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# Prospective Governance and Legal Framework between the EU and MENA in Renewable Energy Cooperation

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*This article provides an overview of the current stage of development as well as the outlook for future cooperation in the field of renewable energy between the European Union and the countries of Middle East and North Africa (MENA). To continue with the progress achieved in the context of the Mediterranean Solar Plan the MENA region should adopt a regionally coordinated approach due to the absence of an established institutional and regulatory framework for trans-regional cooperation. While several studies have highlighted the competitiveness of electricity produced from renewable energy sources in MENA, governments and policy makers in the region should carefully assess their ability to ensure a sustainable policy framework for the renewables sector and opportunities for trans-regional exchanges of electricity. This article proposes that in order to address governance issues and facilitate the creation of a regional energy market, MENA countries may need to adopt an intergovernmental instrument such as the Energy Charter Treaty or the International Energy Charter.*

## I. Introduction

It has been widely recognised that the abundant resources of renewable energy in the countries of Middle East and North Africa (MENA) coupled with their increasing interest towards renewable energy technologies as well as the existing European experience in the field could be used to enhance energy cooperation between the European Union (EU) and MENA.<sup>1</sup> Greater renewable energy cooperation has been on the agenda of both regions for almost a decade, as foreseen in the intergovernmental initiative known as the Mediterranean Solar Plan. Although the Plan was borne out of the growing European demand for

renewable electricity in 2008 it has become clear that the Plan would ultimately also be able to meet the electricity demand by the fast-growing economies of the MENA region.<sup>2</sup> Under this Plan, increased cooperation was aimed at providing countries in the MENA region<sup>3</sup> with the opportunity to attract foreign investments in renewable energy technologies and to minimise gaps in their readiness to develop the necessary infrastructure, including new grid interconnections, enabling MENA countries to transport renewable electricity to Europe.<sup>4</sup>

The interest in renewable energy and energy demand in the MENA region has been strongly linked to the prospective EU-MENA energy cooperation,

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1 Diala Hawila et al, 'Renewable energy readiness assessment for North African countries' (2014) 33 *Renewable and Sustainable Energy Reviews* 128 DOI:10.1016/j.rser.2014.01.066.

2 See eg Mediterranean Energy Regulators, 'Regulations and Investments: Solutions for the Mediterranean Region (MEDREG Forum, Barcelona, 26 November 2014) 17 <[http://www.medreg-regulators.org/Portals/\\_default/Skede/Allegati/Skeda4506-62-2015.5.12/](http://www.medreg-regulators.org/Portals/_default/Skede/Allegati/Skeda4506-62-2015.5.12/)

MedregPAPERS2.pdf?IDUNI=x0zfb4s1l4zqqqmbobjp43tbw8255> accessed 14 September 2015; Bernhard Brand and Thomas Fink, 'Renewable energy expansion in the MENA region: A review of concepts and indicators for a transition towards sustainable energy supply' (Asia-Africa Sustainable Energy Forum, Oran, 13-14 May 2014) <<http://epub.wupperinst.org/frontdoor/index/index/docId/5421>> accessed 1 September 2015.

3 Although in this paper the MENA region is considered as one region, it can be divided into three geographical areas, namely North Africa, East Mediterranean and the Gulf States.

4 Hawila et al (n 1).

particularly in countries such as Libya, Egypt and Morocco.<sup>5</sup> The EU Member States continued interest in the success of renewable energy deployment in the North African region has been argued to increase the chance of success with the implementation of capacity building and knowledge transfer strategies.<sup>6</sup> However, it has also been noted that any future policies and deployment strategies must be compatible with the MENA countries' overall economic, energy and environmental plans. Therefore, certain flexibility is required to accommodate each country's individual differences.<sup>7</sup> The flexibility called for would certainly fit in the ambit of the Energy Charter Treaty,<sup>8</sup> which enables signatories to the Treaty to embark on a more ambitious reform of their energy markets with their immediate neighbours, whereas others could opt for a slower phase of energy market integration as discussed in Section IV.

A number of existing renewable energy projects created as part of the Mediterranean Solar Plan demonstrate that despite numerous concrete challenges facing MENA in its way to renewable energy transformation, the region's countries have continued interest towards renewable energy technologies. Several MENA countries have continued to pursue renewable energy projects despite of the absence of formal EU-MENA cooperation. For instance, Morocco has adopted ambitious plans for the development of integrated solar projects based on concentrating solar power and photovoltaics technologies.<sup>9</sup> One of the first projects under the Moroccan Solar Plan,

which was also viewed as one of the key projects under the Mediterranean Solar Plan,<sup>10</sup> was the 500 MW multi-stage Noor-Ouarzazate concentrating solar power plant which opened its first phase<sup>11</sup> for commercial operations in February 2016. The last two phases of the construction are expected to be finalised by 2018.<sup>12</sup> The intention of the Moroccan energy authorities is to strengthen the regional integration through the creation of Euro-Mediterranean energy markets and harmonising the country's energy legislation with that of the EU.<sup>13</sup>

Developments are also under way in other countries. For example, Egypt announced 14 prequalified bidders of whom several are based in MENA, for a 50 MW concentrating solar power facility in early 2016.<sup>14</sup> Additionally, the Algerian government announced its plans in 2015 to develop 2 GW of concentrating solar power by 2030.<sup>15</sup> In Israel, commercial operation of 121 MW Ashalim Plot B facility is expected to start in 2017, and an additional 110 MW phase is expected to come online in 2018.<sup>16</sup> In Saudi Arabia, integrated solar combined cycle facilities under construction in Duba and Waad Al Shamaal are intended incorporate 50 MW each of concentrating solar power technology when they begin operation in 2017 and 2018.<sup>17</sup> Dubai has launched the Mohammed bin Rashid Al Maktoum Solar Park which is planned to host 5 GW of solar projects.<sup>18</sup> Phase I of the project saw a 13 MW photovoltaics power plant commissioned in 2013, and in 2014, phase II of the project involved tender for a 100 MW photovoltaics

5 See eg Jukka Huusko and Juhani Saarinen, 'Välimereltä löydettiin jättimäinen kaasukenttä: Egyptistä saattaa tulla kaasunviejä myös Euroopan markkinoille' (*Helsingin Sanomat*, 31 August 2015); Anonymous, 'Eni discovers largest known gas field in Mediterranean' *The Guardian* (30 August 2015) <<http://www.theguardian.com/business/2015/aug/30/eni-discovers-largest-known-mediterranean-gas-field>> accessed 1 September 2015.

6 Luigi Carafa, Gianleo Frisari and Georgeta Vidican, 'Electricity transition in the Middle East and North Africa: A de-risking governance approach' (2015) *Journal of Cleaner Production* DOI:10.1016/j.jclepro.2015.07.012

7 *ibid.*

8 Consolidated version of the Energy Charter Treaty of 17 December 1994.

9 The government's intention is to build five sites with 2000 megawatt (MW) of solar capacity by 2020. See Tarik Kousksou et al, 'Renewable energy potential and national policy directions for sustainable development in Morocco' (2015) 47 *Renewable and Sustainable Energy Reviews* 46 doi:10.1016/j.rser.2015.02.056.

10 See *ibid.*

11 160 megawatt Noor I parabolic.

12 Another concentrating solar power plant foreseen by the Moroccan Solar Plan, Ain Beni Mathar (400 MW), is also currently supplying electricity to the grid. See eg 'South Africa starts up first tower plant; Morocco opens Noor facility' (*CSP Today*, 8 February 2016) <<http://social.csptoday.com/intelligence-brief/south-africa-starts-first-tower-plant-morocco-opens-noor-facility>> accessed 3 June 2016.

