

# Turkey's Green Imagination: The Spatiality of the Low-Carbon Energy Transition within the EU Green Deal

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## ABSTRACT

This article asks the extent to which the EU Green Deal influences the EU periphery today and builds on the spatial conditions of multiple, co-existing decarbonization pathways within the EU Green Deal while problematizing the 'green imagination' of Turkey as an immediate neighbour and a candidate country for membership in the EU. As such, it uncovers that the current low-carbon transition process in Turkey is prone to be shaped by the highly politicized energy market in an authoritarian neoliberal structure on the one hand, and Turkey's priorities in energy issues and hard security on the other. The findings further reveal that Turkey's efforts to use more domestic energy resources to meet its consumption needs might also interfere with its efforts and obligations to decarbonize its energy sector. The scrutiny into the low-carbon energy transition in Turkey accordingly contributes further insight into the consequences of the spatiality of such transitions in an authoritarian neoliberal context, and what other alternative policies can be imagined and put in practice. Thus, more empirical research is warranted to reveal the spatiality of the low-carbon energy transition across various geographical settings. At the same time, the article argues that both the EU and its partners such as Turkey should be weary of creating green utopias when redesigning their green-energy space since utopias tout court may not always stimulate large-scale change in a revolutionary way in terms of sustainability, feasibility, good practice, and inclusiveness in decision-making processes.

**Keywords:** Green Energy Transition, AKP government, spatiality of decarbonization, neoliberalism, authoritarianism

## Introduction

Analysing energy from a spatial perspective has attracted a great deal of attention in recent decades. Numerous studies have shown the importance of examining the variability of spatial configurations in order to assess the diversity of energy-transition paths.<sup>1</sup> This article draws upon the work of political geography scholars, who view the current green-energy transition as a spatially constituted process “involving the reconfiguration of current patterns and scales of economic and social activity.”<sup>2</sup> Focusing on Turkey’s low-carbon transition, this article seeks to unpack the heterogenous nature of the renewable energy transition’s trajectories within the EU periphery today while problematizing the ‘green imagination’ of Turkey as an immediate neighbour of and a candidate country for membership in the EU. Thus, this article asks the extent to which the external dimension of the European Green Deal influences the internal energy transition dynamics in Turkey? As Bridge et al. argue, “the fundamentally uneven nature of spatial interactions is both potentially disruptive to policy because they complicate many of its assumptions.” The low-carbon transition process can therefore work “as a simultaneous process of geographical equalisation and differentiation that has the potential to produce new patterns of uneven development.”<sup>3</sup> A geographical imagination, on the other hand, constitutes new geospatial identities and geographical knowledge that bear on strategies of power.<sup>4</sup> Drawing upon these premises, the article builds on the spatial conditions of multiple, co-existing decarbonization pathways within the EU Green Deal and argues that the low-carbon transition process in Turkey is prone to be shaped by the highly politicized energy market in an authoritarian neoliberal structure on one hand, and Turkey’s priorities in energy issues and hard security on the other.

The paper is structured as follows: We will first present the low-carbon transition as a spatial process constituted by political and economic dynamics within any empirical setting. This will be followed by an analysis of the emergence of the spatial pathway that continues to shape Turkey’s low-carbon energy transition within the framework of the EU Green Deal and beyond. Such an analysis will reveal the ways in which the Justice and Development Party (Adalet ve Kalkınma Partisi-AKP) government instrumentalizes renewable-energy investments to create new capital accumulation channels for politically connected businesses in a market-led, low-carbon energy transition. The paper will also show that while Turkey invests in renewable projects as spatial interventions to privatize the gains from the low-carbon energy transition, its near future is simultaneously shaped by the current demands for securing and diversifying its energy supplies. As the low-carbon transition is not implemented in a holistic

1 Anthony Hoare, “Alternative Energies: Alternative Geographies?”, *Progress in Human Geography*, Vol. 3, No 4, 1979, p. 506-537; Gavin Bridge et al, “Geographies of Energy Transition: Space, Place and the Low-Carbon Economy”, *Energy Policy*, Vol. 53, 2013, p. 331-340; Kirby Calvert, “From ‘Energy Geography’ to ‘Energy Geographies’ Perspectives on a Fertile Academic Borderland”, *Progress in Human Geography*, Vol. 40, No 1, 2016, p. 105-125.

2 Bridge et al., “Geographies of Energy Transition”, p. 231.

3 Ibid.

4 Joanne P. Sharp, “Publishing American Identity: Popular Geopolitics, Myth and The Reader’s Digest”, *Political Geography*, Vol. 12, No 6, 1993, p. 491-503; Klaus-John Dodds, and James Derrick Sidaway, “Locating Critical Geopolitics”, *Environment and Planning D: Society and Space*, Vol. 12, No 5, 1994, p. 515-524; Simon Dalby, “Recontextualising Violence, Power and Nature: The Next Twenty Years of Critical Geopolitics?,” *Political Geography*, Vol. 29, No 5, 2010, p. 280-288.

approach, decarbonization constitutes only one of a variety of strategies shaping Turkey's macro energy policy. This strategy largely prioritizes reducing the energy-import dependency while retaining the country's position as an energy hub. This effort runs parallel to expanding domestic hydrocarbon exploration and production to meet rising consumption needs, much in conformity with the hybrid and neoliberal process of the global energy transition and green imagination. The paper will conclude that in such a globally hybrid and neoliberal green-energy transition environment, Turkey's energy landscape is not an exception to the global and European trends despite its nuances. Both the EU's Green Deal and Turkey's current green imagination should, however, be enhanced by being more inclusive to the communities who are directly affected by these changes and by democratising the current green-energy transition processes.

## The Spatiality of Low-Carbon Transition

Recent debates about green-energy transitions “have tended to focus on the temporal dimensions of transition and to neglect the way in which spatial processes shape energy systems and influence their capacity for transformation.”<sup>5</sup> Following Massey,<sup>6</sup> conceiving space as the product of interrelations, as the sphere of multiplicity, and always under construction not only provides an opportunity to critically analyze the multiple (re)configurations of political and economic processes in Turkey's low-carbon transition within the framework of the EU, but also enable us to problematize the current green-energy transition in the world by going beyond the temporal dimensions of the said ‘transition.’

