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MALTA

SELECTED ISSUES

January 18, 2023

Approved By
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RESPONSES TO THE ENERGY CRISIS IN EUROPE AND MALTA¹

As a response to energy price shocks in 2022, European countries adopted a mix of policies to mitigate their impacts on the economy. This chapter compares Malta's response to that of other European countries and discusses the pros and cons of different policies, in light of the desirable policy priorities in the current context. This chapter also analyses the fiscal and distribution implications of alternative energy pricing policies in Malta, focusing mainly on electricity prices for households.

A. The Maltese Energy Sector

1. The Maltese energy sector has unique features in the European context. Malta is a small island economy and largely disconnected from the European energy network, with a limited diversification in energy sources. With its temperate climate, the average energy consumption per capita in Malta is low, in comparison with its European peers. Imported liquified natural gas (LNG) provides the main source of electricity generation (80 percent of Malta's energy production), followed by other fossil fuels (12 percent), and renewable energy including solar and bioenergy (8 percent). Maltese energy markets are not fully liberalized—state-owned ENEMALTA and ENEMED are the sole electricity and petroleum product companies, respectively, and administratively set retail energy prices. Direct control by the government allows for timely interventions in energy markets. Electricity prices have not been changed since 2014, while gasoline and diesel prices have fluctuated but generally remained very stable.

2. Interconnector with Italy is the only direct link to the EU energy market. An underwater electricity cable connects the two countries' electricity grids, with a capacity of up to 200MW. The interconnector, which became operational in March 2015, accounts for between 15 to 20 percent of Malta's electricity consumption. Electricity supplied through the interconnector is subject to daily market price volatility, which can be substantial.

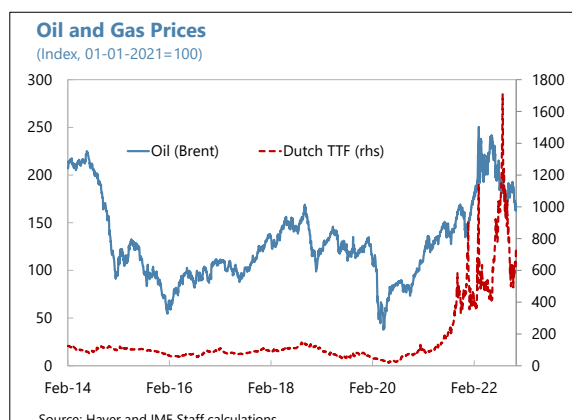
3. The authorities are stepping up their efforts to increase renewable energy production,² but in the near term, Malta will continue to remain vulnerable to energy price shocks. The most relevant upcoming development concerning the Maltese energy mix is the construction of a second interconnector with Italy (expected to be completed by 2025), which will reduce the dependency on LNG and further integrate Malta with the European energy market. The authorities are also actively soliciting investors' interest in large-scale offshore wind farms, which would help reduce the costs of electricity production. However, these efforts are unlikely to materialize into increased energy self-reliance within the next several years.

¹ Prepared by Rafael Barbosa (EUR). Viktor Mylonas (FAD external expert) runs simulations using the Carbon Price Assessment Tool.

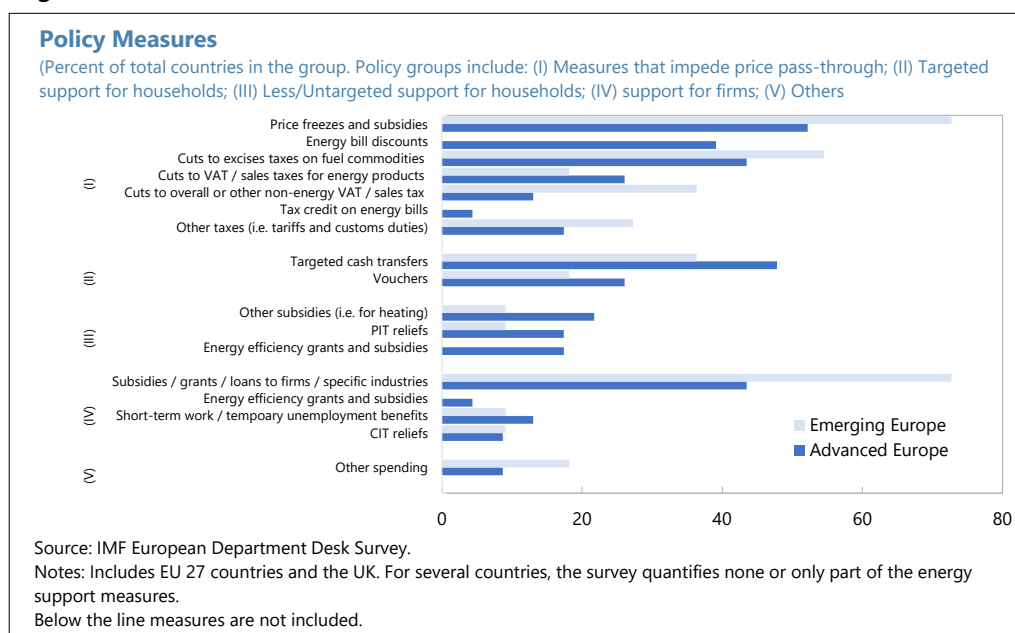
² See Box 2: Renewable Electricity in Malta: A Question of Sources in Central Bank of Malta (2021) for a more comprehensive analysis of the evolution of renewable energy sources in Malta.

