



Leere Versprechungen

Wo Deutschland und G7 beim
Subventionsabbau stehen

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Tracking G7 Fossil Fuel Subsidies

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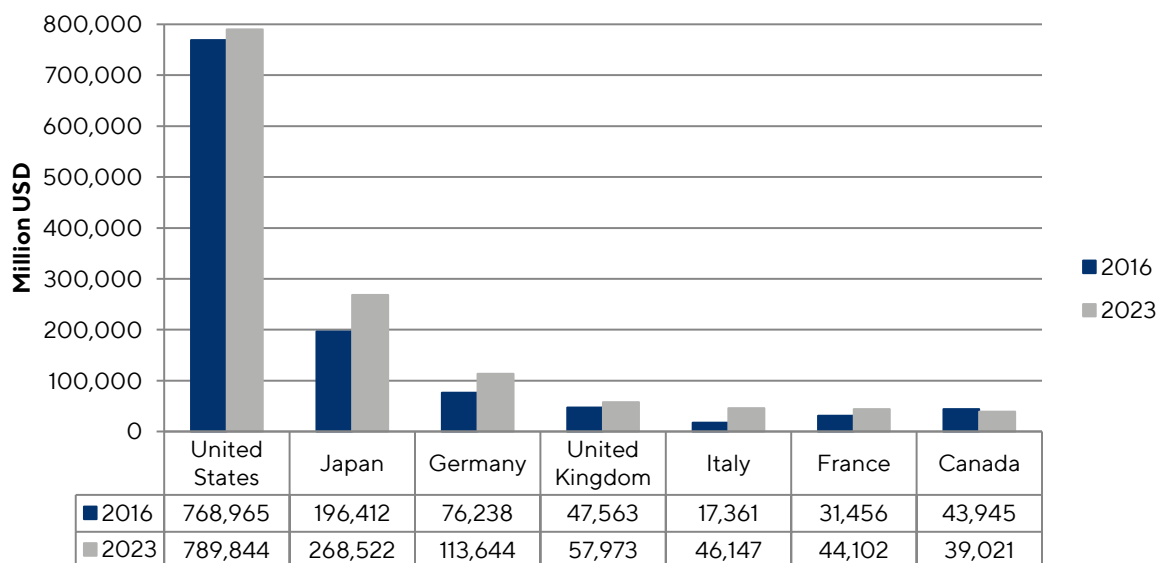
Summary

Reducing fossil fuel subsidies is a crucial step toward achieving climate goals, as it directly addresses price distortions that undermine the competitiveness of climate-friendly technologies and hinder efforts to reduce greenhouse gas (GHG) emissions. Eliminating these subsidies is widely regarded as one of the most cost-effective measures governments can take to fulfil their commitments under the Paris Agreement. Moreover, the reduction of fossil fuel subsidies has particular significance due to its substantial fiscal impact, especially as several G7 countries face challenging budget constraints and simultaneously increasing investment needs.

The **G7's 2016 pledge to phase out inefficient fossil fuel subsidies by 2025** was seen as a significant step toward greater accountability and implementation, offering hope for meaningful progress. Now, as we approach the 2025 deadline, this paper takes a closer look at the actual developments among G7 countries to evaluate the progress made—or not made—toward fulfilling this commitment.

In fact, fossil **fuel subsidies among G7 nations have risen by 15% since 2016, reaching unprecedented levels. Total subsidy volume reached 1.36 trillion USD in 2023**, (compared to **1.18 trillion USD in 2016**) according to IMF data, which includes external costs in the calculation. The COVID-19 pandemic temporarily reduced subsidy volumes due to lower energy consumption, but the fossil energy price crisis triggered by Russia's war in Ukraine reversed this trend. Many G7 countries, particularly in Europe and Japan, implemented substantial subsidies to shield consumers and businesses from soaring gas and oil prices—often below market levels. These measures were introduced as temporary relief but are being phased out only slowly, with some programs, such as those in Japan, even extended further.

Figure 1: Total Fossil Fuel Subsidies of G7 nations, IMF methodology (Million USD, 2016, 2023)



Source: own illustration

Among the G7 countries, only Canada has achieved a reduction in subsidies **since 2016**, while the United States has largely maintained its subsidy levels. However, with the departure of the Biden administration and President-elect Trump's repeatedly stated commitment to the fossil fuel industry, there is a risk that subsidy volumes in the U.S. could rise again.

Meanwhile, **countries like Italy have seen significant increases**. Germany, for example, allocated 38% of its current fossil fuel subsidy volume in 2023—equivalent to 32.6 billion Euro—to short-term relief measures that ended in 2024. Where these temporary interventions persist, there is risk that they become entrenched and undermine long-term climate objectives unless decisive actions are taken to phase them out.

Table 1: Absolute and relative change in Fossil Fuel Subsidies, IMF methodology (2023 to 2016)

Country	absolute change (Million USD)	relative change (%)
Italy	28,786	▲166%
Germany	37,406	▲49%
France	12,645	▲40%
Japan	72,111	▲37%
United Kingdom	10,409	▲22%
United States	20,879	▲3%
Canada	-4,924	▼11%
Total	177,313	▲15%

Source: own calculation

The persistent high levels of fossil fuel subsidies also underscore a broader leadership gap among G7 countries. **Binding timelines and accountability frameworks are urgently needed** to ensure progress. Voluntary mechanisms, such as the G20's peer reviews, have seen limited participation and failed to deliver meaningful results. **Harmonized methodologies** for estimating and reporting subsidies are essential for fostering transparency and enabling effective policy planning.

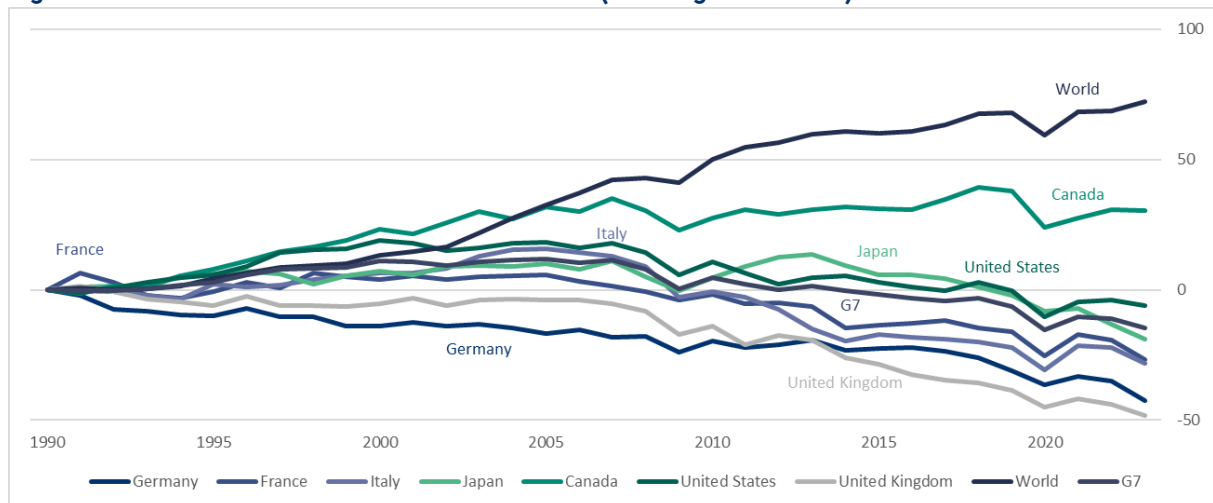
The G7 must take decisive action and lead by example. The continued failure to phase out fossil fuel subsidies not only undermines climate objectives but also perpetuates economic inefficiencies and social inequities. With global attention turning to the upcoming NDC submissions under the Paris Agreement, G7 countries have an opportunity—and a responsibility—to commit to meaningful reforms and align financial flows with a sustainable future.

1 G7: Empty promises to phase out fossil fuel subsidies

The G7 nations—Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States—constitute a significant share of the global economy, collectively accounting for approximately 30%–40% of global economic output (DESTATIS 2024; IEA 2022). They are also **major contributors to global greenhouse gas emissions**, responsible for 30% of global energy demand and 20–25% of energy-related CO₂ emissions (IEA 2022; Lal 2023; Tuo et al. 2024; DESTATIS 2024).

Carbon dioxide emissions of G7 countries have shown a **modest decline** in recent years (DESTATIS 2024). However, it is important to note that this reduction is not uniform across all G7 members. Despite these reductions, G7 countries still account for a disproportionate share of global emissions relative to their population, highlighting the ongoing challenge of aligning economic growth with climate objectives. As both major consumers of fossil fuels and leaders in clean technology innovation, these nations have the capacity to significantly influence global emissions trends.

Figure 2: Carbon Dioxide Emissions from Fossil Fuels (% Change since 1990)



Calculation by DESTATIS 2024; Source: Emissions Database for Global Atmospheric Research (EDGAR/IRC); Data: October 2024

Reducing subsidies for fossil fuels is a critical step toward lowering greenhouse gas (GHG) emissions. The elimination of such subsidies is considered one of the most cost-effective measures governments can take to fulfil their commitments under the Paris Agreement and reduce GHG emissions (Rentschler/Bazilian 2016). By subsidizing fossil fuels, governments create economic incentives to continue their use, thereby perpetuating environmentally harmful dependence on these energy sources. These subsidies, by lowering the cost of fossil fuel consumption, hinder effective climate action and undermine other environmental objectives, such as reducing air pollution. At the same time, fossil fuel subsidies distort market competition by artificially boosting the competitiveness of fossil fuels while slowing the development and deployment of environmentally friendly alternatives and posing a significant “roadblock” to a green energy transition (UBA 2021; IEA 2021).

Fossil fuel subsidies not only harm the environment and accelerate climate change but also disproportionately benefit the wealthy: wealthier individuals have a larger carbon footprint and consequently derive greater absolute benefits from fossil fuel subsidies compared to those with lower incomes. Conversely, the removal of such subsidies tends to place a relatively heavier burden on lower-income households, as these households spend a greater share of their income on energy costs. This makes them more vulnerable to the financial impacts of subsidy removal, even though they derive smaller absolute benefits from the subsidies themselves. (FÖS 2021; del Granado et al. 2010; The New Climate Economy 2015; CAN Europe 2023). Rapid subsidy removal can spark widespread protests, such as those in Germany in December 2023 over cuts to subsidies for agricultural diesel (FÖS 2024a). To ensure **socially just and effective reform**, governments must prioritize robust planning, thoughtful policy design, strategic timing, clear communication, and measures to mitigate adverse social impacts.

