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EU GAS SECTOR DATA FOR DECISION MAKERS

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EU member states and citizens have the capacity to jointly act to reduce gas use. They have the power to respond to the challenging circumstances if they work together. EU member states have recently demonstrated the capacity to work with partners and help deliver massive, coordinated programmes at scale, for example in the COVID-19 response. They can do it again to lower gas demand via open dialogue, and cooperation with business and social partners.

The variety of member state economies becomes a strength in this context. Gas consumption of EU member states varies massively. Therefore, there is opportunity for tailored activity and support to reduce gas demand in all countries:

- > In **IE, EL, ES, FI, LV, IT and PT**, consumption is extremely concentrated in the **power sector** (>40% share of gas use). Many no-regret solutions are available to reduce gas consumption in the sector: efficient appliances, renewable energy and demand side flexibility. Any measures that support reduction of electricity consumption can help. (For example: building renovation measures to limit electrical cooling and heating demand; incentivising the use of efficient electrical appliances; energy auditing for businesses.)
- > In **DE, FR, HU, RO and SK**, **households** are among the biggest users. Priorities to ensure resilience for this and subsequent years are: short-term information campaigns targeted at higher earning users, financial support for those in energy poverty, and a push on renovation and electrification. These can be rolled out nationally with the right combination of information campaign, scale-up of independent and impartial citizen advisory services, and targeted financial support, especially for the vulnerable. There are



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additional simple and cost-effective measures which can be rolled out alongside (such as thermostats, boiler optimisation, simple insulation measures).

- > In **BG, CZ, LU, AT, PL, SI and SE**, the largest driver of gas use is **industry**. The potential for energy efficiency and electrification is deemed to be high across industrial end use but has been understudied. National resilience and recovery plans already include programmes to modernise industrial activities in some of those countries, which can help if they are optimised and implemented at speed. To be able to leverage this at scale, and turn action in this crisis into investments in long-term economic competitiveness, data on gas use in industry needs to be collected at speed. It must also have sufficient granularity (in particular identifying low-temperature heating processes that can be replaced with more modern solutions). In some countries, certain industry sub-sectors drive gas consumption. For example, in DE, (petro)chemicals represent 7% of the country's gas consumption (non-feedstock use only).

These variations indicate where to target quick action. Yet, most countries use gas in most sectors. There are opportunities to exchange best practice and to tailor responses based on countries' specific delivery capacity and existing networks to work at speed.

- > With the exception of CY (no gas) and MT (gas only in power), all countries use gas across the board in different sectors.
- > Use of **gas for the energy sector's own use** (not heat/electricity generation) can be a prime candidate for delivering efficiency in a few countries. In **DE, ES, HR, PL**, energy gas use covers 8–18% of total consumption, compared to the EU average of 4%.

Large gas consumers need to take responsibility, but opportunities to increase efficiency exist for all. Gas demand reduction is an opportunity to limit the impact of inflation and improve competitiveness.

- > 50% of overall gas consumption takes place in three countries: DE, IT and FR.
- > 50% of gas consumption in electricity generation takes place in three countries: ES, DE and IT (closely followed by NL).
- > 60% of gas consumption in households takes place in three countries: DE, FR and IT.



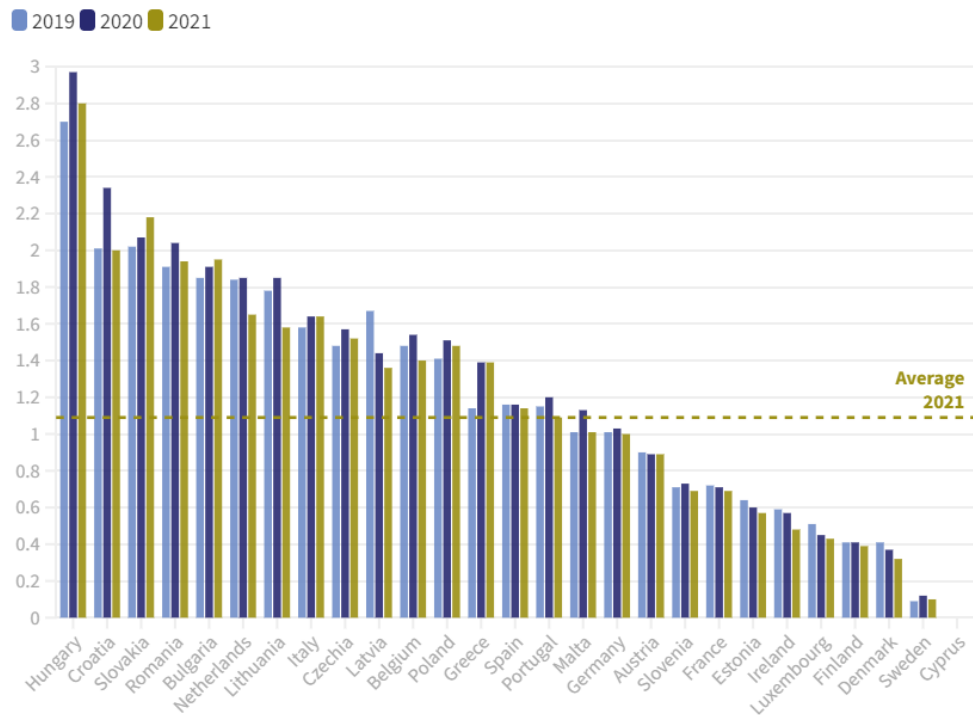
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- > 50% of gas consumption in industry takes place in three countries: DE, IT, FR (closely followed by ES).
- > The gas to GDP ratio (2021) is above average in some European countries (BE, BG, CZ, EL, HR, IT, LV, LT, HU, NL, PL, RO, SK), pointing at potential scope for efficiencies in terms of turning gas into value for the economy.
- > The gas per capita ratio in BE, DE, IE, IT, LU, NL, HU, AT is above the European average.