Scholars such as the atmospheric chemist and Nobel Laureate Paul Crutzen and biologist Eugene Stoermer recently describe a new geological era called the *Anthropocene*, which signifies that the Homo Sapiens have made such a significant impact on Earth and its inhabitants and that this has caused a lasting and potentially irreversible effect on its systems, environment, processes and biodiversity. Crutzen and Stoermer have argued furthermore that over the course of a few generations, humans have drained fossil fuels, transformed at least 30-50% of the planet's surface and caused air pollution that exceeds the sum of all natural emissions.<sup>7</sup> As the climate is changing and species are disappearing at an unprecedented rate, a developing field of Anthropocene Geopolitics has now been exploring policies and understandings that aspire for a sustainable world no longer dependent on fossil fuels.<sup>8</sup> More recently, terms and concepts associated especially with environmental studies such as resilience, climate, biodiversity and ecology have also entered the discipline's vocabulary.<sup>9</sup> This new imagining had to be a

5 Cherly McEwan, “Spatial Processes and Politics of Renewable Energy Transition: Land, Zones and Frictions in South Africa”, *Political Geography*, Vol. 56, 2017, p. 1.

6 Doreen Massey, *For Space*, London, Sage, 2005.

7 Paul J. Crutzen, “The ‘Anthropocene’”, Eckart Ehlers and Thomas Krafft (eds.), *Earth System Science in the Anthropocene*, Berlin, Heidelberg, Springer, 2006, p. 13-18.

8 Dalby, “Recontextualising Violence, Power and Nature”.

9 Dahlia Simangan, “Where is the Anthropocene? IR in a New Geological Epoch”, *International Affairs*, Vol. 96, No 1, 2020, p. 211-224; David Chandler, “Security Through Resilience: Contemporary Challenges in the Anthropocene”, David Chandler et al. (eds.), *International Relations in the Anthropocene*, Palgrave Macmillan, Cham, 2021, p. 173-190.

more-than-human approach to the world<sup>10</sup> going beyond modern conceptions of a humanity separated from nature. As such, together with the influence of complexity thinking, actor-network theory and critical animal studies, posthumanism has advanced as a new concept within International Relations. It challenges the discipline's human-centred focus<sup>11</sup> and the belief that humans have the right to consume the planet's resources without constraint, solely for their benefit and development.

Both the anthropocene and the posthumanist approaches are rightly criticised for not pointing at the ways in which green-energy transitions are intrinsically bound up with political and economic structures within any given context.<sup>12</sup> Agathangelou and Killian argue for instance that many climate change analysts focus on crises and a call for immediate fixes through market forces. These are often “guided by a combined fantasy of catastrophe and ‘forced presentist’ macroeconomic models for a future prioritizing a clean fight in the short term rather than a livable planet.”<sup>13</sup> Erçandırılı claims furthermore that there exist significant problems in the ontological conceptions of both post-humanist and anthropocene approaches because they reduce environmental/ecological issues to agential capacities (agent-centrism or agent-orientism) disregarding the entwined, complex, and socially constructed nature of environmental problems.<sup>14</sup> Solutions to environmental problems therefore should not only focus on the material dialectical relationship between nature and society, but also on the dynamics of the capitalist mode of production within the context of complex relations among states and classes as well as different hegemonic projects of exploitation and rule.<sup>15</sup> As Marxist ecological thinkers rightly argue, the environment as a socio-economic system is not external to *the production of knowledge* in capitalism; rather it is materially and ideologically internal to capitalist relations of production.<sup>16</sup> Jason W. Moore has even called the Anthropocene age *Capitalocene*<sup>17</sup> in order to scrutinize the historical developments and the structures that have led to ecological crises.<sup>18</sup>

Drawing upon such criticism, we argue that in compliance with regional and global trends in green-energy transitions, the guiding principles of Turkey's shift to renewable energy have also been mainly driven by the neoliberal capitalistic logic, business interests, and energy

10 Erika Cudworth et al. (eds.), *Posthuman Dialogues in International Relations*, Routledge, 2017, p. 4.

11 Erica Cudworth E. and Stephen Hobden, “Posthuman International Relations: Complexity, Ecology and Global Politics”, David Chandler et al. (eds.), *International Relations in the Anthropocene*, Palgrave Macmillan, London, 2021, p. 233-249.

12 Yelda Erçandırılı, *Green (In) Security in International Relations Theory: A Critical Realist Perspective*, Unpublihsed PhD Thesis, Middle East Technical University, 2021.

13 Anna M. Agathangelou and Kyle D. Killian, “About Tme: Climate Change and Inventions of the Ecolonial, Planetary and Radical Existence”, *Globalizations*, Vol. 18, No 6, 2021, p. 821.

14 Erçandırılı, *Green (In) Security*, p. 5.

15 Ibid.

16 Michael Redclift, “The Production of Nature and the Reproduction of the Species”, *Antipode*, Vol. 19, No 2, 1987, p. 222-230; Noel Castree, “The Nature of Produced Nature: Materiality and Knowledge Construction in Marxism”, *Antipode*, Vol. 27, 1995, p. 12.

17 According to Jason W. Moore, Capitalocene signifies capitalism as a way of organizing nature, as a multispecies, situated, capitalist world-ecology.

18 Jason Moore, “The Capitalocene, Part I: On the Nature and Origins of Our Ecological Crisis”, *The Journal of Peasant Studies*, Vol. 44, No 3, 2017, p. 594-630.

security. This shift also enabled the consolidation of authoritarian politics in Turkey. Such configurations exacerbate rather than respond efficiently to current environmental problems. In her eye-opening work, *Spaceship in the Desert*, Gökçe Günel<sup>19</sup> offers an excellent example of a green imagination and energy spatiality formed through authoritarian neoliberalism<sup>20</sup> and the potential outcomes. Masdar City has been built, for instance, in the middle of the desert in the United Arab Emirates (UAE) to be the first zero-carbon city in the world and a model for other countries. This city has sought, according to Günel, to make ecological problems ‘manageable’ in the ways in which business models and design projects will contain and resolve climate change without failing to provide increased productivity and technological complexity. Günel elaborates further that “the investment in renewable energy and clean technology, which is part of this transition, was expected to shift the emirate’s image from oil producer to technology developer, rendering the emirate, as one of my interlocutors put it, “more elite.”<sup>21</sup> Despite its ambition, Masdar City has received much criticism both from environmental scholars and activists because it requires at the same time massive amounts of energy, land space, and already scarce water resources to construct and sustain.<sup>22</sup> The \$22 billion Masdar project was originally funded from revenues from oil and gas exports as well, raising the ethical question regarding how a city that is funded by money made through selling oil to power industries that are responsible for greenhouse gases and harmful emissions can be considered sustainable.<sup>23</sup> The UAE also tops world rankings on per capita carbon footprints,<sup>24</sup> and within such a context, Masdar will arguably have only a marginal impact on reducing Abu Dhabi’s greenhouse gas emissions.

