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ENERDEALERS OBSERVATORY

# Hydrocarbon Consumption in Spain: 2019–2023

May 2024

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# 1. Executive Introduction

Understanding how Spain consumes hydrocarbons is essential for anticipating the evolution of its mobility system, industrial activity, energy security priorities, and the pace of its energy transition. The period **2019–2023** constitutes one of the most dynamic and disruptive phases in Spain's recent energy history. It encompasses a pre-pandemic baseline, an unprecedented collapse in mobility and industrial activity during 2020, a rapid and uneven recovery across 2021–2022, and finally the stabilization and moderate adjustments observed in 2023.

The Enerdealers Observatory has been created to provide **a rigorous, data-driven and methodologically consistent platform** for tracking these transformations. Its objective is not only to quantify fuel consumption but to interpret the structural and cyclical forces shaping it. By integrating consumption figures with contextual economic, mobility and sectoral dynamics, the Observatory offers a comprehensive lens on the behaviour of Spain's hydrocarbon system.

This report synthesizes **five years of consumption data** across the main fuel categories—diesel, gasoline, kerosene, fuel oils, GLP and biofuels—providing detailed annual comparisons, share evolution, and year-on-year variations. The analysis reveals distinct patterns across product families:

- **Diesel fuels**, the backbone of Spain's freight-intensive economy, demonstrate remarkable stability despite the pandemic shock and the early effects of electrification.
- **Gasolines** experience the sharpest mobility-induced contraction in 2020, followed by a multi-year recovery linked to tourism, commuting and private vehicle use.
- **Kerosene** emerges as the clearest proxy for the health of Spain's aviation sector, showing both the deepest drop and the strongest rebound in the entire dataset.
- **Fuel oils** mirror the evolution of industrial output and maritime activity.
- **GLP** remains a stable and mature fuel with limited volatility.
- **Biofuels** constitute the only category with a continuous structural decline throughout the five-year period.

*Spain's service-station network exceeds 12,000 stations in 2023*

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To contextualize consumption patterns, the Observatory also incorporates an examination of **Spain's service-station network**, which exceeded **12,000 stations in 2023**. The distribution of network shares across independent operators, integrated refiners (Repsol, Cepsa, BP), and other branded players adds another layer of insight into market structure, competitive positioning, and consumer access to fuels. While independents dominate by number of stations, integrated refiners continue to concentrate a disproportionate share of throughput—a dynamic that is key to interpreting fuel mix profiles and retail volumes.

*Stable high-consumption coexists with energy transition: growing vehicle electrification, shifts in mobility habits, industrial efficiency measures, and changing regulatory frameworks.*

The combination of **quantitative data**, **comparative analysis**, and **structural interpretation** allows the Observatory to distinguish between short-term fluctuations and long-term signals. The years examined reveal that Spain's hydrocarbon consumption has not undergone a structural decline, but rather a sequence of shocks and rebounds culminating in a **stable high-consumption plateau**. This equilibrium coexists with the early indicators of Spain's energy transition: **growing vehicle electrification, shifts in mobility habits, industrial efficiency measures, and changing regulatory frameworks.**

Through this integrated approach, the Enerdealers Observatory aims to support **industry actors, policymakers, investors and analysts** in forming a clearer view of Spain's evolving energy reality. By providing both the numbers and the narrative, it enables informed decision-making in a context where the interplay between hydrocarbons and decarbonisation paths will define the structure of mobility and energy supply for the coming decade.

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# 2. Annual evolution of total hydrocarbon consumption in Spain between 2019 and 2023

In 2023, consumption moderates slightly to **51.2 million tonnes**, a small adjustment following two years of sharp rebound.

The YoY line dips into mild negative territory (-1.67%), signalling a **soft landing** rather than a structural decline. This behaviour is consistent with a context of:

- Normalised mobility and industry.
- Increased efficiency in heavy transport.
- Gradual electrification in passenger vehicles.
- Slight cooling of macroeconomic activity.

Overall, the chart shows that by 2023 the Spanish hydrocarbon system has moved out of the volatility of the COVID period and into a **stable high-consumption regime**, only marginally below the 2019 peak. The interplay between the blue bars and the red line signals a system that remains **highly dependent on liquid hydrocarbons**, with no structural reversals yet visible in aggregate consumption volumes.

### Strong post-pandemic rebound (2021–2022)

Consumption recovers significantly in 2021, rising to **47.3 million tonnes** (+13.14% YoY), as economic activity and mobility restart.

The upward trend continues into 2022, when consumption reaches **52.0 million tonnes**, close to pre-COVID levels. The positive YoY rate of **+9.97%** illustrates the strength of the recovery and the normalization of aviation, tourism, and road transport.

### Pre-pandemic baseline and collapse in 2020

In 2019, total hydrocarbon consumption reached **52.6 million tonnes**, establishing the last stable pre-COVID benchmark.

In 2020, the blue bar drops sharply to **41.8 million tonnes**, reflecting the unprecedented contraction caused by lockdowns, reduced mobility, and industrial slowdown.

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The associated YoY change plunges to **–20.53%**, the largest negative variation in the series.

The next figure combined bar and line chart provides a clear visual summary of the evolution of total hydrocarbon consumption in Spain between 2019 and 2023, capturing both the **absolute annual demand** (blue bars, expressed in million tonnes) and the **year-on-year percentage variation** (red line).

