

# 4 Energy and Trans-European Networks–Energy (TEN-E)

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## **Introduction**

This chapter examines Turkey's post-1999 harmonization with the Energy and Trans-European Networks (TENs) chapters of the *acquis*. Prior to Turkey's obtaining candidacy, the Commission of the European Communities (1999: 35) cited its 'largely aligned' objectives on energy policy; after talks got under way in 2005, this body deemed Turkey's energy-market laws and implementing regulations 'largely in line with' the *acquis* (European Commission 2005: 89); and in 2014, the European Commission (2014: 38) cited Turkey's 'advanced level of alignment'. Energy reform has, however, proceeded unevenly. Adding to the Council's blocking of eight chapters over Turkey's non-application of Custom Union regulations to Cyprus, the latter prevented opening of the Energy chapter due to disputed claims over Mediterranean Sea gas reserves (Gürel and Le Cornu, 2013). Conversely, while EU energy policy embodies environmental objectives, it also advocates supply diversification, raising expectations that Turkey would serve as an 'energy corridor' between new suppliers and European importers (Tekin and Williams, 2011).

The first section briefly describes EU energy policy before examining how the European Commission has assessed the fit between Turkey's laws and various parts of the energy *acquis*. In line with the book's core research agenda, the second part analyzes how cost-benefit calculi and domestic political forces either permitted 'accommodative' or 'adoptive' changes in Turkey's energy sector, thus narrowing misfit, as in the electricity market, renewable energy and energy efficiency, or generated further 'inertia', as in oil stockpiling, bulk gas-importation and nuclear power. Finally, it assesses the reasons for *acquis*-consistent changes in Turkey's energy sector, finding that domestic and external non-EU factors played strong motivating roles, especially in initial reform of the energy market and later improvements in renewable energy and energy efficiency.

## **EU energy policy**

Key EU energy norms reflect not only the broader goal of competitive economic integration, but also those of diversifying supplies and lowering carbon emissions. The European Commission's 2006 'green paper' called for balancing 'three

dimensions of energy – sustainable development, competitiveness and security of supply’ (Tekin and Williams, 2011: 25) and the Commission of the European Communities (2007a: 5) ‘Energy Policy for Europe’ advocated ‘combating climate change, limiting the EU’s external vulnerability to imported hydrocarbons, and promoting growth and jobs, thereby providing secure and affordable energy to consumers’. Designating energy, environment and trans-European networks as shared competencies, the 2007 Lisbon Treaty declared that ‘Union policy on energy’ should ensure ‘the functioning of the energy market’ and ‘security of energy supply in the Union’, as well as promote ‘energy efficiency and energy savings and the development of . . . renewable forms of energy’ and ‘interconnection of energy networks’ (European Union, 2007a: 88).

## **EU energy *acquis* and Turkey’s alignment status**

### ***Security of supply***

The core energy *acquis* includes security of supply. Member states should ‘hold oil stocks of specified categories of fuel equivalent to 90 days of average annual consumption’ and ‘report regularly to the Commission on hydrocarbon production, imports and prices’ (European Union, 2007b: 1). After the 2009 Russia-Ukraine gas dispute raised alarms that some countries would have to switch from natural gas to oil in electricity generation, new EU supply-related measures came out. The oil directive called for compliance no later than the end of 2012 by all non-International Energy Agency (IEA) EU member states with IEA emergency stockpiling obligations (i.e. 90 days of average daily net imports); new ‘central stockholding entities’ (CSEs) empowered to acquire, maintain and release ‘specific stocks’ of various fuel categories; and a Coordination Group to advise on handling ‘major supply disruptions’ (Council of the European Union, 2009). The EU’s 2010 gas security-of-supply regulation required Commission consultation of the Gas Coordination Group, consisting of the Agency for the Cooperation of Energy Regulators (ACER) and ENTSO-G (Energy Network Transmission System Operators-Gas), on Preventive Action and Emergency plans incorporating ‘market-based’ measures, like commercial gas storage, diversification of supplies and routes, reverse flows and bi-directional capacities, as well as ‘non-market based’ measures, such as strategic gas storage and enforced use of oil stocks and storage withdrawal (European Parliament, 2010). EU energy security seemed to improve by 2014, with the existence of 184 billion cubic metres (bcm) of liquefied natural gas (LNG) terminal capacity (40% of EU gas usage), 92 bcm of gas storage (12 bcm more than in 2009), which helped counteract the 2014 stoppage by Russia’s Gazprom to Ukraine, and ‘reverse flow’ capability of nine out of 14 key intra-EU pipelines (Engerer et al., 2014: 7–10). TEN-E in Chapter 21’s Screening Report also plays a role in ‘securing and diversifying the Community’s energy supplies, incorporating the energy networks of Member States and candidate countries, and ensuring the coordinated operation of . . . energy networks in the Community and in neighboring countries’ (European Union, 2007c: 2).