In the same vein, the European Union (EU) Green Deal was introduced by the EU Commission in 2020 with the ambition to transform the EU space and its neighbourhood into a “modern, resource-efficient and competitive economy.”<sup>25</sup> The project ensures no net emissions of greenhouse gases by 2050; a circular economy that ends the destructive pollution caused by plastics and other petrochemicals, pesticides, as well as other waste and toxic substances; and a “farm-to-fork” food system.<sup>26</sup> Yet with all its good intentions the Green Deal cannot escape the criticism of continuing ‘business as usual’ despite its innovative nature.<sup>27</sup> Since

19 Gokce Günel, *Spaceship in the Desert: Energy, Climate Change and Urban Design in Abu Dhabi*, Duke University Press, 2019.

20 Emel Akçali, “Revisiting Neoliberalism in the Age of Rising Authoritarianisms,” Hamed Hosseini, James Goodman and Barry Gills (eds.), *Routledge International Handbook of Global Studies*, London, Routledge, 2020, p. 97-108; Ian Bruff, “The Rise of Authoritarian Neoliberalism. Rethinking Marxism: A Journal of Economics”, *Culture and Society*, Vol. 26, No 1, 2014, p. 113–129; Ian Bruff and Cemal Burak Tansel, “Authoritarian Neoliberalism: Trajectories of Knowledge Production and Praxis”, *Globalizations*, Vol. 16, No 3, 2019, p. 233–244.

21 Andrés García Molina, “Electric Potentials: An Interview with Gökçe Günel”, 24 November 2015, <https://culanth.org/fieldsights/electric-potentials-an-interview-with-gokce-gunel>, (Accessed 12 June 2022).

22 Walid Fouad Omar, “Zero Carbon-City-Masdar City Critical Analysis” *Urban Health and Wellbeing*, Vol. 1, No 3, 2018, p. 1-14.

23 Ibid

24 Emmanuelle Landais, “UAE Tops World on Per Capita Carbon Footprint”, 30 October 2008, <https://gulfnnews.com/uae/environment/uae-tops-world-on-per-capita-carbon-footprint-1.139335#> (Accessed 12 June 2022).

25 European Commission, “A European Green Deal”, [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en) (Accessed 10 June 2022).

26 Jeffrey Sachs, “Europe’s Green Deal”, 13 December 2019, *Project Syndicate*, [project-syndicate.org](https://project-syndicate.org) (Accessed 13 June 2022).

27 Agathangelou and Killian, “About Time”.

the Green Deal requires an immense technology-change program, replacing fossil fuels with energy based on clean sources, it is also viewed as a way of creating new opportunities for EU companies and states in the global market<sup>28</sup> if they succeed in integrating their services and infrastructure into these emerging ecosystems. EU analysts caution, for instance, that China and other economic and geopolitical rivals can become African states' main partners in this sense if Europeans stand aside from "green energy innovation ecosystems" that combine telecoms, digital platforms, solar power, and the internet of things.<sup>29</sup>

The EU Green Deal further creates uncertainty for partner countries on how to adapt to the EU's new rules, regulations and standards, and the extent of EU support for adjusting to these.<sup>30</sup> The current time period in reality is accepted to represent the transition from the fossil fuel age to the low-carbon green energy age in terms of the substitution/ shift between energy sources, and natural gas is regarded as the transition fuel or an interim solution.<sup>31</sup> Hence, no entity in the global scene has withdrawn yet from the global energy market and competition, creating a hybrid energy space and environmental geopolitical scene. Although the Green Deal has been introduced as a big structural change, the EU signed at the same time a multibillion-euro pipeline, EastMed, to transport natural gas from the offshore gas reserves of the East Mediterranean into Greece, in conjunction with the Poseidon and the Gas Interconnector Greece-Bulgaria pipelines into Italy and other European regions. This is why the EU has been accused by DiEM25, a progressive movement for Europe, of 'greenwashing' the existing *status quo* and not targeting a genuine green new deal for Europe.<sup>32</sup>

In this wider context of such a spatiality of low-carbon energy transitions driven by market values and top-down decision-making that precludes a genuine community involvement, Turkey's own green imagination has thus far not evolved in a ground-breaking pattern either. The next sections will dissect such phenomenon and contribute to on-going debates as to how renewable energy projects "may manifest a regime of accumulation whereby low carbon

28 Author interviews with a senior member of Mediterranean Observatory for Energy (OME), an energy industry association in Paris on 15. 11.2021 and a senior member of the Turkish Industry and Business Association (TUSIAD) voluntary organization of Turkey's leading entrepreneurs and executives, on 16.07.2021. The interviews were conducted by all three authors. Ethical approval has been obtained from Dr. Akçali's previous institution Swansea University which offers a vigorous framework for ethical approval of research with human participants. No question was asked about the interviewees' ideological affiliations. Data protection and privacy of the persons interviewed in our research has been ensured by EU/national policies. Before any interviews, we carefully explained to the respondents the methods and the purpose of our research. Every participant was assigned an alpha-numeric code. Data management and analysis was done by using these codes and not the names of the participants. The research outcome and reports was shared with all our interviewees.

29 Michael Tanchum, "Gateway to Growth: How the European Green Deal can Strengthen Africa's and Europe's Economies", 19 January 2022, <https://ecfr.eu/publication/gateway-to-growth-how-the-european-green-deal-can-strengthen-africas-and-europes-economies> (Accessed 14 June 2022).

30 Svea Koch and Niels Keijzer, "The External Dimensions of the European Green Deal: The Case for an Integrated Approach", No. 13. Briefing Paper, 2021.

