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EQUITY RESEARCH ON TOTALENERGIES – CREATING VALUE IN A CHANGING MARKET

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Abstract
In this Equity Research Report, one can find a comprehensive analysis of the intrinsic value of TotalEnergies. As we recognize the challenges faced by the Oil & Gas industry, namely its potential constraints on future profitability, the report includes a fundamental analysis of the sector's prospects. Additionally, the report includes a thorough evaluation of the company's business model and its positioning within the sectors it operates

Keywords

Equity Research, Valuation, TotalEnergies, Energy

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This report is part of the TotalEnergies Equity Research report (annexed), developed by João António de Oliveira Paulos and João Raymundo Carlota and should be read has an integral part of it.

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1. Introduction

This Equity Research Report on TotalEnergies intends to capture the intrinsic value of the company, considering the limitations and opportunities within each of its business segments. As one of the key players in the Oil & Gas sector, TotalEnergies has a considerable part of their revenue streams derived from upstream, midstream and downstream segments (90% in 2023). Given the latter, the company is considerably dependent on finite resources, which heavily influences its long-term prospects.

However, amid a growing trend of competitors scaling back or even divesting from renewable energy investments, TotalEnergies continues following their transition strategy. The company has a 5-year plan that allocates c. 30% of its capital expenditure to the Integrated Power segment, which represents the renewable "leg" of the company.

Having this context in mind, we found most suitable to apply a Sum-of-the-Parts valuation approach to accurately reflect the true value of the company, distinguishing the Oil & Gas activities from its Renewables operations.

In the Joint Report, we begin with a company overview, including a brief analysis of its management board and shareholder structure. Then, we move to a macroeconomic analysis of regions which are key to TotalEnergies' revenue streams (European Union, the United States of America and China), and examine the industries in which the company operates (Oil, Natural Gas, Liquified Natural Gas and Renewable Energy). In addition, we conduct a study on the company's business model, conducting both a SWOT (Strengths, Weaknesses, Opportunities, and Threats) and Porter's Five Forces analysis. The report also compares the company's historical financial performance against that of its main peers (Exxon Mobil Corp, Shell PLC, BP PLC, Chevron Corp, ConoccoPhillips, Equinor ASA and Marathon Petroleum Corp).

In the end, we conduct an extensive valuation analysis in which we conclude that TotalEnergies is currently undervalued with an assigned target price of €69.86, representing an upside of c. 30% from the market price as of December 31st.

This individual report focuses on the both the macroeconomic and industry analysis, as well as the key components of the valuation, including the segment-specific Sales, Cost of Capital, Scenario and Sensitivity Analysis, and a broader Comparables valuation.

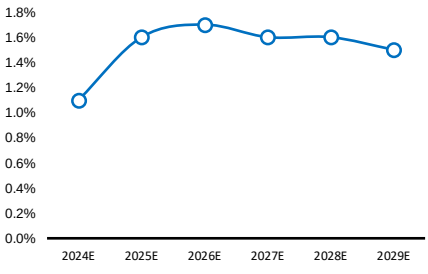
2. Macroeconomic Outlook

In 2024, the world economy is expected to grow moderately by 3.2% (IMF 2024). It was a year marked by a period of disinflation, high interest rates and Central Banks cuts, and geopolitical tensions. Despite having grown beyond the 3 percentage point mark, it is below 2023's growth rate of 3.3% and even lower than the historical average for this century, which is 3.5%. As the effects of aggressive monetary tightening by central banks reflect on the economy, inflation is expected to decline globally, reaching 5.8% in 2024. Geopolitical tensions persist on being a major downside risk to global growth, with the prolongation of Ukraine invasion by Russia, and the escalation of conflicts in the Middle East. These conflicts greatly affect commodity prices, energy prices volatility and supply chains.

2.1. European Union

The 2020s have been stressful on the EU's geopolitical and economic landscapes. During this period, the Union suffered a deep recession caused by the COVID-19 pandemic and was targeted by a harsh energy crisis and inflationary spiral. The latter was ultimately caused by two main factors: First, the excess liquidity added during the pandemic; and second, the Russia's military invasion on Ukraine which interrupted EU's highly demanded Russian gas supplied by about 80%. Despite all this, the EU economy shows signs of resilience and showed good signs of recovery. However, recent quarters are broadcasting a different story. Uncertainty about the future of the EU economy is on the rise and has reached levels that were last seen in February 2022 upon the beginning of Russia's military invasion (Baker, Bloom and Davis 2024).

Graph 1: EU Real GDP Growth Rate
%, 2024E – 2029E



Source: IMF

Despite the continuing war, the root causes for this uncertainty differ. Today, concerns grow over the future of industrial growth in the EU, notably in Germany, the Union's economic powerhouse. Additionally, France is thrown in political turmoil after a tough election period, EU's trade relations with the US might be under risk with the upcoming Trump Administration protectionist policies, and geopolitical instability is on the rise both in Europe and the Middle East.

The past two years were marked by a macroeconomic landscape dominated by inflationary pressures. These led, inevitably, to contractionary monetary policies, namely aggressive interest rate increases, as a way to increase household savings and decrease private consumption, which ultimately happened (European Commission 2024). Following the efforts of both monetary and fiscal authorities, the likely short-term outcome may be a soft landing of the economy, forecasting a rebound in private consumption and total investment in 2024 and 2025, respectively. In addition, the outlook for 2024, 2025 and 2026 points to modest economic growth, with real GDP growth expected to be 0.9%, 1.5% and 1.8%

respectively, and inflation expected to reach the 2% target only in 2026 (European Commission 2024).

2.2. United States of America

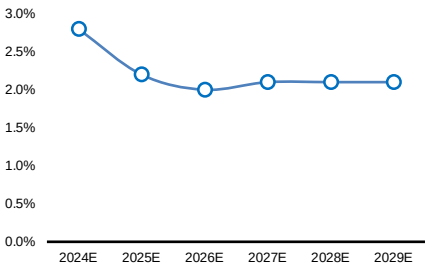
The macroeconomic outlook for the U.S remains cautiously optimistic, driven by recent monetary policy adjustments. Starting in September, the Federal Reserve (Fed) has employed a cumulative 75-bais-point reduction in interest rates, with expectations of a slower pace of rate cuts moving forward. Stimulated, in part, by the expectation of monetary easing and the actual rate cuts, consumer spending is expected to grow by c. 2.5% in 2024, slightly higher than the one recorded in 2023 of c. 2.2% (Panday 2024).

Following a contraction in Capital Expenditures (Capex) of c. 0.3% in 2023 (Bureau of Economic Analysis 2024), it is expected the latter to recover from 2024 onwards, although with a lag, supported by Fed easing and the potential implementation of more business-friendly policies under the next Administration, namely for the energy sector.

Regarding the Consumer Price Index (CPI), which considers energy and food components, it has been steadily approaching the Fed's target of 2% since 2022 and current projections imply that it will reach the latter target by 2025 (Panday 2024). As for real GDP growth, it is expected to increase at c. 2.8% in 2024, followed by a moderate deceleration to c. 2.2% in 2025 (IMF 2024).

Despite expectations of a more business-friendly environment under Trump Administration, notably with its corporate tax cut plan and economic reforms, the future President will be significantly constrained. The U.S. fiscal deficit amounts to record levels, only behind Covid-19 pandemic times, with interest payments on the federal debt exceeding $1 trillion for the first time ever.

Graph 2: USA Real GDP Growth Rate
%, 2024E – 2029E



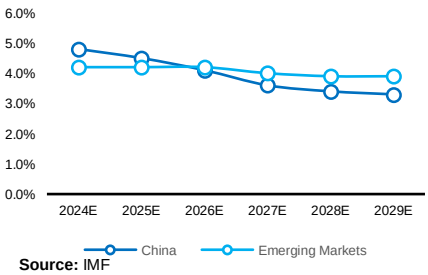
Source: IMF

2.3. Emerging Markets

As usual, starting from a lower base, Emerging Market and Developing Economies are expected to outpace the Advanced Economies' growth, with their economies expected to advance by 4.2% in both 2024 and 2025, albeit down from 4.4% in 2023. The latter deceleration is largely attributed to China's macroeconomic sluggish economic outlook, which expects a slower-than-usual growth of 4.8% in 2024 (IMF 2024).

China, which accounts for a substantial share of Emerging Economies based on its economy size and overreach, is presently facing a challenging economic outlook due to three main internal issues: First, historical week private consumption levels have constrained the economy to rely heavily on exports to bump its growth; second, a present downturn in its property sector exacerbated by the default of Evergrande Group in 2021, which has increased systemic risks and

Graph 3: China and Emerging Markets Real GDP Growth Rate
%, 2024E – 2029E



Source: IMF

macroeconomic uncertainty (IMF 2024); third, a debt overhang among local governments, which have been relying greatly on public debt, driving China's Debt-to-GDP ratio to a whooping c. 290% (NIFD 2024).

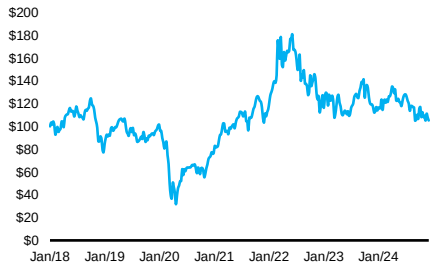
Being the bedrock for this century's oil demand growth (China accounted for c. 60% of oil global increase over this last decade), China's slow-moving consumption levels has influenced negatively the energy industry by pushing down oil demand growth projections and therefore directly affecting downwards oil futures prices.

3. Industry Outlook

3.1. Energy

The oil segment of the energy industry has entered a bearish phase, with oil demand expected to grow by only 0.92 million of barrels per day (mb/d) and 1 mb/d in 2024 and 2025, respectively. These growth rates are considerably lower than the 2 mb/d surge recorded in 2023. The modest growth outlook is largely driven by China's sluggish oil demand (China's overall relevance in the oil industry was noted in the Macroeconomic Overview section), which is expected to increase only by c. 0.14 mb/d in 2024, a tenth of the growth in 2023.

Graph 4: Brent Crude Oil Price
$, Jan/18 – 2024YTD



Source: Bloomberg

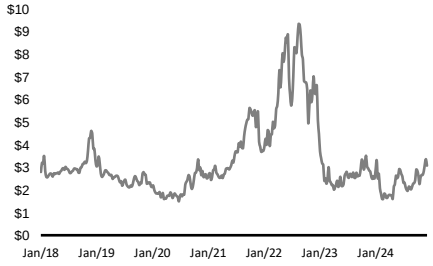
Being the bedrock for this century's oil demand growth (China accounted for c. 60% of oil global increase over this last decade), China's slow-moving consumption levels has influenced negatively the energy industry by pushing down oil demand growth projections and therefore directly affecting downwards oil futures prices.

This dampened demand outlook has already affected the Organization of the Petroleum Exporting Countries (OPEC+) plans to unwind production cuts, postponing such decisions to January 2025, despite earlier expectations of increased production levels by late 2024.

In 2024, the OPEC+ has revised its growth projections downwards four times, cutting forecasts by 20% (from 2.25 mb/d to 1.82 mb/d) and 17% (from 1.85 mb/d to 1.54 mb/d) in 2024 and 2025, respectively. If the lower demand projections check-out and OPEC+ production cuts remain in place, it is nonetheless estimated that global supply will exceed demand by c. 1 mb/d in 2025 (IEA 2024).

Long-term forecasts suggest that both oil and gas demand will peak at c. 86 mb/d in 2027 and starting to decline thereafter, reaching c. 55 mb/d by 2050 as per the Announced Pledges Scenario, which implies a decline of c. 2% year-on-year (S&P Global 2024). These bearish projections have already impacted, as expected, short-term Brent crude futures, which fell to c. $72/bbl in mid-november, implying a more than 10% decline from the 2023 daily spot price average of c. $82/bbl.

Graph 5: LNG Price – Henry Hub
$, Jan/18 – 2024YTD



Source: Bloomberg

In the Liquified Natural Gas market (LNG), demand is expected to increase from c. 412 million metric tons (mbtu) in 2023 to 560 mbtu in 2030, implying a c. 4.5% growth year-on-year (BloombergNEF 2024). While Europe's demand is expected to decline starting in 2027 due to a strong development of renewable energy which reduces demand for gas to produce electricity, Asian markets, particularly China, are expected to drive demand growth as their efforts to replace coal for gas are expected to intensify.

As new liquefaction projects come on stream, the LNG sector is expected to become progressively oversupplied by the end of the decade (total supply, which includes operational, under construction and on a final investment decision projects, is expected to be c. 623 mbtu) with a projected c. 63 million metric tons supply-demand gap (The Oxford Institute for Energy Studies 2024). The latter supply and demand spread could potentially exert downward pressure on prices.

3.2. Renewable Energy

The renewable sector, once among the most bullish industries worldwide, is presently facing a dual challenge of economic and policy uncertainty. On the one hand, the economic uncertainty may be explained by the short-term disruptions from "creative destruction" (as described by the economist Joseph Schumpeter in 1942), which include losses in industries and jobs, alongside with unpredictable returns on investments. On the other hand, the political uncertainty comes ultimately from the rise of movements opposed to environmentally focused policies, which threaten the continuity of environmental targets and measures, such as carbon taxes and green R&D subsidies. The literature suggest that increased uncertainty lowers green innovation by up to c. 1.5% (Bettarelli, et al. 2024).

Despite these headwinds, the long-term outlook is still favorable with renewable energy expected to represent c. 46% of global electricity demand in 2030, a considerable increase from the 30% share in 2023.

The latter implies a c. 2 percentage points increase year-on-year. Furthermore, the share of solar, onshore and offshore wind photovoltaic is projected to account for 95% of new renewable capacity by 2030 (IEA 2024).

In addition, the International Energy Agency has recommended countries to focus on expanding and modernizing electricity grids and storage, setting a global storage capacity target of 1,500 GW by 2030. It is our estimate that in order to meet IEA's target, a total land use, including turbine spacing for onshore wind, of c. 163,972 sq km will be required (assuming a 95% capacity distribution divided between 55% Solar, 35% Onshore wind and 5% Offshore wind). This extensive

Land Use Assumptions
Solar PV
55% of 1500 GW = 825 GW
7 acres/MW = 28,329 sqm/MW
Onshore Wind
35% of 1500 GW = 525 GW
25 hectares/MW = 250,000/MW
Offshore Wind
5% of 1500 GW = 75 GW
12.5 hectares/MW = 125,000/MW
Conversion Rate
1 acre = 4,047 sqm
1 hectare = 10,000 sqm

Source: SEIA, NREL

land use corresponds in relative terms to 1.78x the size of Portugal (92,090 sq km), therefore being nonetheless a significant ambitious target.

4. Valuation

To provide a reliable estimate of TotalEnergies' intrinsic value, we applied a sum of the parts (SOTP) valuation approach. The use of this methodology is more appropriate given that the Company has segments that are inherently different from each other, including both upstream and downstream operations, and businesses with revenues derived from finite resources (e.g. Oil and Gas) and infinite resources (e.g. renewable energy) being the latter the case of their Integrated Power segment.

Therefore, in order to employ a SOTP valuation, we divided the Company in four main business units: Exploration & Production, Integrated LNG, Integrated Power, and Downstream, which includes Refining & Chemicals, Marketing & Services and Corporate segments.

TotalEnergies has reported a proven reserves life index of 12 years, closely aligning with our own computations of 11.66 years.

Table 1: TotalEnergies Reserves Life Index
Million, 2023

Reserves Life Index	
Oil & Gas Production (Kboe/d)	2,483
Conversion rate	1 Kboe = 0.001 Mboe
Oil & Gas Production (Mboe)	906.30
Hydrocarbon Reserves	10,564
Reserves Life Index (years)	11.66

Source: Annual Report, Own computations

4.1. Sales

4.1.1. Exploration & Production

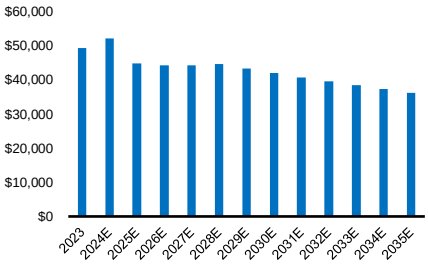
In 2023, the E&P segment sales amounted to a total of $49,156 million and it is forecasted that such will sum up to $36,070 in 2035 which implies a decline of c. 2.5% year-on-year, reflecting the anticipated gradual decline in crude oil price.

To estimate future revenues, we assumed that the Liquids price, which include crude oil and natural gas liquids (NGLs), would continue trading at a historical average discount to Brent crude. For crude oil prices, we relied on Brent Crude Oil Futures projections through 2028, followed by a 2% annual decline, thereafter, aligned with the anticipated reduction in oil demand as per the Announced Pledges Scenario. This 2% decline after 2028 reflects our belief investors are not yet discounting brent futures consistently with the lower oil demand projection by the end of the decade. Under these assumptions, crude prices reach c. $59.13/b by 2035.

As for the natural gas prices, we estimated them using Henry Hub futures prices through 2035 as we perceive that the market is discounting them proportionately to the sector's outlook.