In 1999, Turkey appeared to be progressing in this area. The Commission of the European Communities (1998: 42) described the 90-day stockpile of oil imports in IEA-member Turkey as ‘approximately in line with Community regulations’, and later found Turkey to hold oil stocks ‘largely equivalent’ to *acquis* mandates and to be aligning with ‘the emergency preparedness *acquis*’ on these stocks (Commission of the European Communities, 2001: 71). With passage of the December 2003 Petrol Market Law and creation of a commission to oversee ‘implementation of the oil stockholding requirements of the law’ (Commission of the European Communities, 2004: 114), the European Commission (2005: 85–86) described Turkey as ‘essentially aligned’ with the security-of-supply *acquis*.

After 2005, however, misfit grew. The 2006–2008 progress reports cite Turkey’s failure to harmonize its stock-calculating methods, with the 2007 screening report mentioning Turkey’s weak regulations ‘on listing oil stocks in categories of gasoline types, middle distillates and fuel oil as defined in the *acquis*’ (European Union, 2007b: 3). Later progress reports decried the absence of an autonomous stock-holding agency, with the Commission noting that Turkey had put this responsibility within the General Directorate of Petroleum Affairs (European Commission, 2012: 60).

### ***Internal energy market***

The internal market based on free and non-discriminatory movement of goods represents a core rationale of the Union. The *acquis* restricts ‘state aids’ and mandates opening of the electricity and gas markets as well as ensuring ‘conditions for equal access to resources’ for hydrocarbon prospecting, exploration and production (European Union, 2007b: 1). Seminal directives in the late 1990s required market opening and enlargement of ‘categories of customers eligible to choose their suppliers of electricity and gas’ (Andoura, Hancher and van der Woude, 2010: 21). These had accomplished little by 1999 (Eikelund, 2007: 230). The 2003 directives required full market liberalization for large customers by July 2004 and all customers by July 2007, calling for ‘unbundling’ (i.e. relinquishing managerial control over transmission by entities that also own and/or operate generation and supply), independent regulators and publication of network tariffs, with a secondary regulation in 2003 to harmonize rules for cross-border electricity exchanges (amended in 2006 to deal with ‘congestion management’) and one in 2005 to equalize access to gas transmission networks (Eikelund, 2007: 232; Andoura, Hancher and van der Woude, 2010: 29). Directives in 2004 and 2006, aimed at bolstering capacity investments in electricity generation, gas storage and interconnection, set up the aforementioned Gas Coordination Group and emphasized consultation among electricity transmission system operations.

Anti-competitive practices persisted. EU gas and electricity markets had achieved respective openings of only 57% and 66% by 2005, and in April 2006, the Commission initiated ‘infringement procedures’ against 17 member states (Andoura, Hancher and van der Woude, 2010: 22). During this time, it levied its first EU energy fines on Germany’s E.ON and France’s GDF for colluding to limit

rivals' use of the MEGAL pipeline carrying Siberian gas across Germany and to avoid entering each other's markets (Ipek and Williams, 2010: 15). It launched new procedures against 25 member states in June 2009 (Andoura, Hancher and van der Woude, 2010: 32). The July 2009 electricity and gas directives, which addressed lack of 'non-discriminatory network access' and 'effective . . . regulatory supervision in each Member State' (European Parliament, 2009b: 55; European Parliament, 2009c: 94), were joined by two corollary regulations governing network access and a third creating the above-mentioned ACER to monitor cooperation among transmission system operators and the work of ENTSO-E (electricity) and ENTSO-G (Andoura, Hancher and van der Woude, 2010: 29–31; European Parliament, 2009a: 5).

Turkey has displayed policy misfit on the electricity-market *acquis* and institutional misfit on the gas-market *acquis*. The 2001 Accession Partnership urged Turkey to adopt the EU directives, empower 'an independent regulatory authority' and restructure state utilities (Council of the European Union, 2001: 18, 21). The Commission of the European Communities (2001: 70–71) noted that Turkey's new Electricity Market Law, intended to 'unbundle' the dominant utility TEIAS, limited initial market opening to 20%, and the Natural Gas Market Law, stipulating that the state monopoly BOTAS would be split up and local distribution go to wholesalers, neglected third-party access, unbundling, public-service obligations and storage capacity.

