



**EUROPEAN  
DEPARTMENT**

# **JVI Webiner: Practical, Implementable, Targeted, and Cooperative Household (PITCH) Energy Policies**

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# Roadmap

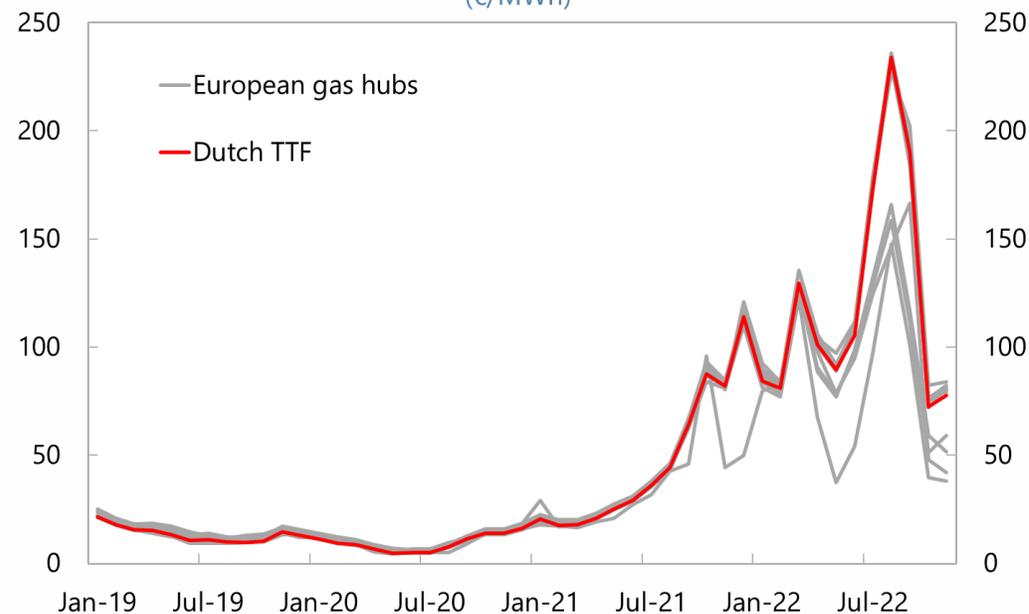
- i. Energy price developments
- ii. Estimated impact of high energy prices on households
- iii. Key principles for relief measures
- iv. Energy-relief measures taken by European governments
- v. Conclusions

# Energy price developments

# Wholesale energy prices are mostly up

Gas and electricity prices rose strongly in the summer—reflecting the Nord Stream 1 disruptions and drought, but have come down in September

Natural Gas Prices at European Gas Hubs  
(€/MWh)

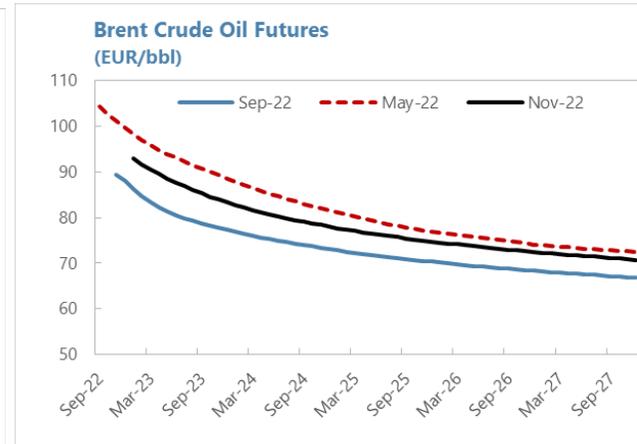
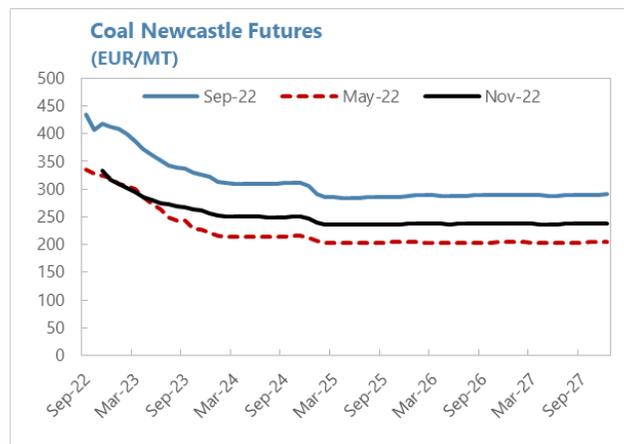
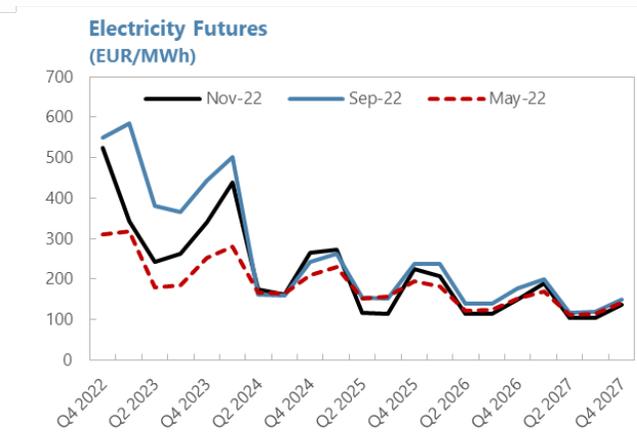
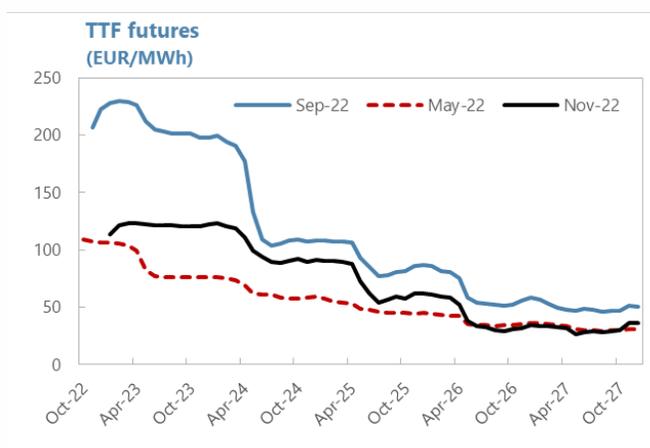


