The "tariff shield" on electricity and gas prices substantially cushioned the rise in inflation in February

The "tariff shield" implemented in October on gas and electricity prices would appear to have contributed to reducing the year-on-year change in consumer prices by 0.3 points in December and January, then by 1.5 points in February. This assessment was made by comparing the values observed for the consumer price index (CPI) with what they could have been if no price shield had been in place, taking into account recent publications by the French Energy Regulation Commission (CRE) and specific assumptions on market offer prices.

To limit energy inflation, a measure known as the "tariff shield" was adopted in autumn 2021, alongside other measures relating to income ("inflation allowance", "energy cheque"). This "tariff shield" freezes regulated sales tariffs (TRV) for gas at their October 2021 level at least until June 2022 and limits the half-yearly increase in TRV for electricity applied on 1st February to 4%. In this context, consumer prices of energy products increased by 21.1% year-on-year in February. This rise can be put into perspective by recent publications from the French Energy Regulation Commission (CRE), showing the increase in TRV that would have been applied for gas[1] and electricity,[2] had there been no "shield".

The gas and electricity retail markets include two types of supply offer: offers at regulated sales tariffs (TRV) and market offers. The price of the latter is fixed by the energy suppliers and is subject to competition. TRVs concern about 67% of household electricity consumption and 29% of their consumption of natural gas and mains gas.[3] These tariffs are offered at regular intervals by the CRE, every month for gas and twice a year (in February and August) for electricity.

According to the usual calculation rules, gas TRVs would have increased gradually by 66.5% including VAT between October 2021 and February 2022,[1] if there had been no tariff shield. Electricity TRVs would have increased by 35.4% including VAT on 1st February 2022.[2] In addition, as market offers are partly indexed on the regulated tariffs, the prices of these offers would probably have been more dynamic, had there been no "shield", than what has been observed since it was put in place. The assumption adopted here is that in the absence of a "shield", the market offer prices for gas and electricity would have continued their recent momentum in relation to the regulated tariffs. (► **Methodology box**).

Under these assumptions, without the "tariff shield" headline inflation would have been higher than the inflation observed from November (year-on-year change in prices would have been 2.9%, against 2.8% observed) and would have reached 5.1% year-on-year in February (i.e. 1.5 points more than observed inflation, ► **Figure 1**). In February, the significant increase in the "shield" effect is explained by the increase in the regulated electricity tariffs by only 4%, much less than the theoretical increase proposed by the CRE (► **Figure 2**). ●

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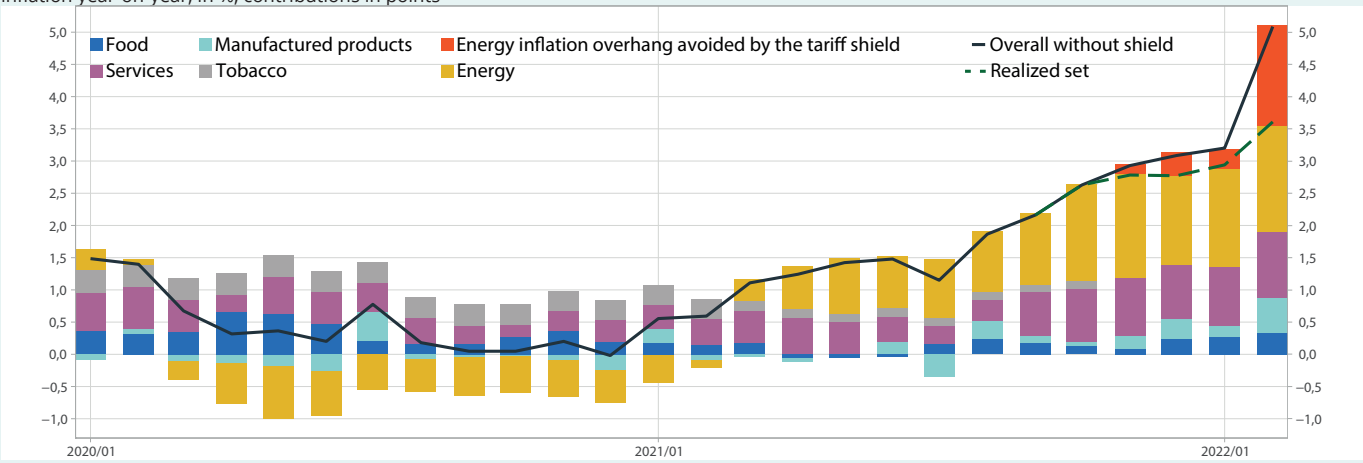
1 Commission de régulation de l'énergie, 10 February 2022, Publication des barèmes applicables pour les tarifs réglementés de vente de gaz naturel – Février 2022.
2 Commission de régulation de l'énergie, 1st February 2022, Évolution des tarifs réglementés de vente d'électricité : hausse de 4 % TTC au 1er février 2022.
3 Commission de régulation de l'énergie, 30 September 2021, Observatoire des marchés de détail du 3e trimestre 2021.