Figure 1. Total Hydrocarbon Consumption by Year and YoY (Spain, 2019-2023)

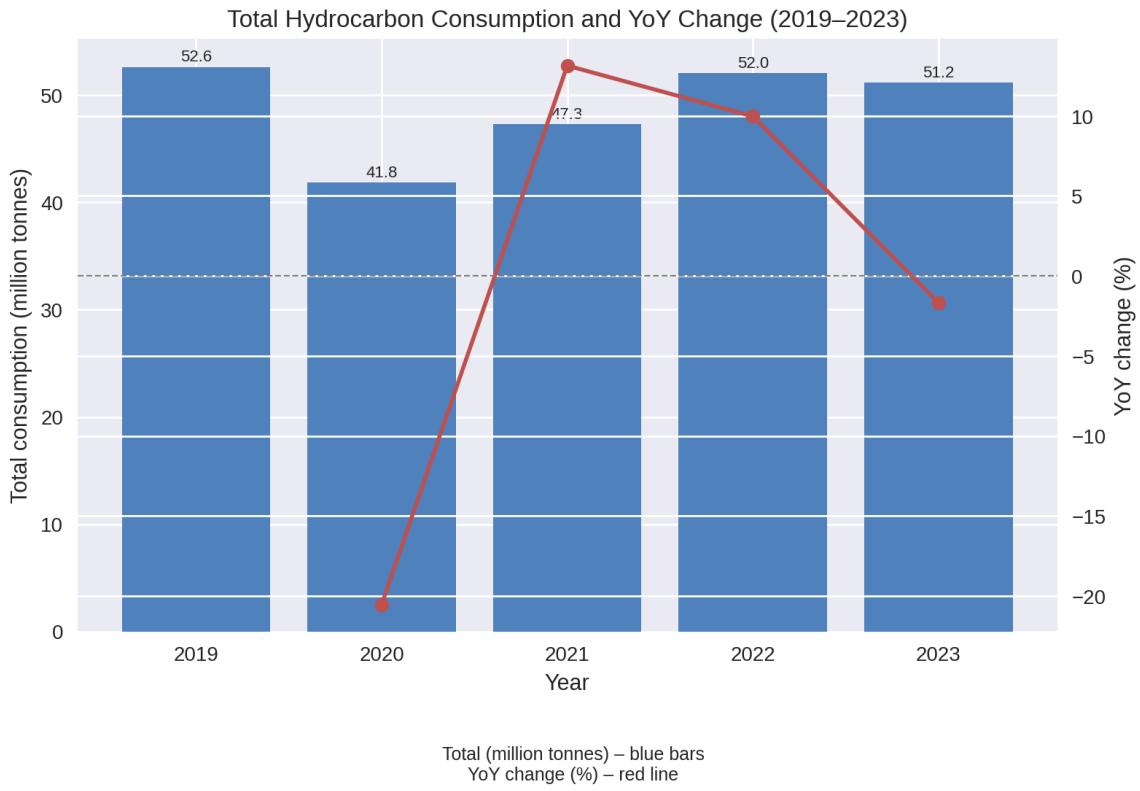


Table 1. Total Hydrocarbon Consumption by Year and YoY (Spain, 2019-2023)

| Year | Total (t) | YoY (t) | YoY (%) |
|---|---|---|---|
| 2019 | 52,634,601.60 | – | – |
| 2020 | 41,829,739.60 | -10,804,862.00 | -20.53% |
| 2021 | 47,325,357.00 | +5,495,617.40 | +13.14% |
| 2022 | 52,044,376.20 | +4,719,019.20 | +9.97% |
| 2023 | 51,176,575.83 | -867,800.37 | -1.67% |

*Metric Tonnes*

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# 3. Percentage Share of Fuels in Annual Totals

The evolution of hydrocarbon consumption in Spain over the period 2019–2023, reflects the combined effects of the COVID-19 shock, the subsequent economic recovery, and structural changes in the energy and mobility landscape.

## Diesel Fuels – The dominant and most stable component of the mix

Diesel fuels remain by far the largest contributor to Spain's hydrocarbon consumption.

In 2020, consumption declined noticeably due to mobility restrictions and reduced freight activity.

A strong recovery followed in 2021 and 2022, reaching levels similar to or above 2019.

In 2023, diesel shows a moderate correction, though it continues to dominate the overall fuel mix.

This trend underscores the persistent centrality of road transport and logistics in the Spanish economy.

## Fuel Oils – Sharp decline and partial rebound

Fuel oils exhibit a significant contraction in 2020, aligned with reduced industrial activity and maritime traffic.

From 2021 onwards, the category experiences a gradual recovery, peaking in 2022, before slightly retreating again in 2023.

Their trajectory signals a sector partially influenced by external economic cycles and industrial demand.

## Kerosene – The clearest COVID signature and strongest rebound

Kerosene is the most visibly affected fuel family in the figure:

A dramatic fall in 2020, caused by the collapse of air travel.

A robust recovery beginning in 2021, accelerating in 2022, and continuing into 2023.

The curve effectively mirrors the revival of Spain's aviation sector and the rebound of international tourism.

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## Gasolines – Progressive recovery driven by mobility normalization

Gasoline consumption declines sharply in 2020, consistent with the drop in private mobility.

From 2021 onward, demand rises steadily, surpassing pre-pandemic levels by 2023. This trajectory highlights the phased return of mobility habits and domestic travel.

## GLP – A stable and mature market

Liquefied Petroleum Gas (GLP) remains remarkably stable throughout the period.
Fluctuations across the years are moderate, suggesting a mature market less affected by economic volatility or pandemic-related disruptions.