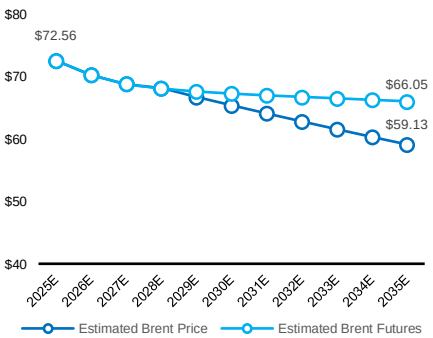
Regarding Oil & Gas production growth, we projected a 2% year-on-year growth between 2024 and 2030, which is lower than the 3% year-on-year growth anticipated by the company, reflecting a more conservative estimate. This

Graph 6: E&P Revenues from Sales
$ millions, 2023 – 2035E



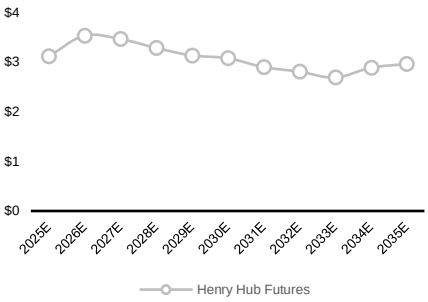
Source: Own computations

Graph 7: Estimated Brent Crude Oil Price
$, 2025E – 2035E



Source: Own computations

Graph 8: Estimated Natural Gas Oil Price
$, 2025E – 2035E



Source: Own computations

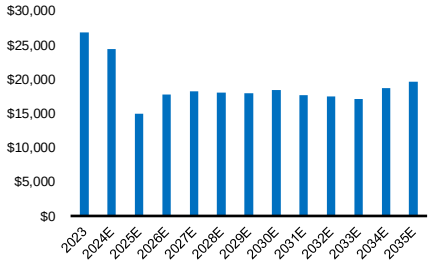
projection is based on the company's historical performance between 2018 and 2023 which includes a c. 1.5% average annual growth in Oil production (c. 8% decline in 2020 was considered an outlier) and c. 1.2% average annual decline in Gas production (c. 35% decline in 2023 was considered an outlier).

The formula used to compute revenues was $Annual\ Liquids\ Production\ (b) * Liquids\ Price\ \left(\frac{\$}{b}\right) + Annual\ Gas\ Production\ (Mcf) * Gas\ Price\ \left(\frac{\$}{Mbtu}\right)$.

4.1.2. Integrated LNG

This segment is estimated to experience a c. 2.6% year-on-year decline from 2023 until 2035 driven by reductions in LNG price ($/Mbtu). TotalEnergies, the largest exporter of U.S. natural gas, has about 10 mbtu of U.S LNG under long-term contracts pegged to U.S. natural gas prices. Having the latter in mind, we assumed LNG prices would track Henry Hub futures.

Graph 9: Integrated LNG Revenues from Sales
$ millions, 2023 – 2035E



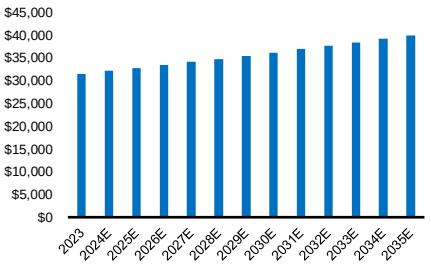
Source: Own computations

TotalEnergies has set an ambitious goal to increase LNG sales by 50% between 2024 to 2030, implying a c. 6% annual growth. However, we adopted a more conservative assumption of 4.5% growth year-on-year as anticipated by industry forecasts (see Industry Overview). From 2031 onward, we estimate that LNG sales will grow at a 2% growth year-on-year reflecting the expected decline of LNG demand in Europe, reaching c. 66.6 Mt by 2035.

The formula used to compute the segment's revenues was $LNG\ Sales\ (Mbtu) * LNG\ Price\ \left(\frac{\$}{Mbtu}\right)$.

4.1.3. Integrated Power

Graph 10: Integrated Power Revenues from Sales
$ millions, 2023 – 2035Ex



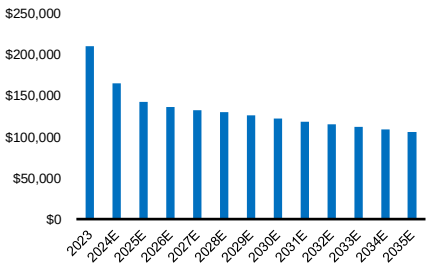
Source: Own computations

This segment was established in 2023, therefore it lacks significant historical data for analysis. Based on the proxy data from 2021 and 2022 given by the company, one can see that in 2022 revenues from sales increased by c. 80%, because of inorganic growth arising from the acquisition of Clearway, and in 2023 such figure was only c. 2%. As a conservative estimate, we projected a 2% year-on-year revenue growth, reflecting both the uncertainty in the renewables market and its significant long-term potential (see Industry Overview).

4.1.4. Downstream

The Downstream segment, which includes both Refining & Chemicals and Marketing & Services, is highly sensitive to oil price performance and, as a result, faces a challenging outlook. Specifically, in Marketing & Services, TotalEnergies has the target of reducing petroleum products sales by 60% by 2030, further

Graph 11: Downstream Revenues from Sales
$ millions, 2023 – 2035E



Source: Own computations

worsening the segment's future perspectives. While we maintain a bullish perspective on TotalEnergies' charging stations, their contribution to the overall segment remains relatively insignificant.

TotalEnergies set the target of operating more than 150,000 EV charging points by 2025, implying a CAGR of c. 58% from 2024 until 2025, which stands to be an ambitious goal. Therefore, considering the company's target, we forecast this growth to occur at a 20% discount, which remains an optimistic projection as we estimate charging points will increase by c. 47% annually over the next two years.

To offset the negative outlook of petroleum products, we project that charging points will increase by 10% from 2026 onward, despite the limited information regarding these services. We assume the company currently uses direct current (DC) fast chargers requiring inputs of at least 480 volts and 100 amps, which translates to a capacity of up to 72 kw. Starting in 2027, we anticipate that the company will be already capable of adopting the latest chargers, which can deliver up to 360 kw (1000 volts and 500 amps).

In addition, we assume a utilization rate of 8% in 2024, reflecting Europe's higher number of electric vehicles in comparison to the U.S., where the average annual utilization rate of 7.5% in 2022 (Frode, Lee and Sahdev 2024). Lastly, the fee per kWh is assumed to be $0.40 which corresponds to the average price in France, growing annually afterwards by 2% to account for inflation (Platini 2024). We used the following formula to estimate charging points' future revenues:

$$Utilization\ Rate\ (\%) * Daily\ Capacity\ (kWh) * Fee\ \left(\frac{\$}{kWh}\right) * Number\ of\ Charging\ Points * Days\ in\ a\ Year.$$

In Refining & Chemicals, refining margins are assumed to correlate with crude oil price as it greatly depends on the latter. TotalEnergies' refining capacity is forecasted to stabilize at 1,800 kb/d, close to the 2019 – 2022 average of 1861 kb/d, reflecting the company's plans to reduce its European refining capacity while at the same time expanding in regions where there is a growing demand, namely Middle East and Africa. The latter is the case of the Dangote Refinery in Nigeria which has the capacity to supply 650,000 barrels per day (bpd). Based on these plans, we expect the utilization rate to remain around the 85% over the years which corresponds to the target set by the company.

While the refining operations lack good prospects, the production of petrochemicals, including monomers and polymers, are expected to increase, with TotalEnergies being considerably bullish on this segment. The Company has been investing significantly, notably in the Daesan Complex which increased the company's polypropylene (polypropylene is a kind of polymer) production capacity by 60% in 2021.

Table 2: European Petrochemicals Industry %, 2023

Petrochemical Companies	EBITDA Margin 2023
BASF SE	10.6%
Brenntag SE	9.0%
IMCD NV	12.2%
Croda International PLC	22.5%
Clariant AG	10.9%
Wacker Chemie AG	12.0%
Solvay SA	20.2%
Kemira Oyj	49.9%
LANXESS AG	6.5%
Ercros SA	6.0%
EMS-Chemie Holding AG	41.4%
Median	**12.0%**

Source: Bloomberg, Own computations

Cost of Capital	
US 10y Treasury Yield	4.42%
Market Risk Premium	5.51%
Corporate Tax Rate	25.00%
Yield to Maturity (10y)	2.39%
TotalEnergies' Credit Rating	A1
Probability of Default	0.2%
Loss Given Default	40.0%
Rd	2.38%
Exploration & Production	
β levered (median of peers)	0.84
β unlevered (own computations)	0.73
Re	9.06%
Ru	8.43%
Integrated LNG	
β levered (median of peers)	0.90
β unlevered (own computations)	0.78
Re	9.36%
Ru	8.69%
Integrated Power	
β levered (median of peers)	0.44
β unlevered (own computations)	0.38
Re	6.82%
Ru	6.50%
Downstream	
β levered (median of peers)	0.59
β unlevered (own computations)	0.51
Re	7.68%
Ru	7.24%

Source: Bloomberg, Own computations

In addition, TotalEnergies has set an ambitious goal of producing 1 million tons of circular polymers annually by 2030. Reflecting the company's bullishness, we forecast an annual production growth of 1.5% for monomers and 3% for polymers, alongside a progressive increase in steamcraker utilization rate from 75% to 85%, over the coming years. Regarding the prices of monomers (including olefins and aromatics) and polymers (including polyethylene, polypropylene and polystyrene), we assumed the present indexes prices as a reference for 2025F (*China Butadiene CFR Spot Price* for Olefins; *Rotterdam Benzene Aromatics FOB Price* for Aromatics; *Polyethylene Fut Comdty*; *Polypropylene Fut Comdty*; *Houston Polystyrene FAS Price*), and as it lacks reliable literature regarding each of those petrochemicals, we assumed that they would vary along with brent crude oil prices since the latter and its derivatives serve as feedstocks for all sort of petrochemicals, therefore directly affecting their prices.

Firstly, the formula used to compute the segment's EBITDA for the refining services was $Throughput\ (kb) * Variable\ Refining\ Cost\ Margin\ \left(\frac{\$}{kb}\right)$. Secondly, the formula used to compute the EBITDA for the petrochemicals operations was $(Monomers\ Production\ (kt) * Monomers\ Price\ \left(\frac{\$}{kt}\right) + +Polymers\ Production\ (kt) * Polymers\ Price\ \left(\frac{\$}{kt}\right)) * EBITDA\ Margin\ (Petrochemicals\ Industry\ Median)$.

4.2. Cost of Capital

To compute the cost of capital, we also segmented values by industry reflecting the different risk profiles between finite-resource driven businesses and those focused on renewable energy. Therefore, to calculate the equity beta for each segment based, we selected a group of peers based on a predefined criteria: First, a primary focus on each segment's industry; second, their revenue streams should come predominantly within Western economies similarly to TotalEnergies; and third, a range of peers with different sizes, including smaller and bigger market capitalizations, to capture the intrinsic capital structure for each industry.

Firstly, in the case of the Exploration & Production segment, the peers list includes EOG Resources Inc, Diamondback Energy Inc, Hess Corp and Marathon Oil Corp. Secondly, the peers for the Integrated LNG includes ONEOK Inc, Western Midstream Partners LP, Golar LNG Ltd and Excelerate Energy Inc. Thirdly, in the Downstream segment, the list includes Phillips 66, Marathon Petroleum Corp, Valero Energy Corp, HF Sinclair Corp and CVR Energy Inc. Lastly, in the Integrated Power, the comparables included are Next Era Energy Inc, Iberdrola SA, Enel SpA, Engie SA, EDP Renováveis SA and Northland Power Inc.

β levered	
Exploration & Production	
EOG Resources Inc	0.85
Diamondback Energy Inc	0.89
Hess Corp	0.82
Marathon Oil Corp	0.84
Median	0.84
Integrated LNG	
ONEOK Inc	0.93
Western Midstream Partners LP	0.74
Golar LNG Ltd	0.94
Excelerate Energy Inc	0.86
Median	0.90
Downstream	
Phillips 66	0.64
Marathon Petroleum Corp	0.59
Valero Energy Corp	0.58
HF Sinclair Corp	0.55
CVR Energy Inc	0.78
Median	0.59
Integrated Power	
NextEra Energy Inc	0.67
Iberdrola SA	0.31
Enel SpA	0.46
Engie SA	0.33
EDP Renovaveis SA	0.43
Northland Power Inc	0.78
Median	0.44

Each segment equity beta was estimated by regressing seven years of weekly returns of all peers against the S&P 500 Index benchmark, reflecting the fact that all of them have significant operations in the U.S. The latter yielded an unlevered beta of 0.84, 0.90, 0.59 and 0.44 for E&P, Integrated LNG, Downstream and Integrated Power, respectively.

The values for the cost of equity were computed by applying the CAPM model. Considering that TotalEnergies' cash flows are denominated in U.S. Dollars (USD), the market return was obtained using the S&P 500 historical returns and the risk-free rate was derived from the U.S. 10-year Government Bonds yield. The implied market risk premium (MRP) yielded c. 5.51% which is in line with current estimates of MRP of 5% - 6%.

As for the cost of debt, the estimation was focused on the overall company using the bond approach $r_D = YTM - PD * LGD$, which yielded a rate of c. 2.38%.

In addition, we assumed the current France's corporate tax rate of 25%. All in all, the WACC for E&P, Integrated LNG, Downstream and Integrated Power yielded 7.80%, 8.05%, 6.66%, and 5.95%, respectively.

4.3. Scenario Analysis

To enrich our model, we developed two alternative scenarios, bullish and bearish, alongside the base case one. Both scenarios have the common driver of Brent crude oil prices as TotalEnergies, like any major oil company, is highly sensitive to oil price swings.

On the one hand, in the bullish case scenario, we assume that there will be a major geopolitical crisis in 2025, such as an escalation of the conflict in the Middle East between Israel and Iran, leading to a spike in oil prices. The consequence would be an increase of the crude oil price by 15% in 2025, resulting in an implied crude price of c. $83.44 (World Bank Group 2024). From 2026 onward, the crude price would vary at the same rate as in the base case. The implied share price in this scenario is c. €73.51, representing an upside of c. 5.2% from the base case.

On the other hand, in the bearish scenario, we assume that oil demand growth will be considerably lower than expected, which would drive oil prices down. The latter would result in crude oil prices going down by 15% in 2025 (the implied crude would be c. $61.68), and the following years would follow both base and bullish scenarios pace. The implied share price in this scenario is c. €66.23, indicating a downside of c. 5.5% from the base case.

4.4. Sensitivity Analysis

The discounted cash flow (DCF) valuation is significantly sensitive to changes in both the perpetuity growth rate and the weighted average cost of capital (WACC), therefore it is detrimental to sensitize the share price by performing a sensitivity analysis on both variables. Since the Exploration & Production and the Integrated LNG segments do not have a terminal value component, the sensitivity analysis was only performed for the Downstream and Integrated Power segments.

As illustrated in Table 3 and 4, the Integrated Power segment is considerably more sensitive to variations in the WACC, and the perpetuity rate compared to the Downstream segment. The latter is likely justified for two reasons: First, the renewables is a high-growth sector which exhibits greater sensitivity to both inputs; and second, investments in renewable energy tend to have longer useful lives, with returns realized over an extended period, therefore being highly sensitive since variations in both inputs can substantially impact the present value of those distant cash flows.

Table 3: Integrated Power Sensitivity Analysis
WACC on top, Terminal Growth on the left side

€69.86	5.0%	5.5%	6.0%	6.5%	7.0%
1.4%	€ 73.33	€ 69.63	€ 66.78	€ 64.53	€ 62.71
1.9%	€ 76.07	€ 71.52	€ 68.13	€ 65.52	€ 63.46
2.36%	€ 79.87	€ 74.03	€ 69.86	€ 66.76	€ 64.37
2.9%	€ 85.48	€ 77.50	€ 72.15	€ 68.34	€ 65.50
3.4%	€ 94.62	€ 82.63	€ 75.33	€ 70.44	€ 66.95

Source: Own computations

Table 4: Downstream Sensitivity Analysis
WACC on top, Terminal Growth on the left sidex

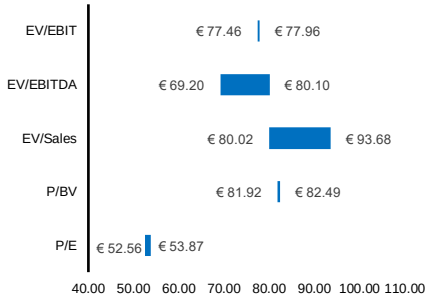
€69.86	5.7%	6.2%	6.7%	7.2%	7.7%
-3.2%	€71.55	€70.26	€69.14	€68.16	€67.31
-2.7%	€72.06	€70.67	€69.48	€68.44	€67.54
-2.2%	€72.63	€71.14	€69.86	€68.76	€67.80
-1.7%	€73.28	€71.66	€70.28	€69.10	€68.09
-1.2%	€74.02	€72.25	€70.76	€69.49	€68.40

Source: Own computations

4.5. Comparables Valuation

In addition to the SOTP valuation, a comparables valuation was also performed. In this analysis, we took into consideration the company's overall peers rather than segment-specific ones, since all major oil companies are investing in energy transition towards more renewables in order to position themselves as energy companies of the future. The selection of peers had the following criteria: First, companies with a market capitalization higher than $60 billion; second, overlapping

Graph 12: Comparable Valuation Range
$, Current Multiples



Source: Own computations

business such as upstream, downstream and renewables; and third, we decided to exclude companies originally from China and Saudi Arabia as their business models structure differ significantly from TotalEnergies.

Based on the previous criteria, six peers were taken into consideration: Exxon Mobil Corp, Shell PLC, BP PLC, Chevron Corp, ConoccoPhillips and Equinor ASA. Furthermore, five different multiples were used: P/E, P/B, EV/Sales, EV/EBITDA, and EV/EBIT. It is also important to note that Equinor was excluded from the computations of enterprise value multiples since the company has a unique capital structure from its peers, characterized by negative net debt and significantly high margins, which considerably inflate its multiples and therefore distort the overall valuation.