► 1. Estimated counterfactual inflation without the tariff shield and headline inflation ultimately observed
inflation year-on-year, in %, contributions in points



How to read it: with no measures limiting energy price increases, headline inflation would have been 5.1% year-on-year in February, against 3.6% actually observed. Energy would have contributed around 3.2 points to this counterfactual inflation, against 1.6 points in reality.
Source: INSEE calculations

► 2. Breakdown of the "tariff shield" effect on headline inflation

in points

	Nov-21	Dec-21	Jan-22	Feb-22
Effect of "tariff shield" on headline inflation	–0.1	–0.3	–0.3	–1.5
including contribution linked to gas	*–0.1*	*–0.3*	*–0.3*	*–0.5*
including contribution linked to electricity	*0.0*	*0.0*	*0.0*	*–0.9*

Note: sums have been calculated on unrounded components, and may therefore differ slightly from the sums of the rounded components.
Source: INSEE calculations

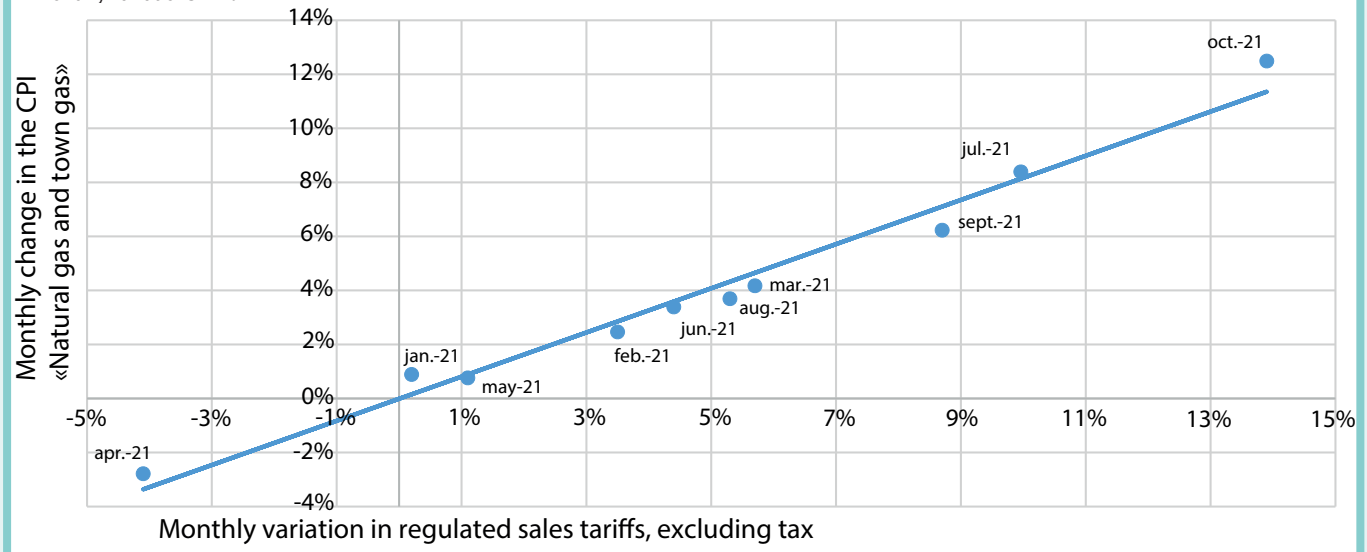
Methodology: how to model changes in the market offer price with no tariff shield in place?