B. The Recent Energy Crisis

4. The energy crisis has threatened the post-pandemic recovery. Upward pressures on energy prices have mounted since early 2021. The Russian invasion of Ukraine added to these pressures, with the Brent price increasing by about 30 percent and the natural gas (TTF) price by more than fourfold. As a result, Maltese electricity import prices through the interconnector with Italy increased significantly. These developments constitute a negative terms-of-trade shock, which dampens the economic recovery and raises inflation.

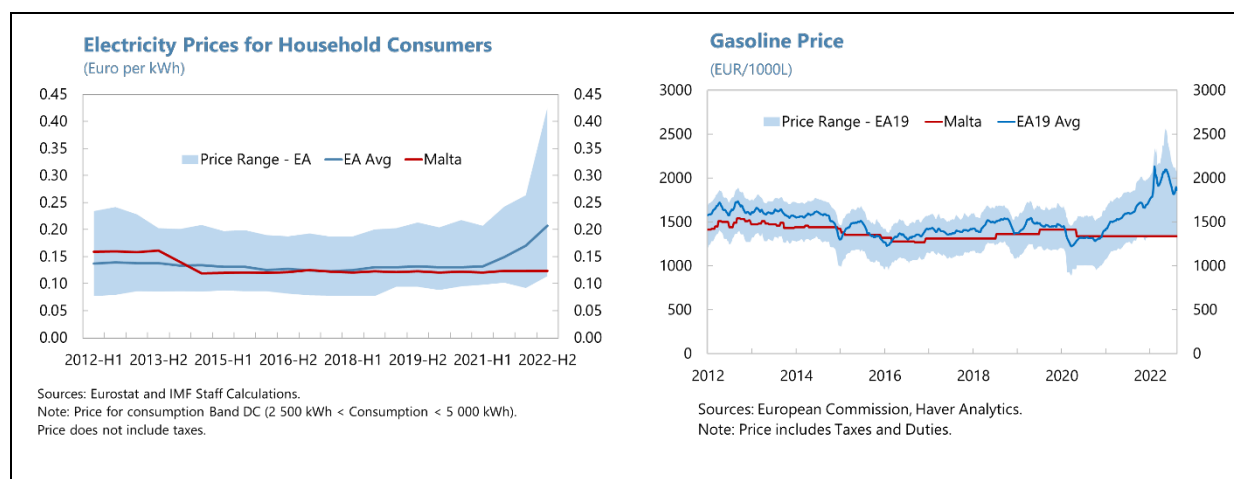
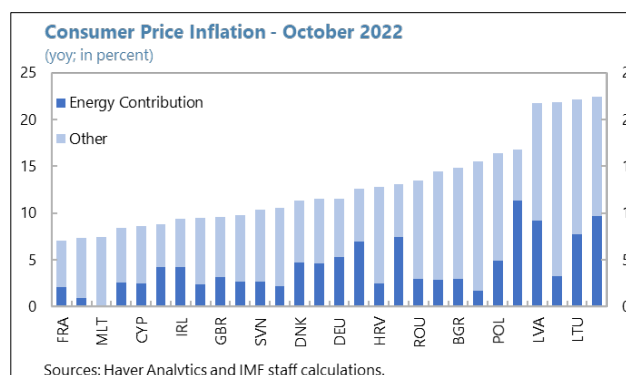


5. In response to the energy shock, European countries implemented a range of measures. Due to the weight of energy in the consumption basket and the low responsiveness of household and firm energy demand, the surge in energy prices created the risk of a cost-of-living crisis. This prompted European governments to respond swiftly with a diverse set of measures.³ The measures can be broadly classified into: (i) measures that impede price passthrough; (ii) targeted support for households; (iii) less targeted support for households; and (iv) corporate support. Over half of all European countries have elected to impose some type of price freeze or subsidy. Many have also lowered excise taxes and provided targeted transfers and subsidies to specific industries (in particular, in emerging and developing Europe). This resulted in heterogeneous levels of passthrough and fiscal costs across countries.