Table 5: Peers Multiples
Current Estimates

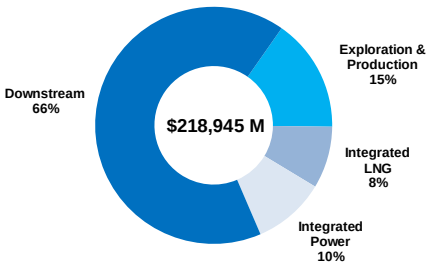
Company	P/E	P/BV	EV/Sales	EV/EBITDA	EV/EBIT
Exxon Mobil Corp	14.6 x	1.9 x	1.6 x	8.4 x	13.5 x
Shell PLC	7.7 x	1.0 x	0.6 x	2.9 x	6.2 x
BP PLC	7.9 x	1.0 x	0.5 x	3.2 x	8.7 x
Chevron Corp	15.4 x	1.9 x	1.6 x	7.7 x	14.3 x
ConocoPhillips	13.8 x	2.8 x	2.7 x	6.5 x	10.8 x
Equinor ASA	7.3 x	1.5 x	7.0 x	18.2 x	23.9 x
Median	**10.8 x**	**1.7 x**	**1.6 x**	**7.1 x**	**12.1 x**

Source: Bloomberg

The median of the selected multiples implies a share price of $70.30 which represents an upside of c. 9% compared to the share price derived from the SOTP valuation.

5. Recommendation

Graph 13: Revenues from Sales by Segment
%, Consolidated Values, 2023



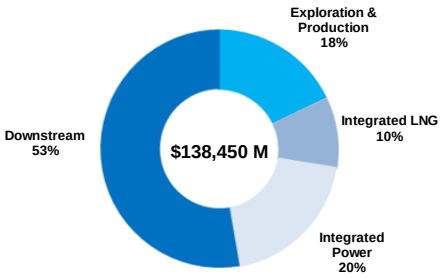
Source: Annual Report, Own computations

TotalEnergies has a target price of €69.86, representing an upside of c. 30% relatively to the market price as of December 31st, an expected dividend of €3.38 per share and a share buyback program of €3.34 per share, implying a total shareholder return of c. 43.5% and therefore a "BUY" recommendation.

While the company is currently trading at a modest premium in comparison to its direct peers, it is being affected by ongoing uncertainties within the European Union, particularly the French political environment, and more recently developments regarding TotalEnergies' investment partnerships.

Although we anticipate that revenues coming from Oil & Gas will decrease over time as a direct consequence of the expected decline of the price of these commodities, we remain confident in TotalEnergies' strong fundamentals.

Graph 14: Revenues from Sales by Segment
%, Consolidated Values, 2035E



Source: Own computations

The company's energy transition strategy demonstrates distinct resilience, especially as notable competitors increasingly divest from renewable energy investment.

In addition, we expect the company's revenue streams will become more diversified, underscoring its potential for a sustainable growth in the years ahead.

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COMPANY REPORT

17/12/2024

Energy Industry: The New Reality

Maintaining profitability amid global energy transition

- **Present position within the sector:** TotalEnergies stands as a leading player in the energy sector, competing with giants like BP and Shell. While its aggressive push into renewables sets it apart, its traditional fuel portfolio remains comparable in scale, presenting both an opportunity for cash generation and a challenge in navigating the global energy transition.
- **Strategic shift towards renewables:** TotalEnergies is at the forefront of the Energy sector shift towards renewable energy, committing over 3 billion USD annually with the goal of having 100 GW of gross renewable capacity by 2030.
- **Dependence on traditional fuels:** TotalEnergies remains strongly dependent on traditional fuels like oil and natural gas, with revenues from these sources representing close to 40% of the company's revenues. While this dependency generates reliable cash flows to invest in the Integrated Power segment, it also exposes the company to the volatilities of commodity prices and regulatory constraints.
- Based on a Sum of the Parts valuation of all its segments, TotalEnergies price target is €69.81 for FY2024, representing a shareholder return of 43.4%, considering a dividend of €3.38. Hence, this result suggests a BUY recommendation.

Company description

TotalEnergies SE, founded in 1924 as Compagnie Française des Pétroles, is a French multinational integrated energy company. It operates across the entire energy value chain, including oil and gas exploration, production, refining, chemicals, marketing, and renewable energy development. In recent years, TotalEnergies has undertaken a strategic transformation to diversify from its traditional oil and gas business into renewable energy and electricity, aligning with global sustainability trends. The company is publicly listed on Euronext Paris and the New York Stock Exchange.

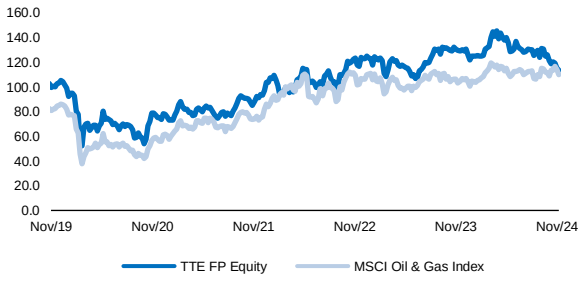
Recommendation:	**BUY**
Price Target FY25:	**€69.86**
Price (as of 31-Dec-2024):	**€53.49**

Source: Bloomberg Terminal | Own computations

52-week range (Euro)	€52.29 - €70.11
Market Cap (Euro Bn)	120.255
Outstanding Shares (M)	2,398

Source: Bloomberg Terminal

TotalEnergies (TTE FP) and MSCI Oil & Gas
Base 100, 15 December 2024



Source: Bloomberg Terminal

	2023	2024E	2025F
Revenues (USD Mn)	218,945	187,617	161,172
Gross Margin (%)	21%	22%	21%
Net Income (USD Mn)	22,617	18,806	15,246
CAPEX (USD Mn)	15,729	20,517	19,209
EPS (USD)	9.43	7.84	6.36
P/E	5.66x	6.80x	8.39x
EV/EBITDA	3,27x	3.63x	4.29x

Sources: Bloomberg Terminal | Own Computations

Table of Contents

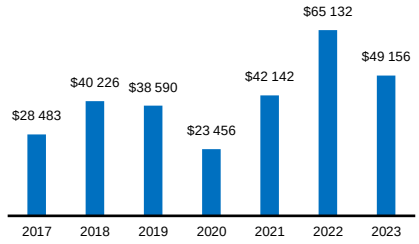
1. Company Overview

1.1. Descriptive

TotalEnergies SE is one of the world's largest energy companies, operating in over 130 countries and employing over 102,500 people globally. Its headquarters is in La Défense, Courbevoie, France. Initially focused on oil exploration and production, the company now has a diversified portfolio that includes natural gas, LNG, electricity (especially from renewable sources like solar and wind), and biofuels.

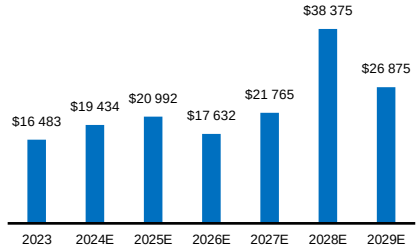
The company rebranded from "Total" to "TotalEnergies" in 2021 to reflect its commitment to achieving net-zero carbon emissions by 2050, signaling a clear shift towards cleaner energy. Today, TotalEnergies' strategy is centered around reducing carbon intensity, expanding in low-carbon electricity, and leveraging its leadership in the global LNG market. Its operational segments include Exploration & Production (E&P), Refining & Chemicals, Integrated LNG, Integrated Power, Marketing & Services, and Corporate.

Graph 1: Exploration and Production revenues



Source: Annual Report

Graph 2: Integrated LNG revenues

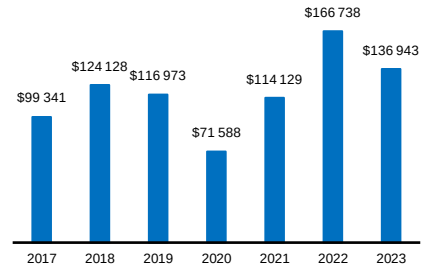


Source: Annual Report

The E&P segment is responsible for the exploration, development, and production of oil and natural gas. TotalEnergies operates in more than 50 countries and aims to balance traditional oil and gas activities with carbon-efficient operations. In 2023, its daily production was 2.48 million barrels of oil equivalent (boe), with efforts focused on areas like Brazil, the Middle East, and Africa. The output was split between oil and natural gas, with the former representing about 56% of the total production (1.39 boe), and the latter approximately 44% of the total production (1.09 boe). The company is strategically reducing its carbon intensity in upstream operations, having cut its Scope 1+2 emissions from 46 Mt Co2e in 2015 to 35 Mt Co2e in 2023.

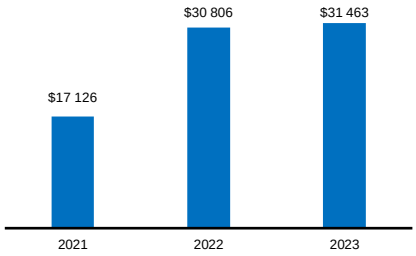
In 2023, the company separated the Integrated LNG segment and the Integrated Power segment, before this year, the company saw them as one in its financial statements. The Integrated LNG segment covers the integrated gas chain as well as biogas, hydrogen and gas trading activities. Gas plays a key role in energy transition by supporting the integration of intermittent renewables and enabling a swift reduction in CO2 emissions, since it is a cleaner alternative to higher-emission fuels. We see Integrated LNG and

Graph 3: Refining and Chemicals revenues



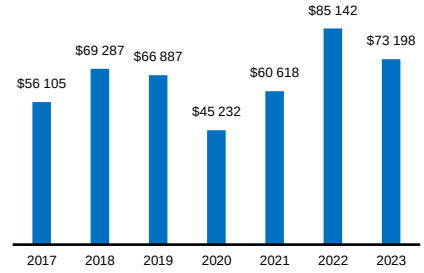
Source: Annual Report

Graph 4: Integrated Power revenues



Source: Annual Report

Graph 5: Marketing and Services revenues



Source: Annual Report

E&P as part of a bigger upstream area.

The Refining & Chemicals segment includes the refining of crude oil, petrochemicals, and biochemicals. The company has strategically reduced its exposure to traditional petroleum refining and increased its investment in biofuels and circular plastics (recycled and bioplastics). There is presently a significant focus on reducing the carbon footprint in refining, with several ongoing projects such as converting the *Grandpuits* refinery into a biorefinery, and the aim to reduce its exposure to refined petroleum products to 30% by 2030. TotalEnergies operates 16 refineries globally, including biorefineries in France and major refining hubs in Saudi Arabia, Belgium, South Korea, and the U.S.

The Integrated Power segments is the fastest-growing segment in the company, reflecting its strategic shift towards renewables. TotalEnergies is scaling up its renewable energy capacity, targeting 35 GW of renewable electricity by 2025 and 100 GW by 2030. In 2023, it reached 22.4 GW of installed capacity, mostly in solar and wind power. The segment includes investments in storage and hydrogen, aiming to generate 100 Twh of low-carbon electricity by 2030.

The Marketing & Services segment operates a vast network of 16,000 service stations in over 70 countries, providing customers with fuels, biofuels, and low-carbon products. It also includes lubricants, polymers, and energy efficiency services. TotalEnergies is leading the development of electric vehicle charging station, with a target of 150,000 charging points globally by 2030, and it is also expanding LNG refueling stations for trucks and ships across Europe.

The Corporate segment includes all corporate-level activities, including finance, strategy, risk management, and governance.

The company maintains a strong focus on financial discipline, with $35.9 billion in cash flow from operations (CFFO) in 2023 and a low gearing ratio of 5%.

1.2. Management Board

Total Energies Board of Directors is composed by 14 members, with 9 independent directors. The board reflects a large range of nationalities, experiences and different cultures, its role is to define the company's strategic orientations and supervise their

implementation, ensuring alignment with corporate interests and consideration of ESG challenges. To face these endeavors, the board elected four committees: the Audit Committee, Governance and Ethics Committee, Compensation Committee and the Corporate Social Responsibility Committee.

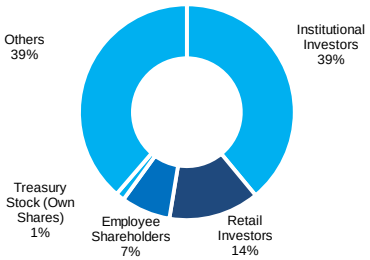
This model seen as a unified leadership model according to the Stewardship Model claims that directors, entrusted with responsibility, act as stewards of the organization, aligning their goals with those of the shareholders. It assumes that the CEO's interests naturally align with the organization's success. By combining the roles of Chairman and CEO, TotalEnergies ensures that strategic decisions are made cohesively, without delays caused by potential conflicts between separate individuals holding these positions.

The company operates under the management of CEO and Chairman Patrick Pouyanné since 2014. This structure is particularly valuable in industries like the energy sector, where rapid decision-making and strategic consistency are critical. Lex Donaldson and James H. Davis in their work on stewardship theory, argue that combining leadership roles fosters unified authority and reduces agency costs, particularly in complex environments where leadership alignment is critical (Donaldson 1991).

In September 2023, the board reaffirmed the relevance of its unified governance structure, emphasizing its effectiveness in pursuing the company's transition strategy. This decision was made after thorough reflection and consultation with each director.

1.3. Shareholder Structure

Graph 6: Shareholder Structure



Source: Annual Report

TotalEnergies has a stable, diversified shareholder base, primarily held by institutional investors. About 39% of the shares are held by institutional investors, mostly in North America and Europe, including BlackRock, Inc (6.5%) and Employee shareholders (7.4%). In addition, around 1.6 million shares are held by retail investors, corresponding to 13.6% of total shares outstanding.

Employees collectively hold 7.4% of TotalEnergies' share capital, this substantial ownership underscores the company's commitment to involving employees in its growth and aligning their interests with corporate performance. The company also holds approximately

1.3% of its own shares as treasury stock.

TotalEnergies follows a progressive shareholder return policy and in 2023 the company's payout ratio was 46% of CFFO, which includes both regular dividends and share buybacks. The company has a quarterly dividend policy, which has been in place since 2011. In 2023, the Board of Directors proposed a total dividend of €3.01 per share, which includes a final dividend of €0.79 per share. The latter marks a 7.1% increase from the previous year's total dividend of €2.81 per share. The dividends are complemented by share buybacks to return surplus cash flow to shareholders. For 2023, the company announced buybacks totaling $9 billion, including proceeds from divesting Canadian assets.

For 2024, the company has updated its shareholder distribution policy, targeting more than 40% of CFFO across market cycles. There will be an increase in interim dividends to €0.79 per share and at least $2 billion in quarterly buybacks.

The company follows a one-tier board structure, led by CEO Patrick Pouyanné, who has been at the helm of TotalEnergies' energy transition. Governance at the company focuses on sustainability and transparency, overseen by the Sustainability & Climate Committee, which ensure that TotalEnergies aligns with its 2050 net-zero goal.

2. Macroeconomic Outlook

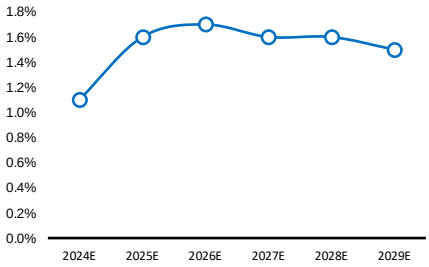
In 2024, the world economy is expected to grow moderately by 3.2% (IMF 2024). It was a year marked by a period of disinflation, high interest rates and Central Banks cuts, and geopolitical tensions. Despite having grown beyond the 3-percentage point mark, it is below 2023's growth rate of 3.3% and even lower than the historical average for this century, which is 3.5%. As the effects of aggressive monetary tightening by central banks reflect on the economy, inflation is expected to decline globally, reaching 5.8% in 2024. Geopolitical tensions persist on being a major downside risk to global growth, with the prolongation of Ukraine invasion by Russia, and the escalation of conflicts in the Middle East. These conflicts greatly affect commodity prices, energy prices volatility and supply chains.

2.1. European Union

The 2020s have been stressful on the EU's geopolitical and economic landscapes. During this period, the Union suffered a deep recession caused by the COVID-19 pandemic and was targeted by a harsh energy crisis and inflationary spiral. The latter was ultimately caused by two main factors: First, the excess liquidity added during the pandemic; and second, the Russia's military invasion on Ukraine which interrupted EU's highly demanded Russian gas supplied by about 80%. Despite all this, the EU economy shows signs of resilience and showed good signs of recovery. However, recent quarters are broadcasting a different story. Uncertainty about the future of the EU economy is on the rise and has reached levels that were last seen in February 2022 upon the beginning of Russia's military invasion (Baker, Bloom and Davis 2024).

Despite the continuing war, the root causes for this uncertainty differ. Today, concerns grow over the future of industrial growth in the EU, notably in Germany, the Union's economic powerhouse. Additionally, France is thrown in political turmoil after a tough election period, EU's trade relations with the US might be under risk with the upcoming Trump Administration protectionist policies, and geopolitical instability is on the rise both in Europe and the Middle East.

Graph 7: EU Real GDP Growth Rate
%, 2024E – 2029E

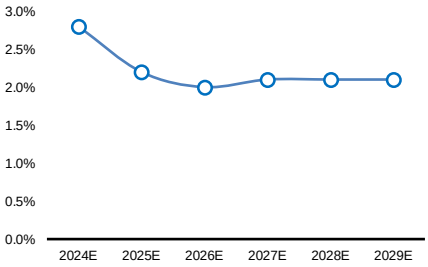


Source: IMF

The past two years were marked by a macroeconomic landscape dominated by inflationary pressures. These led, inevitably, to contractionary monetary policies, namely aggressive interest rate increases, as a way to increase household savings and decrease private consumption, which ultimately happened (European Commission 2024). Following the efforts of both monetary and fiscal authorities, the likely short-term outcome may be a soft landing of the economy, forecasting a rebound in private consumption and total investment in 2024 and 2025, respectively. In addition, the outlook for 2024, 2025 and 2026 points to modest economic growth, with real GDP growth expected to be 0.9%, 1.5% and 1.8% respectively, and inflation expected to reach the 2% target only in 2026 (European Commission 2024).