The methodology used in this Focus consists in estimating the change in gas and electricity consumer prices, in a situation where the "tariff shield" on gas and electricity TRVs has not been introduced. The possible consequences of this measure on prices other than those of gas and electricity are considered negligible and hence not taken into account.

With regard to gas, we estimate the price elasticity between the monthly change in the gas CPI and the monthly change in its TRV over the recent period. In order to be as close as possible to recent developments, the estimation period runs from January to October 2021 for gas. In the absence of available data for this period on TRV including VAT, we consider change in TRV excluding VAT. Elasticity is estimated at 0.82 (► **Figure 3**) suggesting that over this period, the gas CPI is slightly less dynamic than the TRV or, in other words, that the market offer prices experienced smaller fluctuations than the TRV. In addition, the CRE publications giving the scale applicable for natural gas TRVs indicate the change that would have happened since October 2021 to TRVs excluding VAT (and also including VAT) if the tariff shield on gas were not present. We can therefore deduce the associated change in the gas CPI, using the elasticity estimated previously, and on the assumption that it continues to apply.

► 3. Relationship between change in the "Natural gas and mains gas" consumer price index and variations excluding VAT in the regulated sales tariff for gas

monthly variations in %



Source: CRE, INSEE calculations

The method is the same for electricity prices: taking into account the twice-yearly increase in the electricity TRV, we estimate (between January 2019 and February 2022) price elasticity between the half-yearly changes in the electricity CPI and in its TRV excluding VAT. In this case, elasticity is estimated at 1.02: the dynamics of market offer prices are therefore very similar to those of the TRVs. We then deduce, as in the case of gas, the change that there would have been in the electricity CPI in February 2022 had there been no "tariff shield", taking into account the change suggested by the CRE in this situation (and assuming that the estimated relationship remains valid).

The advantage of this method is that it provides directly the probable change in the gas and electricity CPIs in the absence of a tariff shield, associated with that of their respective TRVs, with no prior data on market offer prices and assuming that the relationships estimated above are verified. Nevertheless, given the breakdown of gas and electricity consumption between contracts subject to TRVs and those covered by market offers, we can deduce the underlying market offer prices when this "counterfactual" CPI is calculated in the absence of the tariff shield (► **Figure 4**). For gas, the average market offer price would thus have increased by about 55% between October 2021 and February 2022 (compared to 5.5% with the tariff shield); for electricity, the average market offer price would have increased by 38% between August 2021 and February 2022 (compared to +4.5% when the rise in TRV is limited to 4%). ●

► 4. Assumptions adopted for gas and electricity prices

variations monthly in %

	Oct. 21	Nov.	Dec.	Jan. 22	Feb.
Changes observed					
Electricity consumer price index	0.2	0.7	–0.2	0.8	2.5
"Natural gas and mains gas" consumer price index	12.5	1.9	1.2	0.9	–0.1
Estimated counterfactual changes in the absence of tariff shield					
Electricity consumer price index	0.2	0.7	–0.2	0.8	33.9
"Natural gas and mains gas" consumer price index	12.5	17.3	17.0	–2.5	18.1

INSEE estimations

Source: CRE, INSEE calculations