Sources: Bloomberg Finance L.P.; Refinitiv; and IMF staff calculations.

# Futures prices are also up, except for oil

Futures prices for TTF gas and electricity are significantly higher than in May (through mid-2026 and mid-2024, respectively)

Futures prices of coal shifted up, while oil futures have shifted down



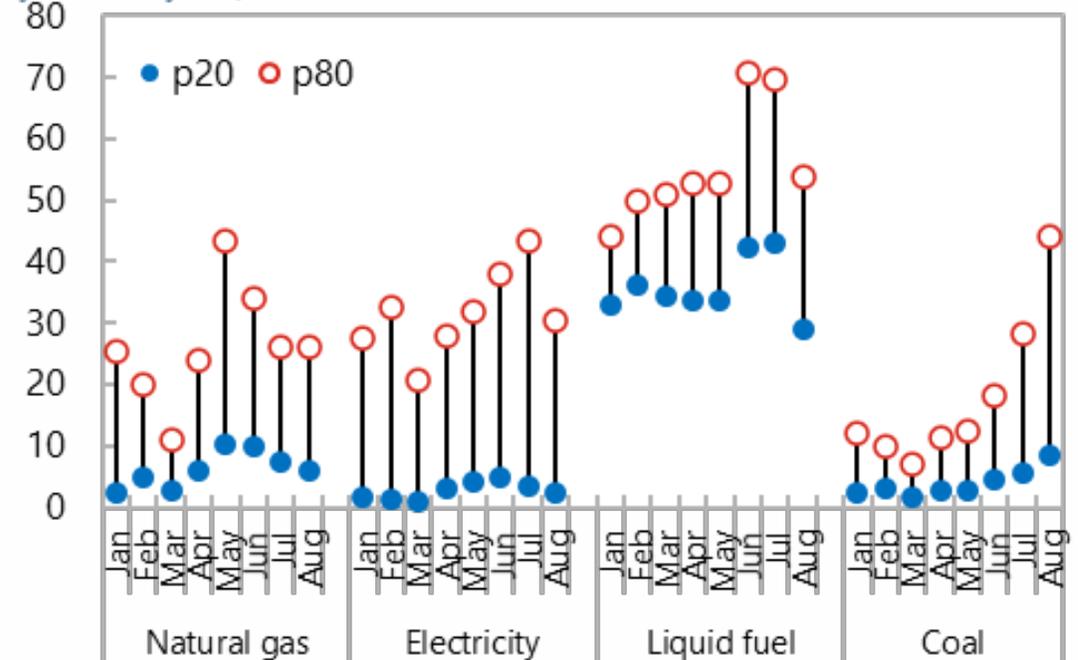
# Passthrough from wholesale to retail prices has increased

In general, pass-through from wholesale to retail prices has increased relative to earlier in the year, but with heterogeneity across countries

Pass-through for gas has declined since June, on the back of large wholesale price fluctuations due to Nord Stream 1 disruptions