³ See Ari and others (2022) for more details.

6. Malta has opted for freezing electricity and fuel prices. To this end, the government provided ENMALTA and ENEMED with subsidies to compensate for their losses—reflecting the difference between the retail energy prices and production costs (which in turn reflects prices of LNG and electricity imports). The policy has helped contain headline inflation—in November 2022, Malta’s headline inflation was 7.2 percent, below the euro area average of 10 percent—despite higher core inflation, which reflects steeper increases in prices of imported processed food and other miscellaneous goods. The policy also helped support consumer confidence, real wages, and more broadly, economic activity.⁴ In comparison with other European countries, Malta’s retail prices for electricity and fuels have become one of the lowest.

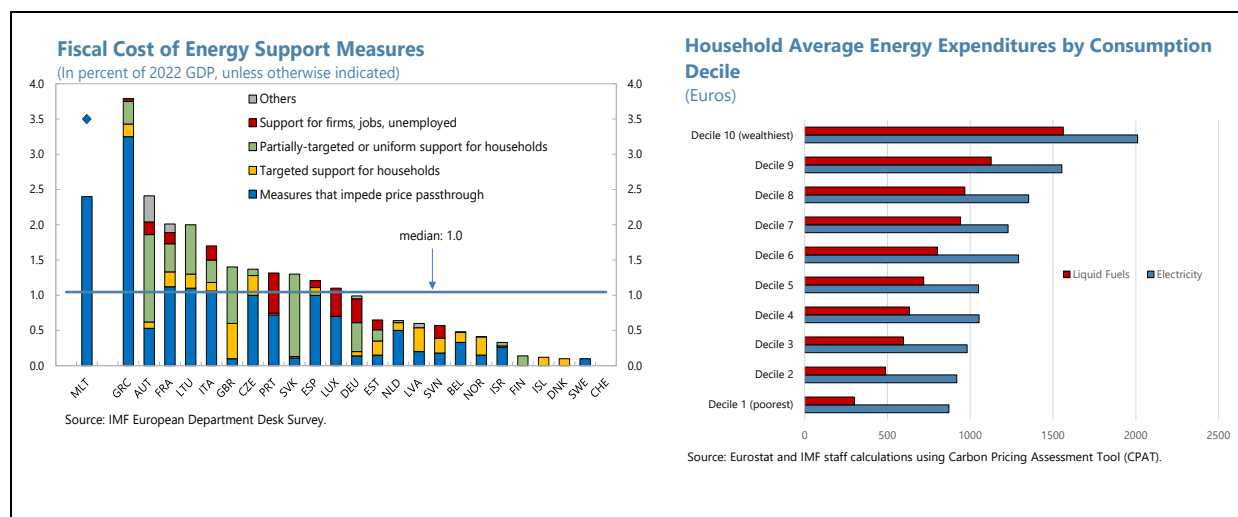


7. However, the energy price freeze comes with a substantial fiscal burden and mutes incentives for energy conservation and efficiency.