13 Kousksou et al (n 9).

14 See *CSP Today* (n 12).

15 Algeria Press Service, 'Algeria to increase capacity of renewable energy projects to 25,000 MW' (22 January 2015) <<http://www.aps.dz/en/economy/5774-algeria-to-increase-capacity-of-renewable-energy-projects-to-25,000-mw>> accessed 3 June 2016.

16 REN21, *Renewables 2016 Global Status Report* (REN21 Secretariat) 68.

17 *ibid.*

18 Moritz Borgmann, 'Dubai Shatters all Records for Cost of Solar with Earth's Largest Solar Power Plant' (*Apricum*, 2 May 2016) <<http://www.apricum-group.com/dubai-shatters-records-cost-solar-earths-largest-solar-power-plant/>> accessed 3 May 2016.

power plant on an independent power producer basis.<sup>19</sup>

At the financial level, several investment banks and investment funds have co-financed large-scale deployment of solar energy and related transmission infrastructure projects in the MENA region.<sup>20</sup> The largest shares of renewable energy investment within the region in recent years have been allocated to a 200 MW wind project in the Gulf of El Zayt in Egypt (\$490 million) and the 160 MW Ouarzazate-Noor I solar plant in Morocco (\$635 million).<sup>21</sup> Whereas the Egyptian wind farm was jointly funded by the European Investment Bank and a German development bank, KfW, the Ouarzazate-Noor I project was financed by multiple donors, including a \$197 million concessional loan from the Clean Technology Fund.<sup>22</sup> The latter is part of a \$750 million investment plan for five MENA countries, including Egypt, Jordan, Libya, Morocco, and Tunisia by the Clean Technology Fund, in collaboration with the African Development Bank and the World Bank.<sup>23</sup>

This article examines the reasons why existing legal and institutional arrangements are inadequate to advance renewable energy cooperation between the EU and MENA, and what alternative legal and institutional arrangements could be used to enhance further cooperation to establish a viable legal framework for commercial exchanges of renewable energy in the period up to 2050. Section II of this article reviews the existing relevant literature on MENA-EU cooperation, including the technical readiness of the MENA countries and the prospected feasibility of future electricity exchanges between the EU and MENA.

Subsequently, section III evaluates the existing legal framework for regional energy cooperation developed under EU law and reviews the achievements attained in context of the Mediterranean Solar Plan prior to 2013. Section IV looks at the EU as a model for designing an institutional framework for the MENA region and weights the policy options available for further regional cooperation between the EU and MENA. Section V concludes that in order to continue with the progress achieved in the scope of the Mediterranean Solar Plan, the two regions should aim at establishing a common regulatory framework which could be facilitated by the adoption of an intergovernmental instrument such as the Energy Charter Treaty.

## II. Review of the Literature

Most existing literature on the EU-MENA energy cooperation reviewed for this article investigates the technical readiness of the MENA countries to move to renewable energy,<sup>24</sup> the competitiveness of electricity produced using renewable energy technologies in MENA,<sup>25</sup> the milestones achieved within the context of the Mediterranean Solar Plan,<sup>26</sup> the role of regulatory agencies in developing a regional energy policy<sup>27</sup> as well as the conditions for renewable energy investment.<sup>28</sup> To the best of my knowledge, existing research on the topic of using the Energy Charter Treaty to facilitate regional electricity market integration outside the EU has been undertaken in the context of Northeast Asia.<sup>29</sup> However, no sim-

19 There are further optional stages the project has the potential to become the largest solar power plant in the world at 800 MW.

20 Clean Technology Fund, 'MENA CSP Investment Plan' (June 2014) <[https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/ctf\\_13\\_6\\_revised\\_investment\\_plan\\_for\\_mena\\_csp\\_0.pdf](https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/ctf_13_6_revised_investment_plan_for_mena_csp_0.pdf)> accessed 3 June 2016.

21 *ibid.*

22 *ibid.*

23 *ibid.*

24 See eg Brand and Fink (n 2); Kousksou et al (n 9).

25 See Theocharis Tsoutsos et al, 'Photovoltaics competitiveness in Middle East and North Africa countries the European project PV PARITY' (2015) 34(3-4) *International Journal of Sustainable Energy* 202 DOI:10.1080/14786451.2013.863774; Inga Boie et al, 'Opportunities and challenges of high renewable energy deployment and electricity exchange for North Africa and Europe: Scenarios for power sector and transmission infrastructure in 2030 and 2050' (2016) 87 *Renewable Energy* 130 DOI:10.1016/j.renene.2015.10.008.

26 See eg Emmanuel Bergasse, 'Euromed Energy Cooperation and the Mediterranean Solar Plan: A unique opportunity for a fresh start in a new era?' CIDOB Barcelona Centre for International Affairs (17 June 2011).

27 See eg Carlo Cambini and Donata Franzi, 'Independent regulatory agencies and rules harmonisation for the electricity sector and renewables in the Mediterranean region' (2013) 60 *Energy Policy* 179.

28 See eg Carafa, Frisari and Vidican (n 6); Laura El-Katiri, *A Roadmap for Renewable Energy in the Middle East and North Africa* (Oxford Institute for Energy Studies 2014) <<http://www.oxfordenergy.org/wpcms/wp-content/uploads/2014/01/MEP-6.pdf>> accessed 29 September 2015; Luigi Carafa, 'Policy and markets in the MENA: The nexus between governance and renewable energy finance' (2015) 69 *Energy Procedia* 1696 DOI: 10.1016/j.egypro.2015.03.132.

29 See Ernesto Bonafé and Aurore Vanhay, 'The role of the Energy Charter Treaty in fostering regional electricity market integration: Lessons learnt from the EU and implications for Northeast Asia' (Energy Charter Secretariat 2015) 87.

ilar work appears to exist in the field of the EU-MENA renewable energy cooperation.

Despite the positive outlook for the renewable energy industry, thus far, the EU-MENA power exchanges have been limited to the interconnection between Spain and Morocco.<sup>30</sup> Although electricity interconnections exist also between Turkey and Greece and Turkey and Bulgaria, and an interconnection between Tunisia and Italy is under preparation, these are currently non-operational.<sup>31</sup> The existence of interconnections between a small number of EU Member States and the neighbouring MENA countries, nevertheless demonstrates that the necessary infrastructure can be constructed in order to establish a viable import-export framework for renewable electricity between the EU and the MENA region. However, in order to facilitate large scale energy exchanges the further cooperation needs to be driven in a much more coordinated way from both sides of the Mediterranean. This is because both the EU and MENA would be required to invest heavily into the transmission networks in order to integrate two or more regional supergrids.<sup>32</sup> This is clearly a process which should be given some considerable and careful thought. For instance, although the Moroccan electricity grid is already well-established and well-developed compared to many of its MENA neighbours, its conventional electricity grid is incapable of transferring large amounts of electricity over long distances.<sup>33</sup> Although without regional electricity trade the Moroccan grid would need little expansion before 2050, in order to facilitate trans-regional electricity exports and to integrate the Moroccan grid with the European equivalent, the former would need to be expanded approximately 1.5-times.<sup>34</sup>

Currently, all North African countries, with the exception of Tunisia, have reasonable transmission and distribution systems which are capable of supporting the intermittent nature of renewable energy.<sup>35</sup> Projects for trans-Mediterranean interconnections and the continuing construction of new regional interconnectors between the Maghreb countries<sup>36</sup> indicate that the region would be able to serve to transport electricity generated from renewable sources within the Maghreb countries.<sup>37</sup> In recent scenarios, two interconnectors to Europe - one between Morocco and Portugal and the other between Morocco and Spain - would be installed using sea cables. Because the prospective converter stations should be placed in the regions with highest electricity exchanges,<sup>38</sup>

logically, the new interconnections may re-use the existing interconnection between Morocco and Spain and convert it to DC transmission. In contrast, the remaining regions would be connected through the AC transmission grid to the HVDC grid.<sup>39</sup> It therefore appears that particularly Morocco would be the likely candidate to lead the EU-MENA power exchanges due to its strong position to supply electricity to the EU in the long-term as well as due to its synchronisation with the European electricity network through the existing Morocco-Spain interlink.<sup>40</sup> Additionally, for the future electricity trade it is also important to note that Morocco's economy is considered relatively liberal, governed by the law of supply and demand.<sup>41</sup>