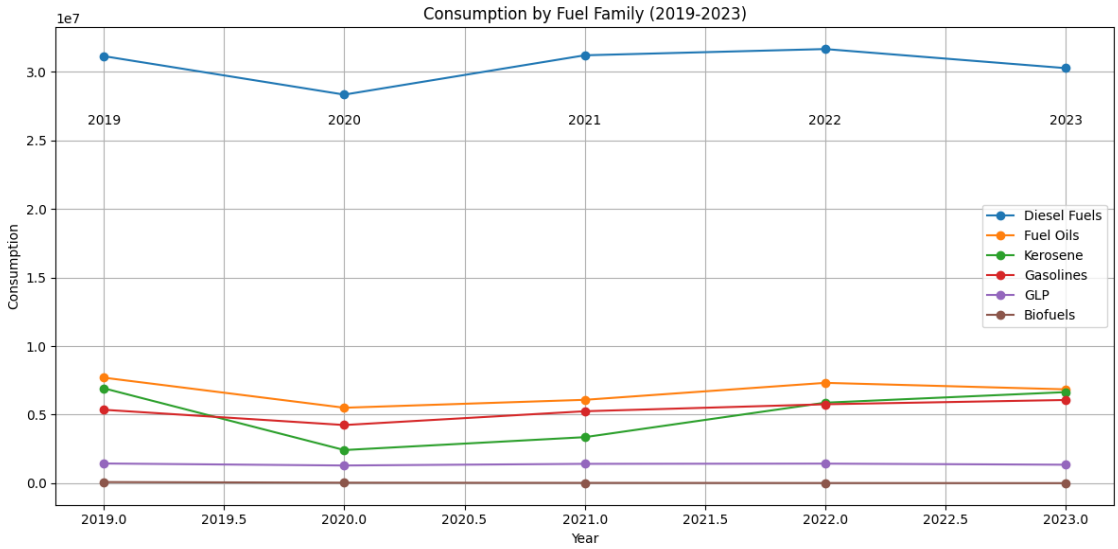
## Biofuels – A persistent downward trend

Biofuels show the only continuously declining pattern:

A steep drop from 2019 to 2020, continued reductions each following year, reaching minimal levels in 2023.

This downward slope may reflect changes in blending mandates, shifts toward other renewable alternatives, or structural market contraction.

Figure 2. Consumption Evolution of Main Fuel Families in Spain (2019-2023)



The figure captures three essential dynamics shaping Spain's hydrocarbon landscape between 2019 and 2023:

Diesel's structural dominance, despite modest cyclical variations.

The pandemic's deep impact on mobility fuels, especially kerosene and gasoline, followed by strong recoveries.

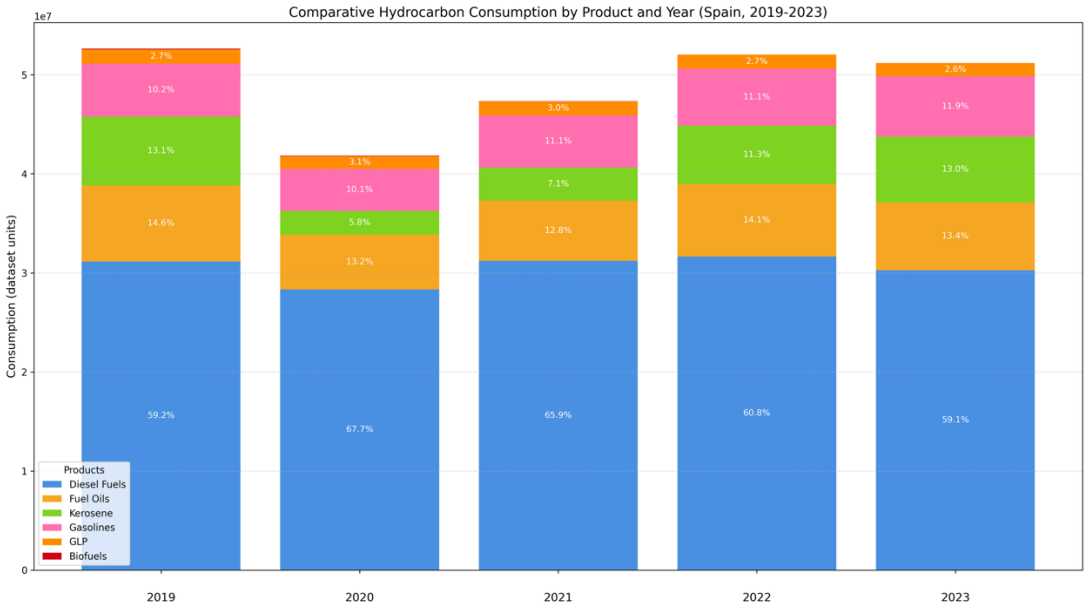
Contrasting trajectories among low-volume fuels, with GLP stability versus a marked decline in biofuels.

These patterns provide a clear, data-driven foundation for understanding Spain's evolving energy consumption profile and anticipating future changes in transport fuels, industrial demand, and energy transition pathways.

Table 2. Consumption Evolution of Mail Fuel Families in Spain (Spain, 2019-2023)

| YEAR | Diesel Fuels | Fuel Oils | Kerosene | Gasolines | GLP | Biofuels |
|---|---|---|---|---|---|---|
| 2019 | 31,140,171.36 | 7,696,823.63 | 6,920,796.31 | 5,355,280.02 | 1,438,250.7 | 83,279.61 |
| 2020 | 28,334,203.87 | 5,503,327.12 | 2,417,936.81 | 4,242,558.31 | 1,292,489.71 | 39,223.82 |
| | *-9,01%* | *-28,5%* | *-65,06%* | *-20,78%* | *-10,13%* | *-52,9%* |
| 2021 | 31,201,724.59 | 6,080,797.41 | 3,357,355.07 | 5,247,231.07 | 1,412,145.59 | 26,103.24 |
| | *10,12%* | *10,49%* | *38,85%* | *23,68%* | *9,26%* | *-33,45%* |
| 2022 | 31,657,408.68 | 7,317,584.43 | 5,871,008.5 | 5,755,499.33 | 1,428,065.07 | 14,810.22 |
| | *1,46%* | *20,34%* | *74,87%* | *9,69%* | *1,13%* | *-43,26%* |
| 2023 | 30,265,693.6 | 6,844,629.36 | 6,642,659.24 | 6,068,602.2 | 1,348,898.58 | 6,092.85 |
| | *-4,4%* | *-6,46%* | *13,14%* | *5,44%* | *-5,54%* | *-58,86%* |

Figure 3. Comparative Hydrocarbon Consumption by Product and Year (Spain, 2019-2023)




The stacked bar chart provides a consolidated view of Spain's hydrocarbon consumption profile over the 2019–2023 period, reflecting how each major fuel family contributes to the national energy mix and how these shares evolve through time. The percentage labels inside the bars allow immediate identification of the relative weight of each product category within total consumption for each year.