This chapter provides an overview of the G7 nations' efforts and challenges in phasing out fossil fuel subsidies. Section 1.1 outlines key early steps, including the 2009 G20 pledge and the 2016 G7 target for 2025. Section 1.2 summarizes renewed commitments through 2023, including enhanced transparency and cooperation. Section 1.3 highlights reporting mechanisms, focusing on inconsistencies in definitions, monitoring, and domestic implementation. Together, these sections sketch the most significant milestones and barriers in aligning subsidy reforms with climate goals.

1.1 Early Commitments

Setting the stage: The G20 pledge in 2009

A wide range of national commitments, as well as supranational and global agreements, emphasize the need to reform and reduce environmentally harmful subsidies. The G20's commitment to phase out inefficient fossil fuel subsidies has a long history, marked by repeated pledges and limited progress. In 2009, at the Pittsburgh summit, G20 leaders first committed to “rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption” (G20 2009). The commitment was **reaffirmed** year by year (G20 2020; G20 2021; G20 2022; G20 2023) as well as at the 2021 and 2022 UN Climate Change Conferences. (UNFCCC/Conference of the Parties 2023; UNFCCC/Conference of the Parties 2022)

The G20s efforts include measures such as support with national implementation strategies and **a voluntary peer review process** to monitor progress, though participation has been limited. To date, only six G20 members, including Germany, have engaged in the process. Progress thus has been limited, with many countries continuing to provide substantial support for fossil fuels (FÖS 2017; FÖS 2024a).

G7 commitment in 2016: building momentum

In 2016, the G7 summit in Japan took a significant step by setting a **concrete target date of 2025**. “We remain committed to the elimination of inefficient fossil fuel subsidies and encourage all countries to do so by 2025.” (G7 2016) This added urgency to the initial G20 commitment and provided a clear timeline.

The decision to set a specific date came amid growing pressure from civil society and increasing recognition of the need for urgent climate action. The 2015 Paris Agreement had recently been adopted, creating momentum for more concrete commitments from world leaders. By setting a deadline, the G7 aimed to demonstrate leadership and encourage other countries to follow suit. Reactions from civil society and academia were generally positive, albeit cautious. Many saw it as a step in the right direction but emphasized the need for concrete action plans (Asmellash 2016; Mathiesen 2016).

1.2 The G7's Renewed Efforts

Reiterating Commitments, struggling with implementation

In 2022, the G7 Ministers of Climate, Energy and Environment reiterated their dedication to addressing fossil fuel subsidies as part of broader climate action ahead of the G7 Summit of June 2024. To enhance the accountability of the 2016 pledge, the ministers proposed the following measures:

- **Reporting on progress** toward meeting their commitment in 2025, building on existing processes such as those in the G20, SDG target 12.c, and the OECD.
- Considering the development of joint public **inventories** of fossil fuel subsidies.
- Increasing international cooperation by fostering discussions, sharing best practices, and improving transparency.
- Developing a **common definition** of inefficient fossil fuel subsidies to facilitate comparability (G7 2022)

The 2022 Communiqué also included the commitment to end new direct international public financing of the unabated fossil fuel energy sector by the end of 2022 (G7 2022).

In December 2023, G7 went one step further and for the first time ever agreed to phase out fossil fuels altogether (Federal Environment Ministry/Federal Economic Affairs Ministry 2023).

However, despite these repeated pledges, progress has been slow, with the G7 falling no less short on implementation than the G20 or the EU. Since 2016, civil society organizations and researchers have consistently called on G7 countries to implement their commitment to phase out fossil fuel subsidies. As the 2025 deadline approaches,

stakeholders are increasingly focused on translating this pledge into meaningful policy changes. Advocacy groups continue to emphasize the importance of transparent reporting and concrete implementation strategies, viewing the upcoming deadline as a crucial milestone in global climate policy (Vardakoulias/Nardi 2024; CAN Europe 2024; Jones/IISD; Green Fiscal Policy Network 2021).

1.3 Reporting Mechanisms and Realities

While the G7 has made strides in establishing reporting mechanisms to track progress on phasing out fossil fuel subsidies, they face challenges in functionality and implementation (Gençsü et al. 2020).

- **Lack of Unified Definitions:** The absence of a common definition for "inefficient" fossil fuel subsidies complicates international comparisons and allows countries to exclude certain subsidies from scrutiny. The G7s latest efforts to improve transparency and develop joint fossil fuels inventories are hampered by the lack of consistent monitoring. For example, while some countries have begun publishing national inventories (e.g. during COP29), these are not standardized or universally adopted across G7 members. So far, only France released a national inventory (IISD 2024).
- **Limited Accountability Mechanisms:** Most reporting mechanisms lack enforcement or follow-up processes to ensure that commitments translate into action. Mechanisms like the G20 peer reviews provide one-time evaluations of fossil fuel subsidies. However, these reviews are voluntary and lack enforcement mechanisms, limiting their effectiveness in driving consistent progress.
- **Inconsistent domestic policies:** Few G7 countries have integrated phase-out commitments into domestic policies with clear timelines or definitions (Environment and Climate Change Canada 2023). Italy, Germany, and France include regular reporting on fossil fuel subsidies in their National Energy and Climate Plans (NECPs), as mandated by the EU (Hizliok et al. 2024; Federal Ministry for Economic Affairs and Climate Action 2024; BMWK 2024).

Germany serves as an example for many of those challenges: The last governing coalition acknowledged the goal of phasing out "environmentally harmful subsidies" in its 2021 agreement (Bundesregierung 2021), but faced internal disputes over which subsidies qualify as harmful and over the trade-offs with social and economic objectives. Despite recognizing the ecological and economic benefits of reform, no concrete package has been implemented, and instead, the volume of such subsidies continues to rise, undermining broader climate protection efforts (Bär et al. 2021; FÖS 2024a; FÖS 2024b).

2 The Problem of Definitions and Measurements

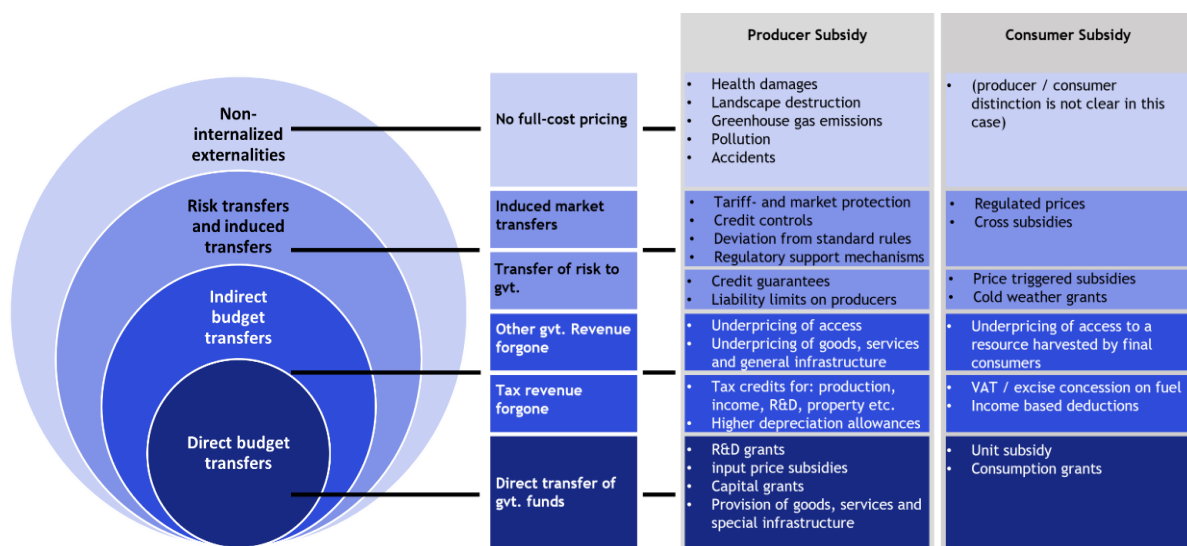
The lack of a common definition for fossil fuel subsidies presents a significant challenge in international efforts to address climate change and promote sustainable energy policies. This definitional ambiguity has far-reaching implications, affecting the accuracy of subsidy estimates and complicating cross-country comparisons. Different approaches to defining and measuring fossil fuel subsidies can lead to different estimates of their magnitude.

The impact of these definitional differences extends beyond mere numerical discrepancies. They affect policy formulation, international negotiations, and the ability to track progress in phasing out harmful subsidies. Without a standardized definition, countries may interpret their commitments differently, potentially undermining global efforts to reduce fossil fuel support (FÖS 2023a).

As we explore the three main international approaches to estimating fossil fuel subsidies – the OECD's program-specific approach, the IEA's simple price-gap method, and the IMF's complex price-gap methodology – this chapter offers an overview of their varying definitions and methodologies. We evaluate their advantages and limitations, highlighting gaps in cross-country comparability and practical application.

2.1 Varying International Approaches

Figure 3: Definitions and Methodologies for Measuring Subsidies



Source: own illustration

Internationally, there are three common approaches for estimating subsidies to fossil fuels, each differing in methodology and results.

- **Program-specific approach (OECD):** This bottom-up approach adds up government subsidies, including direct financial aid and tax exemptions, based on official government data. Since 2013, the **Inventory of Support Measures for Fossil Fuels**¹ has systematically documented 800 policies that likely incentivize fossil fuel production and consumption through direct financial support or tax benefits. Its core aim is to improve transparency by identifying a broad range of public policies that may promote higher fossil fuel use and production than would occur without government involvement. It tracks both consumer and producer subsidies across 40 countries, offering aggregate and policy-specific data from 2010 to 2023 (OECD 2024; OECD; OECD/IISD).
- **Simple price-gap approach (IEA):** This compares national fossil fuel prices with international market prices. Subsidies exist if domestic prices are below the reference price. IEA's fossil fuel subsidy database² currently

¹ Subsidy volumes available under <https://data-explorer.oecd.org> (Fossil Fuel Support)

² <https://www.iea.org/data-and-statistics/data-product/fossil-fuel-subsidies-database>

includes aggregate data for 48 countries but usually excludes subsidies in G7 nations due to higher prices, mostly capturing oil-exporting countries.

- **Complex price-gap approach (IMF):** This compares national prices with a hypothetical reference price that includes additional costs like transport, taxes, and externalities (efficient price). It includes explicit subsidies (undercharging for the supply costs of fossil fuels) as well as implicit subsidies (undercharging for environmental costs and forgone consumption tax). The total fossil fuel subsidy is the difference between efficient prices (including externalities) and retail prices, multiplied by consumption equals. The IMF provides the most extensive dataset, covering 176 countries with aggregated information on subsidy volumes and environmental impacts, data available from for many years, and including projections until 2030.³

Methodological challenges in defining subsidies often intersect with practical difficulties in measuring their volume, leading to underreporting despite inclusion in definitions like the OECD's. This discrepancy often results in estimates representing a lower boundary of true subsidy volumes (FÖS 2017).