It has been suggested that in order to plan a regional transmission network, local governments in the MENA region should take into account their opportunities and ability to export renewable electricity to the EU as well as among themselves at an early stage.<sup>42</sup> For instance, wind power plants should logically be built at sites with excellent wind conditions, photovoltaic installations should be widely distributed in the regions where electricity demand is high and concentrating solar power plants should be placed in areas with high direct exposure to solar radiation.<sup>43</sup> Evidently, the realisation of the EU-MENA electricity market integration implies major challenges at the trans-national, national and local levels, which are of financial, regulatory and technical nature, ranging from the inability to transmit electricity in bulk for long-distances to the influences of plan-

30 See Cambini and Franzl (n 27).

31 See Bergasse (n 26).

32 The concept 'supergrid' in the EU context is best characterised as a transmission network 'facilitating the integration of large-scale renewable energy and the balancing and transportation of electricity with the aim of improving the EU internal electricity market'. See Bonafé and Vanhay (n 29) para 2.4.3.

33 Kousksou et al (n 9).

34 Boie et al (n 24) para 4.2.3.

35 See Hawila et al (n 1).

36 Morocco, Algeria and Tunisia.

37 Indeed, the Maghreb countries are already electrically interconnected with one another. See eg Hawila et al (n 1).

38 Boie et al (n 24) para 4.2.3.

39 *ibid.*

40 Hawila et al (n 1).

41 See Kousksou et al (n 9).

42 Boie et al (n 24) para 4.2.3.

43 *ibid.*

ning decisions on national transmission grids and local supply structures.<sup>44</sup> The technical challenges relate particularly to optimisation of power plant dispatch and the development and efficient operation of respective transmission grid capacities.<sup>45</sup>

## 1. Estimates of Future Renewable Electricity Exchanges

Despite various uncertain factors relating to the large scale deployment of renewable energy technologies in MENA at the time of the writing, incremental steps to energy transition are currently being taken in both in the EU and the MENA region on the way to 2030 and beyond. Researchers involved in the PV Parity project have estimated that the cost of electricity produced by large-scale ground-mounted photovoltaic systems in several MENA countries is likely to become competitive with the wholesale electricity prices of some southern EU Member States in the period up to 2030.<sup>46</sup> The project explored the opportunities to provide the necessary support to policymakers in order to ensure a sustainable policy framework for the photovoltaics sector and as such it aimed to improve the legal framework for imports of electricity generated from photovoltaics in MENA.<sup>47</sup> The project specifically highlighted the competitiveness of electricity generated from photovoltaics in North Africa (Algeria, Morocco, Libya and Tunisia) with the wholesale electricity price in Spain and Italy in the period up to 2030.<sup>48</sup> Similarly, the findings of Tsoutsos and his colleagues indicate that solar energy from

the North Africa and Middle East, and specifically from Egypt, Libya, Jordan, Saudi Arabia and Turkey, is likely to become competitive in Greece in the same time period.<sup>49</sup>

Although such findings are encouraging in the long term, there still are questions over the high transport costs, the construction and geographical location of the necessary interconnections and transmission networks as well as the costs of energy storage in order to facilitate viable electricity exchanges between MENA and the EU. For instance, although the development of storage technologies can be argued to further increase the value of renewable energy, renewable energy is unlikely to become profitable, if the costs of energy generation decrease, but at the same time storage costs remain too high.<sup>50</sup> Therefore, the storage technologies also need further improvement.

The findings of Tsoutsos can be contrasted with results by Boie and her colleagues who combined three long-term electricity models to assess the opportunities and challenges of inter-regional electricity exchange between North Africa and Europe in the period until 2050.<sup>51</sup> The research group predicts that renewable energy in North Africa would become economically viable only after 2030, rather than in the run up to 2030.<sup>52</sup> They argue that the broad deployment of renewable energy systems in North Africa and stronger electricity market integration between this region and the EU would present substantial opportunities for both regions. Furthermore, their findings indicate that wind energy is likely to be one of the dominant renewable technologies, followed by photovoltaics and concentrating solar power.<sup>53</sup> Although the advantage of solar technologies such as concentrating solar power is its uninterrupted<sup>54</sup> availability without the need for a fossil fuel back-up, the disadvantages of this technology are the high up-front costs and high heat storage costs.<sup>55</sup> Therefore, further technology development in this field is needed to reduce the costs.<sup>56</sup>

## III. Existing Legal Framework

This section focusses on the existing legal framework and governance arrangements to support the EU-MENA cooperation on renewable energy. A particular emphasis is placed on the reasons why the existing governance structures and institutional arrangements are inadequate for further cooperation. Al-

44 *ibid.*

45 *ibid.*

46 See Tsoutsos et al (n 25).

47 *ibid.*

48 *ibid.*

49 *ibid.*

50 See eg William Braff, Joshua Mueller and Jessika Trancik, 'Value of storage technologies for wind and solar energy' (2016) *Nature Climate Change* doi:10.1038/nclimate3045.

51 Boie et al (n 24).

52 *ibid.*

53 *ibid.*

54 Electricity can be supplied 24 hours-a-day, 7 days-a-week, 365 days-a-year.

55 Carafa (n 28).

56 *ibid.*

though there are multiple factors which contribute to the inability of the current governance structures to facilitate renewable energy cooperation between the EU and MENA, one of the most obvious reasons is the political disagreement among the EU Member States as to who should finance the necessary infrastructure investments to facilitate renewable energy exchanges between the two regions within the scope of the Mediterranean Solar Plan. Despite the fact that there appeared to be a broad political support for enhanced energy integration both in the North African countries and the EU Member States prior to 2013,<sup>57</sup> the Plan and related Strategy Paper<sup>58</sup> failed to receive political endorsement of the Ministerial Conference of the Union for the Mediterranean on Energy in 2013.<sup>59</sup> Although the Plan highlighted the opportunities of stronger inter-regional electricity market integration between North Africa and the EU, the southern EU Member States arguably saw the Plan transform them into mere energy transit countries for renewable electricity from North Africa.<sup>60</sup> This was one of the major obstacles for the implementation of the Mediterranean Solar Plan.<sup>61</sup>

According to others, one of the biggest challenges facing renewable energy development in the MENA region is the lack of an appropriate institutional framework in North Africa.<sup>62</sup> This has made the plans to facilitate the EU-MENA cooperation as unattainable.<sup>63</sup> However, the situation is not as simple as it seems since some Northern African countries such as Morocco already have a robust institutional framework to support the renewable energy technologies diffusion process.<sup>64</sup> Since a number of institutions, which govern issues to do with energy and electricity, exist in North African countries, the problem can be interpreted to centre on the absence of coordination and cooperation between these institutions regionally and nationally as well as the institutional structures of many, but not all North African countries.<sup>65</sup> However, although the established institutional and regulatory frameworks may be currently inadequate, recent developments appear to be changing the situation.<sup>66</sup>

For instance, a range of new governance structures have been established at the national and regional level to respond to investors' concerns about significant investment risks in relation to developing renewables in the MENA region.<sup>67</sup> Despite this, a number of barriers remain to further growth in the deployment of renewable energy in the region in gen-

eral because although individual MENA countries undertake limited policy action, investment is concentrated in few countries rather than the whole region.<sup>68</sup> Thus far, only a few countries, namely Morocco and Turkey, have been able to attract significant public and private investment.<sup>69</sup> Additionally, investment lags behind at the regional level.<sup>70</sup> On a positive note, the recent years have seen the adoption of laws to set targets for renewable energy growth at the national level, and some countries across the MENA region have also enacted new legal frameworks or institutional structures.<sup>71</sup> However, with the exception of Turkey most MENA countries lack strong incentives and feed-in-tariffs to promote renewable technologies.<sup>72</sup>

The importance of the EU in the MENA region is undeniable as the EU remains essential for the stability, security, economic prosperity and economic reform in a number of countries in the region through multilateral<sup>73</sup> and bilateral relationships<sup>74</sup> between the EU and MENA countries. Several bilateral relationships have been developed through the Association Agreements concluded between mid-1990s and

57 See eg Carafa, Frisari and Vidican (n 6); Kousksou et al (n 9).

58 2010 Mediterranean Solar Plan Strategy Paper is appended to Bergasse (n 26) app 2.