## Energy price passthrough

(percent, ratio between HICP inflation and wholesale inflation, year-on-year)

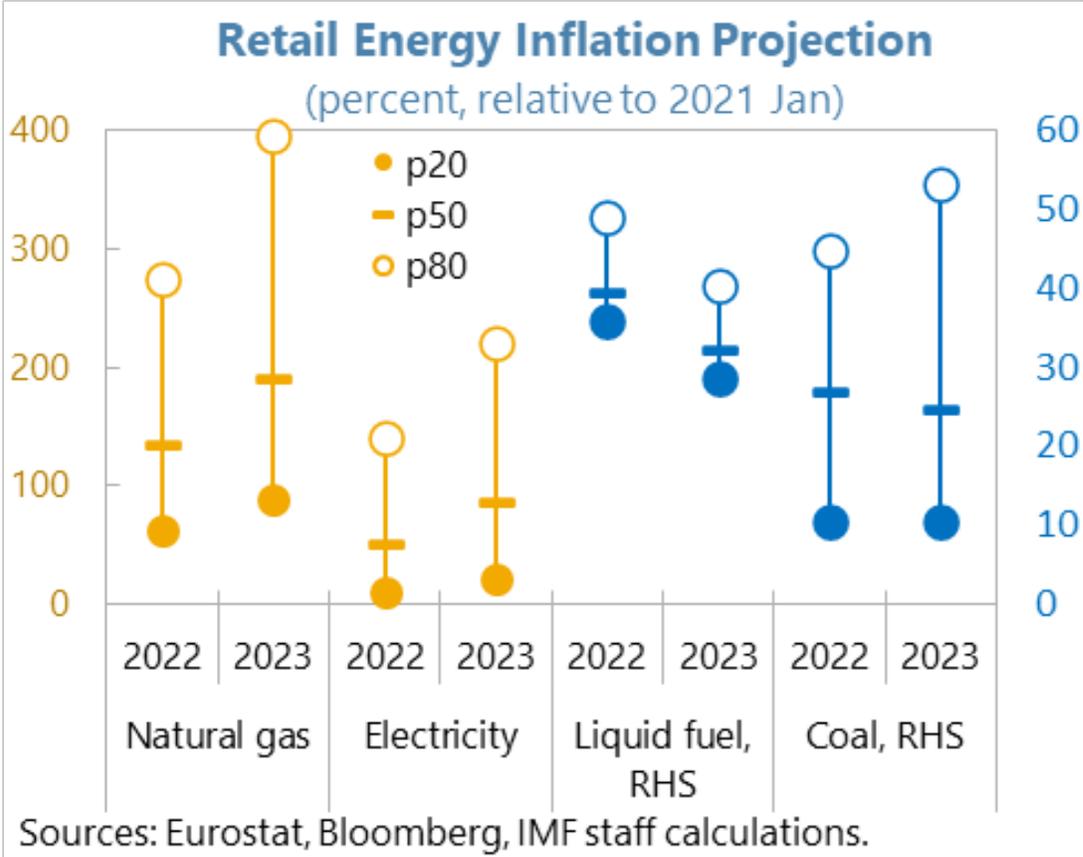


Sources: Eurostat, Bloomberg, IMF staff calculations.

# Inflation projections for retail prices of energy (its complicated)

Retail prices of electricity and especially gas are expected to rise further in 2023 (but less than in 2022)