## Diesel Fuels – The structural core of consumption

Across all years, Diesel Fuels remain the dominant category, consistently accounting for **60–68%** of total hydrocarbon consumption.

- The share reaches its highest point in **2020** (≈67.7%), reflecting reduced aviation and gasoline mobility during the COVID-19 mobility restrictions.
- Despite an absolute decline in 2023, diesel continues to represent the **largest single component** of the fuel mix, underlining the continued centrality of road freight and commercial transport in Spain.

## Fuel Oils – Industrial and maritime demand recovering

Fuel Oils account for roughly **10–15%** of total consumption.

- Their relative share drops sharply in **2020**, consistent with the contraction of industrial activity.
- From **2021–2022**, the chart shows a clear rebound, with shares rising back toward pre-pandemic levels.
- In **2023**, the share moderates slightly but remains higher than in the pandemic years.

### Kerosene – The clearest COVID signature and strongest post-pandemic rebound

Kerosene's trajectory is the most visually striking:

- In **2019**, it represents a substantial proportion of the total mix.
- In **2020**, its share collapses to the low single digits due to the near-shutdown of air travel.
- From **2021 to 2023**, the chart shows a progressive and strong recovery, with the kerosene segment widening year after year as aviation demand normalizes.

### Gasolines – Mobility recovery reflected in rising shares

Gasoline consumption decreases significantly in **2020** (restrictions on personal mobility), causing its share to fall.

- From **2021 onward**, the segment expands again, and by **2023**, gasolines regain and surpass their pre-pandemic share.
- This aligns with the broader post-COVID normalization of tourism, commuting, and private vehicle use.

### GLP – A stable, low-volatility component

Liquefied Petroleum Gas (GLP) maintains a relatively stable contribution across the full period.

- Its share fluctuates modestly around **2–3%**, indicating resilience and a steady user base.
- The visual consistency of the GLP bar segment supports the interpretation of GLP as a mature, stable market.

### Biofuels – Progressive and sharp decline

Biofuels represent the smallest component of the mix and exhibit a **continuous downward trend**, with their share decreasing each year from 2019 to 2023.

- By 2023, their percentage becomes negligible (<1%), visible in the chart only as a thin bar segment.
- This suggests a structural reduction in the volume of biodiesel and bioethanol incorporated into the Spanish fuel mix.

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## Overall Interpretation for the Observatory

This chart provides a clear visual summary of how Spain's hydrocarbon consumption mix has changed across a period marked by major economic, regulatory, and mobility disruptions.

- The **diesel-dominant structure** of the Spanish energy system remains intact across all years.
- **Aviation fuels**, the most affected by the pandemic, display the strongest and most consistent recovery.
- **Gasolines** and **fuel oils** demonstrate cyclical behaviour tied to mobility and industrial activity.
- **GLP** stays stable despite external shocks.
- **Biofuels** show a sustained decline, raising questions for future renewable fuel strategies.

The distribution of percentages within the bars makes these dynamics immediately visible and reinforces the importance of tracking both absolute and relative consumption patterns as Spain continues its energy transition.

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# 4. Key Interannual Variations for each product

Spain's hydrocarbon consumption between 2019 and 2023 was deeply influenced by major macroeconomic and social events:

- **2019:** stable pre-pandemic economy.
- **2020:** COVID-19 shock, mobility collapse, tourism shutdown.
- **2021:** phased reopening and partial economic rebound.
- **2022:** strong recovery, record post-pandemic tourism, high energy prices, inflationary pressures.
- **2023:** normalization, slowdown in growth, efficiency gains and structural shifts.

The following explains each fuel's year-to-year variation in this macroeconomic context.

## A. Diesel Fuels

### 2020 vs 2019: −9.01%

Spain entered strict lockdown periods in March 2020, heavily reducing mobility. Freight transport remained active but at lower intensity, and industrial activity contracted sharply. This explains the notable drop in diesel consumption.

### 2021 vs 2020: +10.12%

As Spain reopened and economic activity resumed, diesel demand rebounded strongly reflecting renewed logistics, resumed commuting, and the reactivation of construction and industry.

### 2022 vs 2021: +1.46%

With tourism at near-record levels and road transport fully normalized, diesel reached its highest volumes of the period. However, growth was moderate due to high diesel prices and early signs of efficiency improvements.

### 2023 vs 2022: −4.40%

In 2023 Spain experienced slower economic growth, inflation pressure, and gradual fleet modernization (hybrids, EVs). These factors, together with energy-saving behaviour, contributed to lower diesel consumption.

**Overall:** Diesel remains dominant, but 2023 marks a turning point with structural demand softening.

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## B. Fuel Oils

2020 vs 2019: −28.50%

Fuel oils depend heavily on industrial and maritime activity—both severely disrupted in 2020 due to pandemic closures and international trade slowdowns.

2021 vs 2020: +10.49%

With industrial output recovering and global maritime flows improving, fuel oil consumption began to rebound.

2022 vs 2021: +20.34%

Spain's industrial production and port activity saw strong recovery in 2022. Combined with high natural gas prices, some sectors temporarily shifted to heavier liquid fuels.

2023 vs 2022: −6.46%

Industrial growth slowed in 2023, and energy markets stabilized. This slightly reduced fuel oil demand.