Fossil Fuel Subsidy Tracker

The Fossil Fuel Subsidy Tracker⁴ combines multiple methodologies, offering a more holistic view: It is a collaborative platform developed by the OECD and the International Institute for Sustainable Development (IISD). It incorporates data from all three major international databases and employs two complementary methodological approaches. For direct budgetary transfers and tax expenditures, it adopts the OECD Inventory approach. For induced transfers, it uses the price-gap approach from the IEA and IMF, which compares end-use prices with reference prices to identify subsidies.

2.2 Advantages and Disadvantages of Different Approaches

The estimation of fossil fuel subsidies presents a complex challenge, with each approach offering distinct advantages and limitations

- The OECD's program-specific approach provides detailed policy insights but is not suitable for cross-country comparisons due to variations in definitions and methodologies. Moreover, the reported subsidy volumes depend heavily on the thoroughness with which national governments track and disclose such data. Reporting gaps can result in subsidy volumes appearing lower than their actual levels (FÖS 2023a). These methodological limitations contribute to significant discrepancies between the OECD and IMF estimates of fossil fuel subsidies. This divergence arises because the OECD relies exclusively on official government data, which may omit certain subsidies and typically excludes non-budgetary subsidies and externalities.
- The IEA's simple price-gap method offers easy international price comparisons but overlooks subsidies in higher-price markets such as in G7 countries.
- The IMF's complex price-gap approach provides the most comprehensive global coverage, making it particularly valuable for international comparisons. By standardizing to a hypothetical reference price that is internationally consistent, it enables cross-country analysis while incorporating a broad definition of subsidies, including external costs. However, this approach does not trace subsidies to specific regulations, which limits its usefulness for discussions on country-specific policy reforms. While explicit subsidies, reflecting direct fiscal costs, are more commonly addressed in policy debates and academic literature, the IMF emphasizes the importance of considering total subsidies—both explicit and implicit. From the perspective of "getting fossil fuel prices right," the inclusion of implicit subsidies, such as unaccounted environmental costs, is crucial, as these costs are just as real and significant as supply costs (IMF 2023).

³ <https://www.imf.org//media/Files/Topics/energy-subsidies/EXTERNALfuelsubsidiestemplate2023new.ashx>

⁴ <https://fossilfuelsubsidytracker.org/>

Method Choice: IMF Data for G7 Comparison and Bottom-Up Analysis for Germany

In the following chapters, we rely on **IMF data derived from the complex price-gap approach to compare fossil fuel subsidies across G7 countries**. This decision is based on several key advantages of the IMF data:

- First, as outlined above, the IMF approach offers the most comprehensive and consistent dataset, with no gaps for G7 countries. In contrast, the OECD data, while valuable for detailed policy insights, suffers from uncertainties regarding the completeness of its coverage due to its reliance solely on official government reporting.
- The standardization to an internationally valid hypothetical reference price enables a higher degree of comparability between countries.

For the sake of completeness, OECD data is also presented and can be found in the Annex.

To undertake the specific **analysis of German fossil fuel subsidies** in chapter 3, however, we adopt a **bottom-up approach**. This method is conceptually similar to the OECD's program-specific framework but expands the definition of subsidies to include implicit and non-budgetary forms of support. By identifying specific subsidies and their underlying mechanisms, this approach provides actionable insights for targeted subsidy reforms. This expanded definition aligns with the methodology used by the German Environment Agency (UBA), which incorporates measures such as the unequal taxation of energy carriers, implicit advantages through state regulations, and the free allocation of emission allowances. (UBA 2021). Thus, while the IMF approach is ideal for international comparisons, the bottom-up approach is better suited for a detailed analysis of Germany's subsidy landscape, offering a clearer pathway for effective reform strategies.

3 Fossil Fuel Subsidies in Germany

The international debate over defining environmentally harmful and inefficient fossil fuel subsidies extends to the national level in Germany. Political discussions on reforming these subsidies are often hindered by disagreements over what constitutes a subsidy and which are truly environmentally harmful.

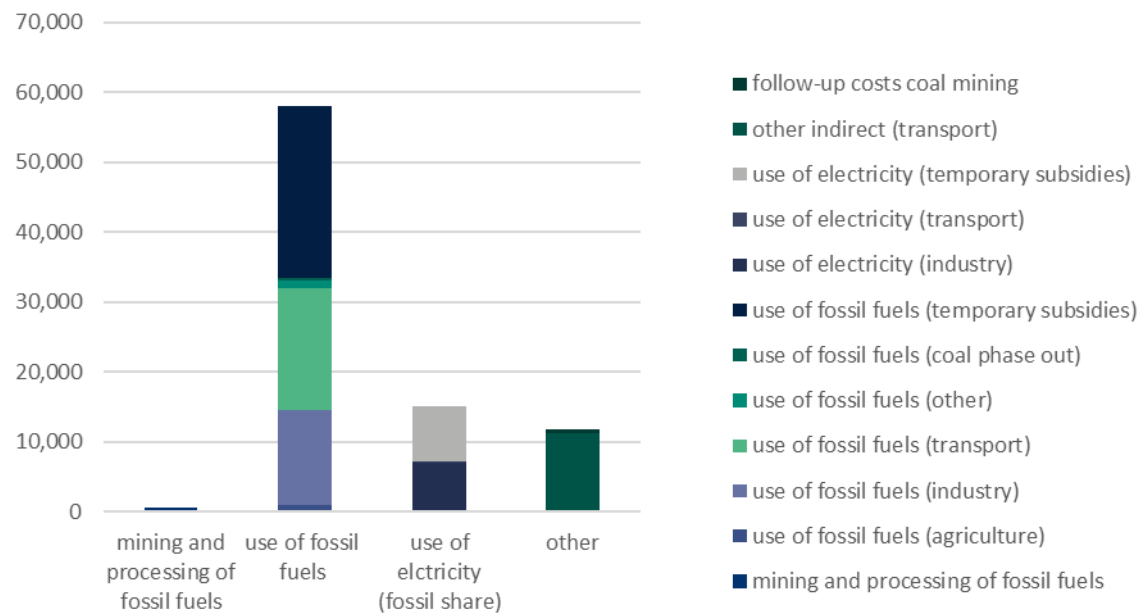
For instance, the German Federal Government and the Federal Ministry of Finance (BMF) follow a much narrower definitional framework in their subsidy reporting compared to the Federal Environment Agency (UBA), resulting in lower reported subsidy volumes. Since 2006, the UBA has been reporting on environmentally harmful subsidies in Germany, also considering implicit benefits that may not have direct budgetary relevance (FÖS 2023a).

This analysis aligns with the UBA's 2021 definition, which has been reporting on environmentally harmful subsidies in Germany since 2006, including implicit benefits that may not have direct budgetary relevance. Building on this, we update the subsidy volume by incorporating official government figures and our own calculations up to 2023. Our approach includes several key adjustments to provide a more comprehensive picture:

- Electricity price subsidies are partially included, proportional to the share of fossil fuels in electricity generation.
- Additional subsidies are considered, such as R&D expenditures, CCS promotion, diesel privilege, kerosene tax exemption (including international portion), VAT exemption for international flights, free allocation of emission allowances, and exemptions from the national CO₂ price.

As a result, our calculated subsidy volume is slightly larger than that reported by the OECD (see Annex). However, it is important to note that our total figure still **represents a conservative estimate**. Some subsidies, like Hermes guarantees or state aid for LNG terminals could not be quantified due to data limitations or complexity.

Figure 4: fossil fuel subsidies in Germany 2023 (FÖS methodology) by category and sector, in Million Euro



Source: own illustration

It is worth highlighting that a significant portion of the current subsidy volume is attributed to **temporary relief measures introduced during the fossil energy price crisis**. These measures account for approximately 38% (32.6 billion out of 85.3 billion Euros) of the total subsidies - more than one-third of the overall volume. This underscores the substantial impact of short-term interventions on the subsidy landscape.

Despite the challenges in reducing fossil fuel subsidies, there have also been **some positive developments in climate finance policy**. Notable reforms include adjustments to the CO₂ pricing path and an increase in the air travel tax. These measures represent steps towards aligning fiscal policies with climate goals, although their impact is partially offset by the continued high levels of fossil fuel subsidies.

The detailed results of this comprehensive analysis are presented in the table below, quantifying the total subsidy volume for 2023.

Table 2: Fossil Fuel Subsidies in Germany in 2023⁵ (FÖS methodology)

	Subsidy	Value (Mio. Euro)	Year	Source
Mining and Processing of fossil fuels	Mining royalty exemption for lignite	233	2022	FÖS 2023b
	Water fee exemption for lignite coal producers	14	2022	FÖS 2023b
	Manufacturer privilege	270	2023	BMF 2023
use of fossil fuels	Exemption of agricultural vehicles from vehicle excise duty	480	2023	BMF 2023
	Energy tax refund for diesel used in agriculture and forestry	440	2023	BMF 2023
	Energy tax exemption for non-energy uses of fossil fuels	1,500	2021	FÖS 2023c
	Energy tax advantage for electricity generation	1,750	2023	BMF 2023
	Energy tax relief for energy intensive processes	450	2023	BMF 2023
	Energy tax breaks for agriculture and manufacturing	170	2023	BMF 2023
	Energy tax advantage for companies in the manufacturing sector in special cases (tax cap / Peak Equalisation Scheme)	175	2023	BMF 2023
	Energy tax concessions for coal	52	2020	Plötz et al. 2023
	Research&Development&Demonstration	42	2023	IEA 2024
	CCS in raw materials industry	3	2022	FÖS 2023c
	Energy tax relief for LPG and natural gas used in engines	25	2023	BMF 2023
	Free allocation of CO ₂ emissions trading allowances	9,076	2022	FÖS 2023c
	Exemption of industry sectors from national carbon price	329	2022	FÖS 2023c
	Energy tax exemption for fuels used in internal waterway transportation	115	2023	BMF 2023
	support of maritime transport	46	2023	BMF 2023
	Energy tax concessions for diesel fuel	8,500	2022	FÖS 2023d
	Energy tax exemption for kerosene	7,800	2023	Own calculation
	VAT exemption for international flights	3,997	2018	UBA 2021; UBA et al. 2021
	Energy tax relief for public transportation	65	2023	BMF 2024
	Climate and heating component in housing allowances	931	2023	OECD 2024
	Stand-by bonus for coal-fired power plants	236	2016-2023	FÖS 2023b
	Compensation for closure of coal-fired power plants	48	2023	Bundesnetzagentur
	Compensation for foregone profits due to forced closure of coal-fired power plants (RWE)	173	2023	FÖS 2023b
Reduction of VAT on gas prices**	6,500	2023	OECD 2024	
Grant programme for energy intensive firms (natural gas)**	3,821	2023	OECD 2024	
natural gas price break**	14,337	2023	OECD 2024	
use of electricity (fossil share)	Electricity tax advantage for companies in the manufacturing sector in special cases (tax cap)	701*	2023	OECD 2024
	Relief on grid charges	1,357*	2023	50 hertz et al. 2022
	Reduced electricity surcharges (CHP and offshore) for industry	222*	2021	FÖS 2023d
	Electricity price compensation (ETS)	2,993	2023	BMF 2023

⁵ If data for 2023 was not available, the most recent available year is assumed.