Oil prices are projected to decline

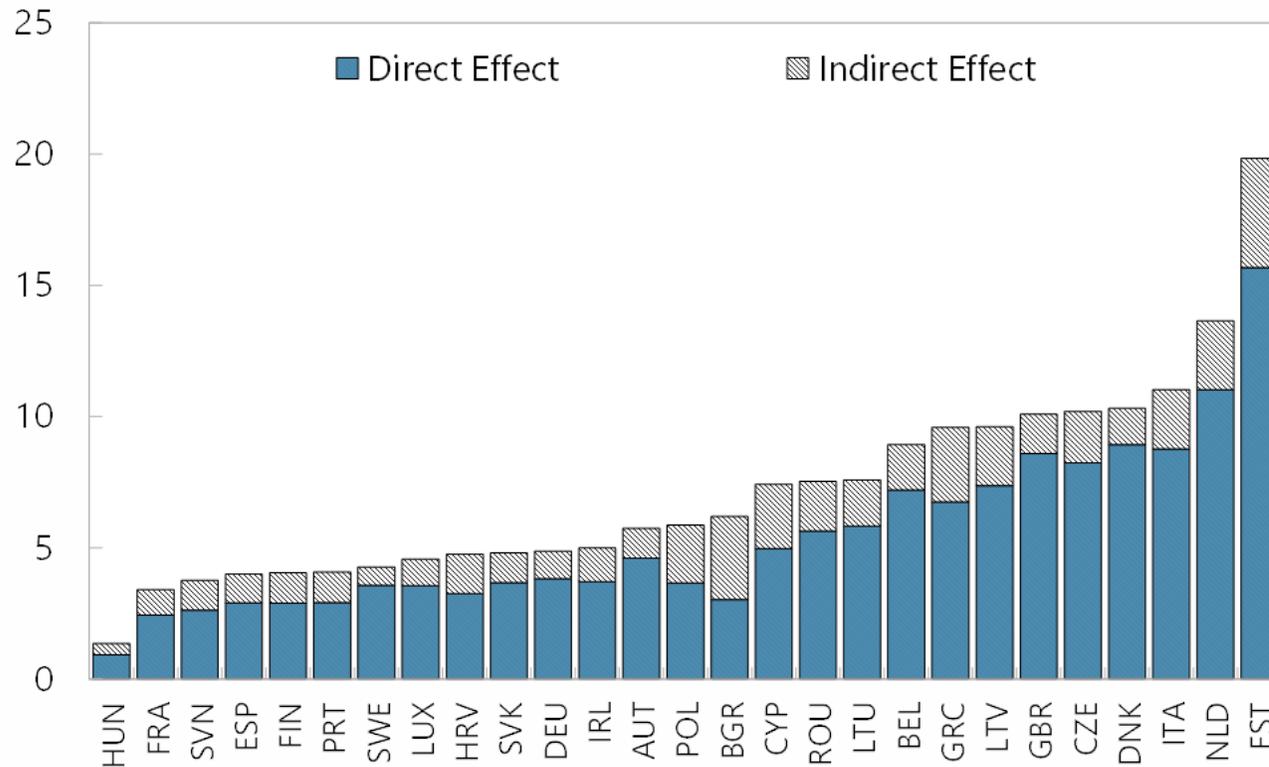


# Estimated impact of high energy prices on households

# Energy bills burdened household budgets in 2022...

## Households' Burden of Higher Energy Prices 2022

(Average; in percent of household consumption)