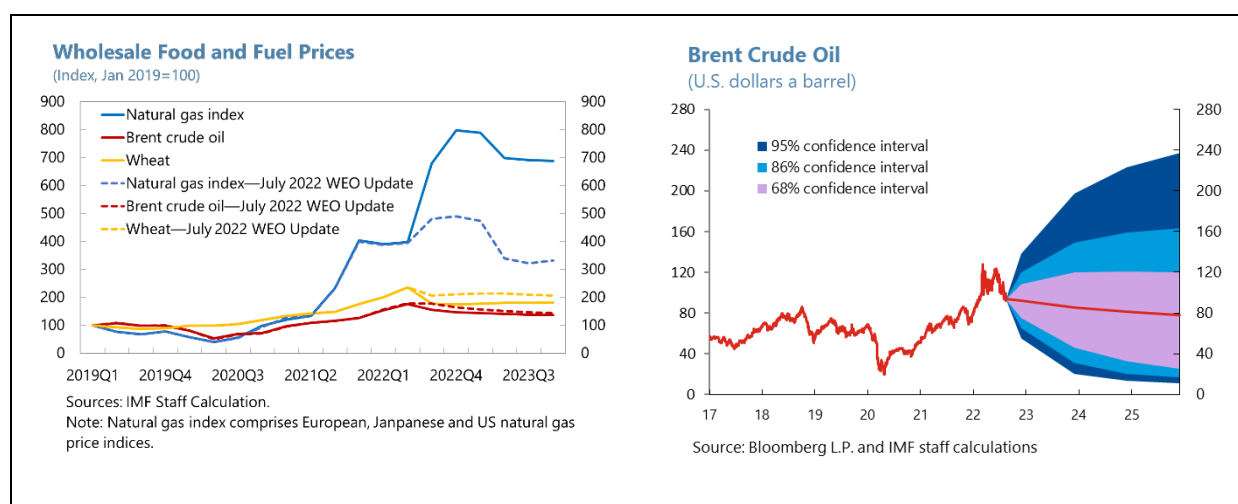
- The fiscal costs of energy subsidies are expected to be 2½ percent of GDP in 2022 and 3½ percent of GDP in 2023, well above the median for European countries close to 1 percent of GDP. The level of the subsidies is sizable given that Malta’s energy intensity in industry and per capita energy consumption is among the lowest in Europe due to temperate climate conditions.
- The current fixed price policy also mutes the price signal, not giving incentives for households and businesses to save in terms of electricity and fuel consumption or to invest in renewable energy.

⁴ In the 2023 Pre-Budget Consultation Document, the government estimates a higher passthrough of electricity prices would lead to a 2.3 percentage points decline in real GDP compared to baseline growth.

- The current untargeted policy also benefits the rich, who tend to consume more energy than the poor (in absolute terms). This is true even if, as a share of income, the fixed price policy benefits lower-income households more than higher-income households since the former consume more energy as the share of income than the latter.



8. High energy prices may persist for a prolonged period, calling for the need to prepare an exit strategy from the current policy. Although most energy prices have softened since the summer, natural gas prices are likely to remain elevated, well above pre-war levels, for years to come, with upside risks. The Brent crude oil price has returned to pre-war levels, but futures markets indicate it could rise once again and return to levels experienced in Spring 2022 for a prolonged period. This implies the continuation of the current policy could risk straining fiscal policy in the future. Accordingly, there are merits in preparing an exit strategy from the fixed price policy, while protecting vulnerable groups. The exit strategy should allow for a greater price passthrough to help contain fiscal costs, while enhancing incentives for energy conservation and an accelerated green transition. Various options should be explored, which would have differential implications for the degree of passthrough to market prices and fiscal costs.



C. Simulating Distributional Impacts for Households and Fiscal Implications

9. In considering options for an exit strategy, distributional impacts for households and fiscal implications are key. For a given household, the impact of higher energy prices depends on the shares of its spending on energy products (direct effect) and on other products or services whose prices increase when energy prices go up (indirect effect). Using the IMF's Carbon Pricing Assessment Tool (a reduced form macro-energy model)⁵, both direct and indirect effects for households are estimated for the following two scenarios.

- Scenario 1. Full passthrough of energy prices on households
- Scenario 2. Full passthrough of energy prices on households with targeted subsidies to low and middle-income households

Energy products include electricity, natural gas, gasoline, diesel, oil, coal, kerosene, and LPG. To evaluate the impact of a full passthrough, electricity and fuel prices are assumed to increase by around 130 percent and 40 percent, respectively—consistent with a counterfactual energy scenario without the government's fixed price policy analyzed in the 2023 Budget. These scenarios are run using publicly available information (including data on energy prices, taxes and tariffs, energy consumption, and energy inputs for production) and price elasticities for each energy product. The simulation results show that the cost of fully compensating all households amounts to about 2½ percent of GDP, close to the estimate for the price freeze subsidies in the 2023 Budget.⁶

