

2021 Energy Price Crisis impacts on Energy Poverty in Türkiye¹

Simge Günay

Institute of Social Sciences, Istanbul University, Türkiye

simgegunay89@gmail.com

Bekir Kayacan

Department of Economics, Istanbul University, Türkiye

bekirkayacan@istanbul.edu.tr

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How has the crisis affected energy costs for households?

The EU saw sharp increases in electricity and gas prices in 2021 mostly due to the increased demand for energy and reduced gas supply (Liboreiro and de Filippis, 2021). As Altunkaya (2021) reported, consumers paid about 41 kuruş/kwh in 2017 as compared to almost 34 kuruş/kwh in 2012, corresponding to an almost 21% increase in electricity prices for households in this period². It is worth noting that since 2018, there has been a remarkable increase in energy prices in the country. According to the official TURKSTAT statistics, electricity bills of residential consumers have increased by 122% since 2018 (Altunkaya, 2021).

In the third quarter of 2021 a 15% hike was observed in electricity prices for all consumer groups in Türkiye. This means that households used electricity from about 91.56 kuruş per kwh and businesses from about 1 lira 22 kuruş per kwh in October. (Hurriyet, 2021). In fact, the Republic of Türkiye Energy Market Regulatory Authority (EMRA)³ already had imposed a 6% increase on the National

¹ In accordance with the circular published in the Official Gazette on “The Use of Expression of ‘Türkiye’ as a trademark (Independent Türkçe, 2021), the expression ‘Türkiye’ is used.

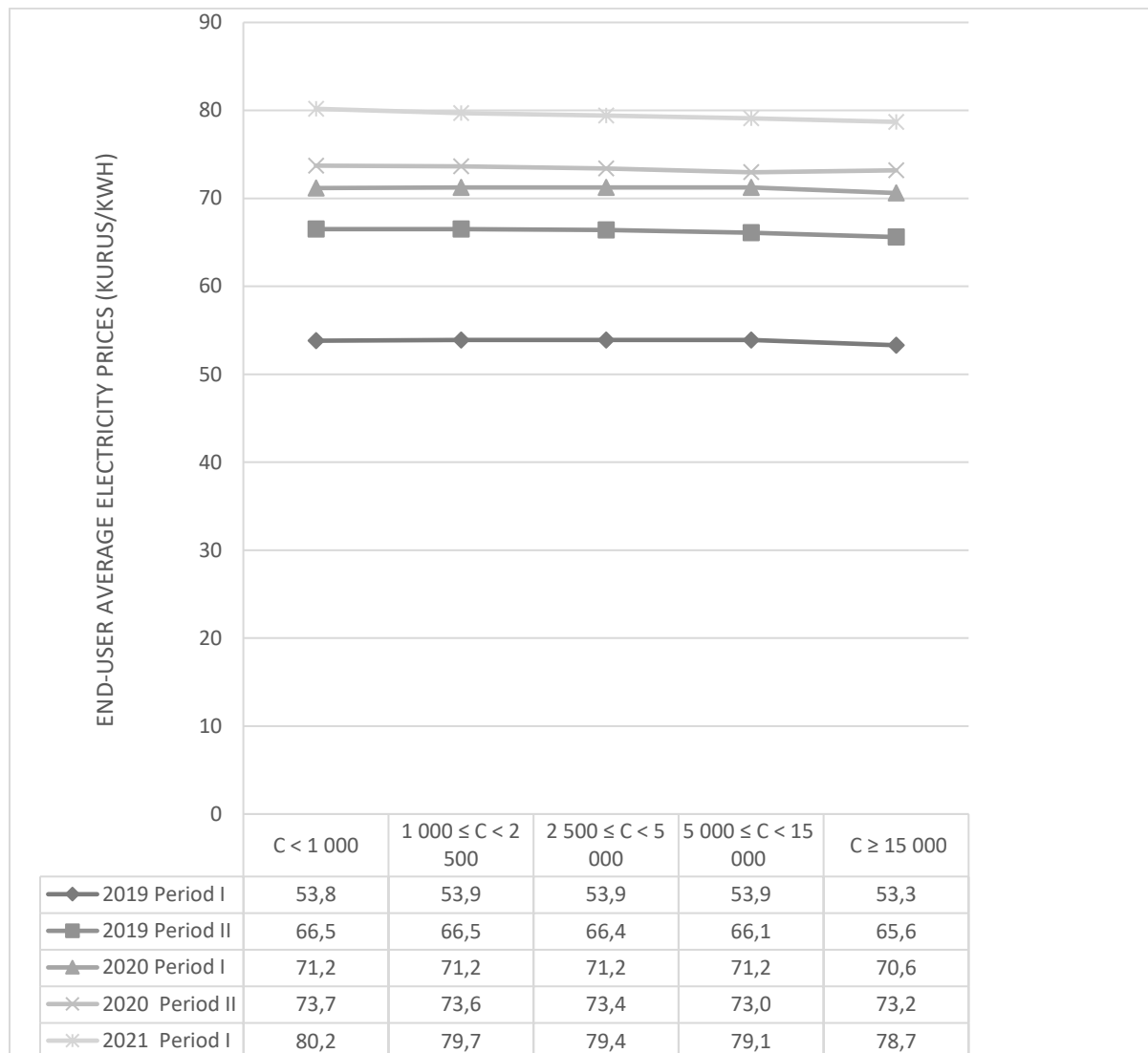
² 1 Turkish lira equal to 100 kuruş.