31 Volkan Ediger, "Energy Transition Periods: Lessons Learnt from the Past", Abu Dhabi, *The Emirates Center for Strategic Studies and Research (ECSSR) Publications*, 2011, p. 175–202.

32 Yanis Varoufakis Y. and David Adler, "The EU's Green deal is a Colossal Exercise in Greenwashing", *The Guardian*, 7 February 2020, <https://www.theguardian.com/commentisfree/2020/feb/07/eu-green-deal-greenwash-ursula-von-der-leyn-climate> (Accessed 12 June 2022).

coalitions of interests can maximize their gains by dispossessing vulnerable social groups of their life-sustaining assets.”<sup>33</sup>

## Turkey's Green Imagination: Path Dependence in Renewable Energy

With ‘Turkey’s Green Imagination’, we make an allusion to a geographic imagination that denotes the change of perceptions under the premises of a new geographic, in this case renewable, energy spatiality. Furthermore, this recent configuration in Turkey will be pursued with total disregard for the interests of stakeholders other than investors. Such neoliberal strategies, as privatization, land seizure, and dispossession of communities, as well as hard security concerns on fossil fuels have created a geographical ‘green’ imagination that continues to shape the low-carbon energy transition within the framework of EU Green Deal in Turkey. Aras et al. argue that “although the distance remains the same, the perception of these geographies changes under the premises of a new geographic imagination, and hence physical distance and former difficulties of being involved in these geographies has started to not make strong sense in policy circles and at the public level.”<sup>34</sup>

In order to understand Turkey’s spatiality of low-carbon transition driven by rent distribution, the privatization process of the energy sector should first be scrutinized. Turkey started privatizing its energy market in the late 1980s and 1990s. However, it was not until the AKP came to power in 2002 that the state’s monopoly over energy distribution and retail sales ended because of the privatization of a large portion of the energy sector.<sup>35</sup> In 2004, The Electric Power Sector Reform and Privatization Strategy Document was published, and the country’s electricity distribution network administered by Turkish Electricity Distribution Co. (TEDAS) was divided into 21 distribution regions. The primary objectives of the sector’s privatization were stated to reduce costs by operating electricity-distribution assets more effectively and efficiently; to increase the reliability and quality of the electricity supply; to reduce technical losses in electricity distribution and prevent illegal uses.<sup>36</sup> The electricity-distribution companies began to be privatized in 2009, and the privatization process was completed in 2013, when all the existing 21 regions were turned over to private companies under the supervision of the Energy Market Regulatory Authority (EMRA), an independent regulator established by the Turkish Electricity Market Law (Law No. 4628) in February 2001.<sup>37</sup> Winning companies were granted a unique distribution license for each region and became regional monopolies.<sup>38</sup> With the involvement of the private sector, electricity-generation capacity grew considerably and increased almost three times whereas the total investment in the energy industry exceeded

33 Komali Yenneti et al., “Spatial Justice and the Land Politics of Renewables: Dispossessing Vulnerable Communities through Solar Energy Mega-Projects”, *Geoforum*, Vol. 76, 2019, p. 90.

34 Bulent Aras et al., “Turkey’s New Activism in Asia”, *Alternatives: Turkish Journal of International Relations*, Vol. 8, No 2, 2009.

35 Sinan Erensi, “The Contradictions of Turkey’s Rush to Energy”, *Middle East Report* 288, 2018, p. 32.

36 Hatice Karahan and Mehmet Toptas, “The Effect of Power Distribution Privatization on Electricity Prices in Turkey: Has Liberalization Served the Purpose?”, *Energy Policy*, Vol. 63, 2013.

37 Electricity Market Law (EML) was passed as a part of accession negotiations with the EU in 2001.

38 Gul Berna Özcan and Umut Gündüz, “Energy Privatisations, Business-Politics Connections and Governance under Political Islam”, *Environment and Planning C: Government and Policy*, Vol. 33, No. 6, 2015, 1714-1737.

USD 50 billion between 2008-2015. The privatization of state-owned electricity distribution companies created a profit of USD 10 billion and offered new incentives for foreign investors to enter the market. The electricity and gas sectors contributed to a large rise in foreign direct investment, reaching USD 19.3 billion between 2006 and 2015.<sup>39</sup>

Contrary to what the proponents of structural market adjustment programs expected, privatization in the energy sector did not lead to the state's withdrawal from the market. Instead, it obscured the lines between the state and the market. Through the distribution of investment licenses in a highly opaque manner, the government not only obtained a novel type of control over private companies, but also offered ample opportunities for accumulating wealth to those who enjoyed close connections with the ruling elite. In return, "business elites who benefit from lucrative government contracts have incentives to support this arrangement and the politicians."<sup>40</sup> In their empirical analysis, Özcan and Gündüz successfully demonstrate that AKP-connected firms, which have direct personal ties to leading AKP members, such as Kolin and Limak, Cengiz Holding, and Elsan-Tumas-Karacay, were disproportionately favored in the process of privatizing the energy sector.<sup>41</sup> In the case of electricity distribution, politically connected firms – either through direct personal ties or networked access to politicians – won the great majority of bids (16 of 20).<sup>42</sup>

The 2005 Renewable Energy and 2007 Energy Efficiency laws further deepened the liberalization process in the national power generation and energy sector in Turkey. On May 18, 2005, Turkey passed its first renewable energy law, the Utilization of Renewable Energy Sources for the Purpose of Generating Electrical Energy (the Renewable Energy Law, No. 5346). In 2010, the Renewable Energy Law was amended to introduce new favourable tariffs for the sale of electricity generated by renewable-energy sources. As a candidate country for EU membership, Turkey also published its National Renewable Action Plan in 2014 and National Efficiency Action Plan in 2017 and adopted the goal of achieving a 30 per cent share for renewable energy in the electricity generation mix and a 10 per cent for renewable energy in the transportation sector by 2023.<sup>43</sup> Despite Turkey's abundant renewable resources, the share of renewables in total final energy consumption and the transportation sector was 11.9 per cent and 0.7 per cent, respectively in 2018.