Data

All data is from Eurostat, extracted in July 2022.

Chart 1: EU gas use per unit of GDP (TJ/€m).

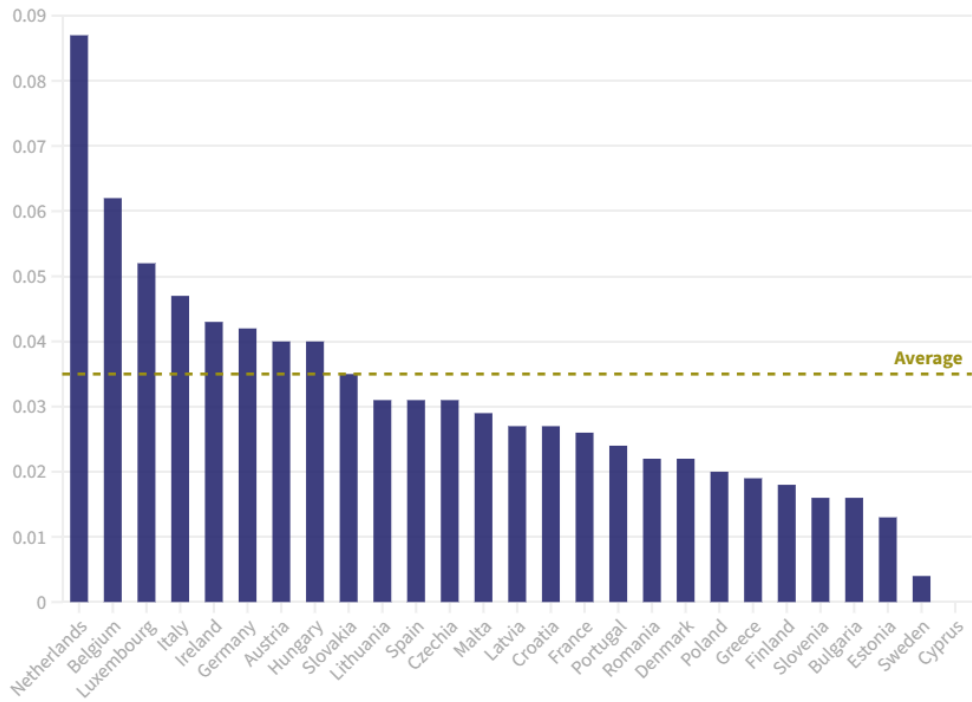


Source: Eurostat.



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Chart 2: EU gas use per capita (TJ/€ of inhabitants)



Source: Eurostat 2019.



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Table 1: EU member state gas consumption by sector (ktoe), excluding agriculture and fisheries.