2.2. United States of America

Graph 8: USA Real GDP Growth Rate
%, 2024E – 2029E



Source: IMF

The macroeconomic outlook for the U.S remains cautiously optimistic, driven by recent monetary policy adjustments. Starting in September, the Federal Reserve (Fed) has employed a cumulative 75-bais-point reduction in interest rates, with expectations of a slower pace of rate cuts moving forward. Stimulated, in part, by the expectation of monetary easing and the actual rate cuts, consumer spending is expected to grow by c. 2.5% in 2024, slightly higher than the one recorded in 2023 of c. 2.2% (Panday 2024).

Following a contraction in Capital Expenditures (Capex) of c. 0.3% in 2023 (Bureau of Economic Analysis 2024), it is expected the latter to recover from 2024 onwards, although with a lag, supported by Fed easing and the potential implementation of more business-friendly policies under the next Administration, namely for the energy sector.

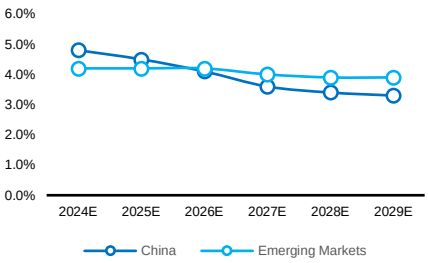
Regarding the Consumer Price Index (CPI), which considers energy and food components, it has been steadily approaching the Fed's target of 2% since 2022 and current projections imply that it will reach the latter target by 2025 (Panday 2024). As for real GDP growth, it is expected to increase at c. 2.8% in 2024, followed by a moderate deceleration to c. 2.2% in 2025 (IMF 2024).

Despite expectations of a more business-friendly environment under Trump Administration, notably with its corporate tax cut plan and economic reforms, the future President will be significantly constrained. The U.S. fiscal deficit amounts to record levels, only behind Covid-19 pandemic times, with interest payments on the federal debt exceeding $1 trillion for the first time ever.

2.3. Emerging Markets

As usual, starting from a lower base, Emerging Market and Developing Economies are expected to outpace the Advanced Economies' growth, with their economies expected to advance by 4.2% in both 2024 and 2025, albeit down from 4.4% in 2023. The latter deceleration is largely attributed to China's macroeconomic sluggish economic outlook, which expects a slower-than-usual growth of 4.8% in 2024 (IMF 2024).

Graph 9: China and Emerging Markets Real GDP Growth Rate
%, 2024E – 2029E



Source: IMF

China, which accounts for a substantial share of Emerging Economies based on its economy size and overreach, is presently facing a challenging economic outlook due to three main internal issues: First, historical week private consumption levels have constrained the economy to rely heavily on exports to bump its growth; second, a present downturn in its property sector exacerbated by the default of Evergrande Group in 2021, which has increased systemic risks and macroeconomic uncertainty (IMF 2024); third, a debt overhang among local governments, which have been relying greatly on public debt, driving China's Debt-to-GDP ratio to a whooping c. 290% (NIFD 2024).

Being the bedrock for this century's oil demand growth (China accounted for c. 60% of oil global increase over this last decade), China's slow-moving consumption levels has influenced negatively the energy industry by pushing down oil demand growth projections and therefore directly affecting downwards oil futures prices.

3. Industry Outlook

3.1. Energy

Graph 10: Brent Crude Oil Price
$, Jan/18 – 2024YTD

Source: Bloomberg

The oil segment of the energy industry has entered a bearish phase, with oil demand expected to grow by only 0.92 million of barrels per day (mb/d) and 1 mb/d in 2024 and 2025, respectively. These growth rates are considerably lower than the 2 mb/d surge recorded in 2023. The modest growth outlook is largely driven by China's sluggish oil demand (China's overall relevance in the oil industry was noted in the Macroeconomic Overview section), which is expected to increase only by c. 0.14 mb/d in 2024, a tenth of the growth in 2023.

This dampened demand outlook has already affected the Organization of the Petroleum Exporting Countries (OPEC+) plans to unwind production cuts, postponing such decisions to January 2025, despite earlier expectations of increased production levels by late 2024.

In 2024, the OPEC+ has revised its growth projections downwards four times, cutting forecasts by 20% (from 2.25 mb/d to 1.82 mb/d) and 17% (from 1.85 mb/d to 1.54 mb/d) in 2024 and 2025, respectively. If the lower demand projections check-out and OPEC+ production cuts remain in place, it is nonetheless estimated that

global supply will exceed demand by c. 1 mb/d in 2025 (IEA 2024). Long-term forecasts suggest that both oil and gas demand will peak at c. 86 mb/d in 2027 and starting to decline thereafter, reaching c. 55 mb/d by 2050 as per the Announced Pledges Scenario, which implies a decline of c. 2% year-on-year (S&P Global 2024). These bearish projections have already impacted, as expected, short-term Brent crude futures, which fell to c. $72/bbl in mid-november, implying a more than 10% decline from the 2023 daily spot price average of c. $82/bbl.

In the Liquified Natural Gas market (LNG), demand is expected to increase from c. 412 million metric tons (mbtu) in 2023 to 560 mbtu in 2030, implying a c. 4.5% growth year-on-year (BloombergNEF 2024). While Europe's demand is expected to decline starting in 2027 due to a strong development of renewable energy which reduces demand for gas to produce electricity, Asian markets, particularly China, are expected to drive demand growth as their efforts to replace coal for gas are expected to intensify.

As new liquefaction projects come on stream, the LNG sector is expected to become progressively oversupplied by the end of the decade (total supply, which includes operational, under construction and on a final investment decision projects, is expected to be c. 623 mbtu) with a projected c. 63 million metric tons supply-demand gap (The Oxford Institute for Energy Studies 2024). The latter supply and demand spread could potentially exert downward pressure on prices.

Graph 11: LNG Price – Henry Hub
$, Jan/18 – 2024YTD

Source: Bloomberg

3.2. Renewable Energy

The renewable sector, once among the most bullish industries worldwide, is presently facing a dual challenge of economic and policy uncertainty. On the one hand, the economic uncertainty may be explained by the short-term disruptions from "creative destruction" (as described by the economist Joseph Schumpeter in 1942), which include losses in industries and jobs, alongside with unpredictable returns on investments. On the other hand, the political uncertainty comes ultimately from the rise of movements opposed to environmentally focused policies, which threaten the continuity of environmental targets and measures, such as carbon taxes and green R&D subsidies. The literature suggest that increased uncertainty lowers green innovation by up to c. 1.5%

Land Use Assumptions
Solar PV
55% of 1500 GW = 825 GW
7 acres/MW = 28,329 sqm/MW
Onshore Wind
35% of 1500 GW = 525 GW
25 hectares/MW = 250,000/MW
Offshore Wind
5% of 1500 GW = 75 GW
12.5 hectares/MW = 125,000/MW
Conversion Rate
1 acre = 4,047 sqm
1 hectare = 10,000 sqm

Source: SEIA, NREL

(Bettarelli, et al. 2024).

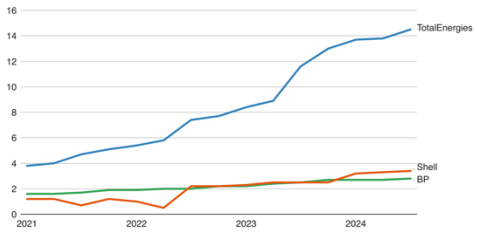
Despite these headwinds, the long-term outlook is still favorable with renewable energy expected to represent c. 46% of global electricity demand in 2030, a considerable increase from the 30% share in 2023. The latter implies a c. 2 percentage points increase year-on-year. Furthermore, the share of solar, onshore and offshore wind photovoltaic is projected to account for 95% of new renewable capacity by 2030 (IEA 2024).

In addition, the International Energy Agency has recommended countries to focus on expanding and modernizing electricity grids and storage, setting a global storage capacity target of 1,500 GW by 2030. It is our estimate that in order to meet IEA's target, a total land use, including turbine spacing for onshore wind, of c. 163,972 sq km will be required (assuming a 95% capacity distribution divided between 55% Solar, 35% Onshore wind and 5% Offshore wind). This extensive land use corresponds in relative terms to 1.78x the size of Portugal (92,090 sq km), therefore being nonetheless a significant ambitious target.

4. SWOT Analysis

4.1. Strengths

Graph 11: Renewables Gap



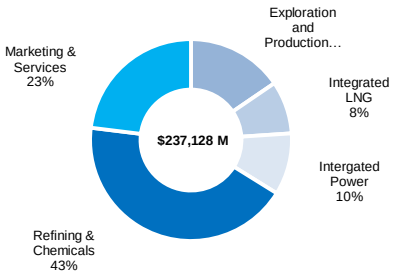
Source: Reuters

In what TotalEnergies is concerned, its main strength compared to its direct competitors is its position in the renewable sector, with 22.4 GW of gross installed renewable capacity, Total's portfolio is bigger than the combined portfolio of peers BP (1.7 GW), Shell (2.5 GW of installed capacity with 4.1 GW under construction), Equinor (0.7 GW) and Eni (1.2 GW). TotalEnergies' 5-year investment plan sees 4.2 billion euros invested in this sector, per year, aiming to achieve 35 GW of gross renewable capacity by 2025 and 100 GW by 2030, ensuring it meets the growing demand for cleaner energies in the sector.

4.2. Weaknesses

Despite being well positioned for a transition to a cleaner world, the company still depends heavily on Oil and Gas. It is their main source of revenue, representing close to 46.2% of total revenues on average, over the last 3 years. The geopolitical conflict between

Graph 12: Revenues by segment in 2023



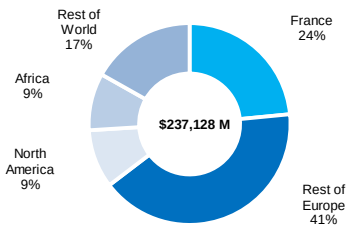
Source: TotalEnergies Financial Statements

Ukraine and Russia has shown how volatile these markets can be and how it may affect companies with such dependency on revenues coming from this sector (European Central Bank 2022). TotalEnergies stopped investing in new projects in Russia but continued to hold stakes in Russian ventures, including a 19.4% interest in Novatek and a 20% stake in the Yamal LNG project. It was faced with a lot of critics as other western peers left Russian operations. This situation worsened, in 2024, when CEO Patrick Pouyanne acknowledged that between $1.5 billion and $2 billion in annual dividends from these investments were "stuck" in Russia due to Western sanctions (Reuters 2024). These events underlined the company's continued reliance on oil revenues and the associated challenges.

4.3. Opportunities

As a well-established company, strategic partnerships reveal themselves as good chance for new opportunities. TotalEnergies has been investing in new partnerships such as the one with Airbus, where TotalEnergies is aiming to provide sustainable aviation fuel for more than half of Airbus's European fuel needs. Highlighting the company's goal of creating new sustainable relationships, alongside European Energy, it will develop at least 4 GW of onshore renewable projects across multiple geographies, leveraging both companies' strengths in renewable energy. Additionally, there are a lot of underserved communities globally, especially relevant in the African continent that has a total installed capacity of c. 50 GW, accounting for 2% of global capacity (International Renewable Energy Agency 2024). Seeing the opportunity in this underserved market, the company has acquired and is developing a portfolio of hydropower projects in Africa.

Graph 13: Revenues by geography in 2023



Source: TotalEnergies Financial Statements

4.4. Threats

TotalEnergies is facing legal challenges related to its environmental and human rights practices. In December 2022, a coalition of NGOs filed a complaint accusing the company of violating the law on the duty of vigilance concerning its oil projects in Uganda. Additionally, close to 20% of TotalEnergies' revenues are originated in the Middle East and Russia, geographic areas that have a noticeable underlying geopolitical risk and as seen before, can create uncertainty and increase risk for TotalEnergies's shareholders. At

the same time, the company has been investing in bigger scale projects, such as the Mozambique LNG project, a significant liquefied natural gas project, that has faced delays due to safety concerns, affecting revenues. Underlying risks such as delays or project failures, are exacerbated, as project size increases.

5. Porter's Five Forces

5.1 Threat of New Entrants: Low

The energy sector is heavily dependent on high Capital Expenditures requirements, namely on infrastructure and exploration. A company like TotalEnergies, planning to invest between 16 and 18 billion euros per year for the next 5 years, shows the level of investment needed to enter the sector. The company produces around 1.5 million barrels of oil per day, a new entrant could not match this production without very significant initial investment, raising a barrier to entry of new competitors. Also, this type of large-scale production enables TotalEnergies to spread fixed costs over a greater volume, reducing the average cost per barrel, allowing it to benefit from economies of scale that the new entrants would not, giving the already established companies in the sector, the edge. Additionally, the industry is heavily regulated, with strict environmental and safety regulations. New entrants need to navigate these complex regulatory requirements, which can take years to fulfill and involve significant costs. For instance, in the United States, obtaining permits for oil and gas drilling can take several months to years, depending on the project's scope and location, driving potential new entrants away from the industry.

5.2. Bargaining Power of Suppliers: Moderate

TotalEnergies works with a network of over 100,000 suppliers worldwide, in an effort to mitigate the bargaining power of suppliers and associated risks. It also has been engaging in vertical integration to enhance control over its supply chain, for example, the acquisition of Saft Group, SA, a French manufacturer of advanced batteries that focuses on energy storage solutions that are crucial for the renewable transition. By integrating Saft into its operations, TotalEnergies strengthened its position in the energy

sector, aligning with its commitment to low-carbon energy situation.

On the other hand, certain crucial areas such as specialized drilling equipment, where the number of suppliers is limited, gives these suppliers more bargaining power. For example, in this area there are only 3 main suppliers, Halliburton, Schlumberger and Baker.

5.3. Bargaining Power of Buyers: Moderate to High

In TotalEnergies case, the bargaining power of buyers is a very important force as it examines the power customers have over prices and terms over the services that a company offers. As the company supplies large scale clients and public organizations, they usually have significant purchasing power, allowing them to negotiate more favorable deals. Also, many of TotalEnergies' offerings are standardized commodities that lack differentiation which allows the buyers to switch suppliers, in the case of being unable to negotiate favorable deals. While TotalEnergies faces significant bargaining power from buyers due to the natural characteristics of the business, the company's diversification, long-term contracts, and customer relationship management collectively help mitigate buyer power by making its offerings more valuable, stable, and difficult to replicate.

5.4. Threat of Substitutes: High

The transition towards renewable energies poses as a threat to TotalEnergies whose portfolio still relies heavily on traditional fossil fuels. As the availability and attractiveness of alternative products that can fulfill the same consumer needs increases, so does the threat towards the company. Although it is very well positioned compared to its industry peers, its renewable capacity does not even reach 1% of the world's. Companies like Iberdrola have over double Total's GW capacity and pose as a growing threat.

Technological developments such as the increase of electric vehicles, that according to studies could represent most passenger cars in Europe by 2030, also pose a threat as the demand for fuel decreases (Felix Jung 2023).

5.5. Competitive Rivalry: High

The energy sector has very well-established competitors such as BP, Shell, Equinor and Eni, with strong networks and already

established in the market. TotalEnergies is seen as a leading player

within the main competitors in the industry when it comes to the renewable transition but the threat that others are catching up is still very present. Additionally, high capital investments and long-term projects in the energy sector create substantial exit barriers, compelling companies to remain competitive to protect their investments.

6. Financial Performance

6.1. Company

TotalEnergies' financial performance in 2022 and 2023 reflects both the highs of a booming energy market and the challenges that followed in a more subdued environment. In 2022, the company achieved a remarkable 43% sales growth, primarily driven by high oil and gas prices following the post-pandemic recovery and geopolitical disruptions, particularly in Europe. The Exploration & Production segment led with a 55% increase in sales, capitalizing on the surge in demand for hydrocarbons. Similarly, the Integrated LNG business saw sales rise by 76%, supported by Europe's urgent need for alternative gas supplies. Meanwhile, TotalEnergies' investments in renewables paid off, as the Integrated Power segment posted 80% growth, driven by new solar and wind projects. By 2023, the energy market faced a downturn, and TotalEnergies' overall sales declined by 17%. The Exploration & Production and Integrated LNG segments, which had driven growth in 2022, saw significant sales declines of 25% and 30%, respectively, as energy prices softened. The company's renewable energy arm, Integrated Power, managed to grow modestly by 2%, showing resilience in a competitive market but far slower than the previous year. Refining & Chemicals sales fell by 18%, and Marketing & Services by 11%, as demand for transportation fuels and refining margins weakened. Despite these challenges, TotalEnergies maintained a strong EBITDA margin of 19.3% (2018-2023 average), and its ROE remained high at 20.49%, reflecting efficient capital use and strong operational performance across its diverse portfolio.