	Electricity tax advantage for certain processes and procedures	382*	2023	OECD 2024
	Electricity tax advantage for companies in the manufacturing sector, and agricultural and forestry businesses	484*	2023	OECD 2024
	Electricity tax advantage for rail and trolleybus operations	58*	2023	OECD 2024
	Privileges for special-contract customers with regard to concession charges for electricity	1,800*	2023	FÖS 2023c
	Grant programme for energy intensive firms (electricity)**	1,228*	2023	OECD 2024
	Electricity price break**	6,764*	2023	Bundeshaushalt.de
other (indirect)	Funding of regional airports	90	2023/2018	BMF 2023
	Commuting tax allowance	5,100	2022	FÖS 2023e
	Flat-rate taxation of privately used company cars	6,077	2020	Plötz et al. 2023
follow-up costs coal mining	Rehabilitation of lignite mining sites in East Germany	215	2023	OECD 2024
	Early retirement payments for hard coal miners	45	2023	OECD 2024
	Combined aids in North Rhine Westphalia	158	2023	OECD 2024
	Total	85,335		
	Share of energy crisis measures **	32,650		

* For electricity price subsidies, only the fossil fuel component was considered.

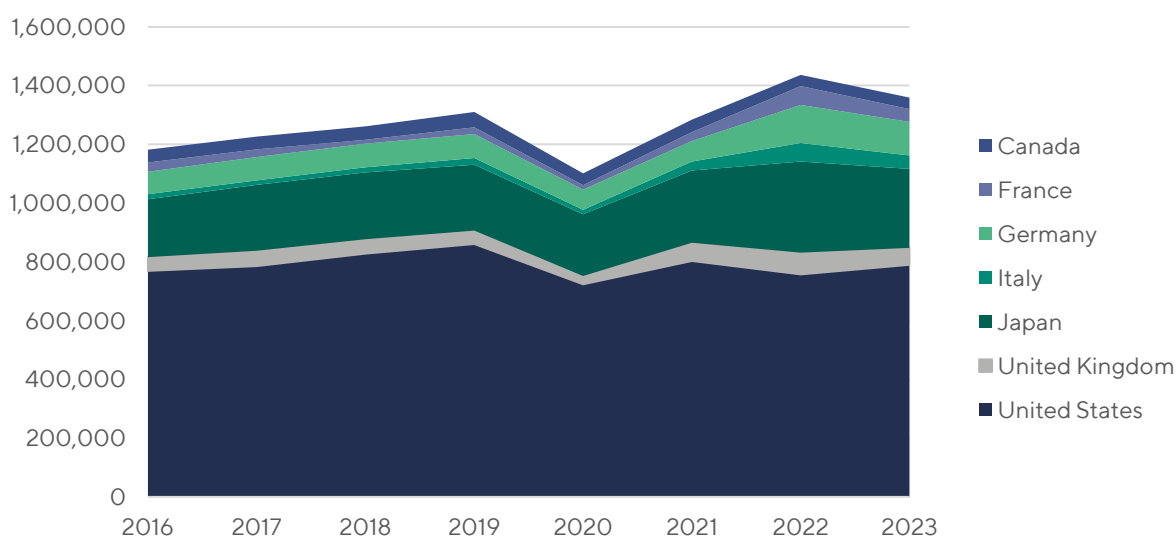
** Temporary relief measure during the energy price crisis.

Source: own illustration, data sources in Table 2

4 Fossil Fuel Subsidies across G7 countries

Chapter 3 provided an in-depth overview of fossil fuel subsidies in Germany. In this chapter, we examine and compare the subsidy volumes across all G7 countries. The total volume of fossil fuel subsidies (FFS) in 2023 amounts to approximately **1.36 trillion USD**,⁶ according to data from the IMF,⁷ about 21% of the global subsidies recorded in the database. The main part of the subsidies is made up of non-internalised **external costs** (implicit subsidies), especially for **climate costs**. The G7's subsidies are **15% higher than in 2016**, when they reached **1.18 trillion USD**. In the following years, fossil fuel subsidies of G7 nations rose to 1.31 trillion USD in 2019, then declined during the COVID-19 pandemic (mainly due to lower consumption, not political measures), only to reach record levels in 2022 (1.44 trillion USD) (see Figure 5). During the fossil energy price crisis following the Russian war of aggression on Ukraine, European countries and Japan in particular massively increased fossil fuel subsidies. Unlike before, these countries subsidized fuels – gas in particular – below market prices in order to protect consumers from excessive cost increases. Though these explicit subsidies were mainly temporary price support measures, fossil fuel subsidies were only slowly reduced in 2023 (Figure 5).

Figure 5: Total Fossil Fuel Subsidies of G7 nations, IMF methodology (Million USD, 2016–2023)



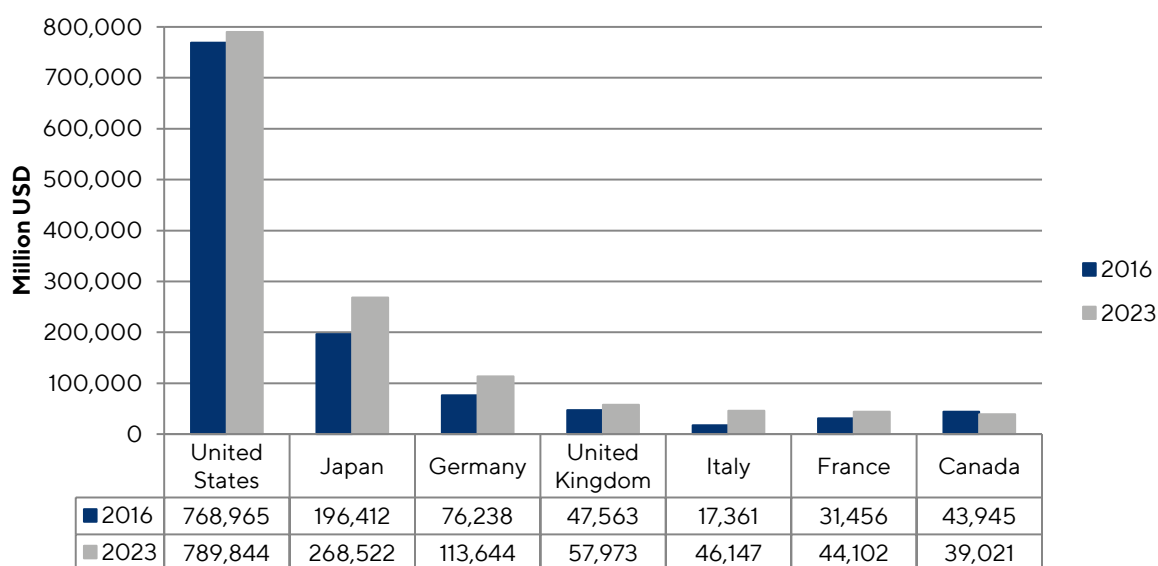
Source: own illustration

Looking at each G7 nation, the **United States** has the **largest volume** of fossil fuel subsidies in 2023, with more than 58% (a total of approx. **790 billion USD**) of total G7 subsidies (see Figure 6), **followed by Japan and Germany** with **268 billion USD** and **114 billion USD** respectively. The fourth largest subsidiser of fossil fuels is **United Kingdom** with **58 billion USD**.

⁶ all subsidy values are in 2021 constant prices.

⁷ <https://www.imf.org//media/Files/Topics/energy-subsidies/EXTERNALfuelsubsidiestemplate2023new.ashx>

Figure 6: Total Fossil Fuel Subsidies of G7 nations, IMF methodology (Million USD, 2016, 2023)

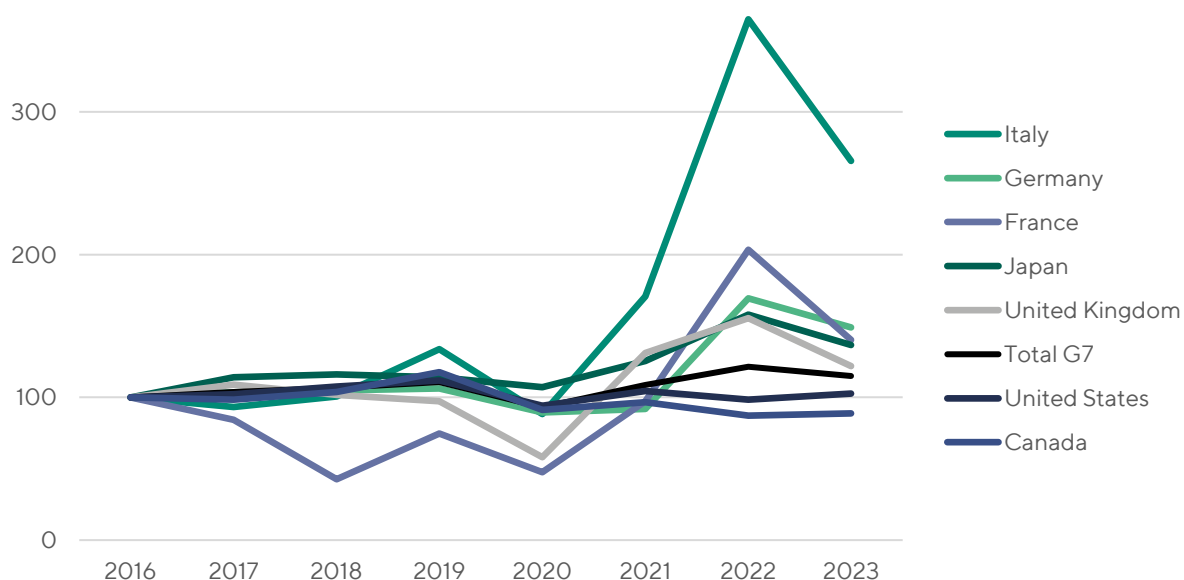


Source: own illustration

While the first four places remained unchanged between 2016 and 2023, Canada, France and Italy changed places. In 2016, Canada was still the fifth largest fossil fuel subsidiser, followed by France and Italy. In 2023, Italy is in fifth place, followed by France and Canada.