The European Green Deal, which seeks to actively engage with green transformation in non-EU countries, has provided a new push to focus on renewable and sustainable energy sources in Turkey. In the aftermath of the introduction of the European Green Deal proposal by the EU Commission in December 2019, the EU's January 2021 Council declared that "EU energy diplomacy will discourage all further investments into fossil fuel-based energy infrastructure

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39 Sinan Erensü, "Powering Neoliberalization: Energy and Politics in the Making of a New Turkey", *Energy Research & Social Science*, Vol. 41, 2018, p. 151.

40 Feryaz Ocaklı, "Reconfiguring State-Business Relations in Turkey: Housing and Hydroelectric Energy Sectors in Comparative Perspective", *Journal of Balkan and Near Eastern Studies*, Vol. 20, No 4, 2018, p. 373-387.

41 Özcan and Gündüz, "Energy Privatisations", p. 726.

42 Ibid.

43 Republic of Turkey Ministry of Energy and Natural Resources, "National Renewable Energy Action Plan for Turkey," 2014, <https://www.ebrd.com/documents/comms-and-bis/turkey-national-renewable-energy-action-plan.pdf> (Accessed 28 January 2022).



projects in third countries, unless they are fully consistent with an ambitious, clearly defined pathway towards climate neutrality in line with the long-term objectives of the Paris Agreement and best available science.”<sup>44</sup> The European Green Deal involves pursuing ‘green deal diplomacy’ to support especially the EU’s immediate neighbours in their transition to a green economy. In this respect, the European Green Deal not only seeks to provide a reference point for the transition to a green economy, but also intends to actively engage with the green transformation in other countries. The Communication on the European Green Deal clearly indicates that “as long as many international partners do not share the same ambition as the EU, there is a risk of carbon leakage, either because production is transferred from the EU to other countries with lower ambition for emission reduction, or because EU products are replaced by more carbon-intensive imports. If this risk materializes, there will be no reduction in global emissions, and this will frustrate the efforts of the EU and its industries to meet the global climate objectives of the Paris Agreement.”<sup>45</sup> Hence, Next Generation EU allocated a substantial budget to facilitate and deepen green transitions in the Southern Mediterranean region.

As a candidate country, Turkey would be required to comply with the rules of the EU Emission Trading System within the framework of the EU Green Deal Policy. As the new EU carbon rules could impose significant additional costs on Turkish exporters, the Turkish business community, namely Turkish Industry and Business Association (TUSIAD) and the Foreign Economic Relations Board of Turkey (DEIK) have been pushing the government to proceed on the decarbonization path as well. Half of Turkey’s foreign trade is with the European Union. Therefore, combating climate change and low-carbon development have already been an incentive for Turkey. However, as elsewhere in the world, such a transition is costly and besides environmental distresses, Turkey has been suffering from economic, political and social turmoil lately. Turkey has hence accelerated its commitment to decarbonization in a fragile context by a firm push from the EU. Most notably, Turkey finally ratified the Paris Agreement in October 2021, and set a goal to achieve net-zero carbon status by 2053 by updating its emission targets in different areas, such as manufacturing, energy, waste, transportation, and agriculture. By doing so, Turkey agreed to submit updated Nationally Determined Contributions every five years and was promised to receive \$3.2 billion in loans for its energy transition.

Turhan and Gündoğan rightly argue, however, that “given the current authoritarian neoliberal moment and the state of crony capitalism in the country, it would also be useful to keep in mind that the history of carbon markets is ridden with politically motivated exceptions and exemptions.”<sup>46</sup> Therefore, these mechanisms also run the risk of simply being new excuses for economic re-distribution to those who are already powerful.” Collaborative relations between the state and powerful market forces at the expense of local livelihoods in the low-carbon transition has been most noticeable in hydroelectric energy production in Turkey.

44 European Union External Action, “Energy Diplomacy,” 17 December 2021, [https://www.eeas.europa.eu/eeas/energy-diplomacy\\_en](https://www.eeas.europa.eu/eeas/energy-diplomacy_en) (Accessed 12 June 2022).

45 European Commission, “The European Green Deal,” 11 December 2019, <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1588580774040&uri=CELEX%3A52019DC0640> (Accessed 10 June 2022).

46 Ethemcan Turhan and Arif Cem Gündoğan, “Price and Prejudice: The Politics of Carbon Market Establishment in Turkey”, *Turkish Studies*, Vol. 20, No 4, 2019, p. 529.

While the AKP government advocated hydroelectric power generation as a way to utilize the country's renewable resources and to reduce economic dependence on fossil-based imported energy, profit-seeking businesses even without sectoral experience found hydroelectric power plants to be a lucrative enterprise. In order to open all the rivers and streams of Turkey to hydropower, the legislative framework including an Environmental Impact Assessment bylaw was changed, and "the role of the state was institutionalized toward 'auditing' within a wider context of development and management of renewable energy resources."<sup>47</sup> The General Directorate of State Hydraulic Works (Devlet Su İşleri Genel Müdürlüğü, DSI) was assigned to monitor private investment in the construction of the hydroelectric power plant, granting 924 private companies licenses to use stream flow on the rivers between 2003 and 2012.<sup>48</sup> As a result of this hydro-boom, the installed electricity generation of hydroelectric power plants increased more than twofold from 2002 to 2014.<sup>49</sup>

Despite the destructive impacts of hydropower plants on ecosystems, hydropower dominates renewable energy production in Turkey. Even though renewable energy generation increased by 64 per cent from 2002 to 2010, hydropower plants accounted for 92 per cent of total renewable energy generation in 2010.<sup>50</sup> In 2019, while renewable energy sources constituted 44 per cent of total electricity generation, hydropower constituted 29.2 per cent of total production.<sup>51</sup> Hydropower projects also received the highest share from the Renewable Energy Support Mechanism (YEKDEM) scheme that guarantees feed-in-tariffs for ten years to companies in renewable energy sector. In 2019, the YEKDEM scheme provided TRY 38.04 billion (USD 6.41 billion) of funding for 777 facilities with a total capacity of 20.9 GW, in which 463 of these 777 facilities are hydroelectric power plants.<sup>52</sup> In January 2021, a new presidential decree (Decree No.3453) was issued to make the payments of the feed-in tariffs and domestic production incentives in Turkish lira under YEKDEM.<sup>53</sup> What is business as usual in the new incentive scheme is that while hydroelectric power plants are entitled to receive feed-in tariffs of TRY 0.40/kWh, wind and solar power plants would only receive TRY 0.32/kWh.