Table 1: Key Financial Ratios

Profitability Ratios	2021	2022	2023
Operating Margin	12%	16%	14%
Net profit Margin	8%	7%	9%
ROE	14%	18%	18%
ROIC	12%	25%	18%
Liquidity Ratios			
Current Ratio	1,17	1,15	1,12
Quick Ratio	0,96	0,94	0,90
Cash Ratio	0,19	0,25	0,26
Solvency Ratios			
Debt-to-Equity	56%	53%	42%
Interest Coverage Ratio	15,62	37,05	32,81
Efficiency Ratios			
Asset Turn Over	0,63	0,87	0,77

Source: Own Computations

6.2. Financial Position Within the Industry

Table 2: Financial Position within the industry

ROE	2021	2022	2023
Total Energies	14%	18%	18%
Exxon Mobil Corp	13%	28%	17%
Shell PLC	11%	22%	10%
BP PLC	8%	-3%	18%
Chevron Corp	10%	17%	13%
ConocoPhillips	18%	39%	22%
Equinor ASA	22%	53%	25%
Marathon Petroleum Corp	29%	41%	31%
Industry Average	16%	28%	20%
ROA			
Total Energies	6%	7%	8%
Exxon Mobil Corp	6%	15%	10%
Shell PLC	5%	10%	5%
BP PLC	3%	-1%	5%
Chevron Corp	7%	14%	8%
ConocoPhillips	9%	20%	11%
Equinor ASA	6%	18%	8%
Marathon Petroleum Corp	11%	16%	11%
Industry Average	7%	13%	8%
ROIC			
Total Energies	12%	25%	18%
Exxon Mobil Corp	7%	17%	11%
Shell PLC	6%	14%	6%
BP PLC	5%	-1%	11%
Chevron Corp	6%	14%	9%
ConocoPhillips	12%	29%	16%
Equinor ASA	9%	27%	11%
Marathon Petroleum Corp	6%	23%	16%
Industry Average	7%	18%	12%
Debt-to-Equity			
Total Energies	56%	53%	42%
Exxon Mobil Corp	33%	12%	11%
Shell PLC	31%	22%	22%
BP PLC	40%	31%	32%
Chevron Corp	24%	8%	13%
ConocoPhillips	33%	17%	27%
Equinor ASA	-	-25%	-16%
Marathon Petroleum Corp	51%	49%	61%
Industry Average	36%	17%	23%

Source: Own Computations

TotalEnergies financial position is considerably healthy within industry standards. One can infer this by looking at the ROA that although being quite low (7.5%), is well within the industry average (8.2%), showing that its efficiency level is normal for the industry.

Additionally, if one was to compare the company's ROA with the peers that have a similar amount of Assets, then, its ROA would be above average. What drives the industry average above TotalEnergies' level is the companies with less assets. Similarly, the ROE (18%) is lower than the industry average (20%), but more constant throughout the analyzed period than the other peers, giving shareholders a more trustworthy belief of the sustained return they can get from the company.

Regarding the ROIC (18%), TotalEnergies is constantly higher than the industry average (11%), and higher than its WACC, showing that it created value for its shareholders, during the analyzed period.

TotalEnergies has a capital structure more dependent on debt than most of its peers, represented by a Debt-to-Equity ratio of 42% compared to an industry of 23%. The debt owned by TotalEnergies mainly consists of long-term borrowings, bonds, and credit facilities, aimed at funding its diverse operations and projects across the energy spectrum. As the Energy sector is a very capital-intensive industry, this level of debt is normal. Despite the reliance on external financing, the company maintains a strong financial position. With an interest coverage ratio of 32.81x in 2023, TotalEnergies is showing incredibly solid financial health all the while enjoying favorable refinancing conditions, given its solid credit rating of A1 by Moody's.

7. Valuation

To provide a reliable estimate of TotalEnergies' intrinsic value, we applied a sum of the parts (SOTP) valuation approach. The use of this methodology is more appropriate given that the Company has segments that are inherently different from each other, including both upstream and downstream operations, and businesses with revenues derived from finite resources (e.g. Oil and Gas) and infinite resources (e.g. renewable energy) being the latter the case of their Integrated Power segment.

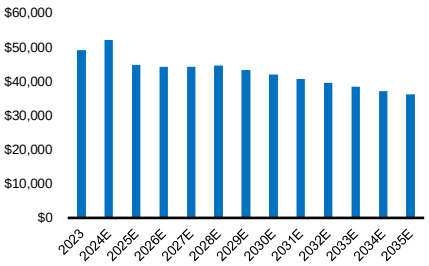
Therefore, in order to employ a SOTP valuation, we divided the

Table 3: TotalEnergies Reserves Life Index
Million, 2023

Reserves Life Index	
Oil & Gas Production (Kboe/d)	2,483
Conversion rate	1 Kboe = 0.001 Mboe
Oil & Gas Production (Mboe)	906.30
Hydrocarbon Reserves	10,564
Reserves Life Index (years)	11.66

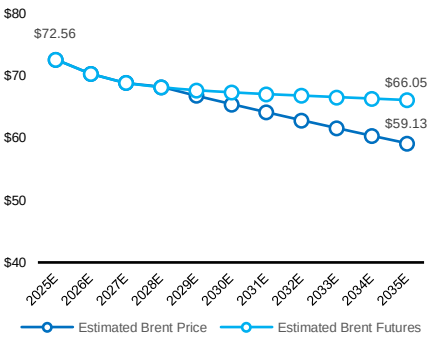
Source: Annual Report, Own computations

Graph 14: E&P Revenues from Sales
$ millions, 2023 – 2035E



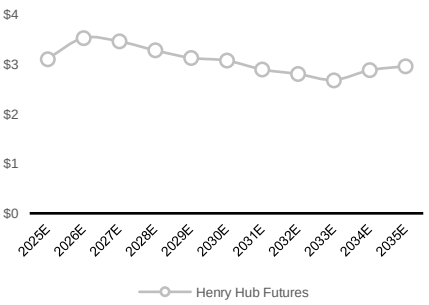
Source: Own computations

Graph 15: Estimated Brent Crude Oil Price
$, 2025E – 2035E



Source: Own computations

Graph 16: Estimated Natural Gas Oil Price
$, 2025E – 2035E



Source: Own computations

Company in four main business units: Exploration & Production, Integrated LNG, Integrated Power, and Downstream, which includes Refining & Chemicals, Marketing & Services and Corporate segments.

TotalEnergies has reported a proven reserves life index of 12 years, closely aligning with our own computations of 11.66 years (Table 3).

7.1. Sales

7.1.1. Exploration & Production

In 2023, the E&P segment sales amounted to a total of $49,156 million and it is forecasted that such will sum up to $36,070 in 2035 which implies a decline of c. 2.5% year-on-year, reflecting the anticipated gradual decline in crude oil price.

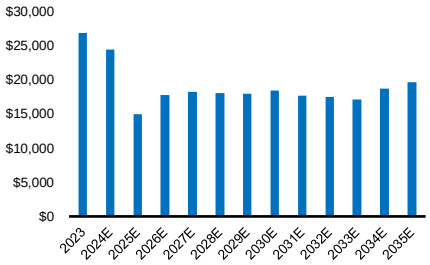
To estimate future revenues, we assumed that the Liquids price, which include crude oil and natural gas liquids (NGLs), would continue trading at a historical average discount to Brent crude. For crude oil prices, we relied on Brent Crude Oil Futures projections through 2028, followed by a 2% annual decline, thereafter, aligned with the anticipated reduction in oil demand as per the Announced Pledges Scenario. This 2% decline after 2028 reflects our belief investors are not yet discounting brent futures consistently with the lower oil demand projection by the end of the decade. Under these assumptions, crude prices reach $59.13/b by 2035.

As for the natural gas prices, we estimated them using Henry Hub futures prices through 2035 as we perceive that the market is discounting them proportionately to the sector's outlook.

Regarding Oil & Gas production growth, we projected a 2% year-on-year growth between 2024 and 2030, which is lower than the 3% year-on-year growth anticipated by the company, reflecting a more conservative estimate. This projection is based on the company's historical performance between 2018 and 2023 which includes a c. 1.5% average annual growth in Oil production (c. 8% decline in 2020 was considered an outlier) and c. 1.2% average annual decline in Gas production (c. 35% decline in 2023 was considered an outlier). The formula used to compute revenues was $Annual\ Liquids\ Production\ (b) * Liquids\ Price\ \left(\frac{\$}{b}\right) +$ $Annual\ Gas\ Production\ (Mcf) * Gas\ Price\ \left(\frac{\$}{Mbtu}\right)$.

7.1.2. Integrated LNG

Graph 17: Integrated LNG Revenues from Sales
$ millions, 2023 – 2035E



Source: Own computations

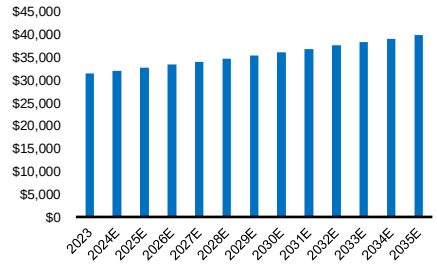
This segment is estimated to experience a c. 2.6% year-on-year decline from 2023 until 2035 driven by reductions in LNG price ($/Mbtu). TotalEnergies, the largest exporter of U.S. natural gas, has about 10 mbtu of U.S LNG under long-term contracts pegged to U.S. natural gas prices. Having the latter in mind, we assumed LNG prices would track Henry Hub futures.

TotalEnergies has set an ambitious goal to increase LNG sales by 50% between 2024 to 2030, implying a c. 6% annual growth. However, we adopted a more conservative assumption of 4.5% growth year-on-year as anticipated by industry forecasts (see Industry Overview). From 2031 onward, we estimate that LNG sales will grow at a 2% growth year-on-year reflecting the expected decline of LNG demand in Europe, reaching 66.6 Mt by 2035.

The formula used to compute the segment's revenues was $LNG\ Sales\ (Mbtu) * LNG\ Price\ \left(\frac{\$}{Mbtu}\right)$.

7.1.3. Integrated Power

Graph 18: Integrated Power Revenues from Sales
$ millions, 2023 – 2035E

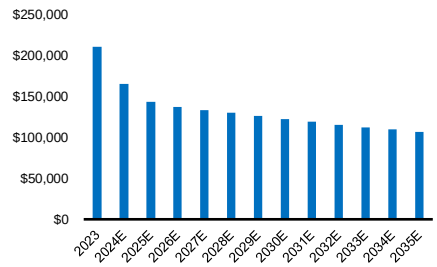


Source: Own computations

This segment was established in 2023, therefore it lacks significant historical data for analysis. Based on the proxy data from 2021 and 2022 given by the company, one can see that in 2022 revenues from sales increased by c. 80%, because of inorganic growth arising from the acquisition of Clearway, and in 2023 such figure was only c. 2%. As a conservative estimate, we projected a 2% year-on-year revenue growth, reflecting both the uncertainty in the renewables market and its significant long-term potential (see Industry Overview).

7.1.4. Downstream

Graph 19: Downstream Revenues from Sales
$ millions, 2023 – 2035E



Source: Own computations

The Downstream segment, which includes both Refining & Chemicals and Marketing & Services, is highly sensitive to oil price performance and, as a result, faces a challenging outlook. Specifically, in Marketing & Services, TotalEnergies has the target of reducing petroleum products sales by 60% by 2030, further worsening the segment's future perspectives. While we maintain a bullish perspective on TotalEnergies' charging stations, their contribution to the overall segment remains relatively insignificant.

TotalEnergies set the target of operating more than 150,000 EV charging points by 2025, implying a CAGR of c. 58% from 2024 until

2025, which stands to be an ambitious goal. Therefore, considering the company's target, we forecast this growth to occur at a 20% discount, which remains an optimistic projection as we estimate charging points will increase by c. 47% annually over the next two years.

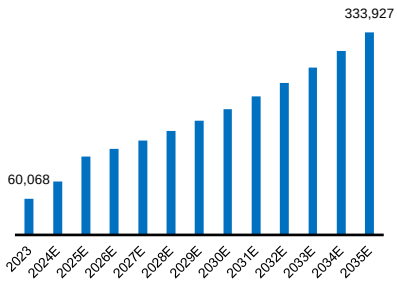
To offset the negative outlook of petroleum products, we project that charging points will increase by 10% from 2026 onward, despite the limited information regarding these services. We assume the company currently uses direct current (DC) fast chargers requiring inputs of at least 480 volts and 100 amps, which translates to a capacity of up to 72 kw. Starting in 2027, we anticipate that the company will be already capable of adopting the latest chargers, which can deliver up to 360 kw (1000 volts and 500 amps).

In addition, we assume a utilization rate of 8% in 2024, reflecting Europe's higher number of electric vehicles in comparison to the U.S., where the average annual utilization rate of 7.5% in 2022 (Frode, Lee and Sahdev 2024). Lastly, the fee per kWh is assumed to be $0.40 which corresponds to the average price in France, growing annually afterwards by 2% to account for inflation (Platini 2024). We used the following formula to estimate charging points' future revenues: $Utilization\ Rate\ (\%) * Daily\ Capacity\ (kWh) * Fee\ \left(\frac{\$}{kWh}\right) * Number\ of\ Charging\ Points * Days\ in\ a\ Year$.

In Refining & Chemicals, refining margins are assumed to correlate with crude oil price as it greatly depends on the latter. TotalEnergies' refining capacity is forecasted to stabilize at 1,800 kb/d, close to the 2019 – 2022 average of 1861 kb/d, reflecting the company's plans to reduce its European refining capacity while at the same time expanding in regions where there is a growing demand, namely Middle East and Africa. The latter is the case of the Dangote Refinery in Nigeria which has the capacity to supply 650,000 barrels per day (bpd). Based on these plans, we expect the utilization rate to remain around the 85% over the years which corresponds to the target set by the company.

While the refining operations lack good prospects, the production of petrochemicals, including monomers and polymers, are expected to increase, with TotalEnergies being considerably bullish on this segment.

Graph 20: Number of Charging Points
2023 – 2035E



Source: Own computations

Table 4: European Petrochemicals Industry %, 2023

Petrochemical Companies	EBITDA Margin 2023
BASF SE	10.6%
Brenntag SE	9.0%
IMCD NV	12.2%
Croda International PLC	22.5%
Clariant AG	10.9%
Wacker Chemie AG	12.0%
Solvay SA	20.2%
Kemira Oyj	49.9%
LANXESS AG	6.5%
Ercros SA	6.0%
EMS-Chemie Holding AG	41.4%
Median	**12.0%**

Source: Bloomberg, Own computations

The Company has been investing significantly, notably in the Daesan Complex which increased the company's polypropylene (polypropylene is a kind of polymer) production capacity by 60% in 2021. In addition, TotalEnergies has set an ambitious goal of producing 1 million tons of circular polymers annually by 2030. Reflecting the company's bullishness, we forecast an annual production growth of 1.5% for monomers and 3% for polymers, alongside a progressive increase in steamcracker utilization rate from 75% to 85%, over the coming years. Regarding the prices of monomers (including olefins and aromatics) and polymers (including polyethylene, polypropylene and polystyrene), we assumed the present indexes prices as a reference for 2025F (*China Butadiene CFR Spot Price* for Olefins; *Rotterdam Benzene Aromatics FOB Price* for Aromatics; *Polyethylene Fut Comdty*; *Polypropylene Fut Comdty*; *Houston Polystyrene FAS Price*), and as it lacks reliable literature regarding each of those petrochemicals, we assumed that they would along with brent crude oil prices since the latter and its derivatives serve as feedstocks for all sort of petrochemicals, therefore directly affecting their prices.

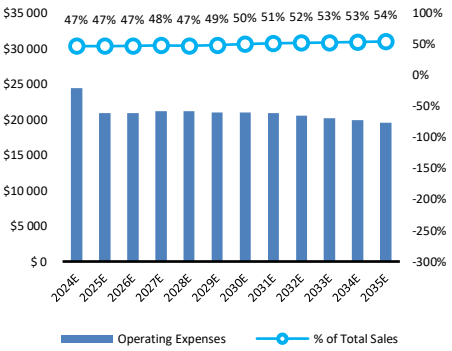
Firstly, the formula used to compute the segment's EBITDA for the refining services was $Throughput\ (kb) * Variable\ Refining\ Cost\ Margin\ \left(\frac{\$}{kb}\right)$. Secondly, the formula used to compute the EBITDA for the petrochemicals operations was $(Monomers\ Production\ (kt) * Monomers\ Price\ \left(\frac{\$}{kt}\right) + +Polymers\ Production\ (kt) * Polymers\ Price\ \left(\frac{\$}{kt}\right)) * EBITDA\ Margin\ (Petrochemicals\ Industry)$.

7.2. Operating Expenses

7.2.1. Upstream and Midstream Segments: Exploration and Production (E&P) and Integrated LNG

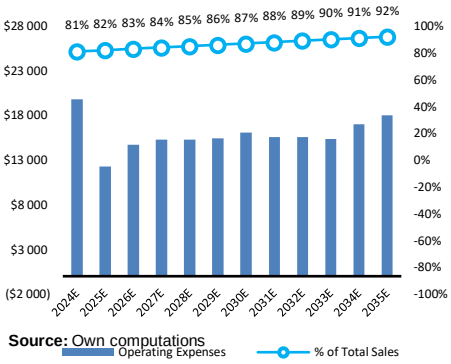
Although we evaluated them separately, Exploration and Production (E&P) and Integrated LNG together form the upstream segment of TotalEnergies E&P operating expenses consist of costs related to seismic surveys, geological studies, drilling of exploration wells, and the acquisition of exploration licenses.

Graph 21: E&P expenses as percentage of total segment sales



Source: Own computations

Graph 22: Integrated LNG expenses as percentage of total segment sales



Source: Own computations

Likewise, the Integrated LNG costs are related to finding and developing gas reserves suitable for liquefaction. This includes exploration, drilling, and the development of new gas fields, additionally expenses involved with extracting natural gas from offshore or onshore fields, including the operation of gas production facilities, labor, and maintenance. Both segments also incur in shared expenses such as labor, maintenance of facilities, transportation of extracted resources to processing plants, and administrative overheads like management and insurance.

