From COP21 to COP22: Renewables and Mediterranean Integration

De la COP21 à la COP22 : énergies renouvelables et intégration méditerranéenne

Issues for reflection

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Has the Paris Agreement fundamentally changed the landscape for Mediterranean Electricity Integration?

- The Paris Agreement was successfully concluded, under French auspices, in December 2015 - between 196 countries. Approximately ten percent of those countries are clustered around the shores of the Mediterranean itself, and many more are in close proximity. Nowhere else in the world are so many developing and developed countries clustered together. What happens in the Mediterranean is therefore critical for the eventual success or failure of the Paris Agreement.
- The Paris Agreement has very ambitious objectives to keep global warming below 1.5 or 2 degrees Celsius, which will require very ambitious decarbonization of the electricity sector.
- In short, under the Paris Agreement, business cannot be "as usual"; transformational steps are needed in the electricity sector in the near term and continuing thereafter.
- The Paris Agreement enshrines some key principles. Of cardinal importance is to ensure that all countries play a role in decarbonization, and that developed countries provide adequate financial support to developing countries to help them play their part. Also of importance, is that markets should play a major role in decarbonization.
- How should this play out for Mediterranean electricity integration? How should market integration be used to promote the objectives of the Paris Agreement in the Mediterranean? Can Northern electricity markets consume renewable energy produced from the vast solar resources of the South? What medium-term investment opportunities would that open up in the South, with implications for economic growth and jobs derived from participating in climate change mitigation? What revenue opportunities could that open up even for existing renewable energy production in the South?
- How should financing be utilized between the developed and developing countries clustered around the Mediterranean to fulfill those objectives? Could such financing even be channeled through integrated Mediterranean electricity markets themselves? These questions take on considerable importance as COP22 discussions approach, and the baton passes from Paris to Marrakech.
- Do existing electricity policies and regulations on both sides of the Mediterranean need substantial reform in order to support implementation of the Paris Agreement effectively? What role could debate and actions on such reforms play in Marrakech, to help make COP22 a success?
**Mediterranean Electricity Integration and EU-MENA policy and regulatory reform**

- Broadly-speaking the Northern Mediterranean electricity sectors are liberalized, unbundled and competitive, and the Southern and Eastern Mediterranean electricity sectors are dominated by “single buyers” of bulk electricity (i.e. monopolists) or by vertically-integrated utilities. This complicates market integration on both a political and economic level. Southern and Eastern Mediterranean countries also tend to utilize fossil fuel subsidies quite extensively, including for fuel used in the electricity sector, while European countries do so much less.

- On the other hand, European countries tend to extensively use a particular type of subsidy on a discriminatory basis, as regards favoring domestic production over imports: namely for renewable energy. The role of renewable energy in most European countries is increasing, and the discriminatory nature of renewable energy subsidies has become controversial, and a major issue for redesign of the internal electricity market in the EU in order to achieve greater internal integration.

- The 2009 EU Renewable Energy Directive provides each member state with a 2020 target for renewable energy as a percentage of consumption (on average 20 percent), and the EU agreement for 2030 is an EU-wide target of 27 percent. The 2009 Directive does allow for virtual imports (“statistical”) within the EU, and physical imports from outside to count towards the achievement of the targets (under certain criteria specified in Article 9); the eventual directive for 2030 may continue or amplify the scope of those provisions. These provisions however have been little used so far (and not at all for the Eastern and Southern Mediterranean).

- What can be expected to happen to unwind the distortionary effect of renewable energy subsidies in Europe, and make the distortions discriminate less against the South, and to what extent does liberalization in Northern electricity markets need to be reciprocated by liberalization in the South? How should these developments be sequenced and coordinated, and what implications do they have for achievement of the goals of the Paris Agreement?

- Can we expect much greater Mediterranean electricity integration until there is greater electricity sector reform in the Southern and Eastern Mediterranean countries – such as introduction of competition in bulk supply, cost-recovery tariffs, elimination of fuel subsidies for the electricity sector, opening up to more private investment, etc.?

- Can the renewable energy subsidies from the North, applied to imports from the South, be a way of channeling the financing needed under the Paris Agreement (while obtaining Europe’s renewable energy from where the resource is most abundant)? Can “business as usual” achieve that, or does integration need to accelerate sharply? Can it start soon, based on exporting solar energy production from the Morocco, Algeria, or Tunisia?

**EU Instruments to promote Mediterranean Electricity Integration**

- The EU has a number of instruments that can be used to promote Mediterranean electricity integration to help achieve its objectives of climate change mitigation, diversification of supply, competitive sourcing of resource-based renewable energy, etc.

- These instruments include, for example, designating certain interconnection projects as “Projects of Common Interest” (PCIs). PCIs are eligible for expedited permitting procedures and for financial support. Such mechanisms can be very helpful to make difficult interconnection projects happen. How willing is the EU to designate an increasing number of Trans-Mediterranean interconnection projects as PCIs?