Reform of each sector proceeded differently. In 2004, the High Planning Council envisaged complete privatization of electricity distribution assets, inception of this process for generation assets in 2006 and full market opening in 2011 (Commission of the European Communities, 2004: 114). In actuality, however, privatization of distribution assets *began* in 2006 for only three regions (Commission of the European Communities, 2006: 49), with tenders completed 'in the first quarter of 2013' (European Commission, 2013: 36) and privatization finished in 2014 (European Commission, 2014: 37). Privatization of generation assets only *began* in 2011 (European Commission, 2011: 74) and may not conclude until 2016 (European Commission, 2013: 36). Market opening rose from 20% – corresponding to a 'threshold for eligible customers' of 9 GWh – in 2002 (Commission of the European Communities, 2002: 96) to 85% in 2014, with the aim 'that all customers be eligible by 2015' (European Commission, 2014: 37). Nonetheless, despite the electricity sector receiving EU reports of 'good progress' from 2009 to 2011, the European Commission (2014: 23, 38) continued to identify persistent cross-subsidies and improper implementation of cost-based pricing.

Gas-sector reform proved more difficult. The Commission of the European Communities (2000: 52) noted BOTAS's 'legal monopoly' and 'sole authority in natural gas importation as well as pricing of natural gas' in 2000. The Energy Market Regulatory Authority (EMRA) reportedly granted four licences to firms to import 6 bcm of Russian gas after the December 2012 contract termination, and the private sector attained a 25% share of gas imports, but in June 2013, EMRA extended BOTAS's extant import licenses for another 10 years (European Commission, 2013: 36–37). Thus, the 2001 Gas Market Law's requirement that

BOTAS tender for ‘release’ at least 10% of its contracted import purchases each year until its market share fell to 20% by 2009, a stipulation deemed incompatible with the *acquis* (European Union, 2007a: 5, 11), never entered force. Though in October 2012 the Ministry of Energy and Natural Resources initiated public consultations on a draft amendment to the Natural Gas Market Law, the European Commission (2013: 37) could report no further progress ‘regarding the gas release programme and the unbundling of BOTAS to meet the requirements of the Natural Gas Market Law’.

Conversely, liberalization of the retail sector has progressed much further than bulk importation. The minimum volume threshold defining consumers eligible to benefit from market opening did not fall below one million cubic metres until 2010 (European Commission, 2010: 64), after which time it dropped to 300,000 cubic metres by 2012 (European Commission, 2012: 61), and ‘[a]ll non-household consumers in the gas market became eligible consumers in 2013’ (European Commission, 2013: 36). The privatized gas network expanded from 15 cities in 2005 (European Commission, 2005: 84) to 69 by late 2014, with 5 cities reportedly unconnected to the network (European Commission, 2014: 38). EMRA published ‘tariff methodology for the tendered distribution regions in December 2011’ and issued an implementing regulation on underground gas-storage ‘selection criteria’ around the time BOTAS contracted with a Chinese firm to build one bcm of storage in Central Anatolia (European Commission, 2012: 60–61).

### ***Renewable energy sources (RES) and energy efficiency***

These technically distinct realms became increasingly linked by climate change concerns. The EU accelerated work on RES in close proximity to the 1997 Kyoto Protocol, but the European Commission (1997: 4) also stressed how the ‘indigenous’ quality of RES could improve the trade balance and ‘security of supply’. The 2001 electricity directive required member states to set indicative RES targets to meet Kyoto Protocol commitments and 2010 Community targets of 12% RES in ‘gross national energy consumption’ and 22.1% in electricity (European Parliament, 2001: 35). Following a 2000 Commission ‘green paper’ that proposed substituting 20% of fossil fuels in road transport by 2020, the 2003 Biofuels Directive cited their role in curbing carbon emissions and limiting import dependency. In March 2007, the Council confirmed its ‘20–20–20’ objectives for 2020: reducing greenhouse gas (GHG) emissions by 20% of 1990 levels; cutting projected energy use by 20%; and raising RES share of energy use by 20%, including biofuel’s share of EU transport oil and diesel use to 10% (Andoura, Hancher and van der Woude, 2010: 45). The 2009 RES directive consolidated these aims.

The EU’s original focus on energy efficiency arose in the ‘security-of-supply’ context. Relevant 1978 and 1982 directives pre-date climate change concerns (Andoura, Hancher and van der Woude, 2010: 94). Additional 1979 and 1993 framework directives on energy-consumption labelling and limiting ‘carbon emissions via energy efficiency’, respectively, were updated in 2002 – and ‘recast’ in 2010 – as an Energy Performance of Buildings (EPB) directive, which stipulated

that new structures with floor space of 1000+ m<sup>2</sup> use decentralized RES supply systems, cogenerated heat and power (CHP), district heating or cooling and heat pumps. A 2004 directive addressed high-efficiency CHP (i.e. energy savings of 10+%) and a June 2005 ‘green paper’ proposed annual energy-efficiency action plans (Tekin and Williams, 2011: 23–24). A 2005 ‘eco-design’ framework directive – ‘recast’ in 2009 – mandated putting larger savings potentials into initial product design, and a 2006 directive requested member states to set indicative energy-savings targets of 9% (with attainment measured after 2015) and provided for ‘energy service companies’ (ESCOs) that could contract with end users to realize savings as well as independent ‘energy audits’ to verify the gains.