Figure 7 shows the subsidy trend over the entire period, indexed to the starting value in 2016. In the years up to 2020, the trends are similar in all countries; with the exception of France (that e.g. introduced a carbon tax), no significant reductions can be observed, but no major increases either. From 2021, most G7 countries have massively increased their subsidies.

Figure 7: Total Fossil Fuel Subsidies of G7 nations, IMF methodology (Index 2016 = 100)



Source: own illustration

Compared to 2016, the year the G7 pledged to phase out inefficient fossil fuel subsidies by 2025, **none of the G7 countries has lower fossil fuel subsidies in 2023, except for Canada. Particularly in France, Germany, Italy and Japan, fossil fuel subsidies in 2023 are significantly higher than in 2016** - by 37% and 40% respectively in Japan and France, just under 50% in Germany, and more than 165% in Italy (see Table 3).

Table 3: Absolute and relative change in Fossil Fuel Subsidies, IMF methodology (2023 to 2016)

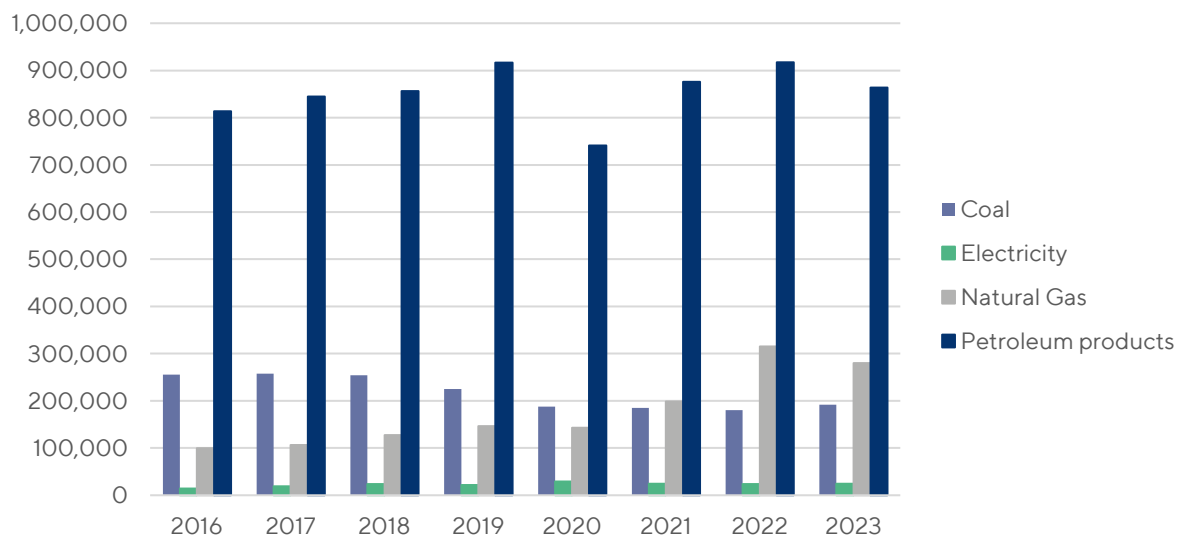
Country	absolute change (Million USD)	relative change (%)
Italy	28,786	▲166%
Germany	37,406	▲49%
France	12,645	▲40%
Japan	72,111	▲37%
United Kingdom	10,409	▲22%
United States	20,879	▲3%
Canada	-4,924	▼11%
Total	177,313	▲15%

Source: own calculation

The main reason for the different developments is the extent to which countries were affected by the fossil energy price crisis and corresponding government responses:

- European countries and Japan in particular massively increased fossil fuel subsidies. Unlike before, these countries subsidized fuels – gas in particular – below market prices in order to protect consumers from excessive cost increases. Though these explicit subsidies were mainly temporary price support measures, fossil fuel subsidies were only slowly reduced in 2023.
- In Canada, the price of fossil fuels, especially mineral oil, rose in the years following the pandemic without the government responding with comprehensive subsidies. As a result, Canada's subsidy volume has fallen.

Broken down by **energy source**, almost **two-thirds** of fossil fuel subsidies in **2023** are spent on **petroleum products**, i.e. mainly affect the transport sector. At more than 864 billion USD, the volume is higher than in 2016. Subsidies for gas and electricity subsidies have risen sharply compared to 2016. Together, they have almost tripled compared to 2016 – due to the energy price crisis. Coal subsidies, on the other hand, are declining.

Figure 8: Fossil Fuel Subsidies per Fuel Type, IMF methodology (Million USD, 2016-2023)

Source: own illustration

5 Conclusions and Outlook

In **Germany**, a significant portion (38% or 32.6 billion Euro) of the fossil fuel subsidy volume in 2023 (**85.3 billion Euro**) stems from **temporary relief measures** introduced during the fossil energy price crisis. These include substantial interventions such as the **natural gas price break** (14.3 billion Euro), the **electricity price break** (6.8 billion Euro), and the **reduction of VAT on gas prices** (6.5 billion Euro) in 2023. This substantial impact of short-term interventions on the subsidy landscape underscores the critical importance of ensuring these temporary measures do not become permanent fixtures. While for Germany, these temporary relief measures ended in 2024, it is imperative to hold policymakers accountable for phasing out permanent fossil fuel subsidies, to prevent entrenching fossil fuel dependency and compromising long-term climate objectives. In view of the tight budget situation, the reduction of fossil fuel subsidies also opens up new fiscal scope.

Among Germany's fossil fuel subsidies, three stand out as particularly significant in terms of volume:

- **Free allocation of CO₂ emissions trading allowances:** This subsidy amounted to 9.1 billion Euro in 2022.
- **Entfernungspauschale** (commuter allowance): This costs the government approximately 5.1 billion Euro annually.
- **Dieselprievileg** (Energy tax concessions for diesel fuel): This tax rebate for diesel fuel amounts to about 8.5 billion Euro per year.

These subsidies not only represent substantial costs to the government but also create environmental concerns by incentivizing fossil fuel consumption and longer commutes. Yet, many concepts for subsidy reforms have been proposed (see FÖS 2021). To ensure **socially just and effective reform**, governments must prioritize robust planning, thoughtful policy design, strategic timing, clear communication, and measures to mitigate adverse social impacts. Repurposing subsidies into climate friendly technologies instead of completely abandoning them is a promising way to avoid resistance of groups that would otherwise be negatively affected.

Across **G7 nations**, the fossil fuel stocktake is no less encouraging. In 2016, when G7 leaders pledged to end inefficient fossil fuel subsidies within a decade, enthusiasm about this achievement was great. Some observers called it a historic decision. But contrary to the promise made in 2016, **G7 fossil fuel subsidies have increased to unprecedented levels:**

- **Total subsidy volume reached 1.36 trillion USD in 2023**, according to the IMF's methodology, which includes external costs in the calculation.
- They are now **15% higher than in 2016, (1.18 trillion USD)**, the time G7 made the promise.
- In terms of volume, the **United States** still lead the ranking with approx. **790 billion USD, followed by Japan and Germany** with **268 billion USD** and **114 billion USD** respectively.
- **Compared to 2016**, all countries except Canada have higher fossil fuel subsidies. The **sharpest rise can be observed in France, Germany, Italy, and Japan**, while the United States has largely maintained its subsidy levels. The massive surge is mainly due to the temporary relief measures introduced in the wake of the fossil energy price crisis, especially in European countries and Japan, to protect households and companies from sharp cost increases. In particular, gas prices were subsidized below the market price level. Subsidies that were introduced as a temporarily measure are only slowly being reduced in the G7 countries. Japan, in particular, has further renewed the programs (IMF 2023).

The persistent high levels of fossil fuel subsidies across G7 countries **underscore the urgent need for stronger action** to align financial flows with climate objectives. Despite repeated commitments, such as the G7's 2025 target and the G20's 2009 pledge, progress on phasing out subsidies has been inconsistent, revealing significant leadership gaps. Essential steps to set the target into practice are:

- **Binding timelines and accountability frameworks** to ensure that progress is effectively tracked and enforced. Voluntary mechanisms like G20 peer reviews have seen limited participation, reducing their impact.
- **Harmonizing methodologies** and promoting platforms like the Fossil Fuel Subsidy Tracker⁸, which integrates data from major international organizations, would enable more comprehensive and transparent assessments.

⁸ <https://fossilfuelsubsidytracker.org/>

Without consistent data, global negotiations risk fragmentation and a lack of trust among stakeholders. Varying subsidy estimation approaches (e.g., OECD's program-specific method, IEA's simple price-gap approach, and IMF's complex price-gap approach) produce inconsistent figures, hindering comparability and policy planning.

The surges in fossil fuel prices since 2022 due to the fossil energy price crisis reinforce the importance of rapidly transitioning away from fossil fuels—not only to address climate crisis but also to reduce dependence on insecure sources of energy. **G7 must set an example** as rich industrialized nations must lead the way to climate neutrality. Looking at the reduction of fossil subsidies, there has been no sign of leadership so far.

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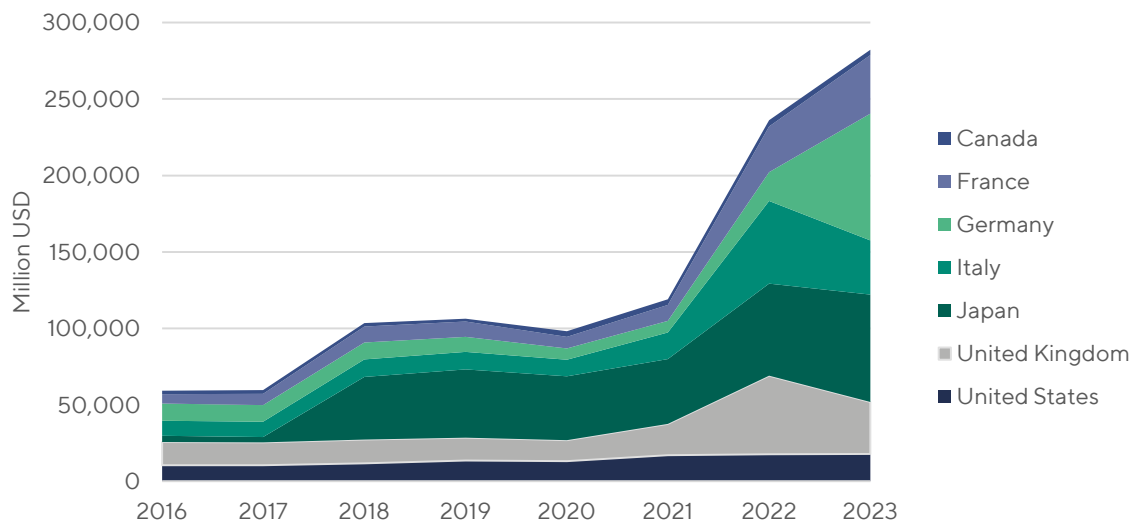
ANNEX

Annex 1: Estimates by OECD Inventory of Support Measures for Fossil Fuels

The OECD inventory provides a comprehensive overview of policies and measures in OECD countries and is therefore well suited to track individual policy measures. However, as explained in Chapter 2, the bottom-up approach makes it difficult to compare countries. This is because the OECD Inventory may have not captured all support measures or because those that were captured have not been fully quantified. Completeness of information on individual policy measures depends on how accurately countries report and which subsidy definitions they apply. Therefore, estimates presented may be under-estimates of actual subsidy totals. Nevertheless, despite these shortcomings, it shows the bottom edge of fossil fuel support and provides some useful hints on “explicit” subsidies, e.g. direct budget transfers and tax exemptions, which were massively extended during the energy price crisis.

