Critical energy infrastructure (CEI) is commonly defined as ‘those assets if undelivered [they are expected to make significant] impact on energy security and energy supply, as well as the overall social and economic well-being of the nation. Such assets include physical energy facilities, energy supply chain, information technologies and communication networks that make up an energy system’. CEI assets in general can be destroyed or degraded by both natural and human initiated threats. Any disruption of a single sector of CEI, whether stemming from a terrorist attack, natural disaster or man-made damage is likely to create a cascading effect on any particular country’s energy system that is both complex and interconnected. A reliable and integrated working system of CEI is a must for any country to assure its overall energy policy objectives as well as its economic well-being. Therefore, the issue of protecting CEI networks has gained significant importance in today’s world, not only to ensure the standards of a well-functioning economy along with a strengthened energy supply security but also as one of the foundational conditions of market integration where consumers can have access to new technologies.

The issue of energy security has, since the oil embargo in 1973 been defined as the assurance of an undisrupted flow of oil. As a result of various incidents new elements have become added to this classical definition. Actually, until the 9/11 terrorist attacks, this issue of energy was mainly concerned with issues like geopolitics, accidents and natural disasters. One of the main turning points in the issue of energy supply security was experienced during the 1973 OPEC oil crisis. Since then, energy security has been defined as the attainment of conditions of an uninterrupted flow of oil at a reasonable price with the condition that the supply of energy would be environmentally friendly. However, since the 70s, this definition has incorporated new concepts like

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3 Ibid.
price stability, diversification of energy sources, energy storage, economic investments, political and military power balance, geopolitics, homeland security, energy efficiency, energy markets and sustainability and the like. It is true that, the rise of security threats and the protection of the CEIs were always a concern for mankind ever since the industrial societies came to the fore (We know that ever since those days), the entire energy systems were targeted (especially in times of war). So, in the aftermath of the oil embargo, the Euro-Atlantic world has increased its pace in establishing safeguards that would both assure the energy security supply of the Euro-Atlantic world as well as guarantee the protection of its CEIs. The establishment of the IEA, the strategy of diversifying indigenous sources, as well as the source countries, and the European practice and strategy of interdependency on Russia for the attainment of natural gas, can all be counted among the numerous safety measures that were taken in this regard. When the emerging energy security risks and threats were observed in different parts of the world, energy security related CEI components came under stress. After the 9/11 terrorist attacks, terrorism in the US was identified not only as a national or regional matter of energy security, or security threats to the CEIs’, but also as a global one. Daniel Yergin also sees and shares the view that the US threat perception in relation to CEIs has dramatically changed since the 9/11 terrorist attacks. According to Yergin’s argument, Washington has started to evaluate security threats to energy security in general and CEIs in particular as a matter of global concern. The global supply chain comprises of production, transportation, storage facilities and distribution networks to final consumers, and came under close scrutiny due to the 9/11 terrorist attacks. Europe and the US began to take seriously the security of their countries’ infrastructure in the face of these emerging threats. Both the European Commission (EC) and the United States Department of Homeland and Security have begun working on measures of coping with the issue of terrorist threats, as well as with other security risks to their CEIs. So, the first initiative in this regard came from the European side in 2005, when the EC adopted the green paper titled European Programme for Critical Infrastructure Protection. Since the implementation of this initiative, the Council of the European Union has adopted Directive 114/08/EC that focuses on the identification and designation of the critical European infrastructure and makes assessments as regards improvements for their protection. On the other side of the Atlantic, when the terrorist attacks coincided with the Fukushima power plant accident, CEIs gained greater significance on the political agendas of the world governments. The American government was obliged to develop and define strate-

4 Ibid.
6 Ibid.

gies and security initiatives to protect their own CEI, which led to the 2009 American’s National Infrastructure Protection Plan (NIPP).10

Turkey is geographically situated at a critical crossroad between major energy producers, where nearly 75 percent of the world’s hydrocarbon resources are found and major consumers in Europe. However, it has been subjected to terrorist attacks from the PKK both in the summer of 2015 and earlier. These recent PKK attacks against Turkey’s major oil and gas pipelines have brought a real concern in international markets about whether Ankara’s CEIs are secure enough for the transportation of hydro-carbon resources. For this reason, in this analysis after briefly examining the current security risks to Turkey’s oil-gas pipelines we will try to reach a conclusion about how secure Ankara’s CEIs are. Turkey as an energy dependent country, importing nearly 70 percent of her energy requirements from abroad, has declared Energy Strategy Plan of 2010-201411, with an intention to meet 30 percent of its electricity needs from renewables by promoting the future use of its hydro, wind and solar energy sources by 2030. According to this plan Turkey also aims to meet the rest of its electricity needs (around 10%) from nuclear energy12. According to Turkey’s strategic energy plan, the rest of her energy needs of nearly 60 percent hydro-carbon resources are expected to come from the diversification of present transit routes as well as through the diversification of the resource countries. These plans for diversification give Turkey the upper hand in Ankara’s overall energy policies as this situation naturally increases the present and future weight of the pipelines. Although the 2010 -14 energy plan focused on intensified efforts towards diversification through renewables and nuclear options, the Turkish economy presently continues to rely on the import of fossil fuels. Turkey’s total liquid fuel consumption averages 734,800 bbl/d and within this bulk more than 90% of the crude oil is imported. What is more important according to the IEA estimations is that Ankara’s crude oil imports are expected to double over the next decade.13

Currently, Turkey’s peculiar natural energy corridor position at the cross-roads that links 70 percent of the world’s proven oil and gas reserves to Western markets makes the supply role of the present and likely oil and gas pipelines transit via Turkey extremely important. In the aftermath of geo-political earthquakes like the chaotic counter-revolutions post-Arab spring and the Ukrainian crisis has directly affected the energy supply security of Europe. In the last decade, the pipelines passing through Turkey have been of critical importance in the face of Europe’s desperate attempt to insure its overall energy supply security. Hence, under present circumstances it is of no surprise that the PKK terrorist organization has targeted Turkey’s hydrocarbon pipe-

lines in order to undermine Turkey’s efforts at becoming an energy hub for Europe.