Turkey has shown relatively less misfit on RES than on energy efficiency, with earlier progress in these areas spurred by electricity-market reform. A 2002 law mandated that transmission utility TEIAS and distribution licensees prioritize ‘system connection of generation facilities based on renewable resources’ and grant ‘advantageous’ licensing fees to RES-based generators (Commission of the European Communities, 2003: 92). Along with closer alignment with the efficiency *acquis* and greater ‘implementation of energy conservation practices’, the 2003 Accession Partnership urged increased RES use (Council of the European Union, 2003: 48). The 2007 framework energy-efficiency law amended the 2005 framework RES law itself to ‘improve incentives for generation of electricity from renewable sources’, leading the Commission to describe Turkey as ‘partially aligned in this area’ (Commission of the European Communities, 2007b: 50). In 2009, implementing regulations came out on wind and geothermal energy; six geothermal fields ‘suitable for electricity generation’ were privatized; and a revised electricity strategy paper ‘set a target of producing 25% of the country’s electricity from renewable sources by the end of 2020 and installing 20,000 MW of wind power capacity by the same year’ (Commission of the European Communities, 2009: 59). In 2011, EMRA adopted implementing regulations ‘on the use of small-scale renewable sources in electricity generation and electricity import and export’ intended to ‘promote cross-border trade and investments by small-scale consumers’ and a 2008 amendment to the 2005 law provided for differentiated feed-in tariffs (European Commission, 2011: 73–74). These tariffs were extended in 2014 until 2026 (European Commission, 2014: 38). Moreover, the new 2013 Electricity Market Law ‘revised the measurement standards for wind and solar energy to streamline applications’ and increased the minimum RES share of ‘unlicensed electricity generation’ from 0.5 MW to 1.0 MW, leading to a reported surge of applications to EMRA for licenses to generate solar power (European Commission, 2013: 37), 600 MW of which were under consideration in 2014 (European Commission, 2014: 38). Though the Commission has questioned the WTO compatibility of domestic-content incentives for RES-generation equipment (European Commission, 2012: 61), progress reports since 2009 have lauded Turkey’s rising share of RES, which reached 29% in 2013, most of the increase ‘from new wind power plants’ (European Commission, 2014: 38). On the other hand, Turkey’s effort to increase use of hydropower has detracted from alignment with Chapter 27 (Environment), especially the 2000 Water Directive. A

December 2010 amendment to the Renewable Energy Law lifted major barriers to the construction of renewable energy plants near protected areas (Scheumann et al., 2014: 137, 147).

Turkey underwent slower reform on the efficiency *acquis*. Turkey's 2003 regulations on energy labelling of refrigerators/freezers and ballast for florescent lighting led the Commission to note Turkey's advances on 'legislative approximation' (Commission of the European Communities, 2003: 93). Yet, by the end of screening, Turkey had not fully assimilated EU norms on high-efficiency CHP, EPB, eco-design requirements, engagement in the EU-US Energy Star programme for office equipment and laboratory verification of labelling accuracy (European Union, 2007b: 7–9). The 2007 framework efficiency law and the 2008 Accession Partnership (Council of the European Union, 2008: 12) appeared to speed alignment. Implementing regulations on transportation and EPB came out, ESCOs gained greater authority to provide efficiency services and further regulations on eco-design requirements entered force. The Commission cited 'good progress' on Turkey's alignment with the efficiency *acquis* between October 2011 and February 2012, based on: an amended implementing regulation on improving energy-use efficiency to provide industry incentives and regulate ESCO authorizations (8,000 energy performance certificates were issued in 2011); an implementing regulation for labelling and 'standard product information' on energy usage by energy-related products; communiques on 'eco-design implementations'; and an energy efficiency strategy 'to reduce Turkey's energy intensity by at least 20% by 2023' (European Commission, 2012: 62–63). However, the EU's 2012 issuance of an Energy Efficiency Directive (EED), parts of which required supplementary Commission implementation guidelines to prepare member states for the June 2014 transposition deadline, may have widened Turkey's policy misfit, as the Commission called for an ambitious 'coordinated action plan', a stronger agency 'with a clear coordination function' and harmonization of Turkey's Energy Efficiency Law with the 2012 EED (European Commission, 2013: 37).