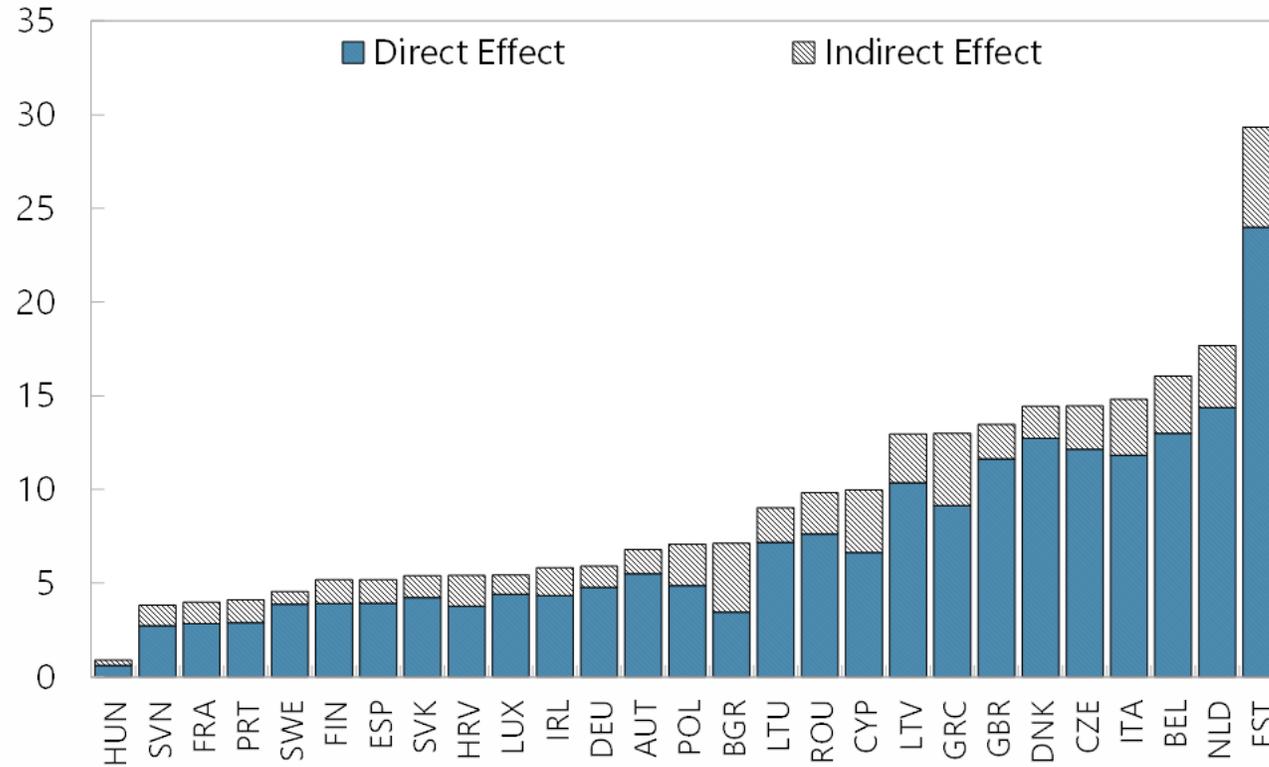


Avg. burden is about 7% higher than in early 2021

# ... the burden will be larger in 2023

## Households' Burden of Higher Energy Prices 2023

(Average; in percent of household consumption)

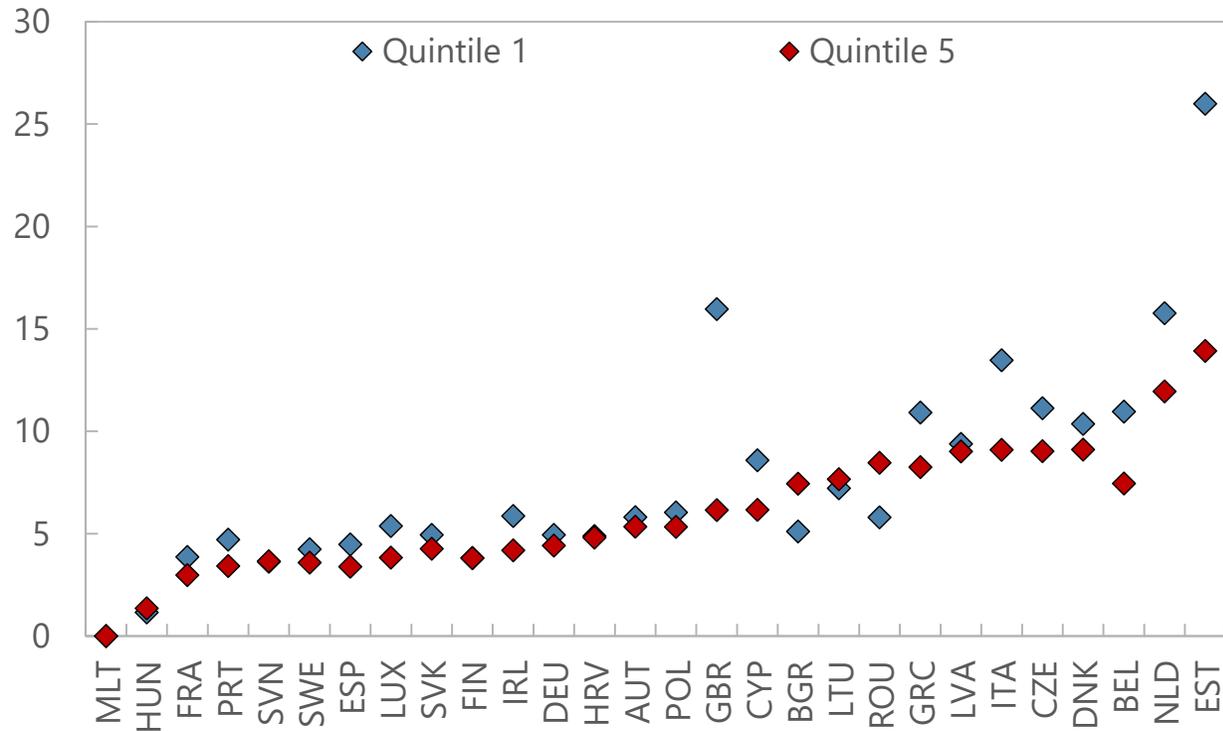


Avg. burden 9.3% higher than in early 2021

# The impact across households is typically regressive

## Household Burden by Quintile

(Percent of Total Household Consumption, 2022)



Source: Bloomberg, ENTSOE, Eurostat, IMF staff calculations.