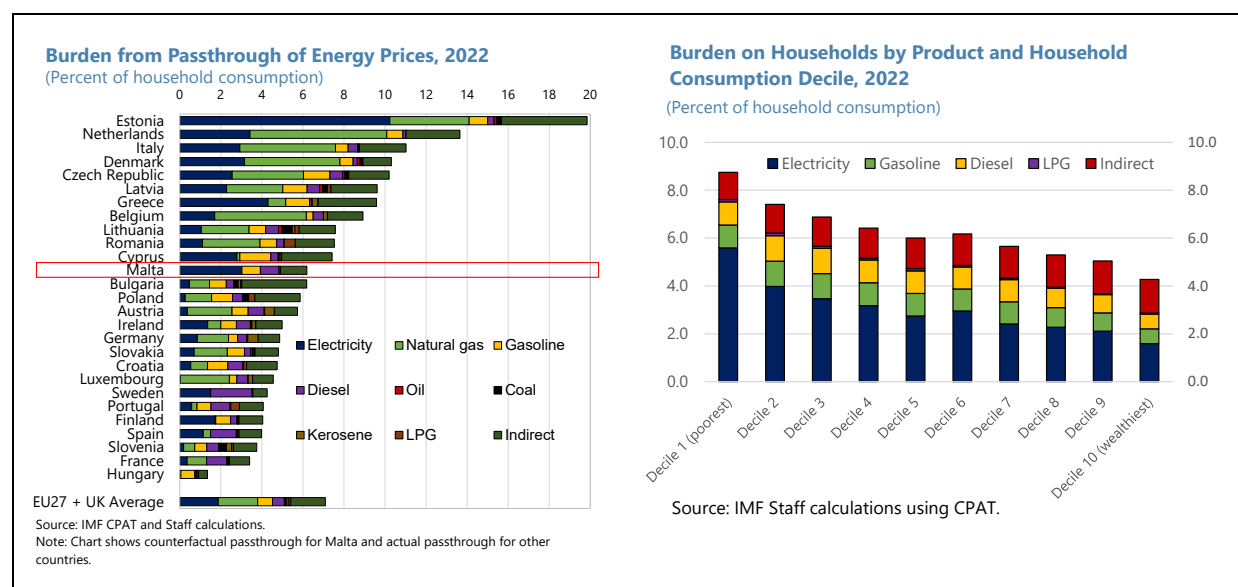
Scenario 1 Results

10. Allowing a full passthrough would have a significant impact on households' consumption in Malta but comparable with other European peers. The burden on households is estimated at 6 percent of consumption, broadly in line with the EU27 average estimated by Ari and others. (2022). Half of the burden is due to the direct increase in the price of electricity, with the remaining half evenly split between the effect of the increase in gasoline prices, diesel prices, and the indirect effect (which captures a consumption loss due to higher non-energy goods and services prices as energy costs rise).

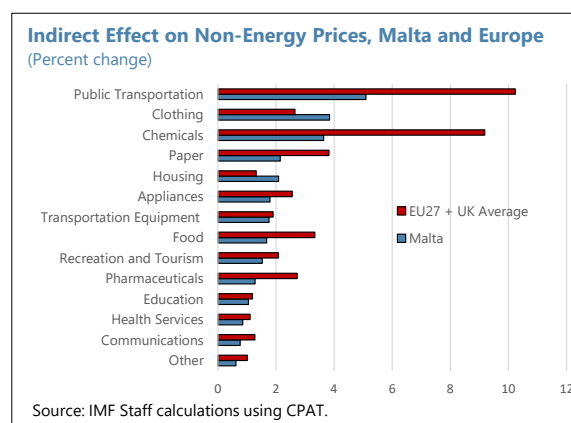
⁵ See Ari and others (2022) for the methodology and detailed results for European countries. CPAT has been jointly developed by IMF and World Bank staff and evolved from an earlier IMF model CPAT, or earlier versions of it, have been used in a variety of multilateral and bilateral IMF reports on climate mitigation—see for example, Arregui and Parry (2020), Batini and others (2020), Black and others (2021), IMF (2019a and b), Parry, Mylonas and Vernon (2021).

⁶ In the simulations, the total cost of 2½ percent of GDP includes only households, while government subsidies associated with the price freeze apply both to households and businesses, so the comparison is not straightforward and could overstate the support to households. However, at the same time, the simulation includes compensation for the indirect effect of increased prices of non-energy goods and services, which can be construed as an implicit cost to businesses. As the government does not publish data on subsidies separately for households and businesses, it is not possible to determine how the cost to compensate for the direct effect of the full energy price passthrough from the model compares with reality. Nevertheless, given the two opposing factors, the total cost of 2½ percent of GDP identified in the model appears to be broadly aligned with real costs.