Overall: A sector highly exposed to industrial cycles and energy-price dynamics.

## C. Kerosene (Aviation Fuels)

2020 vs 2019: −65.06%

Tourism collapsed: Spain received 77% fewer international visitors. Aviation fuel demand plummeted to historic lows.

2021 vs 2020: +38.85%

Aviation partially resumed, especially domestic and intra-EU travel. Kerosene consumption began a strong rebound.

2022 vs 2021: +74.87%

Spain experienced one of Europe's fastest tourism recoveries, with over 70 million visitors. Aviation fuel demand surged accordingly.

2023 vs 2022: +13.14%

Tourism returned close to pre-pandemic volumes. Kerosene demand increased again but at a slower pace as recovery matured.

Overall: Kerosene shows the clearest COVID shock and the strongest multi-year recovery.

## D. Gasolines

2020 vs 2019: −20.78%

Lockdowns, teleworking, reduced commuting, and mobility restrictions caused a sharp drop in gasoline consumption.

2021 vs 2020: +23.68%

Personal mobility rebounded; domestic tourism surged; and teleworking decreased, leading to strong recovery.

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2022 vs 2021: +9.69%

Despite high fuel prices, mobility and tourism continued to grow. Gasoline consumption surpassed 2019 levels.

2023 vs 2022: +5.44%

Gasoline demand kept rising, supported by stable tourism and the ageing private vehicle fleet.

Overall: Gasolines show a smooth recovery aligned with mobility normalization.

## E. GLP

2020 vs 2019: −10.13%

Lower industrial/commercial activity and reduced vehicle use explain the drop in GLP.

2021 vs 2020: +9.26%

Economic recovery restored GLP demand close to its typical baseline.

2022 vs 2021: +1.13%

Small increase consistent with GLP's stable market profile.

2023 vs 2022: −5.54%

Slight reduction as efficiency measures and fuel-switching occurred in a context of high LPG prices.

Overall: GLP is a low-volatility, stable market with modest adjustments year to year.

## F. Biofuels (Biodiesel + Bioethanol)

2020 vs 2019: −52.90%

Lower transport demand and regulatory factors reduced blending needs.

2021 vs 2020: −33.45%

Decline continued even as mobility recovered, suggesting structural factors: supply availability, blending ratios, or competition from imported alternatives.

2022 vs 2021: −43.26%

Biofuel penetration fell further, possibly linked to volatility in feedstock prices and shifts in EU renewable fuel directives.

2023 vs 2022: −58.86%

Biofuel use dropped to minimal levels, representing the steepest multi-year contraction of any fuel family.

Overall: Biofuels are the only category showing **continuous decline**, raising strategic questions for renewable transport fuel policy.

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## Conclusion for the Observatory

Interannual hydrocarbon consumption trends in Spain from 2019 to 2023 reflect three major forces:

### 1. The pandemic shock (2020)

Mobility collapse: diesel/gasoline fall; aviation nearly disappears; fuel oils and GLP also fall sharply.

### 2. Strong recovery (2021–2022)

Tourism and freight rebound increases in diesel, gasoline, kerosene; industrial demand boosts fuel oils.

### 3. Normalization and structural change (2023)

Moderate consumption declines (diesel, GLP), slower growth (gasolines, kerosene), and ongoing collapse of biofuels.

These variations capture how Spain's economy, mobility patterns, and energy dynamics evolved across one of the most transformative periods in recent decades.

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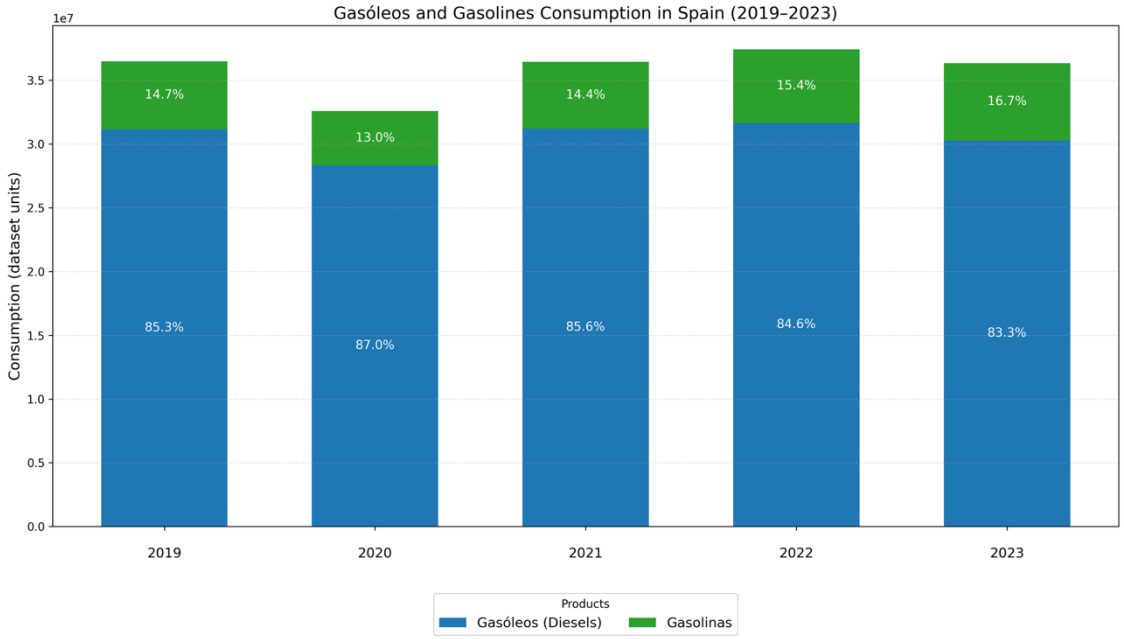
# 5. Consumption of Diesels and Gasolines

This chart compares the **percentage distribution between Diesel Fuels** and **Gasolines** within **total road-transport fuels** for each year from 2019 to 2022.