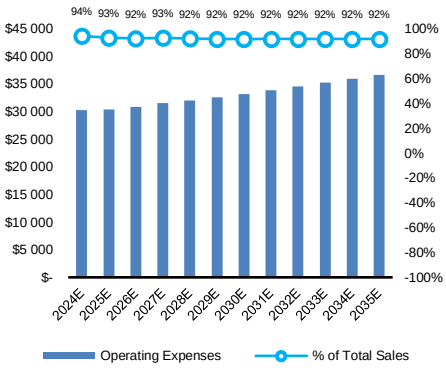
These expenses are largely unavoidable and expected to rise with long term inflation trends. Labour and maintenance expenses in the energy sector are closely tied to inflation, particularly in infrastructure-heavy sectors like LNG, where maintenance costs rise alongside the prices of raw materials and labour (Deloitte 2024). With the IMF, projecting long term global inflation rates to hover c. 2% mark, we conservatively estimate operating expenses growth for the LNG segment to align with this benchmark (Associated Press News 2024).

In the E&P, additional factors create the expectation for higher growth of operating expenses. Increasing environmental regulations and the depletion of easily accessible reserves drive the development of more complex and hard-to-reach reserves. Furthermore, carbon pricing is already impacting the sector, with Wood Mackenzie's analysis reporting a potential 15-20% increase in carbon-related costs for high-emission producers by 2030. To account for these trends, we decided to increase the operating expenses by an additional 1,5% per year, on top of the 2% for inflation, of the E&P segment.

Operating profitability in this segment has historically been sensitive to production efficiencies and commodity prices, as well as the industry's ability to adapt to environmental constraints. Taking into consideration the arguments given, operating profitability will decrease in the future.

7.2.2. Integrated Power

Graph 23: Integrated Power expenses as percentage of total segment sales



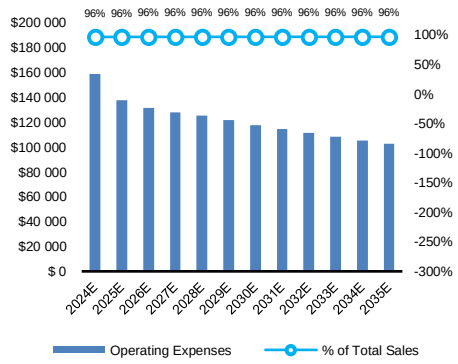
Source: Own computations

Technological developments and economies of scale have significantly improved operational efficiency in the renewable energy sector, particularly in solar and wind energy (IRENA 2024). Unlike traditional energy markets, the renewable sector has minimal variable costs, leading to a steady decline in operational expenses. Based on the literature reviewed we project a 0,5% reduction in operating expenses, annually, throughout the next decade, until 2030. This reduction reflects the expected advancements in technology and reduced dependency expensive raw materials.

Given these expectations, the segment's operating profitability is expected to strengthen over time, with cost declines bolstering margins as the company scales productions.

7.2.3. Downstream: Refining and Chemicals and Marketing and Services

Graph 24: Downstream expenses as percentage of total segment sales



Source: Own computations

The Refining and Chemicals sub-segment incurs substantial expenses in raw material procurement, energy consumption, labor, maintenance, environmental compliance, and logistics. Inflationary pressures alongside stricter environmental regulation, are expected to drive the operating expenses 1% per year, in the forecasted period.

The Marketing & Services sub-segment primarily incurs expenses related to labor, logistics and distribution, retail operations, advertising, and regulatory compliance. While these expenses are similarly subject to inflationary trends, the transition towards sustainable products and services will require additional marketing efforts and supply chain adjustments. As a consequence, we forecast operating expenses growing at 2% per year, in this sector.

The Downstream segment, operations benefit from diverse revenue streams and opportunities for innovation. Operating profitability in this segment will hinge on optimizing supply chains and adapting to evolving market trends, including sustainability initiatives.

7.2.4. Research and Development Expenses

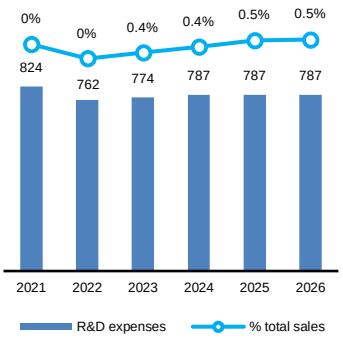
Research and Development expenses are included inside operating expenses in TotalEnergies financial statements, but it is important to have a look at them by themselves as these expenses are crucial to achieve the company's vison of achieving net zero emissions by 2050 and spear head the energy sector transition, R&D is a cornerstone of the strategy to drive innovation and arriving at new sustainable energy solutions.

Annually, TotalEnergies has a budget of 1billion euros assigned to R&D, of which 50% in 2023 was assigned to Renewables, a 15% increase compared to the last decade.

Besides TotalEnergies internal budget, it also collaborates with various stakeholders to enhance its R&D funding and capabilities, as an example, Total was among the beneficiaries of the EU Innovation Fund which allocated 3.6 billion euros to 41 large-scale projects focused on advancing clean technologies in sectors such as renewable energy.

In 2021, TotalEnergies created a unique initiative in the sector by starting OneTech, uniting 3,400 engineers, scientists, and technicians across nine European sites to consolidate the company's technical and scientific expertise across all energy sectors. This initiative reflects a growing trend in the sector where companies are centralizing and streamlining their technical expertise to drive efficiency and accelerate innovation. OneTech is definitely unique in its scale and scope, compared to TotalEnergies' peers. This model not only streamlines operations but also accelerates the development of cross-sector innovations, positioning TotalEnergies as a leader in adapting to the energy transition, in the sector.

Graph 25: R&D Expenses as a percentage of Sales



Source: Own computations

7.3 Capital Expenditures

Regarding Capital Expenditures in TotalEnergies case, we saw it best to look at it in two stages: Until 2028 and after 2028.

7.3.1. Until 2028

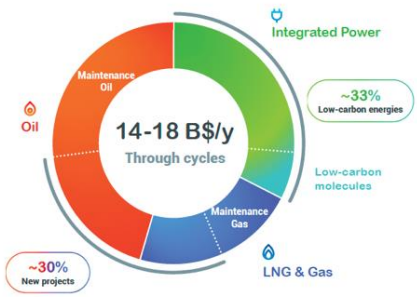
TotalEnergies' largest share of capital expenditures is in the Exploration and Production segment. This is especially noticeable in its strategic 5-year plan, that started in 2023 where TotalEnergies will invest almost half of 14 billion euros per year for the next five years, in this segment, mainly dedicated towards the maintenance

of current infrastructures as well as finishing new projects. As these strategic plans of investments are not something new in TotalEnergies, we expect that the investments towards CapEx will behave in the same way as they did in the last strategic plan. In the plan that involved 2021, CapEx grew 2% in 2022 and decreased 3% in 2023, therefore, we assumed that while this current plan lasts (until 2028), CapEx will decrease at an average rate of c. 1% per year. A decrease in CapEx is fitting since new expenditures will focus mainly on maintenance, since we expect the segment to end in 2035, once the reserves are depleted.

Having the same thought in mind, since we see the Integrated LNG and the Exploration and production segments as part of a broader Upstream area, we expect the Integrated LNG segment to behave the same way as the Exploration and Production, but since we only have available data for how it behaved in 2023, we assumed it will keep behaving the same way, growing at 3% yearly. Total Energies plans to continue its development in the electricity value chain and particularly in renewables with construction projects for solar and wind power plants (notably offshore) and the acquisition of flexible capacities (gas power plants in the United States, batteries in Germany). TotalEnergies intends to continue its investment efforts on solar and wind projects in the United States, wind projects in Brazil in partnership with Casa dos Ventos. For the next 5-year period, CapEx investments in this sector are expected to represent c. 30% of the 14 billion per year investment plan. We assumed that the investments in this sector would be dedicated towards CapEx due to TotalEnergies plan to shift towards a renewable sector and a forecasted need to invest in PP&E to meet the global demand.

The Downstream sector's CapEx is mostly concerned with maintenance and occasional new projects such as the construction, in partnership with the Saudi Arabian Oil Company, of Amiral, a world-scale petrochemical complex in Saudi Arabia. It is also noticeable that Downstream investments are expanding to include charging networks for electric vehicles (EVs), especially in urban areas, therefore, in the next 5 years, as TotalEnergies plans to invest c. 5% of 14 billion euros annually in this area, we expect this investment to be towards capital expenditures.

Graph 26: Planned Investments until 2028



Source: TotalEnergies Universal Registration Document 2023

7.3.2. After 2028

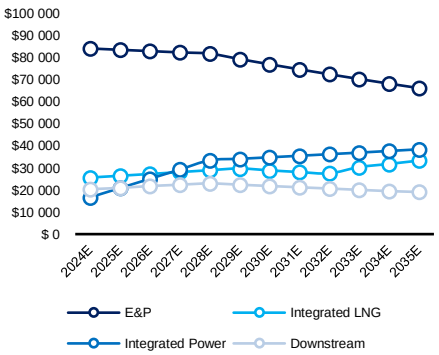
In the Upstream areas, Capital Expenditures will behave the same way as revenues in this segment after 2028. According to McKinsey´s Valuation: Measuring and Managing the Value of Companies this approach is justifiable in the principle that investment requirements typically scale with business activity (Tim Koller 2020). Especially for industries where historical trends see a relationship between capital expenditures and revenues, it makes sense to use this approach, in TotalEnergies' case.

Due to the shift towards renewable energy sources and stringent environmental regulations that are prompting companies to reallocate investments away from traditional oil and gas projects and innovations in extraction and production technologies that are enhancing operational efficiencies, allowing companies to achieve similar or increased outputs with reduced capital investment contributes to a slowdown in CapEX growth (Forum 2024). With these in mind, since our forecast for revenues in this sector sees a constant decrease throughout the forecasted period, it is reasonable to believe that CapEX will behave similarly.

Investments in the energy sector are projected to grow from $1.5 trillion today to between $2.0 by 2040, representing growth of c. 2% annually (McKinsey & Company 2024). Therefore, after 2028, we expect a growth in capital expenditures in this sector of 2% per year, and since revenues will grow alongside those values, we forecast CapEx based on revenue growth.

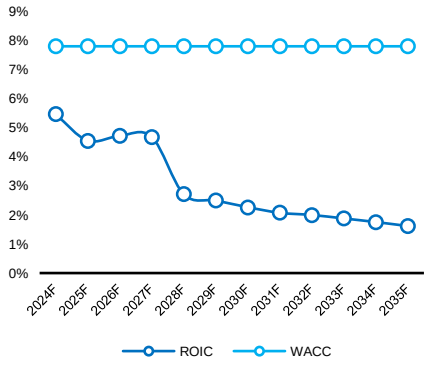
We followed the same route in the Downstream areas, forecasting CapEx based on revenue growth.

Graph 27: CapEx Behaviour after 2028

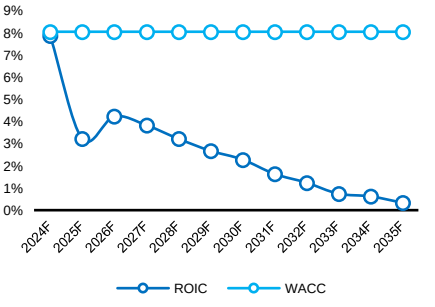


Source: Own computations

Graph 28: E&P segment's forecasted ROIC and WACC



Graph 29: Integrated LNG segment's forecasted ROIC and WACC

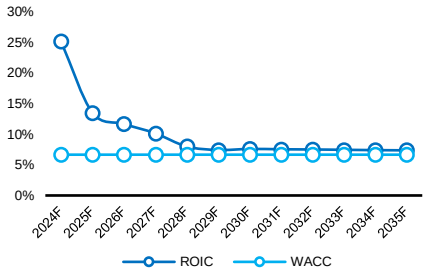


Source: Own computations

7.4. Key Value Creation Drivers

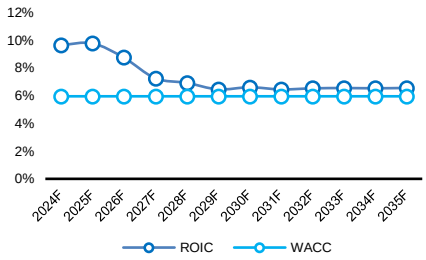
In both the Exploration and Production and the Integrated LNG segments, TotalEnergies reserves will be depleted by 2035, during this period, the ROIC and RONIC will never be higher than the WACC, since TotalEnergies is shifting its investments towards the renewable sector and is already a very mature company in the upstream areas, Return on Invested Capital is not expected to be higher than the company's cost of capital, since new projects on average will not create value for shareholders. Looking at the Integrated Power segment, value will be created in the first few years of our forecast but in 2035, as

Graph 30: Downstream forecasted ROIC and WACC



Source: Own computations

Graph 31: Integrated Power segment's forecasted ROIC and WACC



Source: Own computations

Cost of Capital	
US 10y Treasury Yield	4.42%
Market Risk Premium	5.51%
Corporate Tax Rate	25.00%
Yield to Maturity (10y)	2.39%
TotalEnergies' Credit Rating	A1
Probability of Default	0.2%
Loss Given Default	40.0%
Rd	2.38%
Exploration & Production	
β levered (median of peers)	0.84
β unlevered (own computations)	0.73
Re	9.06%
Ru	8.43%
Integrated LNG	
β levered (median of peers)	0.90
β unlevered (own computations)	0.77
Re	9.36%
Ru	8.69%
Integrated Power	
β levered (median of peers)	0.44
β unlevered (own computations)	0.38
Re	6.82%
Ru	6.50%
Downstream	
β levered (median of peers)	0.59
β unlevered (own computations)	0.51
Re	7.68%
Ru	7.24%

Source: Bloomberg, Own computations

our forecast comes to an end, we see TotalEnergies as more established in the area and its the RONIC and ROIC will converge towards the segment WACC.

As for the Downstream segment of TotalEnergies business, we believe that it will keep being a crucial part of the energy sector itself, but it won't create as much value in perpetuity, the ROIC and RONIC will still be above WACC but converging towards it.

As the continuation of oil and gas related segments depends on its reserves and it is not sensible to estimate how they will grow and which new projects will arise after the current ones end, once 2035 comes and the oil and gas reserves are depleted, we stopped our forecasts of the E&P and the Integrated LNG segments, as they will have no terminal growth. For the Downstream part, we calculated terminal growth based on the weighted average growth of the segment's cash flows in the final year of our forecast (-2.21%). Regarding the Integrated Power segment, we calculated terminal growth as a product of the operating RONIC and the RR, which led us to a value of 2,36% for Integrated Power's growth, keeping it below the long-term growth of the global economy, which is seen as reasonable for us.

7.5. Cost of Capital

To compute the cost of capital, we also segmented values by industry reflecting the different risk profiles between finite-resource driven businesses and those focused on renewable energy. Therefore, to calculate the equity beta for each segment based, we selected a group of peers based on a predefined criteria: First, a primary focus on each segment's industry; second, their revenue streams should come predominantly within Western economies similarly to TotalEnergies; and third, a range of peers with different sizes, including smaller and bigger market capitalizations, to capture the intrinsic capital structure for each industry.

Firstly, in the case of the Exploration & Production segment, the peers list includes EOG Resources Inc, Diamondback Energy Inc, Hess Corp and Marathon Oil Corp. Secondly, the peers for the Integrated LNG includes ONEOK Inc, Western Midstream Partners LP, Golar LNG Ltd and Excelerate Energy Inc. Thirdly, in the Downstream segment, the list includes Phillips 66, Marathon Petroleum Corp, Valero Energy Corp, HF Sinclair Corp and CVR

β levered	
Exploration & Production	
EOG Resources Inc	0.85
Diamondback Energy Inc	0.89
Hess Corp	0.82
Marathon Oil Corp	0.84
Median	0.84
Integrated LNG	
ONEOK Inc	0.93
Western Midstream Partners LP	0.74
Golar LNG Ltd	0.94
Excelerate Energy Inc	0.86
Median	0.90
Downstream	
Phillips 66	0.64
Marathon Petroleum Corp	0.59
Valero Energy Corp	0.58
HF Sinclair Corp	0.55
CVR Energy Inc	0.78
Median	0.59
Integrated Power	
NextEra Energy Inc	0.67
Iberdrola SA	0.31
Enel SpA	0.46
Engie SA	0.33
EDP Renovaveis SA	0.43
Northland Power Inc	0.78
Median	0.44

Source: Bloomberg, Own computations

Energy Inc. Lastly, in the Integrated Power, the comparables included are Next Era Energy Inc, Iberdrola SA, Enel SpA, Engie SA, EDP Renováveis SA and Northland Power Inc.

Each segment equity beta was estimated by regressing seven years of weekly returns of all peers against the S&P 500 Index benchmark, reflecting the fact that all of them have significant operations in the U.S. The latter yielded an unlevered beta of 0.84, 0.90, 0.59 and 0.44 for E&P, Integrated LNG, Downstream and Integrated Power, respectively.

The values for the cost of equity were computed by applying the CAPM model. Considering that TotalEnergies' cash flows are denominated in U.S. Dollars (USD), the market return was obtained using the S&P 500 historical returns and the risk-free rate was derived from the U.S. 10-year Government Bonds yield. The implied market risk premium (MRP) yielded c. 5.51% which is in line with current estimates of MRP of 5% - 6%.

As for the cost of debt, the estimation was focused on the overall company using the bond approach $r_D = YTM - PD * LGD$, which yielded a rate of c. 2.38%.

In addition, we assumed the current France's corporate tax rate of 25%. All in all, the WACC for E&P, Integrated LNG, Downstream and Integrated Power yielded 7.80%, 8.05%, 6.66%, and 5.95%, respectively.

