# K4K Food4Thought:

## The "Iberian exception" does not save vulnerable consumers as much as you might think

On 14 May 2022, the Spanish government published an executive order which implements the "Iberian exception", as agreed in principle with the European Commission, and which aims to limit the impact of the price of natural gas on power prices. This note provides an assessment of this new Royal Decree-Law ("RDL") 10/2022. (Another Food4Though published on 23 April 2022 (https://www.k4kadvisory.com/_files/ugd/c7c811_60f0ebc357724dc89ff124e6fb7d558f.pdf) discussed theoretical aspects. Here we present a quantitative assessment.)

### Defining the need

With a duration of 12 months or until 31 May 2023 at the latest, this measure is expected to benefit all consumers, especially households covered by the regulated tariff (Small Consumer Voluntary Price or "PVPC") and industry with tariffs indexed to pool prices. Other consumers on fixed rates should notice a reduction in tariffs once they renew their contracts. Thus, the measure should help contain the escalation of prices and inflation and, above all, will act as a firewall against the rise in gas prices due to the war in Ukraine, although the price of natural gas had been rising since well before the outbreak of hostilities.

### Limit and expected impact

Broadly speaking, the measure uses a mathematical formula to reduce the offers submitted by merchant natural gas-fired combined cycle and coal-fired plants as well as gas-fired cogeneration plants without a regulated remuneration regime ("the Eligible Projects") into the wholesale spot electricity market, also known as the "pool", based on a subsidy calculated in €/MWh(e). The subsidy for the next day D+1 will be defined as the difference between the price of gas on the Iberian Gas Market ("MIBGAS") for day D+1 and a reference gas price that will start at 40€/MWh(f) during the first six months and increases by 5€/MWh(f) per month until ending at 70€/MWh(f).

The only way to explain how this measure will work in practice is to use a numerical example. Table 1 below uses some representative figures to estimate the benefit to consumers whose energy costs are indexed to the pool price. For example, if the MIBGAS price were 84.9€/MWh(f) (equivalent to the MIBGAS price for 2022Q3 on 16th May) then Eligible Projects would receive a payment of 81.6€/MWh(e) (=(84.9-40)/0.55). (Although we are still waiting for the green light from the EC, we are going to assume that the first month of operation of this measure will be June 2022.)

Let's assume that the pool price drops by the same amount. We know that the price of electricity depends mainly on the price of natural gas and CO2. Using 84.9€/MWh(f) and 90€/tCO2 respectively, the mechanism will leave the average pool price at 116€/MWh(e) during 2022Q3 compared to the 206€/MWh(e) that would be recorded in its absence, a drop of almost 90€/MWh(e).

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**Table 1: Calculating the benefit to users whose energy costs are indexed to the pool price**

| | Variable | Calc | 2022Q3 | 2022Q4 | 2023Q1 | 2023Q2 [1] |
|---|---|---|---|---|---|---|
| a | Demand (GWh) | Based on REE 2021 figures | 61,903 | 60,075 | 60,797 | 55,142 |
| b | Generation CCGT+coal (GWh) | Based on REE 2021 figures | 11,748 | 15,830 | 14,523 | 13,172 |
| c | Gas price without cap (€/MWh(f)) | MIBGAS as of 16 May | 84.9 | 90.7 | 91.2 | 67.3 |
| d | Gas price for subsidy calc (€/MWh(f)) | RDL 10/2022 | 40.0 | 41.7 | 55.0 | 67.5 |
| e | Value of gas subsidy (€/MWh(e)) | =(c-d)/0.55 | 81.6 | 89.2 | 65.8 | 0.0 |
| f | Value of gas subsidy (€000) | =b*e | 958,815 | 1,412,162 | 955,365 | 0 |
| g | % demand on variable tariff | Estimate | 45.0% | 60.0% | 75.0% | 90.0% |
| h | Gas subsidy surcharge (€/MWh(e)) | =f/(a+g) | 34.42 | 39.18 | 20.95 | 0.00 |
| i | Pool price *without subsidy* [2] (€/MWh(e)) | =c/0.5+0.4*90 | 205.78 | 217.46 | 218.36 | 170.50 |
| j | Pool price *with subsidy* [2] (€/MWh(e)) | =d/0.5+0.4*90 | 116.00 | 119.33 | 146.00 | 171.00 |
| k | Change in pool price (€/MWh(e)) | =j-i | -89.78 | -98.13 | -72.36 | 0.00 |
| l | Pool price *with subsidy* + gas surcharge (€/MWh(e)) | =j+h | 150.42 | 158.51 | 166.95 | 170.50 |
| m | Net energy cost saving (€/MWh(e)) | =i-l | 55.36 | 58.95 | 51.41 | 0.00 |
| n | % change in energy cost | =m/i | -26.9% | -27.1% | -23.5% | 0.0% |

[1]: The measure ends 31 May 31 2023 but we show data for the entire quarter. In any case, the MIBGAS future price is below the reference price in 2023Q2.

[2]: Assuming that CCGT sets the price directly or indirectly in all hours.

*Source: Various, K4K calcs.*

The cost of this measure will be the sum of payments awarded to Eligible Projects. If we use the generation of all CCGT and coal plants in 2021Q3 as a reference point (11,748GWh), the quarterly cost would be around €959 million (=11,748*81.6).