	Electricity and heat generation	Households	Commercial and public services	Industry (energy use only)	Transport	Energy sector own use	Non energy use	Total
BE	3,893.0	3,247.4	1,898.3	3,959.2	55.9	847.2	1,018.7	14,919.7
BG	816.4	78.7	89.5	826.0	141.5	46.7	150.9	2,149.6
CZ	1,688.8	1,795.4	1,171.7	2,029.5	97.1	98.1	97.2	6,977.7
DK	713.8	615.8	200.9	676.8	10.6	472.0	0.0	2,689.9
DE	18,434.2	22,379.5	9,467.9	19,475.7	783.3	1,465.2	3,431.2	75,437.0
EE	122.7	57.8	73.4	99.5	6.4	16.5	0.0	376.3
IE	2,516.0	590.2	409.3	952.0	17.0	0.0	0.0	4,484.5
EL	3,015.2	384.4	152.9	334.4	17.9	102.5	427.9	4,435.2
ES	12,760.4	3,457.1	1,946.5	8,600.7	249.1	3,011.7	466.2	30,491.6
FR	7,196.6	11,363.0	5,979.6	10,501.9	162.9	556.5	1,186.9	36,947.4
HR	629.1	459.1	208.8	400.6	4.0	175.9	414.2	2,291.7
IT	25,438.1	16,126.6	7,086.4	8,540.6	1,147.3	1,532.9	642.9	60,514.8
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LV	751.3	110.7	110.1	97.5	0.2	13.6	0.0	1,083.3
LT	254.5	160.9	72.6	303.6	26.4	67.2	958.6	1,843.8
LU	64.0	246.4	107.5	269.5	0.0	0.0	0.0	687.4
HU	2,113.4	2,792.9	1,059.5	1,399.4	82.9	211.7	495.9	8,155.7
MT	305.6	0.0	0.0	0.0	0.0	0.0	0.0	305.6
NL	11,274.1	6,605.2	2,787.0	4,924.8	63.8	1,550.2	2,642.7	29,847.7
AT	2,298.8	1,426.4	363.0	2,715.4	251.1	249.8	355.1	7,659.6
PL	2,723.3	3,638.8	1,348.6	3,910.4	388.2	1,469.1	1,871.0	15,349.4
PT	3,153.5	285.3	247.5	1,258.1	17.5	94.7	0.0	5,056.6
RO	2,530.7	2,530.1	818.5	2,172.5	0.1	369.2	387.3	8,808.5
SI	137.3	105.8	29.6	452.0	4.4	0.9	5.7	735.6
SK	834.8	1,120.0	399.1	839.2	184.7	88.2	362.7	3,828.8
FI	956.7	26.7	27.1	619.8	18.0	111.9	17.3	1,777.4
SE	109.2	19.9	101.7	339.4	8.6	28.3	338.7	945.8
EU27	104,731.5	79,623.8	36,156.8	75,698.5	3,738.8	12,579.9	15,271.1	312,529.4

Source: Eurostat.



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Table 2: EU Member State gas consumption by sector (%), excluding agriculture and fisheries.

	Electricity and heat generation	Households	Commercial and public services	Industry (energy use only)	Transport	Energy sector own use	Non energy use	Total
BE	26%	22%	13%	27%	0%	6%	7%	100%
BG	38%	4%	4%	38%	7%	2%	7%	100%
CZ	24%	26%	17%	29%	1%	1%	1%	100%
DK	27%	23%	7%	25%	0%	18%	0%	100%
DE	24%	30%	13%	26%	1%	2%	5%	100%
EE	33%	15%	20%	26%	2%	4%	0%	100%
IE	56%	13%	9%	21%	0%	0%	0%	100%
EL	68%	9%	3%	8%	0%	2%	10%	100%
ES	42%	11%	6%	28%	1%	10%	2%	100%
FR	19%	31%	16%	28%	0%	2%	3%	100%
HR	27%	20%	9%	17%	0%	8%	18%	100%
IT	42%	27%	12%	14%	2%	3%	1%	100%
CY	0%	0%	0%	0%	0%	0%	0%	100%
LV	69%	10%	10%	9%	0%	1%	0%	100%
LT	14%	9%	4%	16%	1%	4%	52%	100%
LU	9%	36%	16%	39%	0%	0%	0%	100%
HU	26%	34%	13%	17%	1%	3%	6%	100%
MT	100%	0%	0%	0%	0%	0%	0%	100%
NL	38%	22%	9%	16%	0%	5%	9%	100%
AT	30%	19%	5%	35%	3%	3%	5%	100%
PL	18%	24%	9%	25%	3%	10%	12%	100%
PT	62%	6%	5%	25%	0%	2%	0%	100%
RO	29%	29%	9%	25%	0%	4%	4%	100%
SI	19%	14%	4%	61%	1%	0%	1%	100%
SK	22%	29%	10%	22%	5%	2%	9%	100%
FI	54%	1%	2%	35%	1%	6%	1%	100%
SE	12%	2%	11%	36%	1%	3%	36%	100%

Source: Eurostat.



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About E3G

E3G is an independent climate change think tank with a global outlook. We work on the frontier of the climate landscape, tackling the barriers and advancing the solutions to a safe climate. Our goal is to translate climate politics, economics and policies into action.

E3G builds broad-based coalitions to deliver a safe climate, working closely with like-minded partners in government, politics, civil society, science, the media, public interest foundations and elsewhere to leverage change.

More information is available at www.e3g.org

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