Energy Crisis Scenario
Policy Recommendations

Greenpeace European Unit, December 2022

Summary

Ever since the EU entered into the energy crisis, the European Commission has responded with proposed emergency measures which the EU Member States have adopted including: a voluntary gas reduction target of 15%, a mandatory target of 5% reduction of electricity during peak hours, and a 10% non-mandatory overall reduction for electricity

In order for the EU to effectively address the multiple crises we're faced with, namely the war in Ukraine, energy security, cost-of-living, and climate crises, EU leaders must pair short-term reductions with long-term solutions. EU leaders need to make energy efficiency and energy conservation a priority, instead of diversifying suppliers and switching to other fossil fuels, and stop all Russian fossil fuel imports. Additionally, they should move to phase-out of fossil fuels and rapidly scale up investment in renewables. It must be done in a way that protects the vulnerable and makes the polluter pay.

Key findings

- The measures modeled in a new scenario paper by the Institute for Sustainable Futures, commissioned by Greenpeace Nordic, show that **the EU-27 can reduce fossil gas consumption by 15% by March 31, 2023**. Those measures would result in lower costs for fossil fuel imports, improved energy security, reduction of total energy demand, reduction of greenhouse gas emissions and a decrease of the need for investments on the supply side. The gas consumption in Europe has already been reduced by 11% between January to November this year compared to 2019-2021 average and by 20% in October and by 23% in November[1]. According to the IEA overall gas demand in the European Union is set to fall by around 10% in 2022, a drop of around 50 billion cubic

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[1] https://www.bruegel.org/dataset/european-natural-gas-demand-tracker

metres (BCM). Some 10 bcm of this drop is due to curtailed production rather than efficiency gains or fuel switching[2].

- **A 15% reduction of fossil gas consumption in EU-27 depends on significant reductions needed in Germany, France, Spain, Italy and the Netherlands.** The top 5 fossil gas consuming countries together account for over 66% of all fossil gas use in EU-27 manufacturing. By November 2022 Germany had reduced gas consumption by 15% and the Netherlands by 23%. France saved 9%, Italy 6% and Spain only 1%[3].

- **The biggest fossil gas savings potential is in the industrial sector, where 20% reduction of the gas use is possible[4].** Equivalent to 5.6% of the EU-27 gas use in 2021 and greater than the combined gas consumption in Belgium and Bulgaria last year[5].

- **The biggest oil savings potential is in the transport sector..** Measures like reducing the speed limit on motorways e.g. from 130 to 110 km/h, decreasing traffic by helping people switch from private cars to public transport and other modes of emission-free transport, driving 10% less and reducing 30% of intra-European aviation by train travel and virtual meeting technology would enable the biggest savings in terms of total primary energy consumption.

- **Reducing electricity demand by 10% in the residential, public and commercial sectors would reduce fossil gas consumption by 203 PJ/year (5.33 BCM/year)** - more than the combined gas consumption in Denmark, Finland and Luxembourg in 2021. Reducing electricity demand by 15% in those sectors, would reduce fossil gas consumption by 305 PJ/year (8 BCM/year equivalent) - more than the total gas consumption in Greece in 2021. An additional 20% electricity demand reduction in the industrial sector would result in 143 PJ/year/3.75 BCM of fossil gas saved, equivalent to total gas consumption of Estonia, Latvia and Lithuania in 2021.

- **The energy saving resulting from the non-technical measures would result in reducing the total energy demand by up to 10330 PJ/year, equivalent to 278TWh.** A 10% electricity reduction in residential, public, and commercial sectors would result in 1829 PJ of total energy demand reduction in Europe, and a 15% electricity demand reduction in those sectors would increase the saving to 2743 PJs. Combined with an

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[2]

https://iea.blob.core.windows.net/assets/96ce64c5-1061-4e0c-998d-fd679990653b/HowtoAvoidGasShortagesintheEuropeanUnionin2023.pdf