59 Boie et al (n 24); Kousksou et al (n 9); Carafa, Frisari and Vidican (n 6).

60 See eg Brand and Fink (n 2).

61 See eg Brand and Fink (n 2).

62 See eg Carafa, Frisari and Vidican (n 6); Kousksou et al (n 9).

63 Boie et al (n 24); Kousksou et al (n 9); Carafa, Frisari and Vidican (n 6).

64 See Hawila et al (n 1).

65 *ibid.*

66 *ibid.*

67 Carafa, Frisari and Vidican (n 6).

68 Carafa (n 28).

69 See Carafa, Frisari and Vidican (n 6) referring to RCREEE 2013.

70 Carafa (n 28).

71 Tsoutsos (n 25); Carafa, Frisari and Vidican (n 6).

72 *ibid.*

73 Euro-Mediterranean Partnership and Barcelona Process: Union for the Mediterranean.

74 European Neighbourhood Policy. See eg Michelle Pace, 'The European Union, security and the southern dimension' (2010) 19(3) *European Security* 431-444 DOI:10.1080/09662839.2010.534462; Ian Anthony, Camille Grand and Patricia Lewis, *Towards a new European security strategy? Assessing the impact of changes in the global security environment* (European Union 2015) 36-37 <[http://www.europarl.europa.eu/RegData/etudes/STUD/2015/534989/EXPO\\_STU\(2015\)534989\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/534989/EXPO_STU(2015)534989_EN.pdf)> accessed 3 May 2016.

mid-2000s<sup>75</sup> which arguably offer an alternative to the EU membership. Additionally, relations with the countries of the Gulf region include a strong connection through EU-Gulf Cooperation Council, whereas the relationships with Arab States are more generally enhanced through a strong interaction between the EU and the League of Arab States.<sup>76</sup>

The long-term objective of the individual Association Agreements is to widen the bilateral cooperation to include, *inter alia*, trade in services, government procurement, competition, intellectual property rights, investment protection, and the gradual integration of the association countries' economies into the EU single market.<sup>77</sup> Therefore, a certain degree of harmonisation of the MENA countries' policies is already taking place within the scope of the EU-MENA cooperation in the context of the Association Agreements. As such, there is no reason as to why these agreements could not be used to facilitate cross-border trade in electricity. Since all Association Agreements are concluded between the EU and each individual MENA country, their scope is up to the parties to the Agreement. In fact, it is very likely that the Association Agreements would have been used to aid the implementation of the Mediterranean Solar Plan since 'the existing bilateral agreements between the EU and the individual MENA countries' are referred to in the Mediterranean Solar Plan Strategy Paper<sup>78</sup> discussed in section 1a. However, the EU's

policy to conclude Association Agreements has also been criticised for failing to offer strong incentives to the MENA countries since the EU's discourse about creating a Mediterranean Free Trade Area by 2010 has not granted the MENA countries greater access to the EU's internal market.<sup>79</sup>

## 1. Progress Achieved in the Context of the Mediterranean Solar Plan

In order to accommodate renewable energy cooperation between the EU and MENA, prospective cooperation structures already exist at the regional level. Indeed, in 2008, 43 countries from Europe, the Middle East and Africa, including the Heads of State and Governments of the 27 EU Member States and 16 Southern and Eastern Mediterranean countries, launched an intergovernmental cooperation which endeavoured to create a regional strategy for renewable energy initiative known as the 'Mediterranean Solar Plan'.<sup>80</sup> The initiative was aimed at developing 20 gigawatts of new installed capacity from renewable energy in the countries of the Mediterranean region by 2020, together with the necessary electricity transmission capacity and cross-border interconnections.<sup>81</sup>

However, as noted above, the Mediterranean Solar Plan failed to receive political endorsement in 2013.<sup>82</sup> Substantial groundwork had nevertheless been put into the development of the Plan prior to this, and in order to support the Plan the Commission had created a technical assistance project consisting of consultancy companies and electricity enterprises.<sup>83</sup> The 2010 Strategy Paper created as a result of this project aimed at establishing key incentives for facilitating the implementation of the Plan within the scope of Article 9 of Directive 2009/28/EC (the Renewable Energy Directive)<sup>84</sup> which provided for renewable electricity imports from third countries in line with EU policies on competition and state aid under certain conditions.<sup>85</sup>

### a. Action Plan for Renewable Energy Production and Electricity Transmission

The 2010 Strategy Paper<sup>86</sup> foresaw, *inter alia*, the adoption of the Action Plan for renewable energy production and electricity transmission to launch the first set of renewable energy projects in the MENA region between 2010 and 2011.<sup>87</sup> The purpose of these

75 eg Tunisia (1995), Morocco (1996), Palestine (1997), Israel (2000), Jordan (2002), Egypt (2004), Algeria (2005) and Lebanon (2006). See eg Anthony, Grand and Lewis (n 74) 37.

76 See Anthony, Grand and Lewis (n 74) 37.

77 *ibid.*

78 Mediterranean Solar Plan Strategy Paper appended to Bergasse (n 26) app 2, para 3.

79 Pace (n 74).

80 Carafa (n 28).

81 Carafa, Frisari and Vidican (n 6).

82 Boie et al (n 24); Kousksou et al (n 9); Carafa, Frisari and Vidican (n 6).

83 Known as 'Paving the way for the Mediterranean Solar Plan'. See eg Carafa, Frisari and Vidican (n 6).

84 Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC [2009] OJ L140/16 (Renewable Energy Directive).

85 2010 Mediterranean Solar Plan Strategy Paper is appended to Bergasse (n 26) para 3.

86 Bergasse (n 26) app 2.

87 *ibid.*

projects was to inform the development of suitable financial mechanisms, incentives and capacity building activities for future projects.<sup>88</sup> The success of these pilot projects has been argued to be indicative of the success of the MENA region's transformation to renewable energy because they have a potential to encourage a wider change in the medium term.<sup>89</sup> Therefore, the pilot projects could be argued to have been one of the critical factors in the success of the Mediterranean Solar Plan. In the light of their central role in the transition to a regionally coordinated approach, they could also be considered central for any future cooperation between MENA and the EU in the short to medium term.<sup>90</sup>

The Action Plan further envisaged, *inter alia*, the development of legal frameworks for the granting of licences, authorisation of projects, setting of tariffs as well as the establishment of a viable trans-regional import-export framework for renewable electricity.<sup>91</sup> However, since the Mediterranean Solar Plan was not reinforced at the intergovernmental level, it is uncertain whether such legal frameworks were actually developed. This phase nevertheless included securing and developing adapted financing mechanisms in cooperation with the World Bank, the European Investment Bank and several bilateral development banks.<sup>92</sup> Additionally, it included the involvement of various stakeholders, including industry, utility companies, transmission system operators, potential investors, financing institutions and the public sector.<sup>93</sup> Further, the Action Plan was aimed at providing for an assessment of existing interconnections which in turn would have enabled identifying the main links between the different geographical regions involved in the Mediterranean Solar Plan.<sup>94</sup>

