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# Macroeconomic Effects of Energy Price Control Measures in Bulgaria

**Addendum to the Regulatory Insight Report**



Sofia University St. Kliment Ohridski, 2024

FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

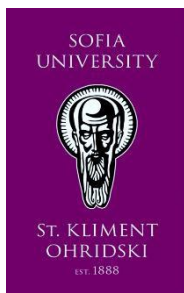
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This addendum supplements the regulatory insight report  
[‘Charting a Course Through the Energy Crisis: Assessing Bulgaria’s  
Response to Soaring Prices’](#)

Faculty of Economics and Business Administration, Sofia University  
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# Macroeconomic Effects of Energy Price Control Measures in Bulgaria

The macroeconomic effects of the energy price control measures for non-household consumers were assessed using a macroeconomic simulation model. The model allows us to track the responses of key macroeconomic variables to policy shocks such as interventions aimed at controlling energy prices.

The assessment followed a what-if setting; thus, it was based on the definition of two scenarios: a baseline scenario and an alternative scenario. In the baseline scenario, policy interventions are in place; correspondingly, energy prices are lower than those implied by market conditions. In the alternative scenario, these interventions are absent; correspondingly, prices are uncontrolled and follow market development. The differences in the values of the tracked indicators under the two scenarios represent measures of the net effects of the policy interventions. It is noteworthy that these net effects are consistent with a ceteribus paribus setup, that is, they measure the influence of the implemented policies under the assumption that all other influences are isolated.

The following two main assessment parameters were used. First, it considers the following spending amounts to finance the policy interventions on an annual basis: EUR 437.9 million in 2021, EUR 2.474 billion in 2022, and EUR 463.7 million in 2023. Second, it addresses the effective annualised reductions in energy prices achieved by the measures: 8.28% in 2021, 46.93% in 2022, and 0.45% in 2023. The model evaluates the simultaneous operation of the two components. The period covered by the assessment spans 2021 to 2025. Two additional years beyond the horizon of the measures were included to explore the possibility of a longer-term duration of the effects and to potentially capture the dynamic implications of interventions.

Figure 1 presents the cumulative net effects on nine selected macroeconomic indicators. Specifically, the effect on real<sup>1</sup> GDP has been positive, reflecting a surge in demand due to the increased quantity of money in the economy and the ensuing increases in real private investment and consumption. However, this effect has been only short-lived and disappeared completely immediately after the cessation of the measures. Nevertheless, this has contributed to achieving higher levels of indicators. These levels are not lost, that is, there is no reversal after the end of the measures. As all amounts spent by the government have been in the form of subsidies, they are reflected in the corresponding increases in real public consumption and not in real public investment<sup>2</sup>.

Figure 1: Cumulative net effects of energy price control measures on key macroeconomic indicators



Source: Own calculations

Note: The values of the net effects that are presented reflect the difference between the values of the corresponding indicator in the scenario with support and in the one without support

<sup>1</sup> 'Real' means measured at constant prices. In the present case, real indicators are all measured at 2010 constant prices.

<sup>2</sup> This is why there is no figure panel corresponding to this indicator: the effect on it is zero.

With respect to the labour market, the effects have again been temporarily positive: employment has been higher than it would have been without support. The unemployment rate has been lower than in a scenario without price control measures. Higher aggregate demand and employment, combined with lower production costs due to lower energy prices, have allowed employers to increase labour costs, and the annual average wage has increased. However, unlike the case of the real sector and other labour market indicators, in this case, the amounts spent by the government have contributed to a longer-term upward trend in nominal wages.

Importantly, price control measures have had a considerable effect on the price level measured by the Harmonised Index of Consumer Prices (HICP). Initially, in the first two years of the intervention, the price level was lower than it would have been if the price controls were absent. From 2023 onwards, the boosted aggregate demand and labour market development, combined with continued support in an environment of low market prices, has led to the cancellation of positive price-level impacts. By contrast, this has contributed to a price level that is significantly higher than that in the absence of support.

The net effects on the budget balance were initially strongly negative, contributing substantially to fiscal deficits. Since 2023, higher consumption and price levels have positively affected the budget balance. These effects are expected to decay and eventually vanish after inflation slows down.

In summary, for 2022, the year with the largest support, the cumulative net effects on key macroeconomic indicators are as follows:

- Real GDP was higher by 3.5% compared to the scenario without support
- Real private investment was higher by 7.1%
- Real private consumption was higher by 3.9%
- Real public consumption was higher by 16.7%
- Employment was higher by 7.1%
- The unemployment rate was lower by 3.2 percentage points (p. p.)
- The average wage was higher by 0.8%
- The price level (HICP-based) was lower by 3.2%
- The budget deficit was larger by 5.0 p. p.

The policy implications of these effects are as follows. First, although such measures are intended only for a limited period, they generate effects that last for considerably longer periods. Second, the effects are of a mixed nature: some of them are positive as they lead to short-term boosting of real GDP, investment, employment, etc. Others, at the same time, are negative; for example, price and wage inflation accelerate causing macroeconomic instability, and budget balances deteriorate raising issues

related to financing them. Therefore, the design and implementation of such policy interventions in the future should be calculated cautiously and prudently. Measures leading to short-run demand stimulation should be coordinated with policies aimed at maintaining price stability. The latter is especially important, given the medium-term objective of Bulgaria's Eurozone membership. The design of measures should also be assessed ex ante for potential impacts on non-household consumers at the microeconomic level, considering their size, industry, location, etc. Given that such measures have the potential to cause large but different effects on different markets, regions, and types of firms, they should be tailored precisely regarding time and space and applied only where and when they are truly necessary.