Large-scale wind and solar power plant investments can also be assessed as spatial interventions to privatize the gains from the low-carbon energy transition in Turkey. In 2018, there were 171 wind power facilities in operation, all of which were owned by major energy

47 Aysen Eren, "The Political Ecology of Uncertainty: The Production of Truth by Juridical Practices in Hydropower Development", *Journal of Political Ecology*, Vol. 24, No 1, 2017, p. 391.

48 Aysen Eren, "Transformation of the Water-Energy Nexus in Turkey: Re-Mmaging Hydroelectricity Infrastructure", *Energy Research & Social Science*, Vol. 41, 2018, p. 24.

49 Erensü, "Powering Neoliberalization", p. 151.

50 Oksan Bayülgen, "Two Steps Forward, One Step Back: How Politics Dim the Lights on Turkey's Renewable Energy Future", *Perceptions: Journal of International Affairs*, Vol. 18, No 4, 2013, p. 77.

51 The share of non-hydro renewables in electricity production was 14.7 per cent in 2019 (wind at 7.2 per cent, solar at 3.5 per cent, geothermal at 2.9 per cent and bioenergy at 1.1 per cent) (IEA 2021).

52 Aleksandra Dimitrova, "Renewables in Turkey get USD 6.4bn in Incentive Payments in 2019 – report", *Renewables Now*, 2020, <https://renewablesnow.com/news/renewables-in-turkey-get-usd-64bn-in-incentive-payments-in-2019-report-684475> (Accessed 12 June 2022). Among the rest, there are 160 wind power plants (WPP), 100 biomass power plants (BES), 45 geothermal power plants (GES) and 9 solar power plants (GES).

53 Resmi Gazete, "Cumhurbaşkanı Kararı 3453, 30 January 2021, <https://www.resmigazete.gov.tr/eskiler/2021/01/20210130-9.pdf> (Accessed 1 June 2022).

and construction companies, Borusan EnBw and Demirer Energy leading with 660 MW and 613.7 MW, respectively. The majority of these wind power projects were carried out in accordance with the old procedures, based on the legislation dated in 2003, in which there were no site selection criteria or Environmental Impact Assessment procedure requirements.<sup>54</sup> Wind energy projects, which were easily approved without taking into consideration any detrimental effects on rural landscapes, are mostly located on the Karaburun Peninsula.<sup>55</sup> Not only pastures, treasury or state lands, but also private properties were leased to five private energy companies (Ayen, Çalık, Ores, Salman and Lodos Energy) for the construction of wind power plants in Karaburun. 87 wind turbines out of a total of 131 in Karaburun Peninsula are owned by Lodos Energy, which dominates 61 per cent (252 km<sup>2</sup>) of the peninsula alone.<sup>56</sup> By excluding communities and civil society actors from the environmental decision-making process, the Renewable Energy Resource Areas (YEKA) were introduced in 2016 to offer investors renewable energy resource zones and its electrical connection capacity utilization rights using an auction mechanism. In 2017, the first YEKA tender was organized for the construction of the largest solar plant in the Karapınar district of Konya in which Kalyon Energy and its South Korean partner Hanwha won the tender.<sup>57</sup> Kalyon Energy also won one of the largest wind tenders in a consortium with Siemens and Türkerler in the same year.<sup>58</sup>

Even though renewable energy is considered the domain of smaller firms, major construction companies frequently win the largest public tenders and dominate the renewable energy sector. The World Bank data indicates that the five major construction companies – Limak, Cengiz, Kolin, Kalyon and Mapa – rank among the top 10 global public tender winners between 1990 and 2019.<sup>59</sup>

The AKP government has therefore used urgent expropriation processes to expedite investments in renewable energy projects. Even though the urgent expropriation law was enacted as a wartime measure in 1940, the AKP adopted it as a standard method, together with other legal distortions, such as changing the Environmental Impact Assessment procedures fifteen times under its rule. Between 2004 and 2014, the number of urgent expropriation cases was 828 in which two-thirds were undertaken to construct hydropower plants.<sup>60</sup> When the

54 Dalya Hazar Kalonya and Zeynep Ozcam, "Wind Farm Conflicts on the Rural-Ecological Commons: The Case of Karaburun", *Online Journal of Art and Design*, Vol. 9, No 1, 2021, p. 301.

55 Ibid.

56 Yagmur Ozcan Cive and Adile Aslan Avar, "Neoliberal Environmental Policies and Environmental Degradation in Karaburun Peninsula, Turkey", *International Conference on Ecology, Ecosystems, and Climate Change, Conference Proceedings*, Dakam Yayinlari, 2019; Karaburun Kent Konseyi, "Lodos Elektrik Üretim A.Ş'nin Karaburun RES Projesi'ne İlişkin 12 Türbin İçin Yaptırılan İlave Nazım Planına İtirazımız," 4 April 2019, <https://www.karaburunkentkonseyi.org/lodos-elektrik-uretim-a-snin-karaburun-res-projesine-iliskin-12-turbin-icin-yaptirilan-ilave-nazim-planina-itirazimiz/> (Accessed 1 June 2019).

57 In 2019, Hanwha withdrawn from the joint venture. Kalyon Energy and China Electronics constituted a new partnership.

58 Presidency of the Republic of Turkey, Investment Office, "Guide to Investing in Turkish Renewable Energy Sector", 2021, <https://www.invest.gov.tr/en/library/publications/lists/investpublications/guide-to-investing-in-turkish-renewables-energy-sector.pdf> (Accessed 14 June 2022).

59 The World Bank, Country Snapshots, Turkey, 2021 <https://ppi.worldbank.org/en/snapshots/country/turkey> (Accessed 14 June 2022).