### ***Nuclear energy***

Nuclear energy and its safety and radiation-protection requirements represent the only energy-related matters covered by the 1957 Euratom treaty. Member states must establish an independent nuclear regulatory authority 'in line with EU best practices', maintain safety standards that conform to 1975 and 1992 Council resolutions and protect workers and population from the risks of 'ionizing radiation' by complying with *acquis* requirements on 'strict controls on radioactive sources, supervision of shipments and of radioactive waste, environmental monitoring, sources of contamination of foodstuffs and an appropriate framework for emergency preparedness' (European Union, 2007b: 1).

Turkey has shown considerable misfit here. In 2000, after Turkey issued a regulation on nuclear and radioactive waste treatment and accident response, the Commission of the European Communities (2000: 53–54) assessed Turkey's Atomic Energy Authority (TAEK) as meeting International Atomic Energy Authority

(IAEA) safeguard standards, and the Commission of the European Communities (2001: 70) positively noted Turkey's signing of a 'Full Scope Safeguards Agreement with the IAEA' on nuclear material safeguards and its Additional Protocol. In 2005, the European Commission (2005: 88) recorded 'some' progress on nuclear safety and radiation protection, and in 2006, the Commission of the European Communities (2006: 49) described Turkey's 'fairly advanced' capacity to meet the nuclear energy *acquis* and its 'considerable degree of alignment' on nuclear safety and radiation protection, assessments echoed in Chapter 15's 2007 screening report (European Union, 2007a: 12). After adoption of implementing regulations on 'basic requirements of quality management for safety of nuclear facilities, on nuclear safety inspections and sanctions and on the issuance of certificates that will be the basis for authorization of the exports of nuclear and nuclear dual use goods' (Commission of the European Communities, 2007b: 50), enactment of a framework law on the establishment and operation of nuclear power plants and energy sales marked 'a major change in Turkey's energy policy' (Commission of the European Communities, 2008: 57). In 2009, Turkey issued regulations on nuclear plant sites, 'special . . . and design principles' for plant safety and 'special principles for safety, notification and reporting of extraordinary incidents, registration and reporting' for research reactors (Commission of the European Communities, 2009: 60).

Yet, the EU has expressed grave reservations on Turkey's alignment here. Progress reports from 2000 to 2005 critiqued Turkey's non-compliance with Euratom mandates that entities 'operating nuclear installations or storing nuclear materials' report on flow and inventories (European Commission, 2005: 88). The 2006 Accession Partnership (Council of the European Union, 2006: 47) urged Turkey to ensure a 'high level of nuclear safety' by strengthening an independent regulator and complying with the Environmental Impact Assessment Directive, a focal item of Chapter 27 that Turkey has not clearly applied in the nuclear context (European Commission, 2013: 69–70). The Commission has also lamented TAEK's non-participation in the IPA horizontal programme on nuclear safety and radiation protection (European Commission, 2011: 74). Given Turkey's agreements with Russia and other countries, the latest with Japan for a 4500-MW plant (European Commission, 2014: 38), the European Commission (2012: 82) has critiqued lack of legislation that surpasses 'protection against ionizing radiation and the licensing of nuclear installations'; failure to ratify the European Community Urgent Radiological Information Exchange (ECURIE) Agreement; non-accession to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management; and non-alignment with corollary EU directives on 'safety of nuclear installations and on the responsible and safe management of spent fuel and radioactive waste'.

### ***Trans-European Networks–Energy (TEN-E)***

Chapter 21 governs Turkey's alignment progress in this area. TEN-E covers 'transport and storage facilities of gas as well as . . . electricity transmission'

and contributes significantly ‘to the electricity and gas market’ (European Union, 2007c: 21). The EU has Treaty authority to promote interconnected, interoperable and accessible electricity networks and ‘diversification of supply sources and routes for natural gas’, via an ‘indicative list of projects of common interest’ (European Parliament, 1996: 147–153).