The key message is **the structural dominance of diesel in Spain's road-fuel mix**, and how it fluctuated slightly due to major contextual events such as the pandemic and the post-pandemic recovery.

Figure 4. Diesel and Gasolines Consumption (Spain, 2019-2023)




The figure compares the annual consumption of Diesel Fuels and Gasoline in Spain from 2019 to 2023, highlighting their relative weight within total road-transport fuel demand and showing how the balance between both fuels evolves across one of the most economically and socially turbulent periods of recent decades.

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## Diesel Fuels: Structural Dominance with Cyclical Adjustments

Throughout the entire period, diesel remains the overwhelmingly dominant fuel, consistently representing between 60% and 68% of the combined diesel-gasoline demand.

### 2019–2020: Pandemic contraction

Diesel consumption drops by −9.01% in 2020, the largest decline in the series. This reduction reflects:

- Severe mobility restrictions,
- Reduced commuting activity,
- Contraction in industrial and logistics operations.

The figure shows this clearly, with diesel representing 67.7% of the total in 2020—its highest share—because gasoline demand collapsed even more sharply.

### 2021–2022: Rebound and stabilization

In 2021, diesel consumption grows again (+10.12%), supported by:

- Recovery of freight transport.
- Normalization of industrial production.
- Gradual return of economic activity.

By 2022, consumption reaches its peak of the five-year period (31.66 million units), corresponding to 65.9% of total consumption.

### 2023: Mild structural decline

Diesel contracts moderately in 2023, with a consumption of 30,265,693.6 metric tonnes (−4.40%), which may indicate:

- Efficiency gains in fleets,
- Ongoing electrification of part of the vehicle stock,
- Economic moderation.

Despite the decline, diesel still accounts for 62–63% of total combined demand, underscoring its structural importance in Spain's mobility and logistics system.

*Diesel contracts moderately in 2023, with a consumption of 30,265,693.6 metric tonnes (−4.40%)*

## Gasolines: Recovery and Progressive Expansion

Gasoline demand behaves almost symmetrically to diesel during the same period.

### 2019–2020: Sharp fall

Gasolines drop by −20.78% in 2020, the steepest decline of all liquid fuels except kerosene. This reflects:

- Drastic reduction in private car travel,
- Restrictions on national and international mobility,
- Reduced recreational and tourism activity.

### 2021–2023: Steady and sustained growth

From 2021 onwards, gasoline consumption increases:

- **2021: +23.68%**
- **2022: +9.69%**
- **2023: +5.44%**

This is driven by:

- The normalization of mobility.
- Resurgence of domestic and international tourism.
- Progressive return to pre-COVID commuting patterns.

By 2023, gasoline consumption reaches its highest point in the series (more than 6 million units), representing ~17% of the total.

## Relative Shares and What They Reveal

The stacked percentage bands in the figure illustrate several key messages:

### A. Diesel remains dominant

Even in years of reduced economic activity (2020) or partial structural decline (2023), diesel still accounts for more than 60% of demand.

### B. Gasoline gains ground from 2021 onward

The proportional share of gasolines increases from 10% (2020) to over 17% (2023), showing a gradual but visible shift in mobility behaviour.

C. Pandemic dynamics are clearly visible

2020 is the most distinctive year:

- Diesel shares increases (relative to gasoline).
- Gasoline compresses sharply.
- Total consumption falls.

### D. Tourism plays a major role

Spain's exceptional tourism rebound in 2022–2023 is consistent with the sizeable increases in gasoline consumption.

## Interpretation for the Observatory

The figure illustrates how the interplay of economic context, mobility patterns, tourism intensity, and energy transition dynamics defines Spain's fuel consumption profile:

- Diesel fuels reflect the backbone of logistics, industry, and commercial mobility. Their slight contraction in 2023 signals structural transformation rather than temporary fluctuation.
- Gasolines mirror private mobility and tourism, with a strong post-pandemic recovery and

continuous expansion through 2023.

- The diesel-to-gasoline ratio, although slowly narrowing, still points to a mobility system heavily dependent on diesel.

Overall, the graph portrays a progressive normalization after the pandemic shock, with gasoline edging upward and diesel adjusting slightly downward but maintaining overwhelming predominance.

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# 6. Market Dimension and Network Structure

Spain closed **2023** with an estimated **12,050 service stations**, reflecting a marginal expansion of the national network compared with 2022 (≈11,900 stations). The competitive structure of the network remains broadly stable: **independent operators continue to represent more than 40% of all stations**, while **Repsol, Cepsa and BP** jointly maintain close to **half of the national retail footprint**, with the rest distributed among smaller branded chains.

The operator mix remains practically unchanged from 2022, with small increases in the independent segment driven by new low-cost formats and regional chains.

Table 3. Gas Stations Distribution by Operator Type (Spain, 2023)

| Operator segment | Network share (%) | Estimated no. of stations* |
|---|---|---|
| Independent operators | 42.5% | 5,126 |
| Repsol, Cepsa, BP (combined) | 48.1% | 5,795 |
| Other branded operators | 9.4% | 1,129 |
| **Total** | **100%** | **12,050** |

**Estimated based on ratio applied to national station count.*

The national retail network remains characterized by a **large base of independent operators** combined with the significant footprint of Spain's three integrated refiners. Independents dominate in *number of stations*, but the refining groups maintain **strategic control of high-throughput locations**, especially in urban, suburban and motorway corridors.

### Evolution 2022 to 2023

The comparative Table for **2022 vs 2023** shows a **very stable market structure**, with only marginal changes in the share of service stations held by each operator group.