60 Umit Şahin, "The Politics of Environment and Climate Change", Editör?, *The Routledge Handbook of Turkish Politics*, London, Routledge, 2019, p. 182.

privatization of water use rights and the violent appropriation of the land mounted a fierce opposition from local residents and environmental groups, state coercive apparatuses cracked down on the protests.<sup>61</sup> By employing various state enforcement tools, rural livelihoods and land were put at the service of the extraction/infrastructure industry in the process of a market-led, low-carbon transition.<sup>62</sup> Hence, as Turhan and Gündoğan highlight, “the expansion of market logic to climate policy and the ‘constitutive role of the state in co-producing and maintaining’ carbon markets does not amount to a rollback of the state but rather to a newly defined power for state to control ‘its subjects through an interface of economic incentives,’ together with coercion where necessary.”<sup>63</sup>

## Consolidating Hybrid Energy Landscape in Low-carbon Energy Transition in Turkey

The guiding principles of Turkey’s low-carbon energy transition have hence been mainly driven by neoliberal logic, business interests, energy security and regime consolidation without efficiently responding to the environmental problems that emanate from strong growth in energy demand and an associated increase in import dependency. Turkey still imports 74 per cent of its energy needs. Given this reliance on imported fossil fuels and burgeoning consumption needs, it is unsurprising that Turkey tries to secure but at the same time diversify its energy supplies as well as expand domestic exploration and production. As a result, Turkey has created a neoliberal and hybrid spatiality of its energy policy in alignment with the global trends for a low-carbon transition. While it has increased its renewable energy potential and plans of constructing nuclear plants on one side, it has also initiated the construction of the TurkStream pipeline to transit Russian natural gas to southern Europe through its own soil. It has also invested in the resurgence of coal-fired electricity generation to meet the country’s growing electricity demand.

By several definitions, nuclear energy is not renewable because it uses up radioactive fuel. However, in terms of climate change, nuclear energy production does not release greenhouse gases, so it is a low-carbon fuel. Turkey has accordingly launched an ambitious nuclear power strategy that foresees the construction of the country’s first nuclear power plant to limit the use of imported fuels for power generation. The plan is to install three nuclear power plants for a total of 12 reactor units. Furthermore, while the Paris Agreement requires OECD- Organisation for Economic Cooperation and Development countries including Turkey to close coal-fired power plants by 2040, Turkey has no coal-phase out date or ‘leaving coal behind’ policy. Turkey’s recent energy policies also emphasize hydrocarbon exploration as part of the country’s geopolitical calculations in the context of changing power dynamics among coastal state and disputes over maritime borders in the Eastern Mediterranean. The discovery of offshore hydrocarbons in the Eastern Mediterranean, namely the Tamar and Leviathan fields in Israel in 2010, the Aphrodite in Cyprus in 2011, and Zohr in Egypt in 2015 accelerated Turkey’s drilling activities in the region. Despite warnings about and the observable risks over the last two decades about environmental

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61 Erensü, “Powering Neoliberalization”, p. 154.

62 Ibid.

63 Turhan and Gündoğan, “Price and Prejudice”, p. 528.

concerns in the Eastern Mediterranean, the discovery of significant gas deposits in the region generated great enthusiasm among interested parties, neighbouring countries, and energy companies. The expanding areas for drilling in the area aggravated the long-standing disputes in Eastern Mediterranean over Cyprus and the Aegean Sea continental shelf and brought in other regional and global actors such as Israel and Egypt, the European Union, and NATO.

Having faced long-standing geopolitical conflicts in the Eastern Mediterranean, the Turkish Petroleum Corporation (TPAO), which holds most exploration and production licenses, has turned to the Black Sea and initiated an offshore investment campaign along with increased operations onshore, including shale oil and gas. It has been argued that the Sakarya gas field, which is operated by TPAO and planned to commence production in 2023 is to be the largest discovery in the Black Sea, which will help diminish Turkey's natural gas import dependence.<sup>64</sup> The successful exploration drilling at the Sakarya gas field encouraged the company to conduct furthermore ten other appraisal wells. While Turkali-1, Turkali-2, Turkali-3 and Turkali-4 were carried out by *Fatih* (named after the Ottoman Sultan Mehmet the Conqueror) and *Kanuni* (named after the Ottoman Sultan Suleyman the Magnificent), TPAO's other sixth-generation drillship will perform the well completion operations and boreholes testing<sup>65</sup>. All these ambitious energy projects take place while Turkey's total energy capacity from renewables has been steadily rising over the last decade, reaching 49,398 megawatts by 2020.<sup>66</sup> According to the 2021 Analysis and Forecast Report by the International Energy Agency (IEA), Turkey's renewable electricity capacity is further expected to increase by over 26 GW, or 53 per cent, between 2021-2026.<sup>67</sup> Despite this fact, the IEA warns that over the next five years, the average annual additions of solar and wind capacity would need to nearly double from the agency's current predictions to achieve net-zero emissions by 2050, while annual demand growth for biofuels would need to quadruple. The report also suggests that the capacity growth in Turkey will make it the fifth largest in Europe and 12<sup>th</sup> largest in the world after Germany, France, Spain, and the Netherlands.<sup>68</sup>

Such hybrid and neoliberal energy transition policies, however, have created their own source of discontents in Turkey. Various environmentalist activists that we conducted interviews with in Turkey are concerned that while the percentage of renewable energy in total consumption is increasing, this does not mean that the use and exploration of fossil fuels is decreasing.<sup>69</sup> Instead, these two sources are in a sense competing. Such hybridity in the low-carbon energy

64 Sakarya Gas Field Development, Black Sea, Turkey", Offshore Technology, 26 October 2021, <https://www.offshoretechnology.com/projects/sakarya-gas-field-development-black-sea-turkey/>.

65 Ibid.

66 Statista, "Renewable Energy Capacity in Turkey from 2008 to 2021, 8 July 2022, <https://www.statista.com/statistics/878801/total-renewable-capacity-in-turkey/> (Accessed 26 June 2022).

67 International Energy Agency, "Renewables 2021: Analysis and Forecast to 2026," December 2021, <https://iea.blob.core.windows.net/assets/Sae32253-7409-4f9a-a91d-1493ffb9777a/Renewables2021-Analysisandforecastto2026.pdf> (Accessed 26 June 2022).