This cost will be "distributed among that part of the Iberian demand that will benefit directly from it, either because it acquires energy at a price directly referenced to the wholesale market price or because it has signed or renewed contracts taking into account the beneficial effect of this measure on wholesale prices" (based on RDL 10/2022, page 67941). At the end of October 2021, only 41% of the demand was subject to supply contracts indexed to the market price, including all PVPC and 48% of industry (see table 38 in https://www.cnmc.es/sites/default/files/3981989.pdf). If we use the demand for 2021Q3 as a reference (61,903GWh) and 45% of them pay the surcharge, it would cost them 34.4€/MWh(e) (=959/(61.90*45%), which compares to 15.5€/MWh(e) if all demand paid for the surcharge. Thus, all those covered by the PVPC or contracts indexed to the pool price would experience a reduction in bills of 55.4€/MWh(e) in 2022Q3 (=89.8-34.4).

For other consumers with fixed price contracts there will be no immediate discount. It is possible that there will be rebates when they renew their contracts after taking into account the drop in pool prices caused by this measure. But you have to remember that these will then also have to contribute to surcharge. (That's why the percentage of demand in variable rates in Table 1 increases over time.)

In the last quarter, the subsidy has no effect since the future gas price in MIBGAS is below the reference gas price. In the first three quarters we can see very significant drops in the pool price but the net impact on the cost of energy is only between 51 and 59€/MWh(e), i.e., a reduction of no more than 30% relative to the levels without the application of the RDL. Of course this will help, but you have to wonder if this relatively small benefit pays off the investment in political capital and regulatory uncertainty.

**Exports to France**

Meanwhile, if the pool price falls in Iberia – since Portugal will adopt the exact same measure (see Decreto-Lei n.º 33/2022 de 14 de maio, https://data.dre.pt/eli/dec-lei/33/2022/05/14/p/dre/pt/html – and users on the other side of the Pyrenees continue to pay a higher price, France will buy as much electricity as possible from Spain. (On other occasions, we have said that for the rest of the EU this measure is nothing more than a way of exporting gas-by-wire, a way of helping the rest of Europe to reduce their dependence on Russian gas.) This has caused some concern as Spain can only export more to France if Spain increases the generation from Eligible Projects at home and, with this, the cost of the subsidy.

But we shouldn't worry. RDL 10/2022 allows the additional value of the net congestion rents obtained in the monthly capacity allocation auctions in the interconnection with France to be used to reduce the surcharge. The value of these rents is defined by what a trader in France would be willing to pay to buy energy in Spain to (re)sell in France. This will be equal to the expected difference between in prices in France *without the subsidy* and in Spain *with the subsidy*.

If the price of natural gas were the same in France and Spain and assuming that the gas-fired plants are similar, the price of electricity in France would be very similar to the price in Spain *without the subsidy*. Then, most likely, the value of this difference would be equal to the value of the subsidy. By cancelling out the subsidy paid to exporting facilities, the surcharge to vulnerable Spanish consumers will not be affected.

However, if the cost of gas in France is higher than in Spain, then the price of electricity in France will be higher than in Spain *without the subsidy*, which can lead to a surplus that can be used to lower the surcharge for consumers whose energy costs are indexed to the pool price. If the difference between French and Spanish gas was 12.5€/MWh(f) (=TTF 2023Q3-MIBGAS 2023Q3), it would lead to French electricity costing 24.9€/MWh(e) (=12.5/0.5) more than the price in Spain *without the subsidy*. The trader would pay this extra amount to access the interconnection line. If quarterly exports in 2023Q3 were 6,624GWh (=3GW*2,208 baseload hours), assuming a maximum baseload flow of exports, an extra €164 million could be recovered, which can be used to reduce the surcharge in Spain. This would be enough to lower the surcharge by 5.9€/MWh(e), i.e., improve the energy component in the tariff from 150.4€/MWh(e) to 144.5€/MWh(e) (=150.4-5.9). In the coming quarters, as MIBGAS and TTF prices get closer, this compensation will not help much. At least we can conclude that Spanish consumers are unlikely to subsidise French consumers and vice versa.

**Entry into force**

The measure will come into force once it is formally authorised by the European Commission. At the same time, the electricity companies will have to report on their fixed and variable contracts, in order to initially apply the measure only to the latter, and the Spanish market operator OMIE and system operator REE will have to adapt their market clearing systems and operations. A ministerial order from the Minister for the Ecological Transition and the Demographic Challenge will be needed to authorise the start of the measure.

**Towards a new PVPC**

At last this RDL 10/2022 includes a mandate to resolve the fundamental problem of the regulated tariff in Spain. The PVPC calculation methodology must incorporate references based on a basket of futures products and the daily and intraday market. This should introduce greater price certainty, incentivise energy efficiency, storage and demand side management. The new PVPC is expected to start being applied from the beginning of 2023.

**And finally, a "correction" for the assets under the Specific Remuneration Regime**

RDL 6/2022 modified article 22 of RDL 413/2014 so that the adjustment for deviations from the market price from 2023 and thereafter was annulled. RDL 10/2022 reincorporates it with one important change: instead of basing the adjustment on the average annual price in daily and intraday markets for each regulatory semi-period, the weighted average of a basket of electricity market prices will be used. For 2023, for example, the weighting coefficients will be 0.75 for the average annual price of the daily and intraday market, 0.15 for the average price of annual futures, 0.025 for the average price of quarterly futures, and 0.0 for the average price of monthly futures.

We do not yet know the weights for 2024 and 2025 except that the weighting of futures market prices in the price basket "will be equal to or greater than 50% and 75%, respectively" (based on RDL 10/2022, page 67176). The specific values will be set by the Minister for the Ecological Transition and the Demographic Challenge, with the prior agreement of the Government's Delegate Commission for Economic Affairs, before July 1 of the previous year.

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Madrid, 19 May 2022.