³ For the press release of Republic of Türkiye Energy Market Regulatory Authority (2021), please see *Elektrik Faturalarına Esas Tarife Tabloları: 1/7/2021 tarihinden itibaren geçerli olacak elektrik tarifeleri tabloları hk.* Link: <https://www.epdk.gov.tr/Detay/Icerik/3-1327/elektrik-faturalarina-esas-tarife-tablolari#>.

Electricity Tariff for the first quarter of 2021. Thus, the total increase in electricity prices in 2021 amounted to 21% (encazip.com, 2021).

The increase in household electricity prices by consumption bands since 2019 can be seen in Figure 1 (TURKSTAT, 2020; TURKSTAT, 2021a):

Figure 1. Household Average Electricity Prices by Consumption Bands in Türkiye



Note: 1st period (for electricity price regulation) refers to January 1-June 30, 2019. 2nd period (for electricity price regulation) refers to July 1-December 31, 2019.

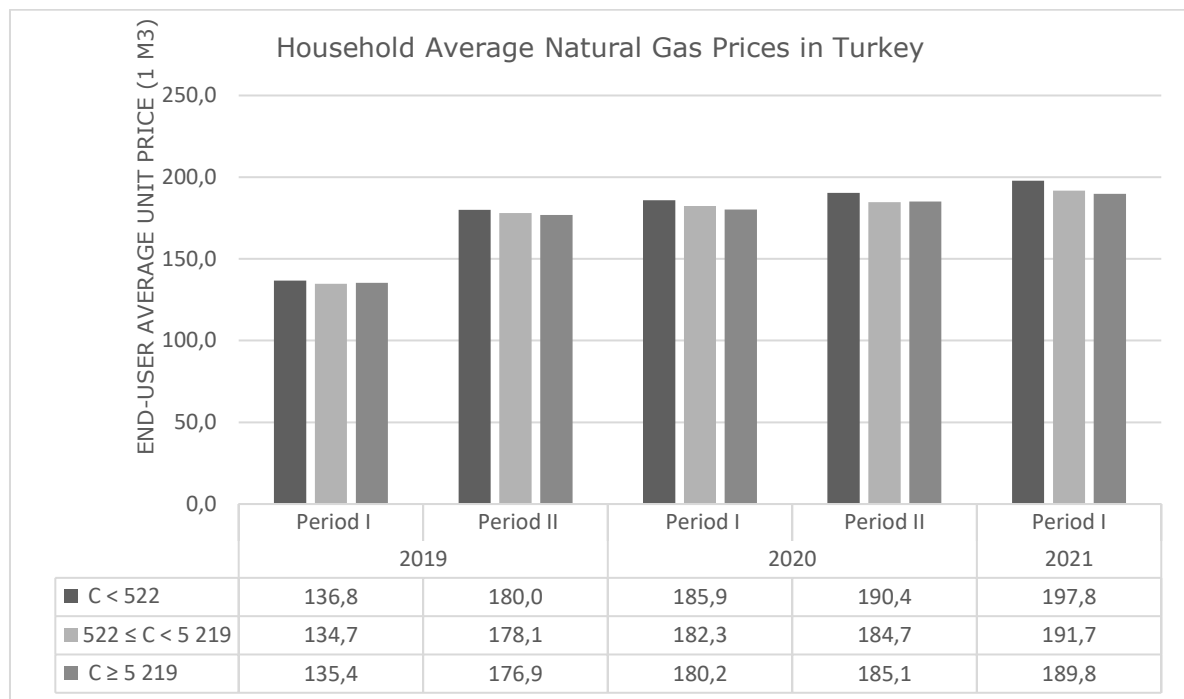
This figure clearly shows that household electricity prices continued to increase between 2019 and the first period of 2021. Average electricity prices for households amounted to 79.5 kuruş per kwh in the first period of 2021 (January-June 2021) and they were about 71 kuruş per kwh in the same period of 2020

(January-June 2020), which means that electricity prices for households increased by about 12% on average in the first period of 2021 compared to the same period last year (TURKSTAT, 2021a). The depreciation of the Turkish lira against the euro and the US dollars is considered as one of the significant factors in the increase in electricity and natural gas prices in recent years (Euronews, 2019).