- The European Fund for Strategic Investments (“Juncker Plan”), the Connecting Europe Facility, and the Neighbourhood Investment Facility (NIF) are all in principle available to support electricity market integration and interconnections across the Mediterranean. So far, the NIF has been deployed to support renewable energy investments in the South, although the amounts involved have not been large. Is the EU ready to deploy its full range of financing instruments on a much larger scale to support Mediterranean electricity integration?

**Trans-Mediterranean interconnections**

- As of today, three Maghreb countries (Morocco, Algeria, Tunisia) operate their grid synchronously with the European grid through the Spain-Morocco interconnection (two parallel transmission lines of 700MW each). This means that Europe and the Maghreb already operate as if one grid (given that the European grid operates in that manner anyway).

- In principle, eight countries in the Mashreq operate as one grid, and are interconnected with Europe through Turkey. However, those countries do not yet operate synchronously with Turkey and the rest of Europe due to voltage instability in the Mashreq.
For the Mashreq electricity market to integrate with Europe would therefore require technical upgrades in the Mashreq to meet European grid standards. That would also allow Mashreq integration with the Maghreb (assuming similar upgrades in Libya as the bridge between the two regions).

- Other interconnections have been proposed to enable greater electricity trade and integration between the two sides of the Mediterranean. These include new connections between Tunisia and Malta, Tunisia and Italy, Egypt and Greece, etc. as well as expanding the capacity of the Morocco-Spain interconnection.

- There are some key questions to be addressed. For example, what EU support mechanisms are available for such interconnections? How can the chicken-and-egg problem be overcome, namely the interconnection may not be bankable without securing the market for electricity transmitted, but it may not be possible to secure the market without assurance that the interconnection will be built? What are the respective roles of public and private sectors in financing such interconnections, and in sharing risks between them?

- Connecting the two sides of the Mediterranean more extensively will only achieve maximum impact on market integration if Europe’s own internal electricity market is being strengthened by more effective cross-border interconnection. The EU has a current target that each member state should have cross-border interconnection capacity equal to at least 10 percent of its total generation capacity (and that this should increase to 15 percent by 2030). The Iberian Peninsula and Italy are currently well below 10 percent, and France is at 10 percent\(^1\), which means that the Maghreb is facing European countries immediately across the Mediterranean that could be much better connected within the EU market. Will Europe effectively pursue its own interconnection? Could those interconnection targets even be extended to those countries negotiating Deep and Comprehensive Free Trade Agreements with the EU (e.g. Tunisia, Morocco)? What would that mean for EU-Maghreb interconnection?

- And one question above all, what priority does Europe place on interconnections with the Southern and Eastern Mediterranean in pursuit of its own objectives of decarbonization, energy diversification, and the creation of investment and employment opportunities? Is Europe prepared to use interconnections to help develop the South in support of COP22? Are countries of the Southern and Eastern Mediterranean ready to produce and export renewable energy to Europe?

The role of financing in pursuit of Mediterranean Electricity Integration and the Paris Agreement

- Financing flows from developed to developing countries is central to the Paris Agreement, in pursuit of the pledge to reach US$100 billion a year from 2020 in financial transfers.

- Flows to date have been much more modest, albeit increasing. For example, the Clean Technology Fund (CTF) has committed more than US$1 billion to the Middle East and North Africa region for renewable energy, and a significant portion of this is being used for the Noor solar projects in Morocco in a PPP framework. That has involved some of the financing agencies present (e.g. EIB, AfDB, World Bank, EC). CTF funds are also available for other countries of the region, in both the public and private sectors.

- The Green Climate Fund (GCF) has been created, under the auspices of UNFCCC, and more than US$10 billion of donor contributions pledged globally. A number of agencies active in the Mediterranean have been accredited to access the GCF, or are considering accreditation, including some represented in this Forum (e.g. EIB, AfDB, World Bank, MASEN). Various other donor-funded climate funds exist and are active in the region, and are starting to scale up.

- Critical questions to be addressed include: Will financing reach a scale commensurate with the size of the climate change mitigation challenge? Can electricity markets be used to allocate financing on a large scale through renewable energy support mechanisms? Are IFIs looking at electricity market integration as a strategic means of promoting renewable energy? Can IFIs develop processes that are streamlined enough to support renewable energy investments on a large scale, particularly involving the private sector?

\(^1\) 2014 data.
Next Steps for the Forum

- Which topics addressed today proved to be most interesting and important?
- Which of those topics should be addressed again, but in greater depth, in future sessions of the Mediterranean Forum on Electricity and Climate Change?
- Which new topics should be addressed in future sessions of the Mediterranean Forum on Electricity and Climate Change?
- Are there organizations or specific individuals that should be invited to participate in future sessions?

Jonathan Walters, May 21st, 2016
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