Turkey received no explicit mention among TEN-E projects in the 1990s. However, the Council of the European Union’s 2003 Accession Partnership urged Turkey to free up ‘cross-border trade in energy’ and implement ‘projects of common interest in the . . . TEN-energy guidelines’ in its territory (Council of the European Union, 2003: 53). Annex I of the revised 2003 ‘guidelines’ listed 12 ‘projects of common interest’ with priority financing status, with ‘natural gas axis no 3’ (NG3) covering ‘new gas pipeline networks to the European Union from new sources’, including Turkey-Greece, Greece-Italy, and Turkey-Austria; Annex II located Turkey inside the Mediterranean and Black Sea ‘electricity rings’; and Annex III referred to the ‘gas transport corridor between Austria and Turkey through Hungary, Romania and Bulgaria’ as well as electricity and gas lines connecting Greece and Turkey (European Parliament, 2003). The 2006 Accession Partnership called on Turkey to support ‘creation of a gradually integrated regional energy market as part of a wider European energy market’ and lift ‘restrictions on cross-border trade and third party access’ (Council of the European Union, 2006: 42). The 2006 list of project axes contained NG3; ‘south-east European electricity market’ infrastructure (EL4) – including the Greece-Turkey line; and Mediterranean electricity (EL9) and gas (NG6) ‘rings’ linking Turkey and its Arab neighbours (European Parliament, 2006).

Turkey has shown much less misfit on electricity than on gas interconnectivity. Built in 2008, the Greece-Turkey line brought preparations for ‘Turkey’s synchronisation with the UCTE (Union for the Coordination of Transmission of Electricity) European power network’ to ‘an advanced stage’ by 2009 (Commission of the European Communities, 2009: 67), and by 2013, the Turkish power grid’s ‘parallel trial interconnection’ with ENTSO-E’s Continental European Synchronous Area had entered ‘the final stage of the third and last phase’ (European Commission, 2013: 42). Turkey and Romania agreed to develop interconnections in February 2014 (European Commission, 2014: 43).

In one sense, TEN-E gas references also bolster Turkey’s EU accession. The South Caucasus Pipeline has been operating since 2007 to feed Azeri gas (via Georgia) to Turkey, where it enters the Turkey-Greece Interconnector (TGI), once slated to join the Italian gas grid via the Poseidon Pipeline. However, the TGI will now complement the Trans-Adriatic Pipeline (TAP), a new project bolstered by Azerbaijani state firm SOCAR’s two-thirds purchase of Greek natural gas grid operator DESFA (Sartori, 2013: 5; Socor, 2014). In 2009, Turkey presided over the Nabucco Gas Pipeline Intergovernmental Agreement (IGA), then lauded by the Commission of the European Communities (2009: 67) as ‘an important strategic step towards closer energy cooperation between the EU, Turkey and other States in the region as well as towards the diversification of energy sources’.

However, like certain EU member states themselves, Turkey's heavy dependence on resale-restricted Russian gas imports, mirrored in BOTAS's dominance over bulk imports, slowed alignment with the gas-transit *acquis*. The 2008 Accession Partnership urged Turkey to implement 'fair and non-discriminatory rules for the transmission of gas' (Council of the European Union, 2008: 12), and EU officials have underscored that Chapter 21 remains guided by the EU norm of transparent and non-discriminatory access to transmission networks and supplies (Tekin and Williams, 2011: 148–149). While praising the Nabucco Project Support Agreements for 'ensuring the necessary regulatory framework and investment guarantees in transit countries', the European Commission (2011: 73) implied that Turkey's lack of 'fair and nondiscriminatory rules for gas transit', insufficient market liquidity and contract inflexibility could limit its 'energy corridor' role. In fact, Ankara's conception of Turkey as 'middleman' or 'hub' – one with preferred access and advantageous leverage over energy transit – has contrasted with the EU's image of Turkey as 'a market-based transit country with shared trade, transit and environmental rules' (Erdogdu, 2014: 8–9).

The EU has, however, also shown inconsistency here. By 2012, the 'gas corridor' project had been downscaled to Nabucco West (to start at the Turkey-Bulgaria border) and a proposed Trans-Anatolian Pipeline (TANAP) to transport the Shah Deniz II phase of Azeri offshore gas output across Turkey (European Commission, 2012: 68). In July 2012, Turkey and Azerbaijan signed an agreement on TANAP to convey 16 bcm of gas, of which Turkey will consume approximately 6 bcm and Europe 10 bcm (Erdogdu, 2014: 3). With the July 2013 conclusion of negotiations involving the Shah Deniz consortium (led by BP and SOCAR), Nabucco lost out altogether to TANAP's European extension – the TAP, which gained full exemption from EU third-party access (TPA) rules, as opposed to only 50% for Nabucco West (Sartori, 2013: 4, 6). Azerbaijan's SOCAR has complementary interests in both projects – 80% in TANAP and 20% in TAP – and in Greek transmission operator DESFA (Socor, 2014). Investment decisions taken in December 2013 'ensure the interoperability and connectivity of the projects' (European Commission, 2014: 43).