7.6. Scenario Analysis

To enrich our model, we developed two alternative scenarios, bullish and bearish, alongside the base case one. Both scenarios have the common driver of Brent crude oil prices as TotalEnergies, like any major oil company, is highly sensitive to oil price swings. On the one hand, in the bullish case scenario, we assume that there will be a major geopolitical crisis in 2025, such as an escalation of the conflict in the Middle East between Israel and Iran, leading to a spike in oil prices. The consequence would be an increase of the crude oil price by 15% in 2025, resulting in an implied crude price of c. $83.44 (World Bank Group 2024). From 2026 onward, the crude price would vary at the same rate as in the base case. The implied share price in this scenario is c. €73.51, representing an upside of c. 5.2% from the base case. On the other hand, in the bearish scenario, we assume that oil demand growth will be considerably

lower than expected, which would drive oil prices down. The latter would result in crude oil prices going down by 15% in 2025 (the implied crude would be c. $61.68), and the following years would follow both base and bullish scenarios pace. The implied share price in this scenario is c. €66.23, indicating a downside of c. 5.5% from the base case.

7.7. Sensitivity Analysis

The discounted cash flow (DCF) valuation is significantly sensitive to changes in both the perpetuity growth rate and the weighted average cost of capital (WACC), therefore it is detrimental to sensitize the share price by performing a sensitivity analysis on both variables. Since the Exploration & Production and the Integrated LNG segments do not have a terminal value component, the sensitivity analysis was only performed for the Downstream and Integrated Power segments. As illustrated in Figures X and Y, the Integrated Power segment is considerably more sensitive to variations in the WACC, and the perpetuity rate compared to the Downstream segment. The latter is likely justified for two reasons: First, the renewables is a high-growth sector which exhibits greater sensitivity to both inputs; and second, investments in renewable energy tend to have longer useful lives, with returns realized over an extended period, therefore being highly sensitive since variations in both inputs can substantially impact the present value of those distant cash flows.

Table 5: Integrated Power Sensitivity Analysis
WACC on top, Terminal Growth on the left side

€69.81	5.7%	6.2%	6.7%	7.2%	7.7%
-3.2%	€71.55	€70.26	€69.14	€68.16	€67.31
-2.7%	€72.06	€70.67	€69.48	€68.44	€67.54
-2.2%	€72.63	€71.14	€69.86	€68.76	€67.80
-1.7%	€73.28	€71.66	€70.28	€69.10	€68.09
-1.2%	€74.02	€72.25	€70.76	€69.49	€68.40

Source: Own computations

Table 6: Integrated Power Sensitivity Analysis
WACC on top, Terminal Growth on the left side

€69.81	5.0%	5.5%	6.0%	6.5%	7.0%
1.4%	€ 73.33	€ 69.63	€ 66.78	€ 64.53	€ 62.71
1.9%	€ 76.07	€ 71.52	€ 68.13	€ 65.52	€ 63.46
2.36%	€ 79.87	€ 74.03	€ 69.86	€ 66.76	€ 64.37
2.9%	€ 85.48	€ 77.50	€ 72.15	€ 68.34	€ 65.50
3.4%	€ 94.62	€ 82.63	€ 75.33	€ 70.44	€ 66.95

Source: Own computations

7.8. Comparables Valuation

In addition to the SOTP valuation, a comparables valuation was also performed. In this analysis, we took into consideration the company's overall peers rather than segment-specific ones, since all major oil companies are investing in energy transition towards more renewables in order to position themselves as energy companies of the future. The selection of peers had the following criteria: First, companies with a market capitalization higher than $60 billion; second, overlapping business such as upstream, downstream and renewables; and third, we decided to exclude companies originally from China and Saudi Arabia as their business models structure differ significantly from TotalEnergies.

Based on the previous criteria, six peers were taken into consideration: Exxon Mobil Corp, Shell PLC, BP PLC, Chevron Corp, ConoccoPhillips and Equinor ASA. Furthermore, five different multiples were used: P/E, P/B, EV/Sales, EV/EBITDA, and EV/EBIT. It is also important to note that Equinor was excluded from the computations of enterprise value multiples since the company has a unique capital structure from its peers, characterized by negative net debt and significantly high margins, which considerably inflate its multiples and therefore distort the overall valuation.

Graph 32: Comparable Valuation Range
$, Current Multiples

Source: Own computations

Table X: Peers Multiples
Current Estimates

Company	P/E	P/BV	EV/Sales	EV/EBITDA	EV/EBIT
Exxon Mobil Corp	14.6 x	1.9 x	1.6 x	8.4 x	13.5 x
Shell PLC	7.7 x	1.0 x	0.6 x	2.9 x	6.2 x
BP PLC	7.9 x	1.0 x	0.5 x	3.2 x	8.7 x
Chevron Corp	15.4 x	1.9 x	1.6 x	7.7 x	14.3 x
ConocoPhillips	13.8 x	2.8 x	2.7 x	6.5 x	10.8 x
Equinor ASA	7.3 x	1.5 x	7.0 x	18.2 x	23.9 x
Median	**10.8 x**	**1.7 x**	**1.6 x**	**7.1 x**	**12.1 x**

Source: Bloomberg

The median of the selected multiples implies a share price of €73.49 which represents an upside of c. 5.3% compared to the share price derived from the SOTP valuation.

8. Recommendation

TotalEnergies has a target price of €69.86, representing an upside of c. 30% relatively to the market price as of December 31st, an expected dividend of €3.38 per share and a share buyback program of €3.34 per share, implying a total shareholder return of c. 43.4% and therefore a "BUY" recommendation.

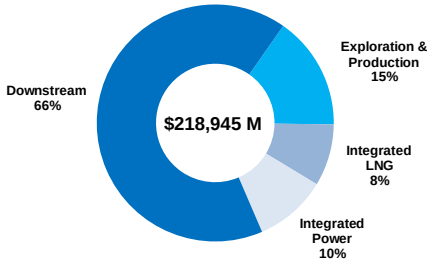
While the company is currently trading at a modest premium in comparison to its direct peers, it is being affected by ongoing uncertainties within the European Union, particularly the French political environment, and recent developments regarding TotalEnergies' investment partnerships.

Although we anticipate that revenues coming from Oil & Gas will decrease over time as a direct consequence of the expected decline of the price of these commodities, we remain confident in TotalEnergies' strong fundamentals.

The company's energy transition strategy demonstrates distinct resilience, especially as notable competitors increasingly divest from renewable energy investment.

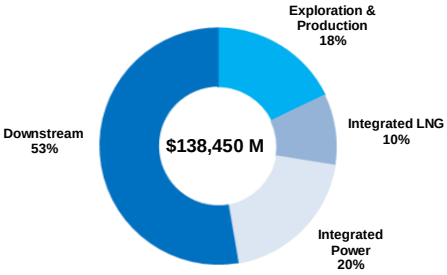
In addition, we expect the company's revenue streams will become more diversified, underscoring its potential for a sustainable growth in the years ahead.

Graph 34: Revenues from Sales by Segment
%, Consolidated Values, 2023



Source: Annual Report, Own computations

Graph 35: Revenues from Sales by Segment
%, Consolidated Values, 2035E



Source: Own computations

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APPENDIX

Table 1: Reformulated Balance Sheet
$ million, Consolidated Values, 2017 – 20235E

Reformulated Balance Sheet	2017	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E
Core Business																			
(+) Operating cash	$2,982	$3,682	$3,525	$2,394	$3,693	$5,266	$4,379	$3,752	$3,223	$3,178	$3,142	$3,115	$3,052	$2,999	$2,933	$2,878	$2,823	$2,799	$2,769
% sales	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*
(+) Accounts Receivables	14,893	17,270	18,488	14,068	21,983	24,378	23,442	19,695	17,036	17,068	16,932	16,568	15,953	15,933	15,566	15,296	15,017	14,871	14,681
(+) Inventories, net	16,520	14,880	17,132	14,730	19,952	22,936	19,317	17,289	13,857	13,763	13,797	13,446	13,221	13,028	12,697	12,465	12,224	12,122	11,995
(+) Other current assets	14,210	14,724	17,013	13,428	35,144	36,070	20,821	17,842	15,327	15,113	14,942	14,813	14,510	14,260	13,946	13,682	13,422	13,309	13,166
(-) Accounts payable, trade	26,479	26,134	28,394	23,574	36,837	41,346	41,335	34,815	29,450	28,371	28,896	28,456	27,764	27,255	26,775	26,221	25,707	25,497	25,237
(-) Other creditors and Accrued Liabilities	17,779	22,246	25,749	22,465	42,800	52,275	36,727	31,472	27,036	26,658	26,357	26,129	25,595	25,153	24,600	24,134	23,675	23,477	23,224
Net Working Capital	**4,347**	**2,176**	**2,015**	**(1,419)**	**1,135**	**(4,971)**	**(10,103)**	**(7,709)**	**(7,042)**	**(5,907)**	**(6,440)**	**(6,643)**	**(6,624)**	**(6,189)**	**(6,233)**	**(6,035)**	**(5,897)**	**(5,873)**	**(5,850)**
(+) Property, plant and equipment, net	109,397	113,324	116,408	108,335	106,559	107,101	108,916												
(+) Intangible assets, net	14,587	28,922	33,178	33,528	32,484	31,931	33,083												
(+) Property plant and equipment intangible assets net (From SOTP)	123,984	142,246	149,586	141,863	139,043	139,032	141,999	147,054	152,161	157,290	162,444	167,634	165,951	162,786	159,807	157,130	157,972	157,567	157,322
(+) Other Non Current Assets	3,984	2,509	2,415	2,810	2,797	2,388	4,313	3,255	2,580	2,598	2,628	2,456	2,419	2,522	2,407	2,342	2,303	2,283	2,250
(+) Deffered Income Taxes (asset)	5,206	6,663	6,216	7,016	5,400	5,049	3,418	4,005	3,016	2,949	3,070	2,949	2,900	2,873	2,791	2,743	2,694	2,668	2,641
(-) Deferred Income Taxes (liability)	10,828	11,490	11,858	10,326	10,904	11,021	11,688	9,650	7,880	8,142	7,938	7,822	7,729	7,567	7,398	7,269	7,124	7,065	6,991
(-) Provisions and other non-current liabilities	15,986	21,432	20,613	20,925	20,269	21,402	21,257	15,624	19,292	18,469	12,544	19,348	27,592	22,943	19,660	16,889	16,653	16,465	16,323
Net Core non Current Assets	**106,360**	**118,496**	**125,746**	**120,438**	**116,067**	**114,046**	**116,785**	**129,040**	**130,585**	**136,226**	**147,661**	**145,870**	**135,949**	**137,671**	**137,947**	**138,057**	**139,191**	**138,987**	**138,899**
Core Invested Capital	**110,707**	**120,672**	**127,761**	**119,019**	**117,202**	**109,075**	**106,682**	**121,331**	**123,543**	**130,319**	**141,222**	**139,227**	**129,325**	**131,482**	**131,714**	**132,023**	**133,295**	**133,114**	**133,049**
Non Core Business																			
(+) Equity Affiliates	22,103	23,444	27,122	27,976	31,053	27,889	30,457	29,800	29,382	29,880	29,687	29,649	29,712	29,645	29,624	29,619	29,592	29,578	29,566
(+) Assets classified as held for sale	2,747	1,364	1,288	1,555	400	568	2,101	0	0	0	0	0	0	0	0	0	0	0	0
(-) Employee Benefits	3,735	3,363	3,501	3,917	2,672	1,829	1,993	2,033	2,074	2,115	2,157	2,200	2,244	2,289	2,335	2,382	2,429	2,478	2,528
(-) Liabilities directly related with Assets classified as held for sale	1,106	70	795	1,335	58	167	687	0	0	0	0	0	0	0	0	0	0	0	0
Non-Core Invested Capital	**20,009**	**21,375**	**24,114**	**24,279**	**28,723**	**26,461**	**29,878**	**27,767**	**27,308**	**27,765**	**27,530**	**27,449**	**27,467**	**27,355**	**27,289**	**27,238**	**27,163**	**27,100**	**27,039**
Total (Core and Non-core) Invested Capital	**130,716**	**142,047**	**151,875**	**143,298**	**145,925**	**135,536**	**136,560**	**149,098**	**150,852**	**158,083**	**168,751**	**166,676**	**156,793**	**158,838**	**159,004**	**159,260**	**160,457**	**160,215**	**160,088**
Financial																			
(+) Current Borrowing. (current portion of non current debt is included)	11,096	13,306	14,819	17,099	15,035	15,502	9,590	12,304	14,083	13,710	13,802	14,985	14,538	14,218	14,278	14,172	14,148	14,296	14,282
(+) Other Current Financial Liabilities	245	478	487	203	372	488	446	388	409	399	386	413	419	409	403	405	405	406	408
(+) Non-current financial debt, net of current portion	41,340	40,129	47,773	60,203	49,512	45,264	40,478	46,792	47,342	49,612	52,960	52,308	49,207	49,848	49,900	49,981	50,357	50,280	50,241
(-) Non Current Financial Assets	679	680	912	4,781	2,404	2,731	2,395	4,110	6,363	8,201	9,680	9,363	7,154	6,745	7,115	8,266	8,466	8,076	7,565
(-) Other Investments	1,727	1,421	1,778	2,007	1,625	1,051	1,543	1,685	1,664	1,767	1,873	1,781	1,665	1,752	1,748	1,744	1,755	1,747	1,741
(-) Current financial assets	3,393	3,654	3,992	4,630	12,315	8,746	6,585	4,110	6,363	8,201	9,680	9,363	7,154	6,745	7,115	8,266	8,466	8,076	7,565
(-) Excess of Cash	30,203	24,225	23,827	28,874	17,649	27,760	22,884	21,475	18,448	18,190	17,985	17,829	17,465	17,163	16,786	16,468	16,155	16,020	15,847
Net Financial Debt	**16,679**	**23,933**	**32,570**	**37,213**	**30,926**	**20,966**	**17,107**	**28,103**	**28,997**	**27,361**	**27,930**	**29,368**	**30,726**	**32,070**	**31,818**	**29,816**	**30,068**	**31,064**	**32,214**
Total Equity	**114,037**	**118,114**	**119,305**	**106,085**	**114,999**	**114,570**	**119,453**	**120,995**	**121,855**	**130,722**	**140,821**	**137,308**	**126,067**	**126,767**	**127,185**	**129,445**	**130,389**	**129,151**	**127,874**
Total Funding	**130,716**	**142,047**	**151,875**	**143,298**	**145,925**	**135,536**	**136,560**	**149,098**	**150,852**	**158,083**	**168,751**	**166,676**	**156,793**	**158,838**	**159,004**	**159,260**	**160,457**	**160,215**	**160,088**

Table 2: Reformulated Income Statement
$ million, Consolidated Values, 2017 – 20235E