Meanwhile, the price of natural gas for residential subscribers (households) increased by 12%, while the tariff for industry and power plants for electricity generation increased by 20% in July 2021 (bloomberght.com, 2021a). The sales price applied by Petroleum Pipeline Corporation (BOTAŞ) to gas distribution companies for households was almost 149 kuruş for 1 cubic meter of natural gas in July, with an increase of 12% compared to the rate of June, while the price increase was 20% for industrial consumers, corresponding to about 178 kuruş for 1 cubic meter of natural gas. These amounts correspond to about 1488 liras for households for 1000 cubic meter of natural gas, 1783 liras for industrial consumers, and 2060 liras for power plants for electricity generation (bloomberght.com, 2021a). According to the tariff published by BOTAŞ, the natural gas price has increased for the seventh time in a row since January (haberturk.com, 2021a). The residential natural gas rate increased by 1% every month from January 1, 2021, until June 2021. Although there was a 15% increase in natural gas prices for industrial consumers and power plants starting from October 1, 2021, no similar increase has been observed for residential rates (egeajans.com). In its statement on November 1, 2021, BOTAŞ announced an about 48% increase in natural gas prices for the large industrial and commercial organizations for 1000 cubic meters of natural gas, and an almost 47% increase in natural gas prices for power plants used for electricity generation purposes for 1000 cubic meters of natural gas. Again, the rate applied for households was not changed (bloomberght.com, 2021b). Lastly, BOTAŞ announced that as of the 3rd of December the price of natural gas used in industry and power plants was increased by 20%. Like in November, the tariff applied for the household once again was kept unchanged (bbc.com, 2021). In this announcement, BOTAŞ stated that high energy prices experienced in world energy markets were not passed on to consumers at the same rate in Türkiye. They aimed to protect all consumer groups at the most from the devastating effects of the current energy crisis (QNB FinansInvest, 2021).

The increase in household average natural gas prices by consumption bands since 2019 can be seen in Figure 2 (TURKSTAT, 2020; TURKSTAT, 2021a):

Figure 2. Household Average Natural Gas Prices by Consumption Bands in Türkiye



According to the Figure 2, average natural gas prices for households were 193 kuruş in the first period of 2021 (January-June 2021) and about 183 kuruş in the same period of the previous year (January-June 2020). This amounts to about 5.5% increase in household average natural gas prices on average in the first period of 2021 compared to the same period in 2020.

What do we know about the current impacts in terms of energy poverty?

Although the natural gas prices have been kept constant for households both in October and in November 2021, Oğuz Türkyılmaz, the chairman of the Chamber of Mechanical Engineers Energy Working Group, said that he still expected a price increase for products and for electricity due to the increasing expenses of industrial enterprises and of power plants (Cakir, 2021). This expectation suggests that payment difficulties of households and even service cut offs could occur due to increasing electricity prices and arrears on households' electricity bills. Considering that about 20% of households in Türkiye could not afford to heat their homes adequately in 2020, about 13% of them complain about the heavy burden of housing costs and almost 19% of them about the heavy burden of installments or loans in 2020 (TURKSTAT, 2021b), it is likely that the situation of low-income households will get worse in the winter 2021. In an interview with Gumuskaya

(2021), Dr. Zeynep Elif Yildizel, who is the founder and Vice President of Association of Geological Research, asserted that the global energy crisis will have a negative impact on Türkiye, and more people will be energy-poor due to increasing energy prices. Furthermore, she suggested that energy vulnerable households will be exposed to food poverty soon, since the increase in energy prices will also increase food prices after a while. According to her, this means that people who are already energy-vulnerable will have to spend their income on food first, by cutting back on their electricity, water, and natural gas usage. However, when increases in energy prices also increase food prices, households will also have to cut their food expenditures (Gumuskaya, 2021).

