

# 2021 Energy Price Crisis impacts on Energy Poverty in Spain

**Roberto Barrella**

Chair of Energy and Poverty and Institute for Research in Technology (IIT) – ICAI School of Engineering,

Comillas Pontifical University, Spain

[rbarrella@comillas.edu](mailto:rbarrella@comillas.edu)

Version: December 2021

The most updated official diagnosis to date on the incidence of energy poverty in Spain is the one carried out by the National Strategy against Energy Poverty [1], [2]. The four primary indicators proposed by the EU Energy Poverty Observatory (EPOV) [3] were calculated between 2014 and 2019 using the data of the Spanish Living Conditions Survey and Household Budget Survey. Table 1 shows their values expressed as share of households in energy poverty in Spain with respect to the total number of households in the year of study.

*Table 1. Incidence of energy poverty in Spain, according to the EPOV primary indicators (percentage of households) [1], [2]*

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Arrears on utility bills	9.2	8.8	7.8	7.4	7.2	6.6
Inability to keep home adequately warm	11.1	10.6	10.1	8	9.1	7.6
High share of energy expenditure in income (2M)	16.6	16.6	16.7	17.3	16.9	16.7
Low absolute energy expenditure (M/2)	13.2	12.2	12.6	11.5	11.0	10.6

Regarding energy prices, which are one of the key issues affecting energy poverty, the Spanish natural gas and electricity tariffs can be divided in “regulated market” and “free market” tariffs, being the former regulated by the Government and the

National Commission of Markets and Competition (CNMC). Particularly, the electricity regulated tariff (PVPC is the Spanish acronym for the electricity regulated price) depends directly on the wholesale electricity market, which sets the prices throughout the day. On the other hand, in the natural gas regulated tariff (TUR in Spanish), the Government and the CNMC publish quarterly the maximum and minimum price that gas retailers can charge in the bill. According to the CNMC [4], in the last trimester of 2019, 37.2% of electricity consumers were on the regulated market against only 19.9% of natural gas consumers who contracted a TUR. In 2020, these percentages did not change drastically (in the third trimester were, respectively, 36.9% and 19.8%). In this regard, the average electricity bill of a Spanish household strongly depends on the type of tariff contracted. Indeed, according to the CNMC [5], in the last semester of 2019, the average monthly electricity expenditure in the regulated and free markets were, respectively, €48.9 and €63. A similar difference was reported in the last semester of 2020 (i.e. regulated market: €46.4; free market: €61.7). Among the other energy carriers used in Spanish households, the maximum price of the Liquefied Petroleum Gas (LPG, butane or propane) is also regulated (bimonthly) by the government.

## **How has the crisis affected energy costs for households?**

The 2021 energy crisis has affected Spanish households' energy expenditure (particularly the electricity and natural gas bills) in different ways depending on if the consumer is on the regulated or free market and the kind of tariff contracted. Regarding the electricity supply, the Government has ensured that the household will pay, on average, the same amount of money in 2021 as in 2018<sup>1</sup>, considering that only the bills of household on the PVPC have been directly affected by the price increase in the wholesale electricity market (see Introduction). However, consumer organizations as FACUA claim that, in order for the government to keep its word, the December PVPC bill would have to be 'negative', i.e. the average user of the regulated tariff should receive around 15 euros in December's bill<sup>2</sup>.

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<sup>1</sup> It is the year when the current prime minister came into government (news about the prime minister's promise: <https://elpais.com/especiales/2021/entrevista-pedro-sanchez/>)

<sup>2</sup> [https://www.elconfidencial.com/economia/2021-11-29/la-factura-de-diciembre-tendria-que-ser-negativa-para-que-sanchez-cumpla-su-palabra\\_3332816/](https://www.elconfidencial.com/economia/2021-11-29/la-factura-de-diciembre-tendria-que-ser-negativa-para-que-sanchez-cumpla-su-palabra_3332816/)

When focusing on the 2021 winter months<sup>3</sup> (which are generally the most critical ones for vulnerable households) and on the 'regulated' prices<sup>4</sup> (in Spain, consumers must be on the electricity regulated market as primary condition to benefit from social tariffs), the energy prices change with respect to the pre-COVID year, i.e. 2019, have been the ones shown Table 2. These values take into account the Government's price-mitigation measures described hereafter.

Table 2. 2021-2019 'regulated' energy prices' difference during winter [6], [7]

Energy carrier	2021-2019 difference
LPG	11%
Gasoil	-3%
Biomass	-2%
Natural Gas	-14%
Electricity ('flat tariff') <sup>5</sup>	48%
Electricity ('time-change tariff') <sup>4</sup>	113%

It can be noticed that the higher price increase was the one related to the electricity time-change tariff, which was much cheaper in 2019. On the other hand, the regulated natural-gas price cap set by the Government in October 2021 has resulted in a decrease of the regulated natural gas tariff in 2021 compared to 2019.

Regarding the "free-market", the analysis of the overall trend is trivial because every supplier can offer several tariffs. However, it should be highlighted that specific suppliers have proposed new tariffs that apparently guarantee a fixed electricity price for up to two years.