- In about half of European countries, poorer households are facing much larger losses than richer households – about twice as much in Estonia and the UK
- In countries where the impact has hit the poor especially hard, poorer households spend a larger share of their budget on electricity and gas

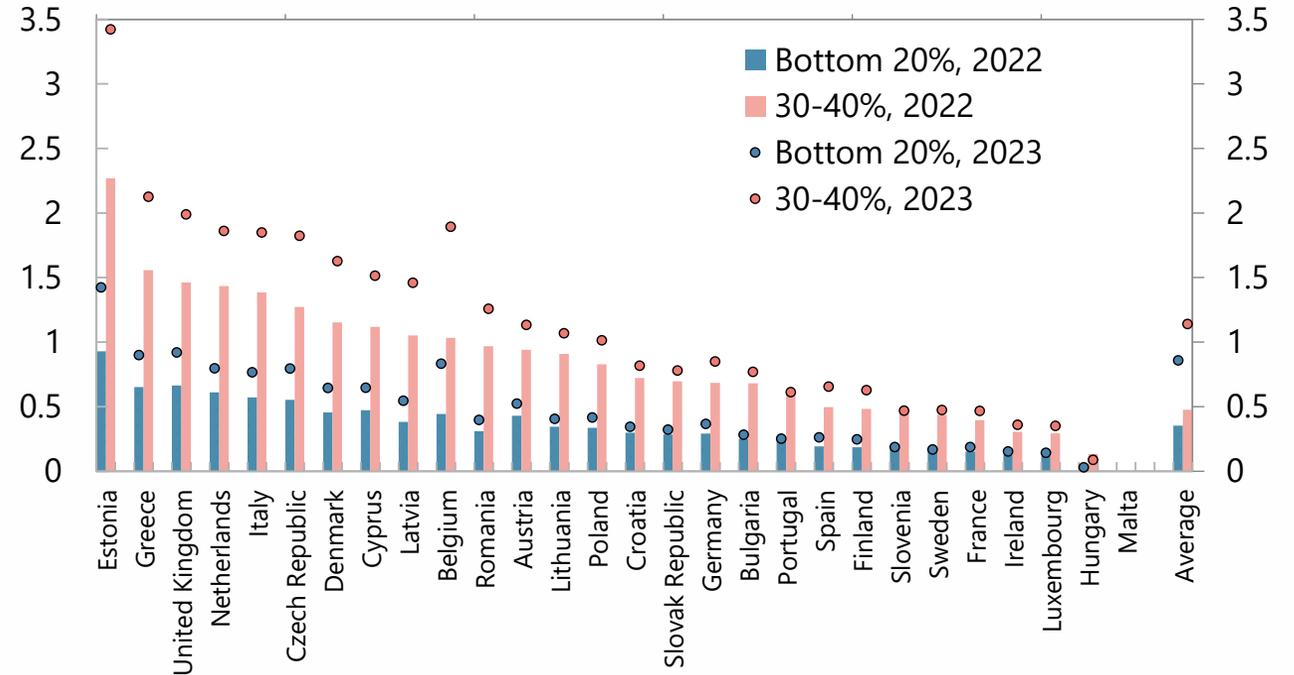
# Compensating the bottom quintiles

Targeted fiscal measures to fully compensate the bottom two income quintiles would cost 0.9/1.1 percent of GDP on average for 2022/23

Substantial variation between countries: >1 percent of GDP for Czechia, Estonia, Greece, Romania, Netherlands, UK, but <0.5 percent of GDP for Finland, France, Hungary, Ireland, and Sweden

Against fiscal cost of broad-based untargeted measures of about 1.8 percent of GDP in 2022-23

Cumulative Revenues to Fully Compensate Lower-Income Households, 2022-23  
(In percent of GDP)



Sources: Bloomberg, ENTSOE, Eurostat, IMF staff calculations.

# Key principles for relief measures

# Relief programs — multiple goals and country specificities

Policy Goals	Country considerations		Examples	Incentivize Energy Conservation	Fiscal Cost	Ease of Implementation
Support vulnerable households	Who are the vulnerable households?	Untargeted & Distorts Prices	Cap on retail prices, VAT reduction, rebate per unit			
Incentivize energy conservation (for energy security and climate)	Russian gas dependency, ability to substitute	Targeted & Distorts Prices	Social tariff			
Limit fiscal costs	Available fiscal space, inflation pressures	Untargeted & Not Distorts Prices	Cash transfers; Lump sum bill discounts			
Ease of implementation	Available information on income and energy consumption, feasible delivery mechanisms, political-economy considerations	Targeted & Not Distorts Prices	Direct aid to a fraction of HH			

# First- and second-best measures

**First best measures:** Allow price signals to operate freely while compensating the vulnerable (i.e., lumpsum relief to vulnerable households)

## **Key challenges in implementing first-best measures:**

- Technical challenges
  - Lack of data or information on household income and/or energy consumption, especially of households are not under social safety programs; imperfect reliability of income-tax data
  - High administrative cost or lack of information on taxpayers' bank account
- Political economy considerations
  - Cost of living crisis raising social tensions (against the backdrop of the war and sanctions), requiring timely relief
  - Easy to pass generous—less targeted—measures, harder to agree on targeting
  - Expectation for the same level of cost-of-living protection as in the pandemic shock (which was likely to be temporary)