Azem Bartu Yildirim (2021), a researcher at the Center for Economics and Foreign Policy Studies (EDAM in Turkish), wrote about the increasing natural gas prices and its possible effect on residential consumers in Türkiye. Yildirim highlighted that natural gas is the main energy source for heating in the country; the share of households in total natural gas consumption was about 32% in 2020, before other sectors such as conversion (28%) and industry (26%). Considering the uncertainties about weather conditions during the winter period – despite estimations of air temperatures around the seasonal normal – it is likely for vulnerable consumers (such as low income households, disabled people, or pensioners) to be negatively affected by natural gas price increases due to increasing demand in winter (Yildirim, 2021). Quoting from Ali Arif Aktürk, who is the former director of Petroleum Pipeline Corporation (BOTAS) and an energy expert in Türkiye, Ozdemir (2021) touches on possible electricity cut offs in case of difficulties in power plants working with natural gas. On the other hand, households are not expected to be negatively affected by natural gas cuts.

What are the impacts on supply conditions and suppliers?

While some experts have forecasted that energy price increases would not affect Türkiye to the same extent as Europe, at the same time, they expect that Türkiye's import bills on energy will increase because of higher energy prices (Zeren, 2021). In addition, Yildirim (2021) from the Center for Economics and Foreign Policy Studies (EDAM) argued that one of the vulnerabilities of Türkiye is its dependency on foreign sources of energy: in 2020, Türkiye met almost 99.7% of its natural gas demand through imports (Yildirim, 2021). On the other hand, Fatih Donmez, the incumbent Minister of Energy and Natural Resources, stated that investments made in electricity and natural gas infrastructure in recent years should help Türkiye not to confront any energy shortage during the winter months. This statement was grounded on Türkiye's agreements of natural gas supply with

Azerbaijan, Russia and Iran, and on the enlargement of national underground storage capacity of natural gas (hurriyetdailynews.com). As Bağış (2021) reported, Türkiye also takes steps towards the diversification of its energy sources, such as LNG imports from Algeria and Qatar (Bağış, 2021). Moreover, he emphasized that the Turkish government continues negotiations for obtaining further supplies of natural gas since Türkiye's contracts expire at the end of 2021 (Daily Sabah with AA, 2021).

In 2021, energy distributors faced cost increases caused by higher raw material prices, drought and an increase in exchange rates. Energy industry representatives said that increasing demand along with higher prices and cost pressures put electricity distribution and generation companies in a difficult position. Noting that the industrial sector buys electricity very cheaply, the representatives underlined that a 45% increase should be made for the industrial sector in the coming period. Burak Kuyan, who is the chairman of Energy Traders Association, stated that the hikes that have not been made and the measures that have not been taken in a timely manner are more likely to cause more problems in the future. He also noted that, although the hikes that were not made did not cause much trouble for electricity production companies, they caused serious problems especially for electricity retail companies. According to Kuyan, potential problems include the inability of generation plants with shrinking profit margins to pay their debts and the burden on the banking sector (bloomberght.com, 2021c).

Which policy responses have been implemented or debated?

Different types of policy responses exist in Türkiye to deal with the problem of energy poverty. These concern the cut of various contributions that were previously paid by consumers, such as a fee called TRT share is included in the electricity bills in Türkiye to meet the expenses of the Turkish Radio and Television (TRT) Corporation. Another fee is the electricity energy fund fee⁴ charged to consumers to cover the infrastructure needs in a context where both the population and the electricity consumption increase (haberturk.com, 2021b). President Recep Tayyip Erdogan, in a press statement he made after the cabinet meeting earlier in November 2021, announced that the TRT share in electricity bills would be removed and that energy fund cuts would be implemented to alleviate the burden of increasing energy prices on consumers (bloomberght.com, 2021d; Erdem, 2021). Some experts, on the other hand, argued that removing the TRT share and

⁴ The Energy fund fee is a contribution for meeting the sector infrastructure expenses. It is determined by the Ministry of Energy and Natural Resources (Euronews, 2021).

energy fund cuts from electricity bills would not make much of a difference for residential consumers, claiming that even if the cuts come into effect, their impact on the monthly household electricity bills would not exceed 1.5 to 2 liras (Erdem, 2021).

Mehmet Ozdag, who is the member of the Board of the Chamber of Electrical Engineers (EMO in Turkish) argued that the Value-Added Tax (VAT) taken at the rate of 18% from electricity bills could also be abolished to alleviate the energy burden on residential consumers. Alternatively, he proposed that VAT rates could be determined according to the amount of households' electricity consumption and the surface of dwellings they reside in. Concerning the municipal consumption tax⁵ that is still charged on electricity bills, he suggested that removing this tax which represents 5% of the electricity bills could ease the burden on residential consumers (Erdem, 2021).

