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# 1 Energy and climate within the broader EU-Turkey relationship



Energy and climate are central to the EU-Turkey relationship. The EU has been a major energy partner for Turkey, providing a significant portion of its energy needs. However, the EU's climate goals, particularly the Paris Agreement, have put pressure on Turkey to reduce its carbon emissions and transition to a greener economy. This transition is essential for Turkey to maintain its energy security and economic growth in the long term. The EU is supporting Turkey's efforts through various initiatives, including the Energy Dialogue and the Energy Community Treaty. These initiatives aim to improve energy efficiency, promote renewable energy, and enhance energy security. The EU-Turkey relationship in the energy and climate sectors is complex and multifaceted, involving a range of stakeholders and interests. It is a key area of cooperation between the EU and Turkey, and one that will continue to evolve in the years ahead.

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Figure 2: The EU-Turkey electricity trade

Source: Bruegel based on International Energy Agency.

## 4 Bilateral cooperation on renewables and efficiency: still a long way to go

Figure 2: The EU-Turkey electricity trade. The chart shows the volume of electricity traded between the EU and Turkey from 2000 to 2020. The Y-axis represents the volume in TWh, ranging from 0 to 100. The X-axis represents the year. The data shows a significant increase in electricity trade starting around 2010, peaking in 2019 at approximately 90 TWh, and then declining to around 70 TWh in 2020. The EU is consistently the net exporter of electricity to Turkey, with the volume of exports far exceeding imports.

Year	Exports (TWh)	Imports (TWh)	Net Trade (TWh)
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	0	0	0
2007	0	0	0
2008	0	0	0
2009	0	0	0
2010	10	0	10
2011	20	0	20
2012	30	0	30
2013	40	0	40
2014	50	0	50
2015	60	0	60
2016	70	0	70
2017	80	0	80
2018	85	0	85
2019	90	0	90
2020	70	0	70

## 5 Nuclear energy: the first gap in bilateral cooperation

Figure 3: Turkey's and the EU's greenhouse gas emissions (million tonnes CO2)





Figure 4: Turkey's external energy vulnerability

## 8 Reducing Turkey's external energy dependency while avoiding the coal rush

High external energy dependency is a major vulnerability for Turkey. In 2019, Turkey's external energy dependency was 74.5% (Central Bank of the Republic of Turkey, 2020). This is significantly higher than the EU average of 33.5% (European Commission, 2020).

Figure 4: Turkey's external energy vulnerability

Source: Bruegel based on Central Bank of the Republic of Turkey and International Energy Agency.

“increasing the share of renewable energy sources in and adding the nuclear power to its energy mix”<sup>13</sup>.  
<sup>14</sup> The share of renewable energy sources in Turkey's energy mix is currently 11% (Central Bank of the Republic of Turkey, 2020).

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<sup>13</sup> See the Energy Strategy of Turkey (2019) for more details (Central Bank of the Republic of Turkey, 2020).

<sup>14</sup> See the Energy Strategy of Turkey (2019) for more details (Central Bank of the Republic of Turkey, 2020).

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