#### b. Master Plan for Implementation of the Mediterranean Solar Plan

Further, the 2010 Strategy Paper foresaw the development of a comprehensive political document (the 'Master Plan') to address region-specific renewable energy and energy efficiency issues.<sup>95</sup> Building on the experience gained through the initial phases of the EU-MENA cooperation, the Master Plan included a road map, detailing the phases, activities and a precise timeline for the implementation of the Mediterranean Solar Plan in the period until 2020.<sup>96</sup> In essence, its aim was to develop 'dynamic, regionally integrated and self-sustained markets for renew-

able energy and energy efficiency technologies', strengthen the inter-connections between the electricity systems of participating countries and thus, facilitate the deployment of 'safe, secure, clean, non-exhaustible, and non-polluting energies' and lead the way to increased exchange of renewable electricity between the EU and MENA.<sup>97</sup> Even though the Master Plan does not explicitly refer to the objectives of the Energy Charter Treaty, it seems to mirror the latter, and specifically Articles 3 and 7(2) of the Treaty which concern the development of open and competitive international markets for energy and the requirement to facilitate electrical interconnections.<sup>98</sup>

The Master Plan further dealt with the development of an enabling policy and regulatory frameworks; strengthening a combination of different financial support mechanisms allowing for a targeted reduction of financing costs; upgrading transmission infrastructure systems; supporting industrial development and job creation, and enhancing capacity development and knowledge transfer.<sup>99</sup> More specifically, it provided the necessary flexibility for new projects and developments, and included, *inter alia*, the development of a strategy to cover: (a) issues relating to the selection of suitable sites for installations and interconnections, local industrial capabilities and renewable energy market development in the Mediterranean countries; (b) the identification of existing initiatives for the electricity generation from

88 *ibid.*

89 Carafa (n 28).

90 See also section IV.

91 Mediterranean Solar Plan Strategy Paper appended to Bergasse (n 26) app 2.

92 *ibid.*

93 *ibid.*

94 *ibid.*

95 Union for the Mediterranean, 'Mediterranean Solar Plan: Joint Committee of National Experts discusses Draft of the Master Plan' (22 February 2013) <<http://ufmsecretariat.org/mediterranean-solar-plan-joint-committee-of-national-experts-discusses-draft-of-the-master-plan/>> accessed 29 June 2016.

96 Mediterranean Solar Plan Strategy Paper appended to Bergasse (n 26) app 2, para 3.

97 Union for the Mediterranean, 'Mediterranean Solar Plan Master Plan: Meeting with the Minister of Energy and Mineral Resources of Jordan' (4 July 2013) <<http://ufmsecretariat.org/mediterranean-solar-plan-master-plan-meeting-with-the-minister-of-energy-and-mineral-resources-of-jordan/>> accessed 29 June 2016.

98 See section IV.

99 Union for the Mediterranean, 'Mediterranean Solar Plan Master Plan' (n 96).

renewable sources, energy efficiency and potential synergy measures to enable the best possible use of such initiatives; (c) legislative and regulatory reforms, institutional and administrative conditions, as well as other relevant infrastructure and electricity sector issues for a phased development of renewable technologies in the North African countries as well as (d) suitable finance mechanisms<sup>100</sup> together with the most cost-effective solutions to ensure private sector involvement in accordance with the existing studies.<sup>101</sup>

The Master Plan was further aimed at addressing the existing bilateral agreements between the EU and the individual MENA countries, the necessary transmission infrastructure in the latter, and the involvement of transmission system operators.<sup>102</sup> Based on this, the Master Plan was supposed to identify specific electricity grid infrastructure projects which fulfilled two criteria. Firstly, they would have been crucial for the establishment of an effective EU-MENA framework for renewable electricity exchange, and secondly, such projects could have been addressed in the framework of the Trans-European Networks initiative.<sup>103</sup> The initiative is intended to complement the internal market by facilitating the planning of energy grids at the supranational, rather than national level. On a whole, the Master Plan would have been a very comprehensive policy guideline for the implementation of EU-MENA cooperation in renewable energy. The Master Plan was nevertheless abandoned as a result of the 2013 ministerial conference.

100 Including appropriate support and import-export schemes, concessional financing and carbon finance and other innovative financing schemes.

101 eg Commission, 'A European strategic energy technology plan (SET-plan): "Towards a low carbon future"' (Communication) COM/2007/0723 final; Facility for Euro-Mediterranean Investment and Partnership and European Investment Bank, 'Study on the Financing of Renewable Energy Investment in the Southern and Eastern Mediterranean Region' (October 2010).

102 Mediterranean Solar Plan Strategy Paper appended to Bergasse (n 26) app 2, para 3.

103 *ibid.*

104 Tsoutsos et al (n 25).

105 Directive 2009/28/EC, art 9(1): 'One or more Member States may cooperate with one or more third countries on all types of joint projects regarding the production of electricity from renewable energy sources'.

106 Case C-66/13, *Green Network SpA v Autorità per l'energia elettrica e il gas* [2015] 2 CMLR 3, para AG61 (*Green Network*).

107 See n 5.

108 Directive 2009/28/EC, art 9(2)(c) 'and the amount of electricity produced and exported has not received support from a support scheme of a third country other than investment aid granted to the installation'.

## 2. Renewable Energy Directive 2009/28/EC

To a smaller degree international collaboration between the EU Member States and the MENA region in the field of renewable energy is already facilitated by the Renewable Energy Directive which establishes the legal basis for joint projects concerning the generation of renewable electricity.<sup>104</sup> Article 9(1)<sup>105</sup> of the Directive regulates the implementation of all types of collaborative projects between the EU Member States and third countries in order to enhance the imports of renewable electricity from countries outside the EU. Additionally, the conditions set out in Articles 9 and 10 of the Directive provide that electricity imported from a third country may be taken into account in assessing the compliance with the overall national energy target of an EU Member State.<sup>106</sup> Such an incentive is further intended to encourage renewable energy exchange from outside the EU. One of the reasons for this is that it is in the interests of the EU to develop of alternative supply options for energy is to reduce Member States' dependence on Russia.<sup>107</sup> Therefore, the renewable energy projects with MENA are viewed as potential viable options for the future security of supply.

Article 9(3) of the Renewable Energy Directive provides that following an authorisation by the Commission, electricity generated and consumed outside the territory of the EU Member States in the context of the construction of an interconnector can be included in the national energy target, if certain conditions are met. In accordance with Article 9(2), a qualifying interconnection must be used to export to the EU electricity generated from renewable energy sources. Additionally, the construction of a qualifying project must have commenced by the end of 2016 and the interconnection must become operational between 2020 and 2022. The joint project must fulfil the criteria in Article 9(2)(b) in that the qualifying electricity must be generated by an installation that has either become operational after 25 June 2009 or has been refurbished after that date. Moreover, the amount of electricity produced and exported must not have received support from any other third country support scheme apart from investment aid granted to the installation.<sup>108</sup> Lastly, under Article 9(3) for the electricity to be imported from third countries to qualify for the national energy target of an EU Mem-

ber State, the newly constructed interconnector must be used as soon as it has become operational, and the quantity of electricity must be less than the quantity exported to the EU after the interconnector becomes operational.