## **Uneven diffusion of EU energy norms in Turkey: factors and outcomes**

### ***Security of supply***

Turkish governments have exhibited a mix of absorption and inertia in adopting this part of the *acquis*. Turkey has largely been complying with long-standing IEA oil-stockpiling requirements, which are more closely oriented towards supplying members' own emergency needs and fulfilling a general interest in price stability. Conversely, governments have consistently refused to give an independently mandated agency authority to maintain oil stocks and administer IEA and directive-guided emergency stock-holding and release obligations. Considering governmental tendencies to interfere in the operation of cost-based pricing

mechanisms in the energy market (European Commission, 2013: 21–22), inertia could reflect ruling-party resistance to high anticipated economic and political costs of relinquishing direct control over perceived vital sources of fuel supply and tax revenue as well as perceptions by businesses of the costly burdens of complying with top-down administration of stringent coordination requirements (for distinct fuel categories).

### ***Internal energy market***

The outcome in this area – partly accommodation and partly inertia – resembles that of security of supply. The Turkish government established EMRA in 2001, an act driven largely by the promise of International Monetary Fund (IMF) loans, the political efficacy of which declined thereafter. Conversely, even in the electricity submarket, where Turkey gradually unbundled supply-transmission-distribution and privatized generation assets, it lagged behind on tariff reform and unaccounted losses due to resistance to concomitant price hikes. Nonetheless, rising living standards and increasing net electricity exports tend to support ‘accommodation’ of EU norms on electricity-tariff transparency and non-discriminatory grid access. Conversely, BOTAS’s resilient monopoly symbolizes an entrenched ‘inertia’ on gas-market reform. As in some EU states (Ipek and Williams, 2010), Turkish governments, despite reform of local distribution, have moved grudgingly on freeing bulk supply, perhaps because Russia’s Gazprom, Turkey’s largest provider, could come to dominate domestic network assets, or BOTAS resists becoming a ‘mere import company’ (Erdogdu, 2014: 9).

### ***Renewable energy supply***

Turkey demonstrates a mix of absorption and accommodation on the RES-related parts of the energy *acquis*. In terms of absorption, hydropower production has pushed the share of RES to over 25% of total electricity generation. The government has also assimilated EU norms by promoting advanced RES via differentially calibrated feed-in tariffs and licensing and grid-access incentives. This has brought earmarked EU financial assistance to Turkey, greater revenue to relevant RES suppliers and retail distributors, theoretically more competitive energy prices for consumers, lower carbon emissions and decreased dependence on hydrocarbon imports.

### ***Energy efficiency***

Accommodation on energy-efficiency reform does not diverge markedly from key aspects of the RES story. Again, Turkey has incentivized businesses and households to use less energy per output, both of which reinforce RES in slowing the growth in carbon emissions and meeting conservation targets encapsulated in the EU 2020 goals, as well as indirectly curbing energy imports. Here, although industrialists, retailers and households may favour longer-term declines in energy costs, reform falls short of transformation, as major improvements in efficiency

entail higher perceived costs of advanced technical training, setting and enforcement of tighter standards, product-price hikes, and greater public awareness.

### ***Nuclear energy***

This part of the energy *acquis* manifests some of the most stubborn inertia, notably in terms of Turkey's failure to agree to significant EU-signed conventions and programmes and to establish an independent regulatory authority. The signature of key accords, including Euratom, potentially places a future sector of energy production outside the state's sovereign control, and – as with security of supply – establishment of an independent regulator separate from TAEK may also threaten the government's control over a vital policy area and function.

### ***Trans-European Networks–Energy***

The outcome of reforms guided by Chapter 21 parallels that of Chapter 15's IEM subsection. On electricity, Turkey has absorbed EU interconnectivity norms, which bolsters the above-mentioned benefits of export revenue – that is, private generators and exporters (especially those of RES-based electricity), transmission coordinators and communities earning transit fees would prefer greater transparency of regulations and tariffs as well as non-discriminatory grid access. Those seeking larger potential revenues from augmented gas transit would seemingly favour norm absorption, but this area seems stuck in inertia, given BOTAS's long-standing control over bulk gas importation and transit across Turkey. Conversely, as noted above, EU norm diffusion should be undermined by notable waivers of its own TPA rules on certain trans-boundary projects.

## **EU influence on Turkey's energy reform**

European norms diffuse to varying extents and for different reasons. As the accession process has covered EU-Turkey relations for this period of study, a variety of external factors have influenced Turkey's energy reforms – not only European values, but also EU conditionality mechanisms as well as other coterminous external pressures.