11. The simulation suggests that household burden as a share of consumption is higher for low-income households, mostly due to higher electricity prices. For the lowest consumption decile, the burden is close to 9 percent of consumption, whereas for the highest consumption decile, it is much lower at 4 percent. This reflects the greater burden of higher electricity prices for lower-income households, while for gasoline and diesel, the burden is broadly similar across deciles (except for a noticeable reduction in the burden for the highest consumption decile). The burden due to the indirect effect is also similar across deciles.



12. The indirect effect of higher energy prices appears to be relatively contained. On average, the indirect burden on consumption is estimated at 1¼ percent of total consumption, smaller than the European average, close to 1¾ percent.⁷ This is, in part, due to Malta's relatively low share of energy intensive industry (e.g., chemicals, manufacturing) compared to most other European countries. Therefore, a potential loss in competitiveness relative to European partners could be limited at a macroeconomic level. By industry, due to its relatively high use of energy as inputs, "public transportation" would be affected the most, with its prices increasing by 5 percent,⁸ followed by close to 4 percent increases for "clothing" and "chemicals." The price impact for "recreation and tourism,"—one of the key industries for Malta's growth and employment—is estimated to be mild, at around 1½ percent.



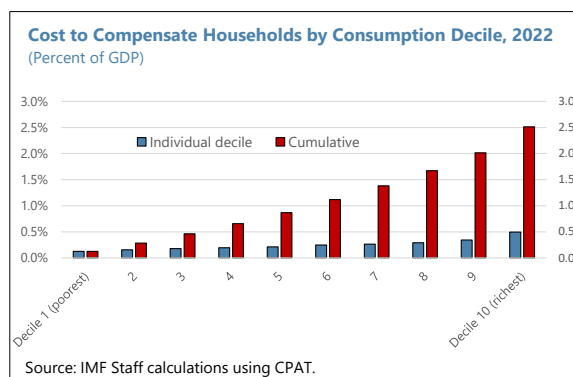
⁷ The indirect effect is based on estimates for increase in prices based on Input-Output tables. These estimates are below the Central Bank of Malta's internal estimates which included general equilibrium effects.

⁸ The impact of the government's recent free public transportation policy is not assumed in this simulation.

Scenario 2 Results

13. To protect the vulnerable, the government can provide subsidies to targeted groups. Fiscal costs to compensate households' burden of the full passthrough are estimated by consumption decile.

14. The simulation results suggest scope for fiscal savings by shifting the current mostly untargeted policy to a targeted policy. Given their high level of energy consumption, fully compensating richer households becomes increasingly more expensive than focusing on low-income households. To illustrate, the estimated cost of fully compensating the first three consumption deciles is under 0.5 percent of GDP, while the cost of compensating the first five deciles would be close to 1 percent of GDP. The cost of compensating all the households is estimated at 2.5 percent of GDP, in line with the current fixed energy price policy that benefits all



D. Considerations for Alternative Energy Pricing Policies for Malta

15. In designing options for the exit strategy, the policy should aim to address the following objectives.

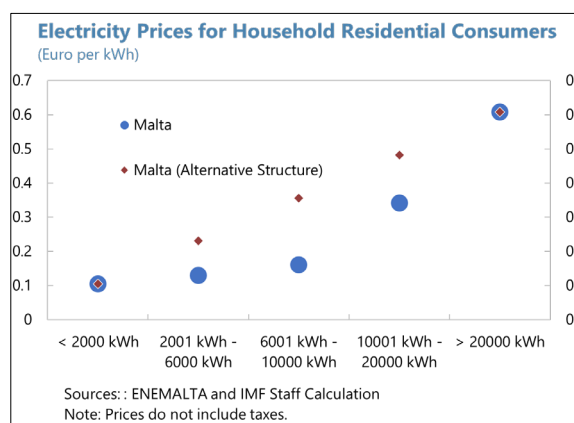
- *Preserving the price signal.* The price signal is important to enhance incentives for energy conservation or investment in its efficiency and renewable energy. Measures to suppress price increases in countries with ample fiscal space have benefits, because they can be implemented quickly and may be the only option when income support programs are difficult to design. Nonetheless, resorting to such measures should be temporary, as the increase in global fuel prices is a negative terms-of-trade shock for energy importing economies, reducing real income, which economic agents need to adjust to.
- *Providing targeted income support.* Support measures should be fiscally cost-effective and thus targeted to vulnerable households, which tend to spend a greater share of their incomes on energy and have little means to cope with the rapid increase in the cost of living. High-income households are more likely to effectively cope with the burden of higher energy prices. This would free fiscal resources for other government objectives.
- *Accelerating the green transition.* This energy crisis could be used as an opportunity to reduce reliance on fossil fuels and advance the green transition. Ultimately, accelerating the green transition is the best way to limit vulnerability to spikes in fossil fuel prices. Preserving the price signal is not enough, and governments can promote incentives to invest in renewable energy and energy efficiency. To incentivize energy efficiency, governments could provide support to households and firms to undertake energy-saving investments.