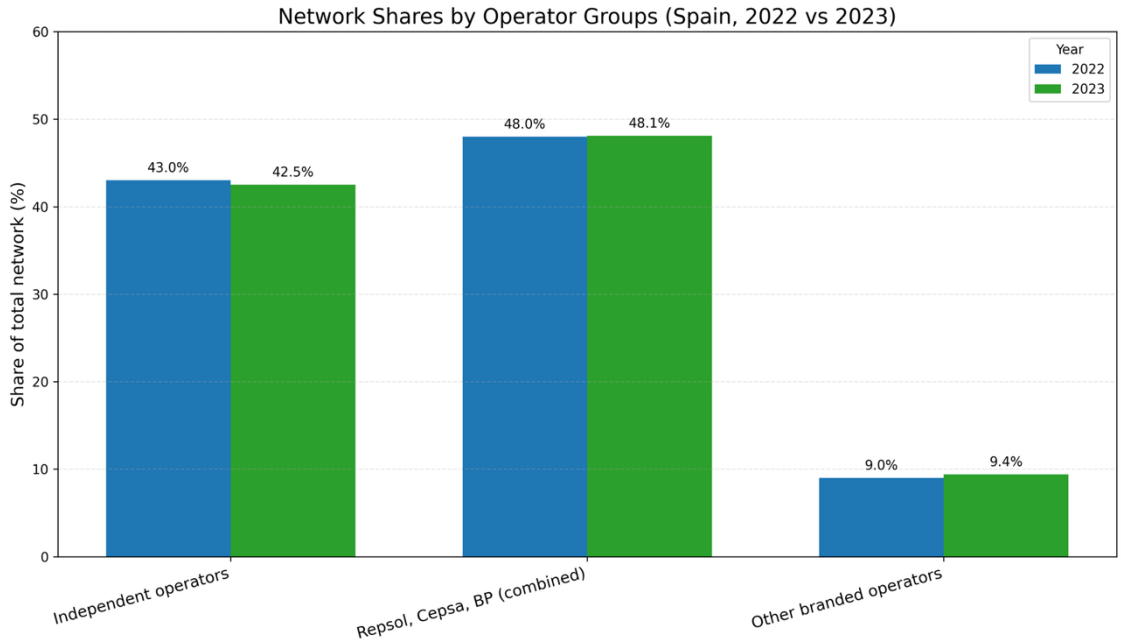
Table 4. Gas Stations Distribution by Operator Type (Spain, 2022-2023)

| Operator group | 2022 (%) | 2023 (%) |
|---|---|---|
| Independent operators | 43.0 | 42.5 |
| Repsol, Cepsa, BP (combined) | 48.0 | 48.1 |
| Other branded operators | 9.0 | 9.4 |

Independent operators lose a **very small share** of the total network. This suggests that, while they remain a key component of the Spanish retail landscape, expansion of other branded formats or selective acquisitions/branding of independent sites may be slightly eroding their relative weight.

*Independent market (51,9%) consumes 1.3 million metric tonnes of diesel per months*

Figure 5. Evolution of Network of Gas Stations by Operator Type (Spain, 2022-2023)



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### Repsol, Cepsa, BP (combined)

- **2022:** 48.0%
- **2023:** 48.1%
- **Change:** +0.1 percentage points

The three integrated refining groups **essentially maintain their position**. The slight increase (+0.1 p.p.) indicates a **successful defence of market share** at an already dominant level, possibly through targeted capex, network optimisation (closures + openings) or rebranding of some locations.

### Other Branded Operators

- **2022:** 9.0%
- **2023:** 9.4%
- **Change:** +0.4 percentage points

"Other branded operators" show the **largest relative gain**, though still modest. This +0.4 p.p. suggests:

- gradual expansion of regional and second-tier brands, and/or
- incorporation of former independent sites into smaller branded networks.

### Overall Reading for the Observatory

1. Structural stability:

   The Spanish service-station network is **highly stable** year-on-year; no group shifts by more than half a percentage point between 2022 and 2023.

2. Dual structure confirmed:
   - Almost **half of all stations** remain under the umbrella of **Repsol–Cepsa–BP**.
   - Just over **40%** are still **independent**, preserving a strong competitive fringe.

3. Gradual repositioning, not disruption:
   The small gains by "other branded" players and the slight decline in independents point more to **ongoing consolidation at the margin** than to any abrupt restructuring of the market.

*In 2023 diesel retains nearly three-quarters of total road-fuel consumption*

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# 7. Fuel Consumption by Operator Type: Diesel vs Gasoline Mix

The analysis of diesel-gasoline consumption by operator type shows that Spain's service-station network continues to display **highly differentiated market profiles**, shaped by geography, customer base and brand positioning.

### Independent Operators (2023)

- **Diesel share: 78.3%**
- **Gasoline share: 21.7%**

Independents continue to rely heavily on diesel due to their **strong presence in freight-intensive corridors, industrial belts and large-capacity transit routes**. Their networks attract a customer base where commercial transport and professional fleets predominate.

### Integrated Refining Operators (Repsol, Cepsa, BP) (2023)

- **Diesel share: 69.0%**
- **Gasoline share: 31.0%**

These operators maintain a more balanced product mix thanks to their **dense urban and peri-urban networks**, where gasoline demand from private mobility is structurally higher. Their proximity to urban areas, convenience retailing and loyalty schemes contributes to this skew.

### Other Operators (2023)

- **Diesel share: 70.9%**
- **Gasoline share: 29.1%**

This segment sits between independents and integrated refiners, reflecting a **portfolio of mid-sized regional chains**, local distributors and medium-scale branded networks whose geographic and commercial profiles blend both freight exposure and household mobility demand.

### Aggregate Market (Total Spain, 2023)

- **Diesel share: 73.7%**
- **Gasoline share: 26.3%**

At the national level, Spain continues to exhibit a **diesel-centric consumption structure**, reflecting:

- strong road-freight dependence,
- legacy diesel passenger car fleet,
- geographic distribution of economic activity, and

- high share of logistics corridors and long-distance mobility.

