing decisions.

**Preliminary IFI’s highlights:**

- Need for independent regulators
- Barriers to be removed for getting information on countries
- Need to support regional and sub-regional projects
UfM Energy Platforms

In November 2014, during the Italian Presidency of the Council of the EU, a Conference in Rome on “Building a Euro Mediterranean energy bridge: the strategic importance of Euromed gas and electricity networks in the context of energy security”, launched “three thematic platforms to provide a permanent high level forum for discussing energy policy objectives and measures, with a view to identify specific and concrete actions”

• **Gas**: to reinforce the security of gas supply and the regional gas exchanges.

• **Electricity**: to promote gradual establishment of regional and sub-regional inter-connected electricity markets.

• **Renewable Energy and Energy Efficiency**: to assist in the deployment of renewable energy and energy efficiency technologies and projects.
Mutual Benefits from Infrastructures

**Italy**

**Typical load and generation profile in a low consumption day (MW)**

- Significant reduction of the electricity demand and of the electricity price
- Underuse of thermal power capacity, leading to dismissal or mothballing of power units
- Huge growth of RES from 2008 to 2013
- Difficulty to balance the system due to over-generation problems in low load conditions

*Source: Terna & STEG*

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**Tunisia**

**Expected energy not supplied (MWh/year)**

- Growth of electricity demand at about 5% average yearly rate with sharp rise at peak hours
- Power production (98%) totally depending on gas
- Risks of structural deficit in the energy balance
- Without HVDC interconnection high level of energy not supplied, particularly in case of delay in commissioning of 300MW CCGT (sensitivity case), and non compliance with adequacy and reliability indices
- Significant shortage problems (a major event of service interruption in 2014)
Thank you for your attention!

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