[3]https://www.economist.com/briefing/2022/11/24/the-costs-and-consequences-of-europes-energy-crisis-are-growing
[4] 780PJ/year (22.05 Billion cubic meters of gas) in absolute terms,
[5] Based on
https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2022-full-report.pdf

industry electricity demand reduction of 20%, the EU-27 is able to reduce total energy demand by 3115 PJ and 4029 PJ accordingly[6].
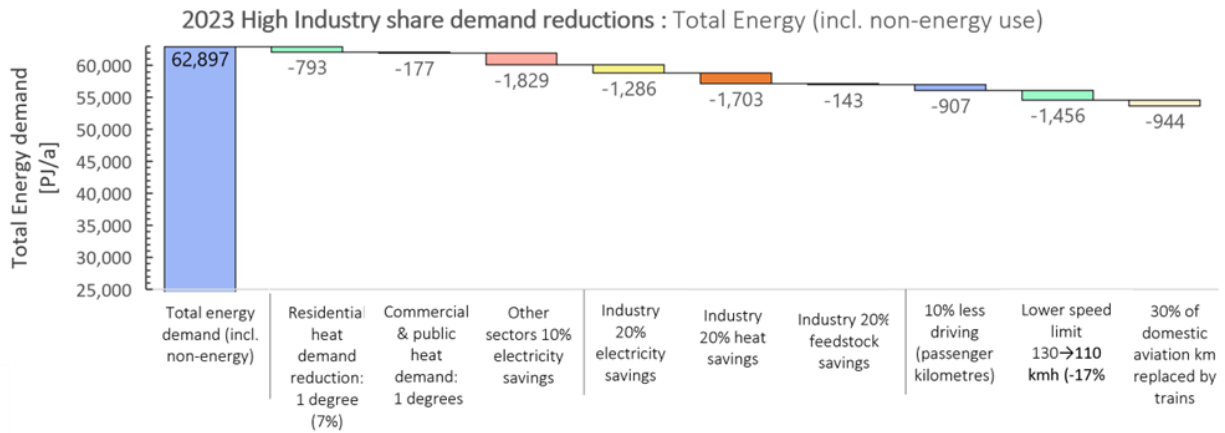
The effect of demand reduction measures on the total primary energy demand for a high industry share scenario.
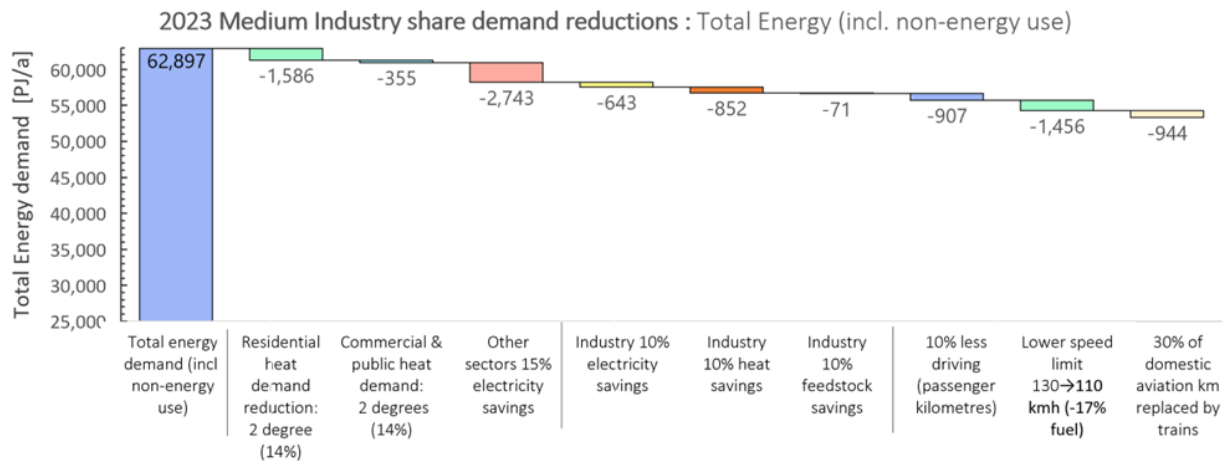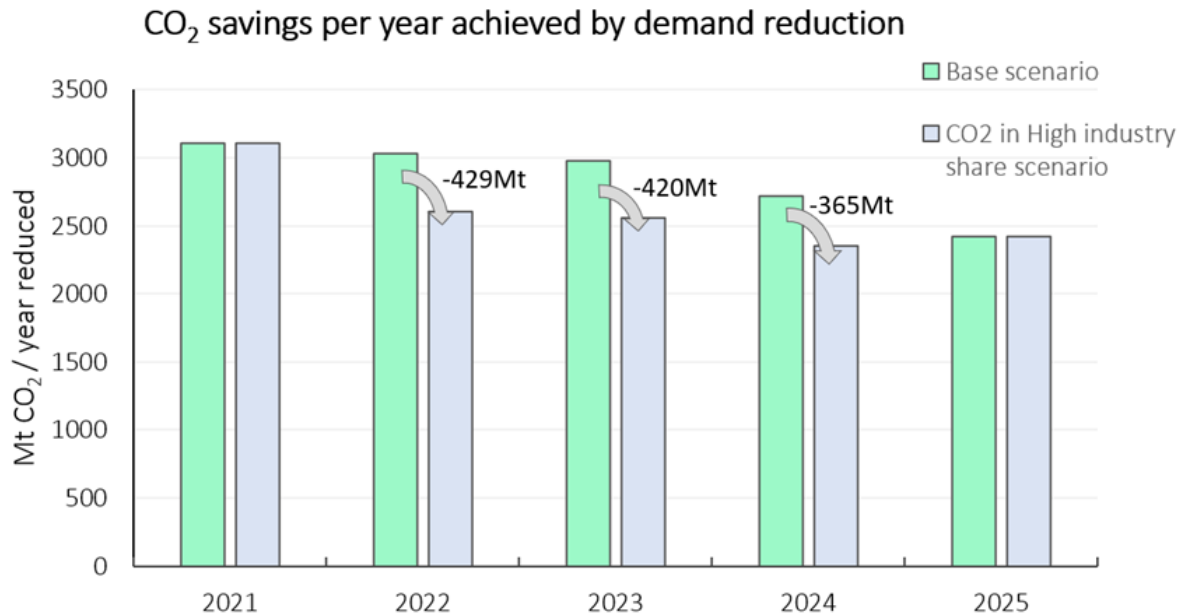