## Interpretation for the Observatory (Spain 2019–2023)

The inclusion of **2023** consolidates the structural patterns observed in earlier years:

1. **The network structure remains broadly stable.** Independent operators preserve a large physical footprint, but integrated refiners continue to dominate strategic, high-volume urban & motorway locations.
2. **Diesel remains the backbone of Spain's retail fuel market.** Even in 2023—despite fleet electrification and economic slowdown—diesel retains nearly **three-quarters** of total road-fuel consumption.
3. **Gasoline recovers after the pandemic but does not alter the diesel-heavy mix.** Growth in 2022–2023 is linked to tourism, commuter mobility and the gradual rebound of the private vehicle sector.
4. **Operator segments show distinct commercial profiles.**
   - Independents: freight-oriented diesel retail.
   - Integrators: more diversified mix, urban mobility.
   - Others: intermediate commercial positioning.
5. **The market stabilizes after the shocks of 2020–2021.** Network size increases slightly while fuel mix patterns remain consistent with Spain's structure of mobility and logistics.

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# 8. Final Conclusions

The analysis of hydrocarbon consumption in Spain over the period **2019–2023** reveals a sector shaped by exceptional disruption, rapid recovery, and the early signals of structural transition. Across this five-year window, the Spanish energy and mobility landscape underwent a sequence of profound shifts —from the pre-pandemic equilibrium, through the COVID-19 shock and subsequent rebound, to the normalization and moderate adjustment observed in 2023.

## 1. A System Marked by Shock, Recovery, and Stabilization

Spain's total hydrocarbon consumption fell sharply in **2020**, plunging by more than **20%**, the largest drop in the modern statistical series. This contraction affected all major fuel families, with especially severe impacts on aviation fuels and gasoline. However, the subsequent rebound in **2021** and **2022** brought national demand back to pre-COVID levels. By **2023**, consumption moderated slightly (-1.67% YoY), indicating that the system has exited the volatility phase and reached a new, stable operating regime.

## 2. Diesel Remains the Backbone of Spanish Mobility

Throughout the entire period, diesel fuels maintained their historical dominance, consistently representing **60–68%** of Spain's hydrocarbon mix. Despite a decline in 2023, diesel continues to underpin logistics, freight transport, and substantial parts of private mobility. The resilience of diesel consumption —even under conditions of high prices, efficiency improvements, and fleet electrification— highlights the structural weight of Spain's transport model and geography.

## 3. Gasoline: From Collapse to Multi-Year Recovery

Gasoline demand displayed the clearest pandemic pattern: a deep collapse in 2020, followed by sustained growth in **2021, 2022 and 2023**. By 2023, consumption exceeded its 2019 level, supported by the rebound of tourism, normalization of commuting, and the enduring size of Spain's private vehicle fleet. Gasoline has not overtaken diesel but has strengthened its relative contribution to the mobility mix.

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### 4. Kerosene: The Strongest Indicator of Economic Normalization

No fuel better reflects Spain's broader economic cycle than kerosene. The near-disappearance of aviation in 2020 caused a catastrophic drop of more than **65%**. Recovery began in 2021, intensified in 2022, and continued into 2023, closely tracking the return of international travel and the tourism sector— a strategic pillar of Spain's economy.

### 5. Fuel Oils and GLP: Industrial Signatures and Stability

Fuel oils followed industrial activity closely: collapsing in 2020, recovering in 2021–2022, and easing slightly in 2023 as economic growth moderated. GLP remained a **low-volatility, mature fuel**, with modest fluctuations across the five years. This stability underscores its niche but steady role in Spain's industrial and mobility contexts.

### 6. Biofuels: Continuous Structural Decline

Biofuels were the **only fuel family to contract every year from 2019 to 2023**, ultimately reaching negligible levels. This persistent decline —unique among all product groups— raises signals regarding Spain's renewable fuel strategy, market incentives, and the competitiveness of biodiesel and bioethanol within the current regulatory framework.

### 7. A Stable but Segmented Retail Network

Spain's service-station network grew slightly from **11,900 stations (2022)** to an estimated **12,050 in 2023**. The market remains structurally stable:

- **Independent operators:** ~42–43%
- **Repsol, Cepsa, BP:** ~48%
- **Other branded groups:** ~9%

The minimal year-on-year variation (<0.5 p.p. for any group) confirms a mature and consolidated retail ecosystem. Independents dominate numerically, but integrated refiners continue to command the highest-throughput and strategically located sites, shaping national volume flows.

### 8. Diesel vs Gasoline Mix Across Operator Segments (2023)

Operator profiles remain highly differentiated:

- **Independent operators:** diesel-heavy (≈78%) tied to freight corridors.
- **Refining operators:** more balanced (≈69% diesel / 31% gasoline) due to urban footprint.

- **Other operators:** intermediate mix (~71% diesel).

Nationally, diesel still represents **73.7%** of road-fuel consumption in 2023, reflecting Spain's freight dependence and mobility structure.

## Overall Conclusion: A System in Transition, Not Transformation

The period **2019–2023** confirms that Spain remains a country with:

- **Heavy reliance on diesel**,
- **A steadily recovering gasoline segment**,
- **A rebounding aviation sector**,
- **Stable industrial fuel demand**, and
- **A declining biofuel pathway**, despite climate objectives.

The system shows **stability rather than disruption**, even as early signs of structural evolution —fleet electrification, efficiency improvements, and changing mobility patterns— begin to materialize.

Spain's hydrocarbon landscape is therefore **entering a phase of gradual transformation**, where the legacy fossil-fuel structure remains dominant, but the forces shaping long-term energy transition are becoming increasingly visible.

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