In 2015 the Court of Justice of the European Union held that the transitional provisions in the Renewable Energy Directive were justified by the high European interest in projects being carried out in third countries such as those falling within the ambit of the Mediterranean Solar Plan.<sup>109</sup> An explicit reference to the Plan by the Court is remarkable because the Plan had encountered difficulties at the political level two years prior to the Court's decision. The Court's approach nevertheless indicates the promotion of renewable energy production in the context of the Plan is considered an essential objective recognised by the EU,<sup>110</sup> whether the Plan has received political endorsement of the EU Member States or not. As such, this is not surprising, considering the important part renewable energy continues to play in the EU energy policy. Indeed, one of the main objectives of the policy is to ensure that energy is 'affordable and competitively priced, environmentally sustainable and secure'<sup>111</sup> in line with the EU's target of producing 20 percent of energy consumption from renewable sources by 2020.<sup>112</sup> However, throughout the years the Court has also been accused of judicial activism,<sup>113</sup> specifically in the areas subject to the principle of free movement. Importantly, the Court has, indeed, had an instrumental role in, *inter alia*, enforcing principles concerning the protection of the environment.<sup>114</sup>

Therefore, the Renewable Energy Directive provides a clear scope for the EU Member States to implement cross-border electricity exchange projects in a flexible manner under Article 9 and with the objective of encouraging the imports of renewable energy from third countries. However, at the time of writing, none of the Member States has adopted any flexible mechanisms under this provision.<sup>115</sup> Therefore, it has been suggested that in order to encourage increasing cooperation between the EU and MENA in this area, it may not be only the MENA governments which need help and support in implementing renewable energy projects. Indeed, Tsoutsos and his colleagues have argued that the policy-makers in the EU Member States may need to be provided with support in form of additional tools and information about the relevance of renewable elec-

tricity imports from the MENA countries, for instance, under a specific renewable energy project.<sup>116</sup> Therefore, the fact that no Member State has used Article 9 is not due to the lack of interest in renewable energy technologies in the MENA or the absence of investment in renewable energy projects in the MENA region, but there may be lack of willingness among the EU Member States to cooperate in the field. The reasons for this are clearly more complex than this article has a scope for, but they include, *inter alia*, political instability in many of the MENA region's countries, existing energy markets and infrastructure, regulatory barriers, financial concerns, existing trading conditions, private sector involvement, lack of international cooperation as well as sociocultural factors, and social and environmental outlooks in some of the region's countries.<sup>117</sup> In addition, the practical aspects relating to large energy projects and renewable energy projects such as regulatory requirements, rules and procedures concerning bidding and procurement, the availability of financial incentives as well as real estate ownership are likely to differ in each individual MENA country,<sup>118</sup> making it difficult for international investors and energy companies alike to conduct their business in the region.

109 *Green Network* (n 106) para AG61.

110 *ibid* para AG63.

111 Commission, 'Progress towards completing the Internal Energy Market' (Communication) COM (2014) 634 final, para 1.

112 *ibid* para 2.1 referring to Commission, 'A policy framework for climate and energy in the period from 2020 to 2030' (Communication) COM (2014) 15 final.

113 See eg Michael Dougan, 'Judicial Activism or Constitutional Interaction? Policymaking by the ECJ in the Field of Union Citizenship' in Hans-Wolfgang Micklitz and Bruno De Witte (eds), *The European Court of Justice and the Autonomy of the Member States* (Intersentia 2012).

114 See eg Case 240/83 *Procureur de la République v Association de défense des brûleurs d'huiles usagées* [1985] ECR 00531 (free movement of goods - waste oils).

115 Tsoutsos et al (n 25).

116 *ibid*.

117 See eg Brand and Fink (n 2); Walid El-Khattam et al, 'Establishing a Regional Mediterranean Electricity Market: Assessment and Strategy' (2013) 3(1) *European Energy Journal* 58, 63 <[http://www.medreg-regulators.org/Portals/\\_default/Skede/Allegati/Skeda4506-13-2013.11.20/EEJ\\_1301\\_MEDRAG.pdf?IDUNI=x0zfb4s1l4zqoqmbjop43tbw2198](http://www.medreg-regulators.org/Portals/_default/Skede/Allegati/Skeda4506-13-2013.11.20/EEJ_1301_MEDRAG.pdf?IDUNI=x0zfb4s1l4zqoqmbjop43tbw2198)> accessed 14 September 2015.

118 See eg Squire Sanders, 'The Future for Renewable Energy in the MENA Region' <<http://www.cleanenergypipeline.com/Resources/CE/ResearchReports/The%20Future%20for%20Renewable%20Energy%20in%20the%20MENA%20Region.pdf>> accessed 14 September 2015.

## IV. Proposed Governance Arrangements

This section focuses on the alternative legal and institutional arrangements that are needed to advance further renewable energy cooperation between the EU and MENA. Naturally, the closer the energy cooperation between different regions the more harmonisation of technical standards and energy policies will be involved. Trans-regional trade in renewable electricity between the EU and MENA would most likely require more intensive cooperation and coordination between national energy legislation<sup>119</sup> and the adoption of a legal foundation for a regional energy market. Such a legal foundation could be facilitated by the adoption of an international instrument such as the Energy Charter Treaty. Therefore, the MENA countries must consider whether they are comfortable with the adoption of common rules with their neighbours and create a supranational entity to oversee their national energy policies and legislation in a similar way as in the EU.

Although the EU institutional framework is often taken as a model of successful regional cooperation in existing studies,<sup>120</sup> it is worth noting that regional integration and development of regional energy markets within the EU have not been without their specific problems. For instance, the creation of fully integrated single energy market for the EU has posed several challenges, primarily due to the reluctance of the EU Member States to implement common standards.<sup>121</sup> Over the past two decades during which the Commission has attempted to create an internal energy market, some Member States have intermittently opposed agreement on common rules for market

liberalisation, cross-border electricity trade, and ensuring consistent treatment of investors.<sup>122</sup> The creation of the internal energy market in the EU is far from complete since even though the Commission's goal was to finalise the process by the end of 2014, no harmonised market design rules or interconnection capacity exist between Member States.<sup>123</sup> Although it may not be possible to replicate the institutional framework of the EU in MENA, compelling arguments exist for the establishment of an entity such as a ministry, dedicated agency or another public authority which would guarantee a consistent approach towards a region-wide transition to renewable energy.<sup>124</sup> Further, such an entity would need to have a clear function and ability to mobilise the necessary public and private finance as well as to move projects forward.<sup>125</sup> Additionally, transitioning to renewables depends on financial and infrastructural challenges, which are primarily transnational. As a result, the deployment of renewable energy in the MENA region cannot be tackled at the national level alone.<sup>126</sup> Therefore, the governments in the region should pursue all efforts to further enhance institutional capacity of their corresponding public authority both at the technical and financial level.<sup>127</sup>

There are, indeed, opinions that a transition to renewable energy in the whole MENA region is more likely, if action is taken at the regional governance level.<sup>128</sup> Certainly, if the EU legislative framework is taken as a benchmark of global energy governance, one of the advantages relating to the harmonisation of the EU energy legislation has been the creation of a supranational body which oversees and initiates the process. Therefore, there also seems to be a strong argument for the creation of a supranational regulatory authority within the MENA region to coordinate energy regulation and pushes projects forward regionally.

For this reason, a regional approach should be used to overcome the non-political barriers standing in the way of renewable energy transition across the MENA region.<sup>129</sup> According to Boie and her colleagues, trans-regional trade in renewable electricity would require intensifying cooperation and coordination between national legal frameworks in the MENA countries. In the long term, increased cooperation would probably result in a harmonised renewable energy policy for the wider EU-MENA region.<sup>130</sup> However, to facilitate further cooperation, major developments would be required also in terms of electricity

119 Boie et al (n 25) para 4.2.3.

120 For a discussion in the context of regional energy cooperation in Northeast Asia, see Bonafé and Vanhay (n 29).

121 Kousksou et al (n 9).

122 Bonafé and Vanhay (n 29).

123 See eg Martin Gerig and Bernardo Vasconcelos, 'The EU Energy Union Strategy: Will It Finally Complete the EU Internal Energy Market?' (2015) 3 Renewable Energy Law and Policy Review 183.