The EU-Turkey accession partnerships, which spell out priority tasks for Turkey, provided financial aid. The first accession partnership indicated that Turkey had obtained €367 million in grant aid between 1996 and 1999 (Council of the European Union, 2001: 22). Community assistance to Turkey – €954 million between 1995 and 2002 – rose to €177 million per year between 2000 and 2003, partially to bolster public administration in the energy market (Commission of European Communities, 2003: 9). This was supplemented by additional European Investment Bank (EIB) loans of €1.5 billion between 2000 and 2002 (Council of the European Union, 2003: 55). The TENs comprised top areas for *acquis*-implementation financial aid, which reached €300 million in 2005, when EIB loans to Turkey stood at €3.6 billion (European Commission, 2005: 6–7).

Turkey's National Programmes for Adoption of the Acquis (NPAA) lay out planned legislative and institutional changes in line with the corresponding accession partnership's listed priorities and spell out funding volumes and sources needed to carry out those changes. The first NPAA declared that Turkey anticipated financial needs 'of around 50 million euros for institutional changes and the requirements due to such changes' (European Union General Secretary of Turkey, 2001: 364). Turkey, in a severe financial crisis, did adopt seminal energy-market reforms reflected in the Council of the European Union's 2001 Accession Partnership, but mainly to meet IMF loan conditions (Commission of the European Communities, 2001: 70).

Subsequent NPAAs contained more itemized precision. Turkey's 2003 NPAA (European Union General Secretary of Turkey, 2003: 7–23) enumerated amounts summing to over €10 million in total funding needs, over half to be met by the EU, which was to provide the bulk of financing for priority tasks of enhancing EMRA's independence, freeing cross-border electricity trade and increasing the RES share of energy production, as urged in the 2003 Accession Partnership (Council of the European Union, 2003: 48, 53). In line with that year's Accession Partnership (Council of the European Union, 2008: 12), Turkey's 2008 NPAA targeted energy efficiency and accession to the nuclear Joint Convention, with the first set of needs worth about €43 million – €18 million from the EU – and the second about €28 million, with less than €1 million from the EU (European Union General Secretary of Turkey, 2008: 174–185). By 2009, after a minor economic downturn, Turkey had obtained new IPA commitments of €567 million and an IPA 'crisis package' involving €52.5 million, via a 'special Turkey window for multibeneficiary programmes' to support activities like energy-efficiency investments and renewables (Commission of the European Communities, 2009: 5–6).

With smaller requests for EU assistance to meet the last NPAA's priority energy reforms, Turkey's post-2008 EU-compatible progress on the electricity market, RES and energy efficiency may reflect expected 'co-benefits' of lowering GHG emissions in the wake of its 2009 ratification of the 1997 Kyoto Protocol (Koehn, 2008: 63–70). Turkey's 2011 National Climate Change Action Plan lists co-benefits such as EU alignment, but more often energy security or reduced import dependence, capacity building, increased competitiveness and employment and technological development (Williams, 2013: 298). Energy-related items with the co-benefit of *acquis* alignment involve promoting CHP and regional heating systems, legal arrangements for energy efficiency and utilizing landfill gas.

## Conclusion

As in other policy areas, Turkey's energy sector has a decidedly mixed record on progress towards EU-mandated reform. On security of supply, IEA membership had already narrowed Turkey's pre-accession misfit with EU criteria, but strong inertia has blocked creation of an independent stock-holding agency. On market reform, IMF pressures undergirded EU demands, with Turkey making accommodative change in terms of creating EMRA and gradually freeing retail electricity

and gas markets. By contrast, institutional misfit persists in BOTAS domination of gas imports, unless post-2011 agreements to build TANAP to ship Azerbaijani gas across Turkey conform, as promised, to EU criteria and thus promote accommodation on related TEN-E and gas-market reforms (Natural Gas Europe, 2014).

Addressing import dependency and climate change represent global concerns pushing many countries to increase RES usage and energy efficiency. Indeed, Turkey's hydropower endowment and earlier electricity-market reforms favoured absorptive change on RES, although easing environmental impact assessment standards on new dams undercut progress on Chapter 27. Turkey was also accommodating EU energy-efficiency criteria until 2012, when the new EED called for a coordinated action plan and an independent agency to carry it out. In the area of nuclear power, Turkey's compliance with certain IAEA safeguards partially met EU criteria, whereas it has lagged dramatically on empowering an independent regulator and improving spent-fuel management and radioactive waste-disposal standards.

As such, Turkey has incorporated a number of key energy *acquis* requirements, but usually under the simultaneous influence of non-EU external actors or trends. Some EU energy norms never fully diffused to Turkey, with policy inertia registering the effects of countervailing domestic interests and geostrategic calculations. Inertia may also reflect the complexity of some EU measures (e.g. the 2012 efficiency directive) and weaknesses in EU common energy policy. Finally, waivers of EU market-access rules on large energy projects (e.g. TAP) in the name of energy security could sow confusion by contradicting the EU energy-policy 'pillars' of competitiveness and sustainability.

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