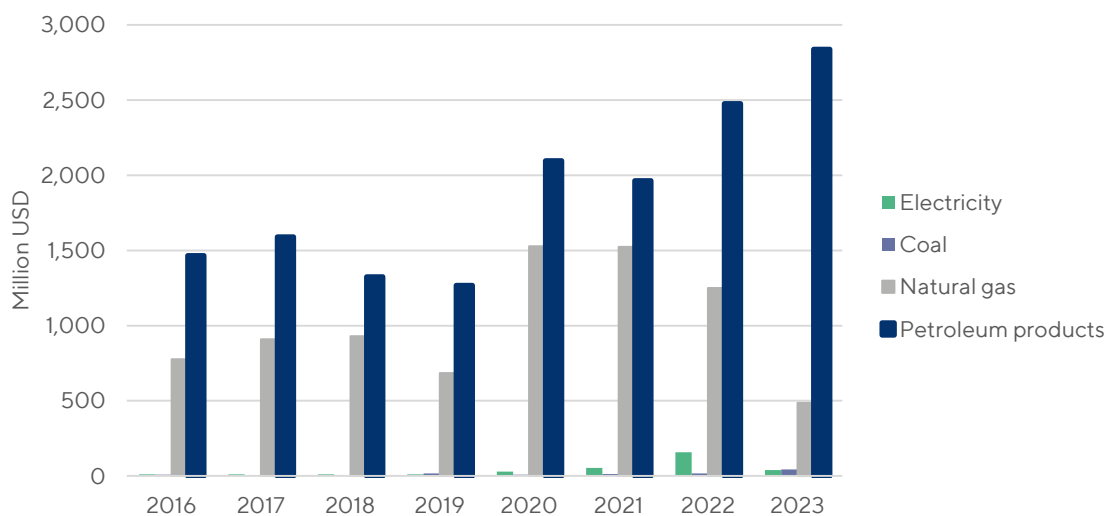
The following figures show the development in the years 2016 to 2023. Direct support for fossil fuels has increased sharply since 2022. Japan and the European G7 countries in particular have massively increased their subsidies. While European countries are scaling back their temporary support measures, they have been renewed in Japan.

Figure 9: Total Fossil Fuel Subsidies of G7 nations, OECD inventory (Million USD, 2016–2023)



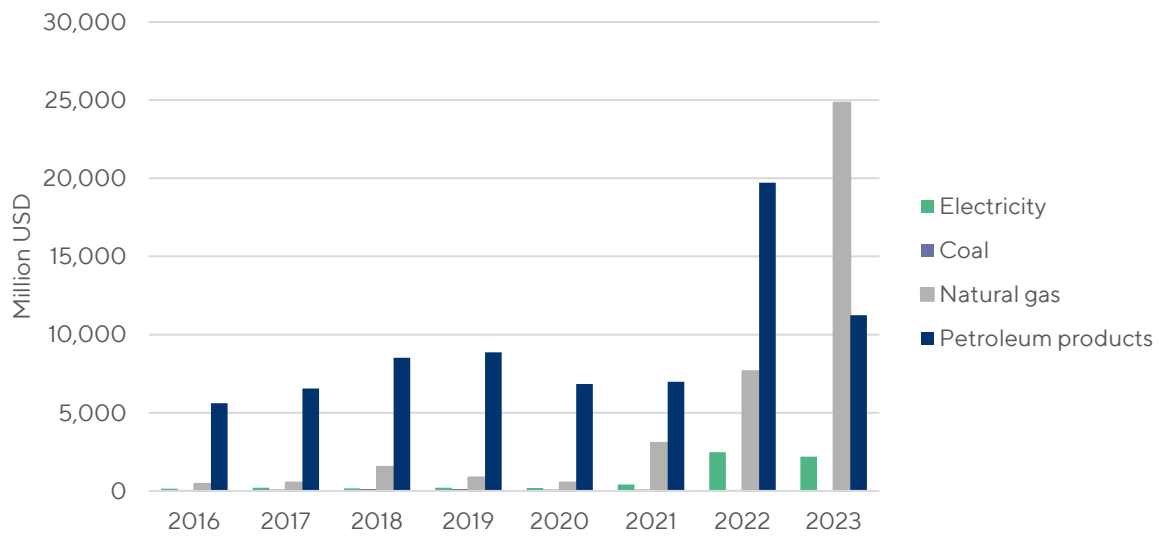
Source: own illustration

Figure 10: Canada Fossil Fuel Subsidies per Fuel Type, OECD methodology (Million USD, 2016–2023)



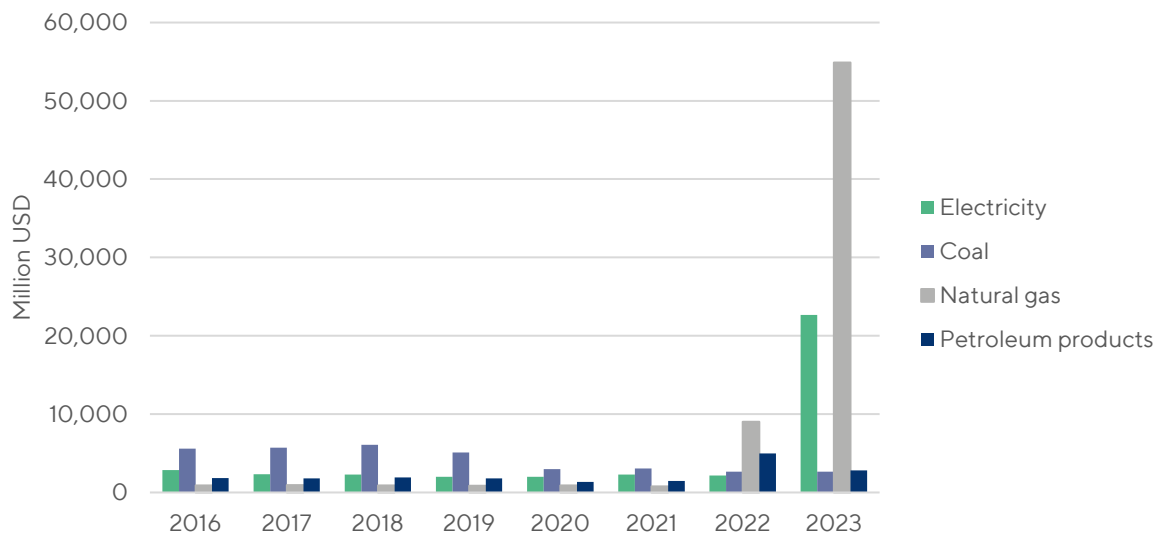
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Figure 11: France Fossil Fuel Subsidies per Fuel Type, OECD methodology (Million USD, 2016-2023)



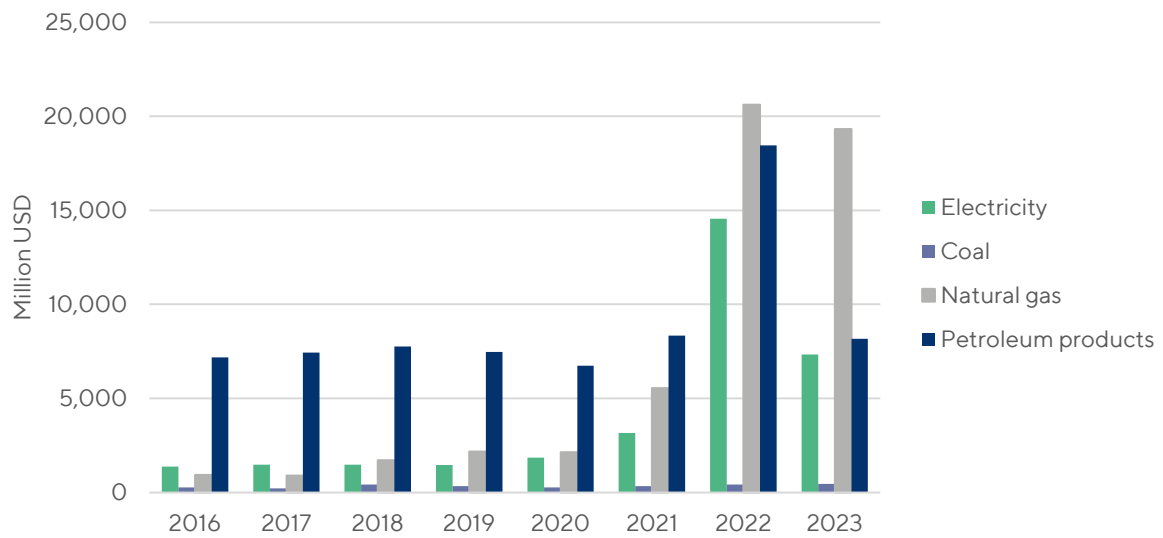
Source: own illustration

Figure 12: Germany Fossil Fuel Subsidies per Fuel Type, OECD methodology (Million USD, 2016-2023)