124 See Carafa, Frisari and Vidican (n 6).

125 *ibid.*

126 See Carafa (n 28).

127 See Carafa, Frisari and Vidican (n 6).

128 Carafa (n 28).

129 *ibid.*

130 Boie et al (n 25) para 4.2.3.

market design and infrastructure policy both in the EU and the MENA region.<sup>131</sup> Therefore, developing suitable pathways for a sustainable transformation of the regulatory frameworks and political conditions in both regions is best achieved through a continuous political dialogue.<sup>132</sup> Additionally, more coordinated renewable energy support could act as a major driver for directing renewable investments to the MENA region since it would allow for least cost resource allocation of renewable energy potentials.<sup>133</sup> Since regional integration would be expected to increase trade in electricity between neighbouring countries, as such, a system of supra-national regional planning and strategies would also be necessary.<sup>134</sup>

Experience from the EU demonstrates that just as important as the establishment of a supranational entity is, the creation of independent and impartial national regulatory authorities is also significant in reforming national electricity markets.<sup>135</sup> The reluctance of EU Member States to adhere to common standards to create an internal energy market for the EU has demonstrated that achieving regional integration poses several challenges, including the need for consistent political agreement, a degree of regulatory harmonisation, and financing and building the necessary interconnection infrastructure.<sup>136</sup> According to Bonafé and Vanhay, the national regulatory authorities<sup>137</sup> have had an important role in ensuring the development of the common electricity market within the EU, the observation of the EU principles on market integration, and in adopting a collaborative approach to common problems.<sup>138</sup> Therefore, there is no reason why the implementation of the future regulatory framework in the MENA region could not be the responsibility of national authorities, provided that they adopt a regionally coordinated approach.

A strong regional coordination of infrastructure planning appears to be critical for the creation of a regional supergrid both in the EU and MENA.<sup>139</sup> Thereby, grid regulation and electricity market development would need to be coordinated not only at the national level, but also between the EU and MENA.<sup>140</sup> As such, much stronger cooperation than what has existed to date is necessary for the cross-border exchanges in renewable energy to become reality between MENA and the EU. Realistically, there are only two policy options for the future EU-MENA cooperation. Whereas in the short term, the MENA countries may be more willing to adopt policy options

which require minimum harmonisation, increased energy cooperation makes harmonisation necessary in the long term.

## 1. Short Term Policy Options (until 2030)

As noted in section II, large scale electricity exchanges between the EU and the MENA region have been estimated to become economically feasible only after 2030. Indeed, according to Boie and her colleagues, the total net electricity exchange between North Africa and the EU is likely to be moderate in short or medium term.<sup>141</sup> In order to facilitate further progress in this field, a continuous evolution of the current framework for cooperation, which builds on the progress achieved towards renewable energy transition in the MENA region in the programme plans of the Mediterranean Solar Plan, appears to be the most appropriate,<sup>142</sup> despite the EU's failure to cooperate politically in the context of the programme.

In the long-term, the net electricity exchange between the EU and MENA could contribute a significant share of the EU electricity consumption which in turn would call for a more harmonised approach to support renewable energy cooperation.<sup>143</sup> Therefore, in the short or medium term, the most likely option for the MENA countries is to take a regionally coordinated policy action which would be realised gradually through technical cooperation and mutual learning.<sup>144</sup> Such an approach would require initia-

131 *ibid.*

132 *ibid.*

133 Boie et al (n 25) para 4.2.3.

134 Kousksou et al (n 9).

135 See eg Cambini and Franzi (n 26); Bonafé and Vanhay (n 29) para 2.1.4.

136 Kousksou et al (n 9).

137 Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC [2009] OJ L 211/55, art 8(5) requires EU Member States to designate competent authorities which are tasked with the monitoring of the national electricity market to ensure its effective and transparent functioning.

138 Bonafé and Vanhay (n 29) para 2.1.4.

139 Boie et al (n 25) para 4.2.3.

140 *ibid.*

141 20-40 TWh/a in 2030. See Boie et al (n 25) para 4.2.3.

142 Boie et al (n 25) para 4.2.3.

143 *ibid.*

144 Carafa (n 28).

tion of pilot projects utilising renewable energy which would be protected from the dominant fossil fuel-electricity production regime to reduce substantial distortions in electricity markets in the region.<sup>145</sup> Indeed, a sustained and strong support is required by the MENA governments not only to promote investment in renewable energy technologies, but also to minimise heavy fossil fuel subsidies.<sup>146</sup>

The reasoning behind this is that the successful pilot projects have a potential to encourage a wider transformation in the medium term.<sup>147</sup> As discussed in the introduction, several renewable energy projects have already been initiated in a number of MENA countries. However, turning the pilot projects into more a sustainable transition to renewable energy in the region would require the establishment of monitoring and benchmarking systems in order to enable participating countries to be informed of the progress within the projects.<sup>148</sup> Additionally, for the pilot projects, particularly concentrating solar power, to become profitable, the MENA countries need concessional finance and the opportunities to export renewable electricity to the European markets.<sup>149</sup> This is because while the export of electricity generated from concentrating solar power is feasible from a technological point of view, the production and transport are very costly.<sup>150</sup> Therefore, a region-wide energy transition in the short term can be argued to be largely dependent on successful pilot projects.<sup>151</sup>

It has been further suggested that because technical cooperation projects have already made an important progress in terms of the development and en-

hancement of technical capacities in the MENA region, the EU-MENA cooperation could be re-orientated to country specific technical and financial assistance.<sup>152</sup> This would take place in the form of information networks which aim at facilitating the exchange of technical knowledge, best practices, and mutual learning.<sup>153</sup> Additionally, bilateral forms of technical assistance at the EU level,<sup>154</sup> which were initially devised to facilitate regulatory harmonisation, convergence and institution-building in accession countries have been extended to other third countries under the European Neighbourhood Policy.<sup>155</sup> As such there is no reason why these forms of cooperation could not benefit the individual MENA countries. Although specific activities in the energy sector in the context of the European Neighbourhood Policy have remained limited and for the most part they have been directed to Ukraine,<sup>156</sup> there is no reason why they could not be relevant in the context of the EU-MENA renewable energy cooperation.

## 2. Long Term Policy Options (between 2030 and 2050)

It has been suggested that the EU-MENA long term policy action should take place through mechanisms of cooperation which would aim at the progressive harmonisation of technical standards.<sup>157</sup> It appears that currently the harmonisation of standards is the least-likely policy option because of political disagreement among EU Member States as to how far the current cooperation should go. However, ultimately such harmonisation could entail the adoption of a set of new rules which would provide a legal foundation for a regional energy market in MENA.<sup>158</sup> Since there are existing legal instruments which could be used to support the prospective EU-MENA collaboration, instead of without the need to negotiate a new set of rules, the founding legal text could be provided by an existing multilateral treaty. Should the MENA countries decide to use a legally binding instrument such as the Energy Charter Treaty, specific parts of the EU renewable energy *acquis* could be extended to the MENA countries in order to harmonise legislation on both sides of the Mediterranean. Additionally, the adoption of the Energy Charter Treaty would entail adoption of a set of organisational structures to monitor compliance with commonly agreed rules. Such policy action would also require the introduc-

145 *ibid.*

146 See eg Carafa, Frisari and Vidican (n 6); Hawila et al (n 1).

147 Carafa (n 28).

148 *ibid.*

149 *ibid.*

150 *ibid.*

151 *ibid.*

152 See eg Carafa, Frisari and Vidican (n 6); Carafa (n 28).

153 Carafa, Frisari and Vidican (n 6).

154 ie Twinning, Technical Assistance and Information Exchanges (TAIEX) and Support for Improvement in Governance and Management (SIGMA).