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<sup>3</sup> According to the Spanish building regulation, the winter months (heating season) are from January to May and from October to December. However, the presented data assume that the average price in November and December will be the same as in October.

<sup>4</sup> Regulated prices for electricity, natural gas and LPG. The prices used for gasoil and biomass are based on average price statistics "at delivery point".

<sup>5</sup> Before June 2021, there were two main regulated market tariffs, i.e. 2.0A (no time metering or 'flat tariff') and 2.0DHA (time-of-use or 'hourly discrimination' tariff). The electricity tariff considered for the months after June 2021 is a new time-change tariff (2.0 D) valid for all consumer on the regulated market.

## Which policy responses have been implemented or debated?

The energy prices shown in Table 2 take into account the following government measures<sup>6</sup> introduced to mitigate the price hikes [8], [9], [10]:

- Electricity:
  - Reduction of VAT from 21% to 10%<sup>7</sup> (Royal Decree-Law 12/2021 of 24 June 2021, effective from the end of June).
  - Reduction of electricity tax from 5.11% to 0.5% (Royal Decree-Law 17/2021 of 14 September 2021, effective from mid-September).
  - Reduction of demand charges (96% reduction, Royal Decree-Law 17/2021 of 14 September 2021, effective from mid-September)
- Natural gas:
  - Cap on the regulated price of natural gas (TUR) for winter 2021/2022 (Royal Decree-Law 17/2021 of 14 September 2021, Resolution of 26 September 2021, effective from the end of September)

Moreover, the Royal Decree Law 23/2021 [9] increased the assistance programs' coverage (described in [6]), both for the electricity social tariff and the Thermal Social Allowance (TSA, introduced in 2018 to support heating, domestic hot water and cooking costs in Spanish vulnerable households). Specifically, the discount on the electricity bill granted by the social tariff to vulnerable consumers was increased from the current 25% to 60% and from 40% to 70% for the severely vulnerable - until 31 March 2022. On the other hand, the budget for the TSA was doubled in 2021 (the starting budget earmarked for 2021 was €100m), reaching 202.5 million euros. Considering the number of TSA beneficiaries in 2021 (1.22 million households), the average allowance has been €166 per household.

Additionally, the Royal Decree Law 17/2021 [8] enhanced the moratorium of four months (after the first demand for payment) to disconnect the electricity supply of vulnerable consumers by adding six months with a "minimum vital supply" proxy, which consists of a electricity supply with a maximum power of 3.5 kW.

Finally, the bill that cut 'windfall profits' to electricity companies (CO<sub>2</sub> allowances in the remuneration of power plants that do not bear these costs, mainly hydroelectric and nuclear plants) has been approved in the chamber of deputies.

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<sup>6</sup> It includes only price mitigation measures that directly impact the energy bill.

<sup>7</sup> VAT is reduced from 21% to 10% for consumers with contracted power up to 10 kW if the average market price exceeds 45 euros per MWh. The government reinforces the degree of protection for severely vulnerable consumers, applying 10% VAT regardless of the market price and the contracted power.

## **What do we know on the current impacts in terms of energy poverty?**

A recently published study [6] proposes a methodology to estimate the Spanish winter energy poverty (WEP) share based on the EPOV 2M approach (see Table 1) using the required thermal energy expenditure of vulnerable households. Moreover, that work assesses the impact of the Thermal Social Allowance (TSA). The latter calculation was performed for 2019, but the same authors have replicated the calculation for 2021 [7] including the new structure of the electricity bill, the average energy prices for 2021 and the short-term measures implemented (described above). In 2021, despite the price-mitigation measures implemented by the government, the average-household's required thermal energy expenditure increased by 10% compared with its value in 2019 (2019: €1057; 2021: €1159). Moreover, the WEP share in the vulnerable consumers sample is expected to increase with respect to the same year (1.2% increase in vulnerable consumers affected by energy poverty during winter, thus reaching 97%). The good news is that the increase in the TSA budget will at least match the mitigation impact on WEP achieved in 2019 (-1%).

## **What are the impacts on supply conditions and suppliers?**

2021 has been a critical year both for the change in the Spanish electricity tariff structure implemented in June<sup>8</sup> [11] and the energy price crisis that is still ongoing. These facts have been causing changes in contracts and supply conditions that have particularly affected the most vulnerable groups of the population, which often lack of knowledge on their energy bills. In order to increase the awareness on these issues, the Government decreed that 'consumers must be given adequate notice in a transparent and comprehensible manner of any intention to modify the terms of the contract and informed of their right to withdraw from the contract free of charge when they receive notice'. Moreover, they should 'be notified directly by their supplier of any price revision resulting from the planned conditions, at least one month in advance of its implementation in a transparent and comprehensible manner' [9].