The effect of demand reduction measures on the total primary energy demand for a medium industry share scenario-

- **Combining the proposed fossil gas, oil and electricity savings would achieve a greenhouse gas emission reduction equivalent to Poland's yearly emissions 364 Mt of CO2[7].**

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[6] Value for total energy demand reduction resulting from the 20% of electricity reduction by industry combined with respectively 10% and 15% electricity use reduction by the residential, public and commercial sectors.

[7] https://www.globaldata.com/data-insights/macroeconomic/greenhouse-gas-emissions-in-poland-2096009 /) or https://ourworldindata.org/co2/country/poland

CO$_2$ savings per year achieved by demand reduction

Achieved CO2 reduction per year by the proposed demand reductions in the high industry share scenario

Policy Recommendations

The findings create a clear case for immediate introduction of mandatory energy use reduction targets across sectors, followed by increased reduction targets ahead of next winter, as well as investments in energy savings, improved energy efficiency across sectors, and an upscale of sustainable renewable energy. The policy measures must address the waste of big consumers and support vulnerable households.

Greenpeace calls for 3 mandatory EU wide short term reduction targets

- Make the European 15% gas reduction target mandatory between 1 August 2022 and 31 March 2023.

- Make the European 10% reduction target for electricity consumption mandatory between 1 August 2022 and 31 March 2023.

- Introduce a 13% reduction target for energy use in the transport sector between now and the end of 2023.

Key policy measures to support vulnerable households

In 2020, 36 million people in the EU could not keep their homes adequately warm. These numbers can be predicted to rise to much higher levels during winter 2022/23, particularly considering that 75% of the European building stock is energy inefficient.

- Financial support schemes for vulnerable people to meet their basic energy needs.

- Ban disconnections, e.g., energy providers should not have the right to cut off vulnerable customers who fail to pay their bills.

Policy measures that make this winter's energy savings permanent through investments

The immediate reductions that can be achieved without any investment must be complemented with large societal investments that systematically create energy security and resilience for European households by decreasing their dependence on high fossil fuel and electricity consumption.

- Massive renovation programmes and support schemes for insulation and heat pumps.

- Support schemes for large scale and small scale solar thermal and PV systems.

Policy measures to reduce oil use in the transport sector

A Greenpeace transport report has shown that short-term measures in the transport sector such as a ban on private jets and short-haul flights with reasonable train alternatives, or the introduction of affordable 'climate tickets' for public transport, could cut the EU's oil with 13%, which would save EU consumers €63 billion on transport-related energy spending, and prevent greenhouse gas emissions equivalent to the use of 120 million cars.

- Traffic reduction measures: Affordable "climate tickets" for public transport, reduced speed limits, car free inner cities across EU.

- Ban private jets and short haul flights where trains are available.