Besides this debate, Fatih Donmez, the incumbent Minister of Energy and Natural Resources, announced the introduction of a gradual pricing schedule in electricity and natural gas bills. Donmez said that the timetable was not yet clarified since they were waiting for the law to come out. Upon switching to gradually priced bills the consumers who use electricity sparingly will pay lower bills relative to heavily consuming subscribers (haberglobal.com.tr, 2021). At this point, it would be important to accurately target fuel poor households who are also income-poor since low-income and precarious households already use electricity and/or natural gas sparingly. Providing adequate and affordable energy for all is key.

At the local level, the Municipality of Uskudar, a district in Istanbul, announced that during the winter 2021-22, they would provide 400 TL/month of natural gas support for the in-district residential use of students' apartments where at least three-roommates reside with subscription of Istanbul Gas Distribution Industry and Trade Joint Stock Company (IGDAS) (memurlar.net, 2021).

⁵ Municipal consumption tax is a compulsory tax that is calculated proportionally over the "active energy cost" included in the electricity bills of consumers. It is also known as "electricity consumption tax". These taxes are transferred directly to the municipalities' budgets, thus supporting local municipalities. Municipal consumption tax (MCT) rates differ for residential and industrial subscribers (5% of the consumption amount for residential and commercial subscribers and 1% of the consumption amount for industrial subscribers) (elektriksepeti.com, 2016).

To what extent have the energy poverty impacts of the crisis affected the national debate on energy poverty?

The global energy crisis and its possible effects on Türkiye received wide media coverage in the country. This situation inevitably brought the issue of energy affordability on the policy agenda. To avoid energy poverty, policymakers strongly recommend that households implement energy conservation measures. Fatih Donmez, the current Minister of Energy and Natural Resources, recently pointed out the importance of changing habits and attitudes towards energy use so as to save energy (Daily Sabah with AA, 2021). The gradual pricing for energy, for both residential and industrial consumers, also aims to bring about a change in habits, by encouraging the efficient use of electrical energy and ensuring that those who consume more in similar consumer groups bear the cost of their overconsumption (haberglobal.com.tr, 2021).

In addition, considering that Türkiye depends on fossil fuels to a large extent and that its energy demand is expected to increase in the future, Cevheribucak (2021) emphasizes the importance of an energy transition for the country. She suggests that Türkiye needs to take steps to ensure its energy security by transitioning away from fossil fuels such as oil, coal and natural gas for environmental sustainability, human security, and energy justice. Most importantly, she points to the disparity between policy and implementation to achieve “just” energy transition along with sustainable mobility in Türkiye.

On the other hand, in an interview with Gumuskaya (2021), Dr. Zeynep Elif Yıldız⁶ approached the issue from a different standpoint, referring to the neoliberal policies such as the privatizations in the energy sector since 1980, production costs deprived of government support, and increased costs upon the 2008 crisis as the main reasons of energy poverty in the world. She suggests that the increase in prices due to privatizations and to the inability to control primary energy sources such as crude oil and/or natural gas resulted in increase in energy prices both in Türkiye and in other countries. By saying this, she highlights that since both Europe and Türkiye are heavily dependent on Russia for their natural gas demand, they cannot control for the price of natural gas and therefore, face high energy prices. According to her, this is what happened in Türkiye and Europe

⁶ Dr. Yıldız is an energy expert who is the founder and Vice President of the Association of Geological Researches. She worked at Turkish Petroleum Corporation between 1996-2009. She is the writer of “Energy Resources: Global Perspective, Concepts and Economics (zeynepelifyildizel.com, 2022). She is frequently featured in the media with her speeches and articles on energy. Her main research interests are carbonates, energy resources, economic geology, petroleum geology, hydrocarbon exploration, oil and gas, subsurface geology and well logs (METU Geological Engineering Department, 2022).

in September and October 2021. As a result of this, she added, more people are expected to become energy poor in both Türkiye and Europe (Gumuskaya, 2021).

Conclusion

Rising energy prices prevail across the world. Not surprisingly, it is expected that Türkiye will also be affected to a certain extent by the increasing energy prices. Energy prices in Türkiye have already been on an upward trend for the last couple of years. Authorities have taken and continue to take some measures to mitigate the impact of increasing energy prices on the budgets of households and firms. Energy efficiency, coupled with a transition to renewable energy, is undoubtedly critical at this point, notwithstanding it is a longer-term endeavour. Therefore, low-income individuals/households will probably need continued protection from the rising energy prices in Türkiye in the future.

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