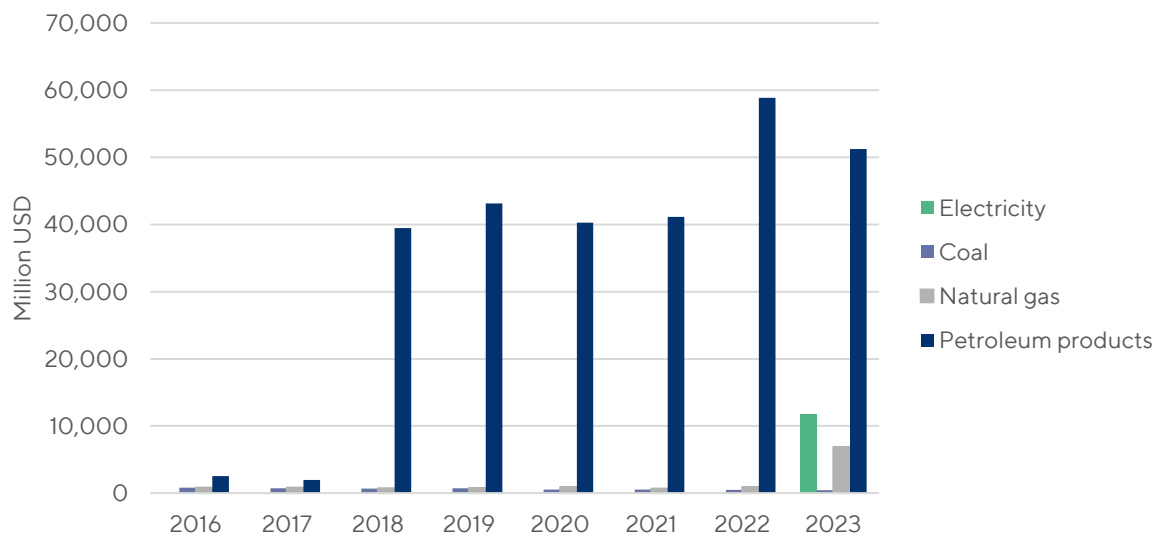
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Figure 13: Italy Fossil Fuel Subsidies per Fuel Type, OECD methodology (Million USD, 2016-2023)



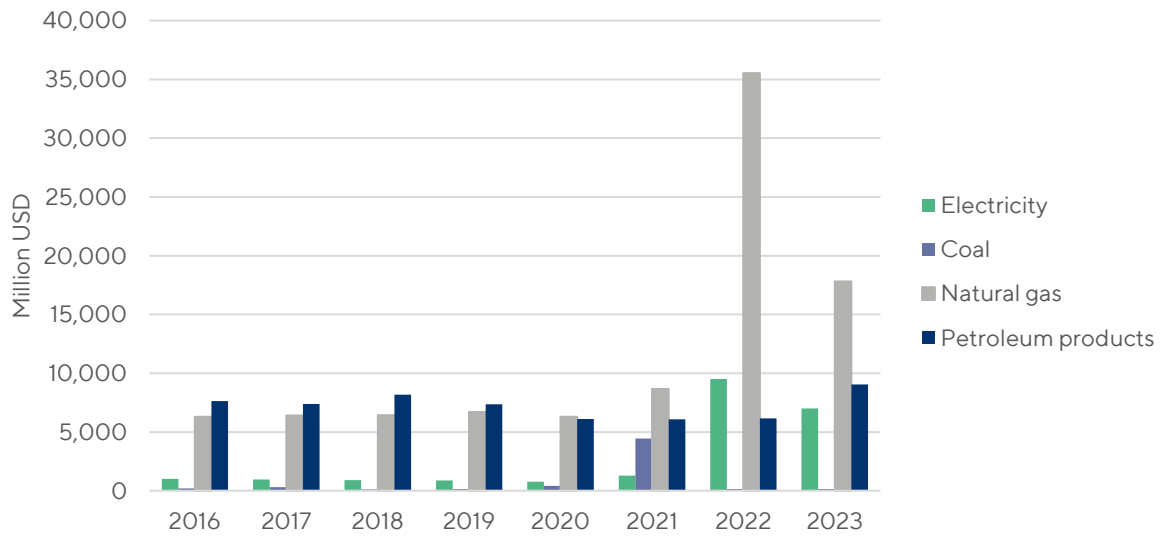
Source: own illustration

Figure 14: Japan Fossil Fuel Subsidies per Fuel Type, OECD methodology (Million USD, 2016-2023)



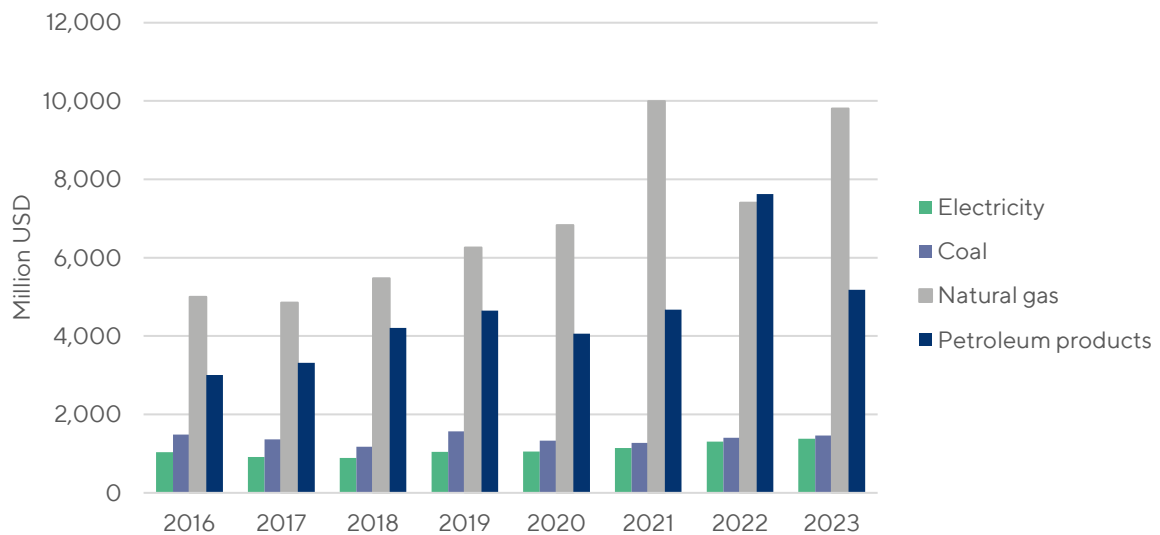
Source: own illustration

Figure 15: United Kingdom Fossil Fuel Subsidies per Fuel Type, OECD methodology (Million USD, 2016-2023)



Source: own illustration

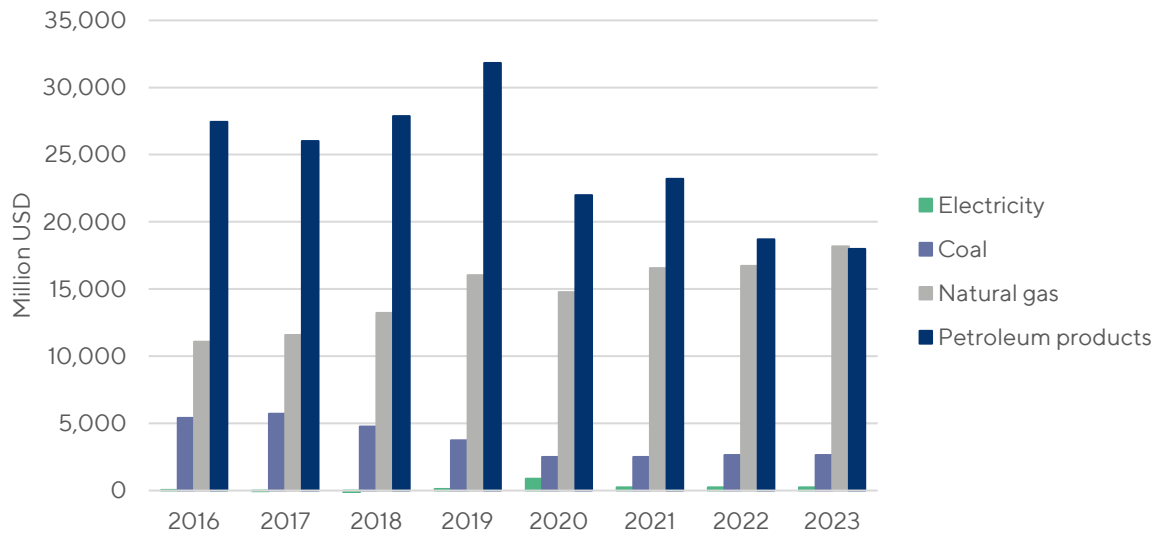
Figure 16: United States Fossil Fuel Subsidies per Fuel Type, OECD methodology (Million USD, 2016-2023)



Source: own illustration

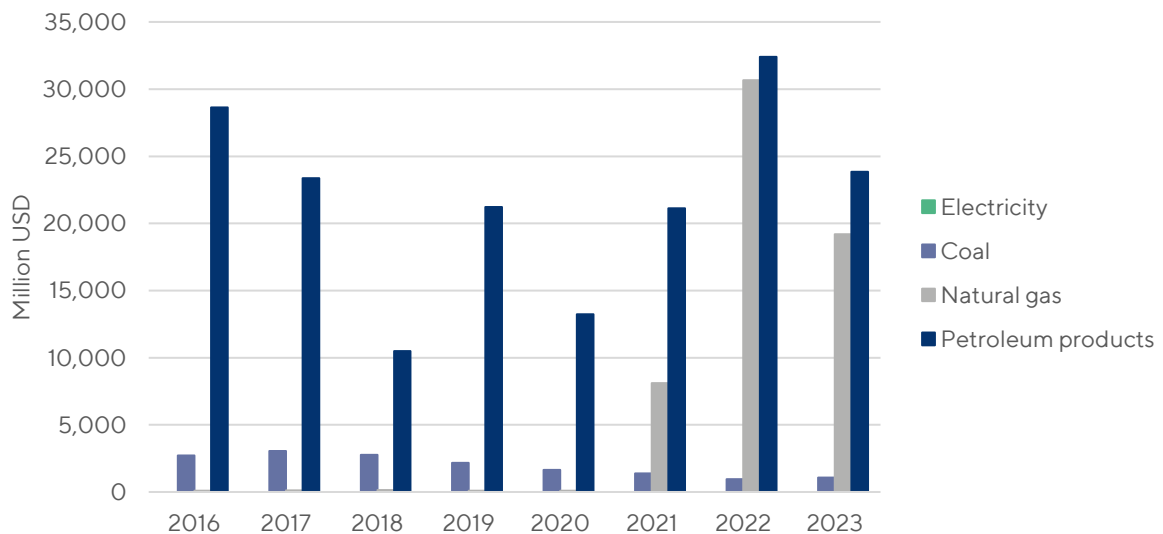
Annex 2: IMF Country Data

Figure 17: Canada Fossil Fuel Subsidies per Fuel Type, IMF methodology (Million USD, 2016-2023)