## **Second best measures:**

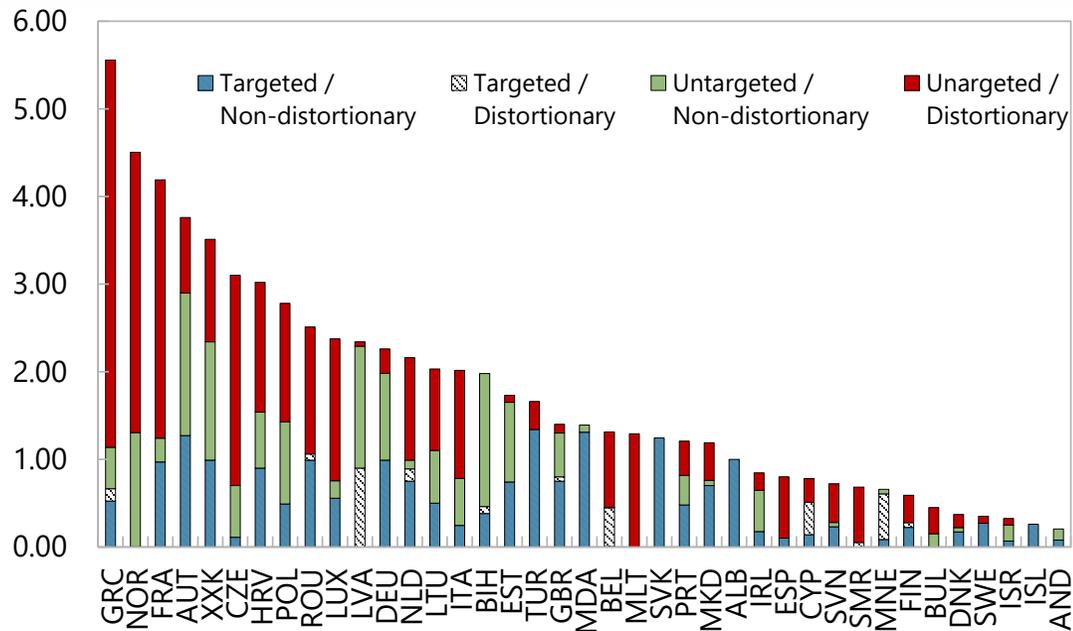
- Rebates or bonuses on energy bills that do not distort the marginal price.
- Block pricing, which distorts the marginal price to a limited degree.

# Energy-relief measures taken by European governments

# Total fiscal costs of HH support measures

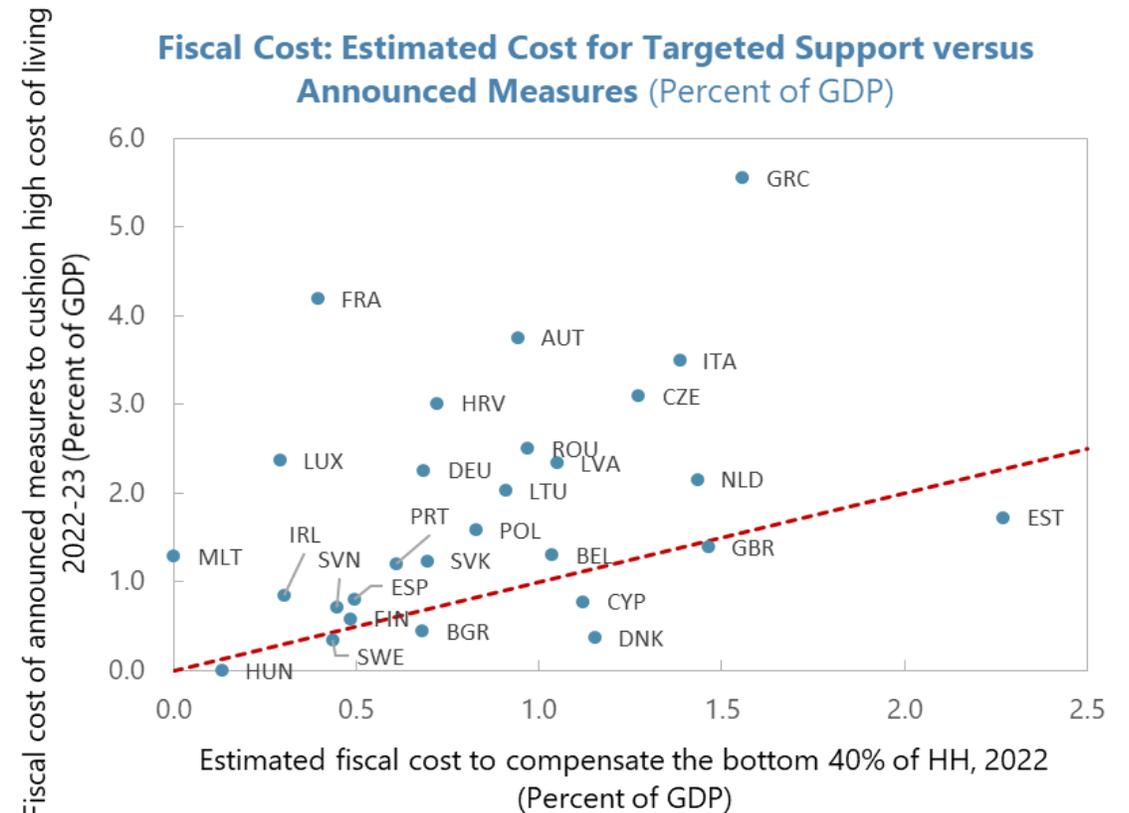
- The average fiscal cost of relief measures in the EU is about 1.8 percent of GDP in 2022-23