In the summer of 2015, PKK terrorists attacked and sabotaged at least three oil and gas pipelines in Turkey with the objective of causing damage to Turkey’s economy. More importantly, through this action they also wanted to expose government as impotent to guarantee the security of its CEIs and its citizens. As former Energy and Natural Resources Minister Taner Yıldız stated, ‘PKK, by organizing these sabotages has aimed to create a panic and uncertainty about the safety of the pipelines passing through Turkish territory in order to devalue Ankara’s strategic position in efforts to disrupt Ankara’s stability and development’14. In the summer of 2015, Turkey’s energy infrastructure was struck by three PKK’s attacks. ‘First, in July 2015, the Turkish-Iranian gas pipeline in Ağrı province in Turkey which delivers about approximately 10 billion cubic meters of gas annually was sabotaged and was shut down for about five days. Nearly two days later on 29 July 2015, Kirkuk-Yumurtalık oil pipeline (which has a transportation capacity of 1.6 million barrels per day in the Şırnak province of Turkey) was attacked by PKK and was offline for a week. Moreover, on 4 August 2015, PKK militants undertook an assault on the Baku-Tbilisi-Erzurum pipeline (that has a capacity of carrying 8.8 billion cubic meters annually gas) in the Sarıkamış district of the north-eastern province of Kars’15. Following these acts of sabotage, Turkish authorities declared that precautions had been taken in order prevent any setbacks caused by these attacks16.

Though the PKK terrorist attacks on Turkey’s major oil and gas pipelines is not a new occurrence, it has created an element of new risk that companies supplying and transporting oil and gas via Turkish pipelines have to consider. The positive news is that according to the International Index of Energy Security Risk 2015 Edition Report (published by the US Chamber of Commerce), Turkey’s energy security risk score is 1.08717. On the other hand, the OECD average risk index [which] is [also] calibrated to a 1980 base year figure of 1.000 ‘with a higher number meaning higher risk’18. So, when one compares Turkey’s risk ratio to those of other consumers’ and transit countries’, Ankara stands as a country who’s CEI is not yet a major concern. Consequently, in the energy markets, one can easily assert that Turkey, despite the recent terrorist attacks to its CEIs, still maintains its position as a reliable energy partner for Europe and beyond19.

**Conclusion**

In the post-Cold war era, with the rise of new security risks and threats, the definition of energy has naturally expanded. The definition can no longer be narrowed to the issues of geo-politics,

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16It has been stated that, in the aftermath of recent terrorist attacks on Turkish pipelines Turkey deployed thermal cameras and horseback patrols with the aim of strengthening the security around major pipelines so as to safeguard the strategically important energy supplies. See, Ali Ünal, ‘PKK Scheming to...’, ibid.

17 Ibid.

18 Ibid.

19 Ibid.
natural disasters or accidents only. What is more important, the incidents that have the capacity to disrupt the flow of oil and gas have become not only a concern of one particular country but a worldwide concern regardless of their various security complexes. This situation has been magnified after the 9/11 terrorist attacks and was further exacerbated by the rise of the failed/failing states and non-state actors’ and because of their given and likely damages to the CEIs globally. The Euro-Atlantic world for this reason has been obliged to increase its efforts in protecting various CEI initiatives. As mentioned earlier, since the 1980s, Turkey has also been negatively affected by the rise of terrorist security threats, especially from the PKK. Up until now, Turkey for its part has effectively worked to protect its pipelines. Under contemporary security conditions, terrorism cannot be countered by any individual country, hence in the case of Turkey there needs to be greater understanding and cooperation coming from Ankara’s Euro-Atlantic partners in particular and the international community in general. Whilst Turkey’s current concerns about its CEIs and the PKK’s attempts at sabotage constitute an important security issue for Ankara, it is also a crucial issue for the Europeans since these pipelines are critical assets in the supply of the hydro-carbons from Ankara’s neighborhood to Europe.

About BILGESAM

Established in 2008, the Wise Men Center for Strategic Studies (BILGESAM) is one of the leading think tanks in Turkey. As a non-profit, non-partisan organization BILGESAM operates under the guidance of a group of well-respected academics from different disciplines, retired military generals and diplomats; and aims to contribute regional and global peace and prosperity. Closely following the domestic and international developments, BILGESAM conducts research on Turkey’s domestic problems, foreign policy and security strategies, and the developments in the neighbouring regions to provide the Turkish decision-makers with practical policy recommendations and policy options.

About Author

Nurşin Ateşoğlu Güney is professor of international relations and head of international relations department at Yildiz Technical University in Istanbul. Prof. Güney is security and nuclear energy fellow at the Wise Men Center for Strategic Studies (BILGESAM). She has extensively published on Middle East, security studies, American foreign and security policies, EU, NATO and arms control and disarmament issues. Some of her latest publications include; ‘Turkish Nuclear Security after Iranian Nuclearization’, Contemporary Security Policy, Vol. 33/3, December 2012 and ‘The current Stalamate on the Iranian Nuclear Crisis: Is there a way out of this Impasse?’, Ortadoğu Analiz Dergisi, Orsam, Mart 2013, Vol.5, No. 51, pp. 29-36.