155 Carafa (n 28).

156 *ibid.*

157 *ibid.*

158 *ibid.*

tion of innovative financing mechanisms which evidently tie together harmonisation of technical standards and public finance.<sup>159</sup> Alternatively, the MENA countries could adopt a legally non-binding instrument such as the International Energy Charter<sup>160</sup> which is only a declaration of States' political intention to aim at strengthening energy cooperation.<sup>161</sup>

Whether or not a potential future intergovernmental instrument adopted by MENA was legally binding, it could nevertheless bring the national and regional energy sectors in both the EU and MENA closer by enhancing regional cooperation.<sup>162</sup> In fact, the relevance of the Energy Charter Treaty has been noted widely outside Europe since this Treaty has been signed by a number of non-European countries. Additionally, the EU engages in promoting the Treaty as a model for international energy cooperation globally.<sup>163</sup> Article 2 of the Energy Charter Treaty specifically mentions that the purpose of the Treaty is to promote long-term cooperation in the field of energy 'based on complementarities and mutual benefits'. This clearly suggests that cross-border exchanges of electricity are aimed at bringing benefits to all signatories to the Treaty. Additionally, there is a clear emphasis on creating opportunities for cross-border trade in electricity since Article 3 emphasises the Treaty's aim to develop open and competitive international markets for energy materials and products.

Further, to enable cross-border exchange of electricity among signatories to the Treaty, Article 7(1) stipulates that the contracting parties are to facilitate the transit of energy materials and products without distinction to their origin, destination and ownership and without imposing unreasonable delays, restrictions or charges on the goods in transit. Additionally, Article 7(2) requires signatories to cooperate to modernise facilities used to transport electricity, adopt measures to mitigate interruptions to energy supply and facilitate electrical interconnections. In practice, Article 7(1)-(2) can be interpreted to prevent the EU Member States from discriminating between electricity generated in the MENA region and that generated in the EU. It also appears to necessitate the Member States to facilitate the entry on the internal market of electricity generated in MENA through interconnections enacted on their territories, should the MENA countries become signatories to the Energy Charter Treaty. No doubt this would prove highly contentious, but ultimately, this is what the provisions of the Treaty would indicate.

Putting aside the political disagreement as to who should bear the costs of substantial grid extensions in Southern Europe in the context of the Mediterranean Solar Plan, the benefit of MENA countries becoming contracting parties to the Energy Charter Treaty would be that the Treaty could function as an essential starting point for the MENA countries to approach common challenges created by their own regional supergrid. Although the Energy Charter Treaty is a legally binding instrument, it has been applauded for its ability to make allowances for conditions and circumstances particular to a specific region.<sup>164</sup> Thus, the ultimate objective and the governing principle of the Treaty is to create competitive and efficient markets without imposing market conditions such as market liberalisation, unbundling, targets for renewable energy sources in the energy mix, third party access and environmental regulation.<sup>165</sup> Additionally, the Treaty does not interfere in national energy markets and policies.<sup>166</sup> Therefore, specific regions within both the EU as well as MENA could agree on a more ambitious market reform within the regional borders within the scope of the Treaty,<sup>167</sup> whereas other signatories could adhere to a more loose cooperation.

The adoption of the Energy Charter Treaty by the MENA countries would also provide investors and other interested parties with legal certainty.<sup>168</sup> Legal certainty brought by the adoption of the Treaty would be beneficial for investors because it would alleviate the high capital risk of renewable energy projects in the MENA region.<sup>169</sup> However, the Treaty is unlikely to be the only legal instrument which could be used to integrate all aspects of electricity markets of indi-

159 *ibid.*

160 International Energy Charter of 20 May 2015.

161 See International Energy Charter, 'Overview' <<http://www.energycharter.org/process/international-energy-charter-2015/>> accessed 1 June 2016.

162 Bonafé and Vanhay (n 29) 87.

163 To date, the Treaty has been signed or acceded to by 52 States as well as the EU and Euratom, and regional and international organisations are also observers by invitation. See eg Bonafé and Vanhay (n 29) para 1.3.1.

164 See Bonafé and Vanhay (n 29) ch 2.

165 *ibid.* 87.

166 *ibid.*

167 *ibid.*

168 *ibid.*

169 Carafa (n 28).

vidual MENA countries because investors would require additional guarantees such as feed-in tariffs to guarantee profits to renewable energy producers and reduce the cost of renewable electricity to final consumers.<sup>170</sup> As such, promoting renewable technologies would entail a more active fiscal role by the MENA governments.<sup>171</sup>

As an alternative multilateral instrument to the Energy Charter Treaty, the International Energy Charter could be appropriate in the context of the future EU-MENA cooperation because it can be seen to provide a set of minimum principles for transnational cooperation in the field of energy among the MENA countries themselves as well as between MENA and the EU. One of the advantages of the International Energy Charter is that it is legally non-binding, and therefore, it does not entail obligations or financial commitments to the countries adopting it.<sup>172</sup> The adoption of the Charter by MENA could provide a new political momentum to the intergovernmental energy cooperation in the MENA region as well as with the EU. The first steps towards further regional cooperation and the adoption of minimum principles have already been taken by some of the region's countries since Israel, Iran and Lebanon have adopted the Charter in 2015,<sup>173</sup> and other MENA countries may well sign it in the future. It appears that the non-binding character of the Charter may be more palatable to the MENA countries since currently none of these countries is a contracting party or active observer to the Energy Charter Treaty.

## V. Conclusion

The existing legal instruments such as the Renewable Energy Directive could be seen as useful in enabling fledgling cooperation between the EU and the MENA region in relation to individual interconnection projects. However, there appears to be little political will among EU Member States to pursue joint projects with the MENA countries in order to facilitate the establishment of a wider and viable import-export framework for renewable electricity between

these two regions at the moment. Although a number of North African countries appear to be in a strong position to supply electricity to the EU in the long-term, no substantial steps have been taken to facilitate renewable energy exchanges between the EU and MENA thus far. There nevertheless appears to be some willingness to invest into interconnecting infrastructure to facilitate trans-regional electricity trade and to integrate regional grids within the MENA region with the European equivalent.

In order to continue with the progress achieved in the scope of the Mediterranean Solar Plan prior to 2013 and ultimately facilitate renewable electricity trade with the EU, the MENA region would need to adopt a regional approach towards renewable energy governance. This would arguably require intensifying cooperation and coordination between national energy legislation which could result in a harmonised renewable energy policy for the MENA region. As such, this would probably resemble very much of the renewable energy *acquis* of the EU. Since major developments are required in terms of renewable energy policy, electricity market design and infrastructure policy both in regions, further EU-MENA cooperation requires the adoption of a common regulatory framework. This could be facilitated by the adoption of a legally binding instrument such as the Energy Charter Treaty which would provide a legal basis for further EU-MENA cooperation and as such, function as an essential starting point for the MENA countries to approach common challenges relating to the creation a regional transmission network and transregional trade in electricity.

While the adoption of the Energy Charter Treaty would also create certainty to investors and other interested parties, it would guarantee certain flexibility to the MENA countries since it would not require all countries to participate in an ambitious market reform within the scope of the Treaty the same way. Instead, some countries could choose to cooperate more loosely within the scope of the Treaty. Alternatively, the MENA countries could adopt common principles such as those laid out in the International Energy Charter which does not entail obligations or financial commitments to the signatories. As such, the non-binding Charter could provide a new incentive for the future EU-MENA energy cooperation as well as help the two regions to coordinate their infrastructure planning with view of constructing a regional supergrid.

170 El-Katiri (n 28).

171 *ibid.*

172 International Energy Charter, 'Overview' (n 163).

173 *ibid.*