16. The first best policy is accepting a higher level of passthrough coupled with targeted transfers, but implementation is challenging. This option broadly meets the policy objectives discussed above. The price signal is preserved, while substantial fiscal savings could be obtained by supporting only a segment of households. In addition, this option provides greater incentives for energy conservation and investment. For example, high-income households would respond to high energy prices by investing in energy efficiency and renewable energy (e.g., installation of insulation, heat pumps, and photovoltaic panels). However, there are administrative challenges in implementing a targeted transfer program because it involves means testing with up-to-date information on households' income and wealth.⁹ An inadequate transfer program risks leaving out households who are vulnerable.

17. An alternative policy option is strengthening the progressive tariff structure in electricity, protecting essential levels of consumption. ENEMALTA's tariff structure for households has some progressive elements,

increasing sharply for high consumption levels above 10,000 kWh. In addition, for below 10,000 kWh, the incremental increase in the tariff is relatively flat. Therefore, as a second-best option, the tariff structure for electricity can be redesigned to better reflect the subsistence level of power

consumption and marginal cost (i.e., the incremental cost of electricity production)—In other words, the subsistence level of consumption can be priced at below marginal cost, whereas consumption above a subsistence level can be priced at marginal cost.¹⁰ The subsistence level of consumption should also be set by taking into account the number of households.



18. In addition, it is worth considering the introduction of “peak demand” electricity charges. The pattern of electricity consumption varies during the day, across days in the week, and by season. For example, electricity demand in Malta is particularly high during high-temperature days in the summer. Peak demand charges help divert electricity consumption away from high-demand periods. They will also contribute to improve efficiency, reliability, and costs of electricity distribution and production.

E. Conclusions

19. Given that the energy crisis could persist for a prolonged period, Malta needs to start preparing accordingly. Malta's fixed energy price policy has contributed to taming inflationary

⁹ Malta currently has a program (Energy Benefit) aimed to mitigate the effect of the increase in expenditure on water and electricity bills of low-income families. However, currently, there is no framework to provide targeted cash transfers to individuals, not on social assistance programs. [Energy Benefit \(DSS\) \(gov.mt\)](https://gov.mt/energy-benefit)

¹⁰ An alternative would be to redesign the current eco-reduction subsidy applied to electricity and water bills and which provides a discount on total consumption, provided it is below a given threshold.

pressure, providing confidence to economic agents, and supporting growth. However, giving across-the-board subsidies to all population groups comes with significant fiscal costs. Furthermore, by suppressing the price signal, Malta's approach does not enhance incentives for energy conservation and investment in energy-efficient products and renewable energies. Ultimately, reducing Malta's dependency on imported fossil fuel is the best way to ensure Malta's resilience to energy price shocks and its fiscal robustness. In this regard, the implementation of Malta's climate change mitigation strategy under its Recovery and Resilience Plan and 2021 Low Carbon Development Strategy will help strengthen Malta's resilience and long-run competitiveness.

20. Policymakers need to balance the pros and cons of each option, and the implementation of the exit strategy should be gradual. Allowing higher passthrough (with targeted cash transfers) would reduce the fiscal cost and encourage energy conservation, but, if implemented too fast, it could also aggravate inflationary pressures and hurt economic activity. Administrative costs associated with this option should also be considered, as an accurate and timely implementation of adequate means testing may be challenging. Redesigning the tariff structure for electricity is administratively less costly. However, the extent to which this option contains fiscal costs, encourages energy conservation, and protects vulnerable households, will depend on the details of the tariff adjustment. A "peak demand" charge could also be considered as a complement to the other options. Regardless of the choice of a new policy, its implementation should be gradual to contain inflationary pressures and negative effects on economic activity.

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