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<sup>8</sup> In the new structure, the amount of two of the invoices of the electricity bill, i.e. regulated system access fees and the demand charges, depends on in which of the regulated three day-bands the electricity is being consumed: peak hours (from 10 a.m. to 2 p.m. and 6 p.m. to 10 p.m.), flat or standard hours (from 8 a.m. to 10 a.m., from 2 p.m. to 6 p.m. and in the evening from 10 p.m. to midnight) and off-peak hours (from midnight to 8 a.m. on weekdays and the twenty-four hours of weekends and public holidays).

On the other hand, the escalation in prices has triggered arrears among small suppliers, which may be forced to send their consumers to other companies that are more resistant to market shocks. For example, at the beginning of October, the Ministry for the Ecological Transition and the Demographic Challenge announced the start of procedures for disqualification and transfer of customers of two small electricity suppliers<sup>9</sup>.

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

This energy price crisis has had a controversial impact on the national debate on energy poverty. On the one hand, it has increased the awareness on this social issue both in the political debate and on the public opinion. On the other hand, there is a risk of focusing and identifying energy poverty as a problem resulting (only) from high energy prices. Both aspects are connected with the redundancy of news on the energy price rise, which harks back the global debate on the definition of energy as a universal right, which was deeply analysed in a recent published ENGAGER toolkit<sup>10</sup>.

## **Conclusion**

In 2021, despite the measures implemented by the government, energy poverty is expected to increase. The good news is that the increase in the budget for social allowances and the implementation of price reduction measures will at least alleviate the effects of this energy price increase. However, these palliative measures alone cannot be the solution to energy poverty in the medium and long term, not least because of their high annual cost. They should then be complemented by structural measures (e.g. improving the energy efficiency of housing and introducing a –real- minimum vital supply for vulnerable consumers) to avoid "chronification" of the problem, thus helping vulnerable households to escape from energy poverty.

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<sup>9</sup> <https://www.boe.es/boe/dias/2021/10/05/pdfs/BOE-B-2021-41024.pdf>

<sup>10</sup> <http://www.engager-energy.net/policy-briefs/>

## References

### Sources

- [1] Ministerio para la Transición Ecológica, Estrategia Nacional contra la Pobreza Energética 2019-2024, 2019. [https://www.miteco.gob.es/es/prensa/estrategianacionalcontralapobrezaenenergetica2019-2024\\_tcm30-496282.pdf](https://www.miteco.gob.es/es/prensa/estrategianacionalcontralapobrezaenenergetica2019-2024_tcm30-496282.pdf).
- [2] Ministerio para la Transición Ecológica y el Reto Demográfico, Actualización de indicadores de la Estrategia Nacional contra la Pobreza Energética. Noviembre de 2020, 2020. [https://www.miteco.gob.es/es/prensa/20201106\\_actualizaciondeindicadores2020\\_final\\_\\_tcm30-516466.pdf](https://www.miteco.gob.es/es/prensa/20201106_actualizaciondeindicadores2020_final__tcm30-516466.pdf) (accessed November 12, 2020).
- [3] Indicators, (n.d.). [https://energy-poverty.ec.europa.eu/energy-poverty-observatory/indicators\\_en](https://energy-poverty.ec.europa.eu/energy-poverty-observatory/indicators_en) (accessed December 9, 2021).
- [4] Comisión Nacional de los Mercados y la Competencia (CNMC), Informe De Supervisión De Los Cambios De Comercializador –Cuarto Trimestre 2019, 2019. [www.cnmc.es](http://www.cnmc.es).
- [5] C.N. de los M. y la C. (CNMC), CNMCData, (2021). <http://data.cnmc.es/datagraph/> (accessed December 7, 2021).
- [6] R. Barrella, J.I. Linares, J.C. Romero, E. Arenas, E. Centeno, Does cash money solve energy poverty? Assessing the impact of household heating allowances in Spain, *Energy Res. Soc. Sci.* 80 (2021) 1–18. <https://doi.org/10.1016/J.ERSS.2021.102216>.
- [7] R. Barrella, ¿Hasta dónde está llegando el bono térmico para paliar la Pobreza Energética?, VII Semin. Interdiscip. La Cátedra Energía y Pobr. (2021).
- [8] Jefatura Del Estado, Real Decreto-ley 17/2021, de 14 de septiembre, de medidas urgentes para mitigar el impacto de la escalada de precios del gas natural en los mercados minoristas de gas y electricidad., 2021.
- [9] Jefatura Del Estado, Real Decreto-ley 23/2021, de 26 de octubre, de medidas urgentes en materia de energía para la protección de los consumidores y la introducción de transparencia en los mercados mayorista y minorista de electricidad y gas natural, 2021.
- [10] Jefatura del Estado, Real Decreto-ley 12/2021, de 24 de junio, por el que se adoptan medidas urgentes en el ámbito de la fiscalidad energética y en materia de generación de energía, y sobre gestión del canon de regulación y de la tarifa de utilización del agua, 2021.
- [11] Comisión Nacional de los Mercados y la Competencia (CNMC), La nueva factura de la luz | CNMC, (2021). <https://www.cnmc.es/la-nueva-factura-de-la-luz> (accessed May 17, 2021).

### Web links

(see endnotes)