68 Ibid.

69 Author interviews in April-September 2021, and see Emel Akcali, Evrim Gormus and Soli Ozel; "Towards A 'Green' Mediterranean? Environmental Geopolitics of Turkey, Egypt and Israel," *Institut Montaigne*, 17 February 2022, <https://www.institutmontaigne.org/en/analysis/towards-green-mediterranean-environmental-geopolitics-turkey-egypt-and-israel> (Accessed 2 June 2022) ; Emel Akcali, Evrim Gormus and Soli Ozel, "Energy Transitions and Environmental Geopolitics in the Southern Mediterranean, *IAI Commentaries Series*, 7 April 2022, <https://www.iai.it/en/pubblicazioni/energy-transitions-and-environmental-geopolitics-southern-mediterranean> (Accessed 2 June 2022).

transition in Turkey, the Eastern Mediterranean, and within the EU consequently narrows the discursive space of environmentalists both within and beyond the Mediterranean for genuine political actions to respond to actual environmental degradation in the region. Environmentalists have also pointed out that the EU Green Deal's aim of decoupling economic growth and environmental impacts can only be made possible by outsourcing polluting activities beyond EU borders. Renewables, moreover, can create further dependencies on scarce raw materials such as lithium, cobalt, nickel and other rare earth metals mainly imported from the Global South. Escribano & Lazaro warn that "the increasing attention devoted to the geopolitics of renewables, including patents, flows and strategic minerals, shows that path-dependence on the fossil geopolitical landscape can easily turn into the 'fossilisation' of renewables."<sup>70</sup> Further criticism revolves around the benefits in store for large companies and politically connected businesses. Environmental activists in Turkey and on the Greek islands of Syros and Tinos, for instance, believe that windfarm investment opportunities are mostly directed by the government to a select number of favored companies. These in turn tend to get easy access to public and protected land to install wind turbines without a genuine engagement with the needs and livelihoods of the local population.<sup>71</sup> In order to prepare societies and individuals for such a consequential political project as the EU Green Deal, Turkey as well as EU member states should empower their citizens within the EU and beyond through popular assemblies and by engaging with local governments to ensure a more democratic energy transition process. Supporting communities most affected by the climate emergency, by developing more sustainable commuting or encouraging the production and the sale of food locally are some examples of needed actions. Strengthening local economies, establishing platforms for sustainable consumption, providing services to people affected by climate change and environmental degradation, developing local solutions for sustainable energy access, reclaiming green spaces and implementing healthy waste-treatment facilities while protecting worker rights are equally fundamental to such processes.

## Conclusion

Skeptics have been challenging the feasibility of the EU Green Deal for application in the non-EU world. One of the main EU Green Deal goals is to transfer its design elements and technologies, first and foremost to its partners but also to the globe. However, many critics question the feasibility of this goal because not every country is capable of spending billions of euros to invest in purely green imaginations with renewable technologies. They do not have the ambitions, know-how, and means to apply such models, either. Even wealthier EU countries do not have adequate capacities to turn away from conventional energy resources, as illustrated by the differences in fossil fuel subsidies, including fiscal and other forms of indirect financial support and at the pace at which fossil fuels are cancelled in various EU countries.<sup>72</sup> The Nord Stream 2 pipeline, which runs from Russia's Baltic coast to north-eastern

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70 Gonzalo Escribano and Lara Lázaro, "Balancing Geopolitics with Green Deal Recovery: In Search of a Comprehensive Euro-Mediterranean Energy Script", *Real Instituto Elcano (Royal Institute)*, Vol. 15, 2020.

71 Author interviews in October 2021.

72 Marinus Ossewaarde. and Roshnee Ossewaarde-Lowtoo, "The EU's Green Deal: A Third Alternative to Green Growth and Degrowth", *Sustainability*, MDPI, Vol. 12, No 23, 2020, p. 11.

Germany, was remarkable in this respect. Even though, there were various warnings that if Germany continues with its current fossil gas infrastructure plans, it will be in violation of its Paris Agreement obligations, Germany did not change its energy strategies to turn away from Russian gas supply until Russia's invasion of Ukraine.<sup>73</sup> This hybrid situation may elucidate why the European Green Deal has been openly embraced by businesses, which see opportunities connected to the green-energy transition, electrification of cars, and state subsidies and investments in greening corporate capitalism.<sup>74</sup>

Given such inconsistencies, Turkey's spatiality of low-carbon transition driven by rent distribution, hard security, and neoliberal logic and ideology as depicted above does not come as a surprise. This demonstrates the importance of scrutinizing the variability of spatial configurations in order to assess the diversity of energy-transition paths, as we argued above. In this paper, we have adapted a spatial approach to energy to understand how the process of spatial differentiation "is not limited to energy systems themselves, but extends to their implications for patterns of economic growth and development."<sup>75</sup> As such, we could reveal the heterogenous nature of renewable energy transition's trajectories within EU periphery today while problematizing the 'green imagination' of Turkey as an immediate neighbour of and candidate country for membership in the EU. We could also discuss the extent to which the external dimension of the European Green Deal influences the internal energy transition dynamics in Turkey. Our findings unveil that Turkey's current green imagination may in fact lead to further consolidation of authoritarian politics and further crony capitalism in Turkey. Turkey's efforts to use more domestic energy resources to meet its consumption needs might also interfere with its efforts and obligations to decarbonize its energy sector. Turkey needs to look toward net-zero greenhouse gas emissions by the middle of the century since it is facing severe environmental problems such as droughts, wildfires, and flooding. The scrutiny into the low-carbon energy transition in Turkey therefore, contributes further understanding about the consequences of the spatiality of such transitions in an authoritarian neoliberal context, and what other alternative policies can be imagined and put in practice. Thus, more empirical research is warranted to reveal the spatiality of low-carbon energy transition across various geographical settings.

Turkey should finally re-consider the impact of its neoliberal and hybrid green-energy policies on its current green imagination. It should also try to democratize its energy space, rescue it from the exclusive domain of (rentier) business interests, and be more responsive towards its own citizens who are directly affected by these transformations. Both the EU and its partners such as Turkey should be weary of creating green utopias when redesigning their green-energy space since utopias *tout court* may not always stimulate large-scale change in a revolutionary way in terms of sustainability, feasibility, good practice, and inclusiveness in decision-making processes.

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73 Michael Bushbaum, "Worse Than Coal: New Data Finds Nord Stream 2 Contradicts EU Climate Goals", *Energy Transition*, 2021, <https://energytransition.org/2021/09/worse-than-coal-new-data-finds-nord-stream-2-contradicts-eu-climate-goals/> ( Accessed 10 June 2022).

74 Ossewaarde and Roshnee Ossewaarde-Lowtoo, "The EU's Green Deal".

75 Bridge et al., "Geographies of Energy Transition", p. 231.

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