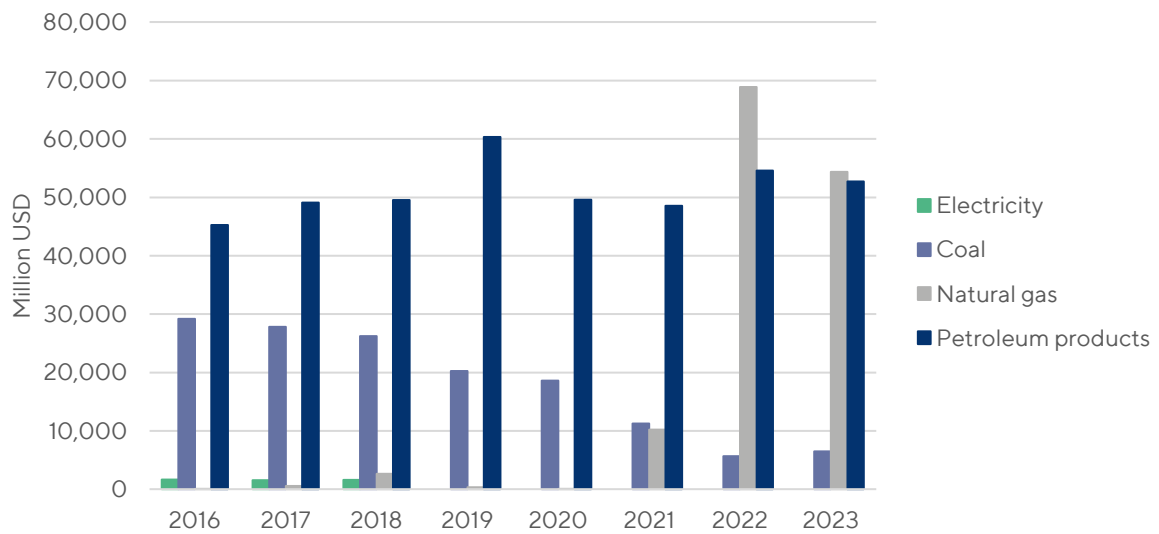
Source: own illustration

Figure 18: France Fossil Fuel Subsidies per Fuel Type, IMF methodology (Million USD, 2016-2023)



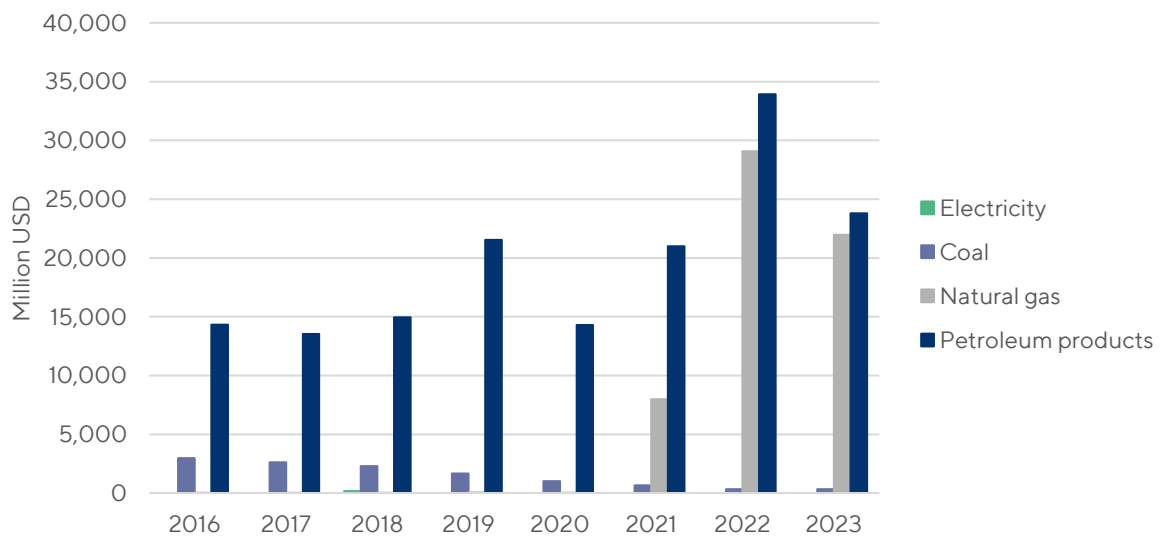
Source: own illustration

Figure 19: Germany Fossil Fuel Subsidies per Fuel Type, IMF methodology (Million USD, 2016-2023)



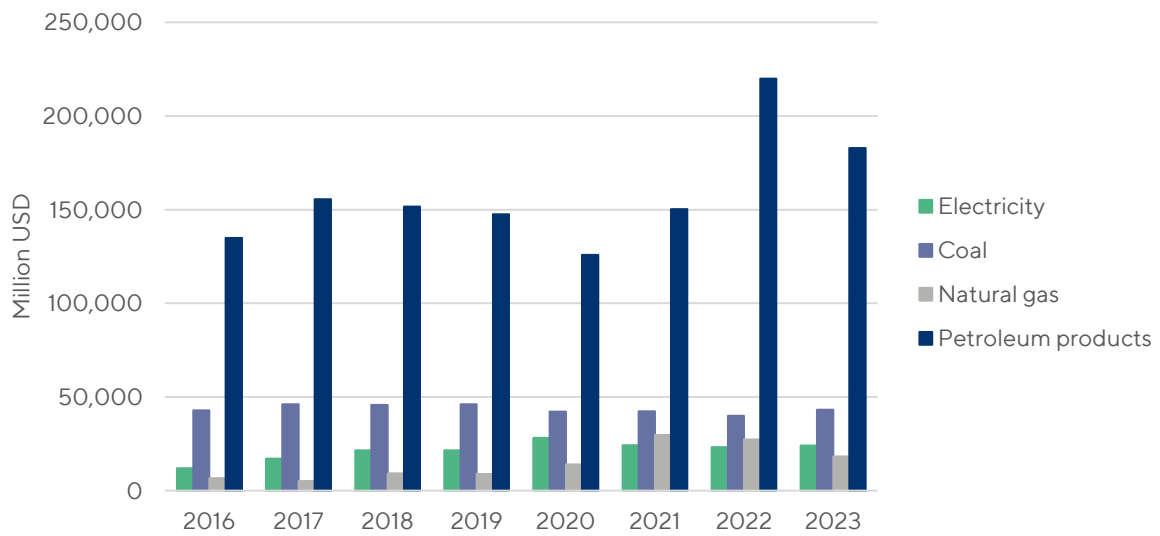
Source: own illustration

Figure 20: Italy Fossil Fuel Subsidies per Fuel Type, IMF methodology (Million USD, 2016-2023)



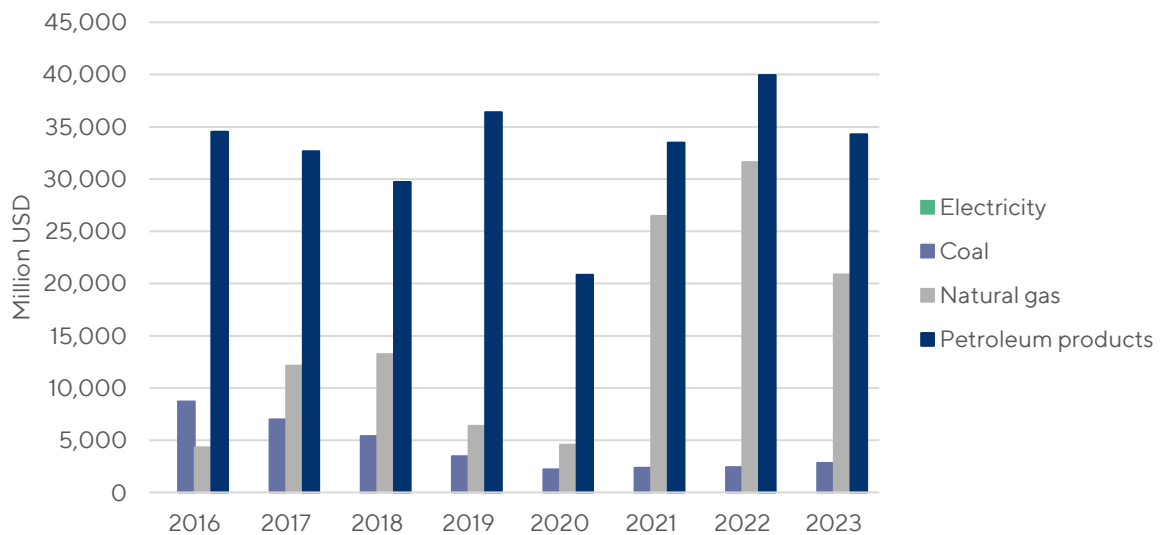
Source: own illustration

Figure 21: Japan Fossil Fuel Subsidies per Fuel Type, IMF methodology (Million USD, 2016-2023)



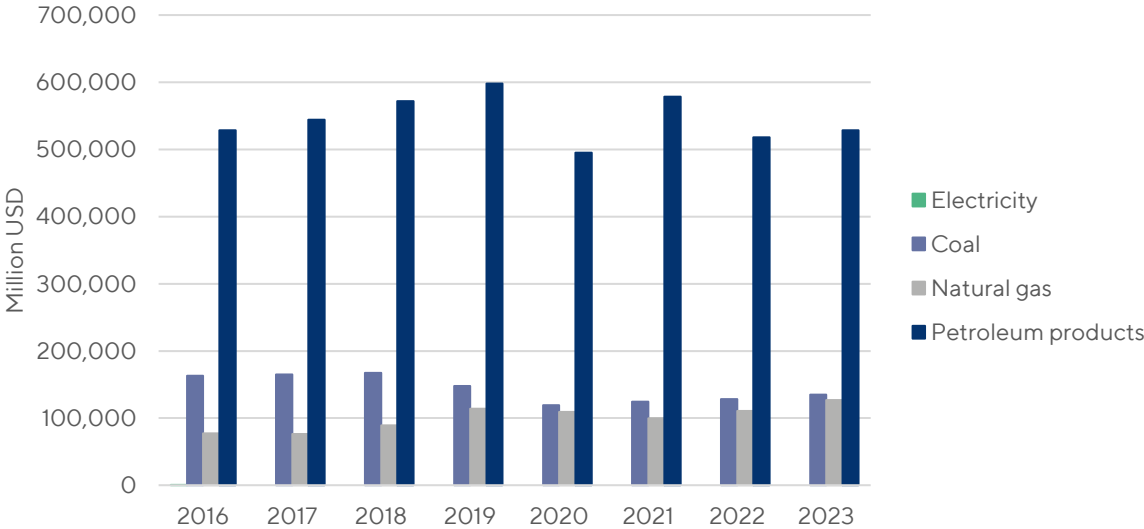
Source: own illustration

Figure 22: United Kingdom Fossil Fuel Subsidies per Fuel Type, IMF methodology (Million USD, 2016-2023)



Source: own illustration

Figure 23: United States Fossil Fuel Subsidies per Fuel Type, IMF methodology (Million USD, 2016-2023)



Source: own illustration