Fiscal Cost of Household Support Measures, 2022-23  
(Percent of GDP)



Sources: IMF survey of national authorities' announcements, IMF Staff calculations.

Fiscal Cost: Estimated Cost for Targeted Support versus  
Announced Measures (Percent of GDP)

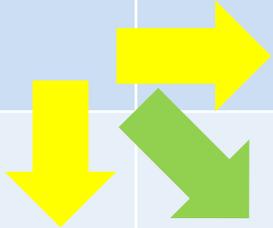


Sources: IMF survey of national authorities' announcements, IMF Staff calculations.

# Cost of household relief measures by type

“Unit” Fiscal Cost in 2022-23  
(Percent of GDP)

	Untargeted	Targeted
Price distorting	0.28	0.08
Keeps price signal	0.18	0.13



**Policy Adoption**  
(Percent of total measures)

	Untargeted	Targeted
Price distorting	34	4
Keeps price signal	19	43

# Good Examples

- Progressive lump-sum transfers for low-income households (Cyprus)
- Lump-sum transfers for lower-income households that are neither covered by a minimum vital income benefit nor receiving pension (Spain)
- Uniform lump-sum transfers that are income-taxable (Germany)
- Lump-sum rebates on energy bills with claw-back from high-income earners through a tax levy (Belgium)
- Expansion in coverage of existing social assistance programs (Belgium, Germany, Luxembourg)
- Energy “price brakes” (Germany)
- Block pricing (Estonia, Austria, Poland)

# Prevalent Not-So-Good Examples

**Capping retail prices of energy products** (Croatia, Estonia, France, Hungary, Poland, Portugal, Romania, Slovenia, UK)

**Lowering various fees/charges on electricity/gas** (Czech, Estonia, Germany, Italy, Latvia, Luxembourg, Portugal, Slovakia)

**Reducing excise duties/VAT rate on energy products** (Austria, Belgium, Bulgaria, Croatia, Czech, Cyprus, Denmark, Finland, Germany, Hungary, Italy, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovenia, Spain, UK)

**Reducing/delaying CO2 tax/carbon pricing** (Germany, Slovenia)

# Conclusion

# Conclusions

EU governments have adopted numerous support measures over the last year, both targeted and untargeted, at a high fiscal cost.

The need to reduce energy use and limit fiscal costs makes it important to shift from broad price-suppressing measures to more targeted support:

- Avoid price caps and tax reductions that suppress price signals. Suppressing the price signal for households is fiscally costly and shifts the burden of demand reduction elsewhere (domestic industries or other countries).
- Price increases should be allowed to pass through to end users, possibly with a short-term price smoothing. This should go hand-in-hand with uniform lump sum income support targeted to low and middle-income households (or a combination of feasible policies in the same spirit).
- If the ideal approach is not possible, governments can use rebates or bonuses on energy bills and/or block tariffs/subsidies while clawing back the support from high income groups.
- The exact coverage and magnitude of the support is a country choice (fiscal space, trade-offs, and social preferences). However, significant differences push the adjustment to countries with lower ability to provide support.
- Need to keep the support broadly fiscally neutral to avoid working against monetary policy. Financing options include a temporary increase in profit taxes and income taxes on the rich.

Ultimately, it is supply-side measures that will make a difference:

- Expand renewables investment
- Improve energy efficiency (e.g., retrofitting)
- Improve connectivity
- Increase the number of LNG terminals

**Thank you!**