Reformulated Income Statement	2017	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E
Core																			
Revenue from Sales	149,099	184,106	176,249	119,704	184,634	263,310	218,945	187,617	161,172	158,919	157,125	155,768	152,583	149,948	146,651	143,875	141,139	139,956	138,450
Sales	171,493	209,363	200,316	140,685	205,863	280,999	237,128												
Excise Taxes	(22,394)	(25,257)	(24,067)	(20,981)	(21,229)	(17,689)	(18,183)												
Operating Expenses	(125,241)	(154,097)	(144,261)	(103,755)	(146,256)	(200,536)	(174,033)	(147,159)	(127,002)	(124,965)	(123,827)	(122,151)	(120,371)	(119,167)	(121,220)	(115,224)	(112,669)	(111,522)	(109,630)
Depreciation, depletion and impairment of tangible assets and mineral interests	(16,103)	(13,992)	(15,731)	(22,264)	(13,556)	(12,221)	(12,762)	(15,462)	(14,102)	(14,073)	(13,858)	(13,932)	(13,879)	(14,011)	(14,108)	(13,834)	(13,733)	(13,647)	(13,609)
Core result before taxes	**7,755**	**16,017**	**16,257**	**(6,315)**	**24,822**	**50,553**	**32,150**	**24,995**	**20,069**	**19,880**	**19,440**	**19,684**	**18,332**	**16,769**	**11,322**	**14,817**	**14,738**	**14,787**	**15,211**
Statutory Tax Rate	44.43%	34.43%	34.43%	32.02%	28.41%	25.83%	25.83%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Statutory Taxes	(3,446)	(5,515)	(5,597)	2,022	(7,052)	(13,058)	(8,304)	(6,249)	(5,017)	(4,970)	(4,860)	(4,921)	(4,583)	(4,192)	(2,831)	(3,704)	(3,684)	(3,697)	(3,803)
Core Result after tax	**$4,309**	**$10,502**	**$10,660**	**($4,293)**	**$17,770**	**$37,495**	**$23,846**	**$18,747**	**$15,051**	**$14,910**	**$14,580**	**$14,763**	**$13,749**	**$12,577**	**$8,492**	**$11,113**	**$11,053**	**$11,090**	**$11,408**
Non core																			
Other Income	$3,811	$1,838	$1,163	$2,237	$1,312	$2,849	$3,677	$2,558	$2,939	$2,988	$2,821	$2,907	$2,893	$2,860	$2,872	$2,861	$2,851	$2,848	$2,840
% Non-Core Invested Capital	19%	9%	5%	9%	5%	11%	12%	9%	11%	11%	10%	11%	11%	10%	11%	11%	10%	11%	11%
Other Expenses	($1,034)	($1,273)	($1,192)	($1,506)	($2,317)	($7,344)	($2,396)	($2,622)	($2,746)	($2,954)	($3,153)	($3,350)	($2,830)	($2,923)	($2,972)	($3,004)	($3,014)	($2,990)	($2,931)
% Non-Core Invested Capital	5%	6%	5%	6%	8%	28%	8%	9%	10%	11%	11%	12%	10%	11%	11%	11%	11%	11%	11%
Net Income (loss) from Equity affiliates	$2,015	$3,170	$3,406	$452	$3,438	($1,892)	$1,845	$2,008	$1,879	$1,607	$1,292	$1,407	$1,141	$1,588	$1,558	$1,495	$1,437	$1,414	$1,431
% of equity affiliates	9%	14%	13%	2%	11%	-7%	6%	7%	6%	5%	4%	5%	4%	5%	5%	5%	5%	5%	5%
Non core before taxes	**$4,792**	**$3,735**	**$3,377**	**$1,183**	**$2,433**	**($6,387)**	**$3,126**	**$1,944**	**$2,073**	**$1,641**	**$960**	**$963**	**$1,204**	**$1,526**	**$1,458**	**$1,352**	**$1,274**	**$1,271**	**$1,340**
Statutory Tax Rate	44.43%	34.43%	34.43%	32.02%	28.41%	25.83%	25.83%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Statutory Taxes	($2,129)	($1,286)	($1,163)	($379)	($691)	$1,650	($807)	($486)	($518)	($410)	($240)	($241)	($301)	($382)	($365)	($338)	($318)	($318)	($335)
Tax adjustments	($2,004)	$296	($88)	$2,565	$2,214	$11,061	$4,309	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Non core after tax	**$4,667**	**$2,153**	**$2,302**	**($1,761)**	**($472)**	**($15,798)**	**($1,990)**	**$1,458**	**$1,554**	**$1,230**	**$720**	**$722**	**$903**	**$1,145**	**$1,094**	**$1,014**	**$955**	**$953**	**$1,005**
Financial																			
Cost of Net Debt	($1,534)	($2,121)	($2,352)	($2,110)	($1,525)	($1,243)	($1,019)	($1,453)	($1,510)	($1,557)	($1,642)	($1,655)	($1,567)	($1,575)	($1,578)	($1,578)	($1,586)	($1,588)	($1,587)
% interest	3%	4%	4%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Other financial income	$957	$1,120	$792	$914	$762	$896	$1,285	$244	$354	$447	$522	$504	$393	$375	$393	$449	$460	$440	$415
% interest	17%	19%	12%	8%	5%	7%	12%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Other financial expenses	($642)	($685)	($764)	($690)	($539)	($533)	($731)	($655)	($657)	($653)	($637)	($629)	($642)	($658)	($647)	($646)	($644)	($643)	($644)
Financial result before taxes	**($1,219)**	**($1,686)**	**($2,324)**	**($1,886)**	**($1,302)**	**($880)**	**($465)**	**($1,864)**	**($1,813)**	**($1,763)**	**($1,756)**	**($1,780)**	**($1,817)**	**($1,858)**	**($1,832)**	**($1,774)**	**($1,771)**	**($1,791)**	**($1,816)**
Statutory Tax Rate	44.43%	34.43%	34.43%	32.02%	28.41%	25.83%	25.83%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Statutory Taxes	$542	$580	$800	$604	$370	$227	$120	$466	$453	$441	$439	$445	$454	$465	$458	$444	$443	$448	$454
Other comprehensive income	$6,725	($3,494)	($781)	$1,230	($1,446)	($3,109)	$1,107												
Financial result after taxes	**$6,048**	**($4,600)**	**($2,305)**	**($52)**	**($2,378)**	**($3,762)**	**$762**	**($1,398)**	**($1,360)**	**($1,322)**	**($1,317)**	**($1,335)**	**($1,363)**	**($1,394)**	**($1,374)**	**($1,331)**	**($1,328)**	**($1,343)**	**($1,362)**
Total Comprehensive Income	**$15,024**	**$8,056**	**$10,657**	**($6,106)**	**$14,920**	**$17,935**	**$22,617**	**$18,806**	**$15,246**	**$14,819**	**$13,982**	**$14,151**	**$13,290**	**$12,328**	**$8,211**	**$10,796**	**$10,680**	**$10,700**	**$11,051**

Table 3: Cash Flow Statement
$ million, Consolidated Values, 2017 – 20235E

	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E
Core EBIT	16,017	16,257	(6,315)	24,822	50,553	32,150	24,995	20,069	19,880	19,440	19,684	18,332	16,769	11,322	14,817	14,738	14,787	15,211
Statutory taxes	(5,515)	(5,597)	2,022	(7,052)	(13,058)	(8,304)	(6,249)	(5,017)	(4,970)	(4,860)	(4,921)	(4,583)	(4,192)	(2,831)	(3,704)	(3,684)	(3,697)	(3,803)
Recurrent NOPLAT	10,502	10,660	(4,293)	17,770	37,495	23,846	18,747	15,051	14,910	14,580	14,763	13,749	12,577	8,492	11,113	11,053	11,090	11,408
Depreciation, depletion and impairment	13,992	15,731	22,264	13,556	12,221	12,762	15,462	14,102	14,073	13,858	13,932	13,879	14,011	14,108	13,834	13,733	13,647	13,609
Gross Free Cash Flow	**24,494**	**26,391**	**17,971**	**31,326**	**49,716**	**36,608**	**34,209**	**29,153**	**28,984**	**28,438**	**28,696**	**27,629**	**26,588**	**22,600**	**24,947**	**24,786**	**24,738**	**25,017**
Net Capex - PPE	(17,919)	(18,815)	(14,191)	(11,780)	(12,763)	(14,577)												
Investment in Intangibles	(14,335)	(4,256)	(350)	1,044	553	(1,152)												
Net Capex - PPE and Investment in Intangibles	(32,254)	(23,071)	(14,541)	(10,736)	(12,210)	(15,729)	(20,517)	(19,209)	(19,202)	(19,013)	(19,122)	(12,196)	(10,845)	(11,130)	(11,157)	(14,575)	(13,242)	(13,364)
Change in other assets	18	541	(1,195)	1,629	760	(294)	471	1,664	49	(151)	293	86	(76)	197	113	89	46	60
Change in other core liabilities	6,108	(451)	(1,220)	(78)	1,250	522	(7,672)	1,899	(561)	(6,130)	6,688	8,152	(4,811)	(3,452)	(2,900)	(381)	(247)	(217)
Change in WC	2,171	161	3,434	(2,554)	6,105	5,132	(2,394)	(667)	(1,135)	532	203	(19)	(435)	44	(198)	(138)	(24)	(23)
Core and Recurrent Unlevered Free Cash Flows	**537**	**3,571**	**4,449**	**19,587**	**45,622**	**26,239**	**4,097**	**12,839**	**8,135**	**3,677**	**16,758**	**23,651**	**10,420**	**8,260**	**10,804**	**9,782**	**11,270**	**11,474**
Non core / Core but Non-Recurring EBIT	3,735	3,377	1,183	2,433	(6,387)	3,126	1,944	2,073	1,641	960	963	1,204	1,526	1,458	1,352	1,274	1,271	1,340
Statutory Taxes	(1,286)	(1,163)	(379)	(691)	1,650	(807)	(486)	(518)	(410)	(240)	(241)	(301)	(382)	(365)	(338)	(318)	(318)	(335)
Tax adjustments	(296)	88	(2,565)	(2,214)	(11,061)	(4,309)	0	0	0	0	0	0	0	0	0	0	0	0
Change in non core invested capital	(1,366)	(2,739)	(165)	(4,444)	2,262	(3,417)	2,111	458	(456)	235	81	(18)	112	66	52	75	63	61
OCI	(3,494)	(781)	1,230	(1,446)	(3,109)	1,107	0	0	0	0	0	0	0	0	0	0	0	0
Total Unlevered Free Cash Flows	**(2,170)**	**2,353**	**3,753**	**13,225**	**28,976**	**21,939**	**7,666**	**14,852**	**8,910**	**4,631**	**17,561**	**24,536**	**11,677**	**9,420**	**11,870**	**10,812**	**12,286**	**12,540**
Financial Result	(1,686)	(2,324)	(1,886)	(1,302)	(880)	(465)	(1,864)	(1,813)	(1,763)	(1,756)	(1,780)	(1,817)	(1,858)	(1,832)	(1,774)	(1,771)	(1,791)	(1,816)
Tax Shield	580	800	604	370	227	120	466	453	441	439	445	454	465	458	444	443	448	454
Change in Net Debt	7,254	8,637	4,643	(6,287)	(9,959)	(3,859)	10,996	894	(1,636)	569	1,438	1,357	1,344	(252)	(2,002)	253	996	1,150
Transactions with debtholders	6,149	7,113	3,361	(7,220)	(10,612)	(4,204)	9,598	(466)	(2,958)	(748)	104	(5)	(49)	(1,626)	(3,333)	(1,076)	(348)	(212)
Transactions with Shareholders	(3,979)	(9,466)	(7,114)	(6,005)	(18,364)	(17,735)	(17,264)	(14,386)	(5,951)	(3,883)	(17,665)	(24,530)	(11,627)	(7,793)	(8,537)	(9,736)	(11,939)	(12,328)
Financing Parties cash Flows	**2,170**	**(2,353)**	**(3,753)**	**(13,225)**	**(28,976)**	**(21,939)**	**(7,666)**	**(14,852)**	**(8,910)**	**(4,631)**	**(17,561)**	**(24,536)**	**(11,677)**	**(9,420)**	**(11,870)**	**(10,812)**	**(12,286)**	**(12,540)**

Table 4: Cash Flow Statement
$ million, Per Segment, 2017 – 20235E

Exploration & Production	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F
Core EBIT	**$32,496**	**$20,308**	**$16,673**	**$14,068**	**$13,669**	**$13,661**	**$14,074**	**$12,861**	**$11,362**	**$10,077**	**$9,418**	**$8,597**	**$7,788**	**$6,964**
Statutory taxes	($25,136)	($10,250)	($10,656)	($8,991)	($8,736)	($8,731)	($11,244)	($10,275)	($9,077)	($8,051)	($7,524)	($6,868)	($6,222)	($5,563)
Recurrent NOPLAT	**$7,360**	**$10,058**	**$6,017**	**$5,077**	**$4,933**	**$4,930**	**$2,830**	**$2,586**	**$2,285**	**$2,027**	**$1,894**	**$1,729**	**$1,566**	**$1,400**
Depreciation, depletion and impairment	$8,115	$8,493	$11,025	$9,766	$9,695	$9,367	$9,367	$9,404	$9,588	$9,745	$9,562	$9,533	$9,509	$9,530
Gross Free Cash Flow	**$15,475**	**$18,551**	**$17,042**	**$14,843**	**$14,628**	**$14,297**	**$12,198**	**$11,990**	**$11,873**	**$11,771**	**$11,456**	**$11,261**	**$11,076**	**$10,930**
Net Capex - PPE and Investment in Intangibles	$9,800	$5,536	$10,427	$9,171	$9,104	$8,781	$8,785	$6,963	$7,219	$7,446	$7,332	$7,370	$7,411	$7,494
Change in other assets	($1,372)	$382	$418	($1,012)	$214	($16)	($47)	($37)	($99)	($95)	($73)	($84)	($79)	($74)
Change in other core liabilities	$1,980	($519)	($1,281)	$5,594	($1,054)	$283	$68	$389	$711	$637	$547	$593	$557	$533
Change in WC	($2,075)	$902	$138	$281	$41	$50	($59)	$90	$86	$72	$78	$74	$70	$69
Core and Recurrent Unlevered Free Cash Flows	**$23,808**	**$24,852**	**$26,745**	**$28,877**	**$22,934**	**$23,396**	**$20,945**	**$19,394**	**$19,791**	**$19,831**	**$19,339**	**$19,215**	**$19,035**	**$18,952**
Non core / Core but Non-Recurring EBIT	**($9,943)**	**($307)**	**($1,089)**	**($1,351)**	**($1,819)**	**($2,161)**	**($2,572)**	**($2,842)**	**($1,731)**	**($1,934)**	**($2,055)**	**($2,152)**	**($2,201)**	**($2,207)**
Statutory Taxes	$7,691	$155	$696	$864	$1,163	$1,381	$1,644	$1,816	$1,106	$1,236	$1,314	$1,376	$1,407	$1,411
Tax adjustments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in non core invested capital	($4,281)	$520	$814	($878)	$228	$141	($170)	$66	$12	($30)	$16	($1)	($5)	$4
OCI	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Unlevered Free Cash Flows	**$17,275**	**$25,219**	**$27,166**	**$27,510**	**$22,505**	**$22,756**	**$19,847**	**$18,435**	**$19,178**	**$19,102**	**$18,614**	**$18,437**	**$18,235**	**$18,159**

Integrated LNG	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F
Core EBIT	**$7,185**	**$4,018**	**$3,029**	**$1,245**	**$1,592**	**$1,510**	**$1,307**	**$1,116**	**$976**	**$682**	**$503**	**$295**	**$270**	**$153**
Statutory taxes	($1,385)	($524)	($707)	($291)	($372)	($353)	($305)	($261)	($228)	($159)	($117)	($69)	($63)	($36)
Recurrent NOPLAT	**$5,800**	**$3,494**	**$2,322**	**$955**	**$1,220**	**$1,158**	**$1,002**	**$856**	**$748**	**$523**	**$386**	**$226**	**$207**	**$117**
Depreciation, depletion and impairment	$1,208	$1,288	$1,613	$1,479	$1,421	$1,409	$1,409	$1,404	$1,432	$1,453	$1,430	$1,423	$1,423	$1,425
% PPE and RUA														
Gross Free Cash Flow	**$7,008**	**$4,782**	**$3,936**	**$2,434**	**$2,641**	**$2,567**	**$2,411**	**$2,260**	**$2,180**	**$1,976**	**$1,815**	**$1,649**	**$1,630**	**$1,542**
Net Capex - PPE and Investment in Intangibles	$496	$2,035	$2,383	$2,273	$2,239	$2,253	$2,279	$2,169	$597	$683	$843	$4,237	$2,875	$2,946
Change in other assets	$838	($622)	($248)	($1,028)	$324	$34	($29)	$5	$44	($74)	($20)	($41)	$159	$89
Change in other core liabilities	($912)	$172	$667	$1,309	($480)	$2	$25	($14)	($50)	$94	$26	$56	($213)	($118)
Change in WC	($8,703)	$560	$300	$807	($300)	$3	$29	($19)	($24)	$52	$11	$31	($113)	($63)
Core and Recurrent Unlevered Free Cash Flows	**($1,274)**	**$6,927**	**$7,038**	**$5,794**	**$4,425**	**$4,859**	**$4,715**	**$4,401**	**$2,747**	**$2,731**	**$2,676**	**$5,932**	**$4,339**	**$4,396**
Non core / Core but Non-Recurring EBIT	**$978**	**$2,194**	**$1,820**	**$1,876**	**$1,882**	**$1,772**	**$1,903**	**$1,778**	**$1,879**	**$1,841**	**$1,845**	**$1,837**	**$1,832**	**$1,841**
Statutory Taxes	($189)	($286)	($387)	($415)	($419)	($400)	($432)	($398)	($423)	($411)	($414)	($414)	($413)	($415)
Tax adjustments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in non core invested capital	($3,826)	$1,840	$49	($646)	$414	($61)	($97)	$85	($24)	($12)	$16	($7)	($1)	$3
OCI	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Unlevered Free Cash Flows	**($4,310)**	**$10,675**	**$8,520**	**$6,609**	**$6,301**	**$6,170**	**$6,088**	**$5,866**	**$4,178**	**$4,149**	**$4,123**	**$7,348**	**$5,757**	**$5,825**

Integrated Power	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F
Core EBIT	**$1,395**	**$2,419**	**$1,623**	**$2,058**	**$2,296**	**$2,248**	**$2,472**	**$2,619**	**$2,733**	**$2,722**	**$2,809**	**$2,876**	**$2,924**	**$2,995**
Statutory taxes	($60)	($460)	($189)	($240)	($268)	($262)	($288)	($306)	($319)	($318)	($328)	($335)	($341)	($349)
Recurrent NOPLAT	**$1,335**	**$1,959**	**$1,434**	**$1,818**	**$2,028**	**$1,986**	**$2,183**	**$2,313**	**$2,414**	**$2,404**	**$2,482**	**$2,540**	**$2,583**	**$2,646**
Depreciation, depletion and impairment	$194	$281	$226	$234	$247	$236	$239	$241	$238	$239	$239	$239	$239	$239
Gross Free Cash Flow	**$1,529**	**$2,240**	**$1,660**	**$2,052**	**$2,275**	**$2,221**	**$2,422**	**$2,554**	**$2,653**	**$2,643**	**$2,721**	**$2,779**	**$2,822**	**$2,885**
Net Capex - PPE and Investment in Intangibles	$266	$6,111	$4,426	$4,434	$4,447	$4,436	$4,439	$911	$922	$937	$951	$965	$980	$994
Change in other assets	($528)	$700	($30)	($186)	$174	($16)	($11)	$52	$8	$17	$27	$18	$22	$23
Change in other core liabilities	$157	($589)	($84)	$191	($172)	($22)	$0	($68)	($31)	($34)	($47)	($39)	($41)	($44)
Change in WC	$2,607	($1,303)	($510)	$779	($374)	($37)	$133	($100)	($1)	$12	($31)	($7)	($9)	($17)
Core and Recurrent Unlevered Free Cash Flows	**$4,031**	**$7,159**	**$5,462**	**$7,269**	**$6,350**	**$6,582**	**$6,984**	**$3,349**	**$3,551**	**$3,575**	**$3,621**	**$3,716**	**$3,773**	**$3,842**
Non core / Core but Non-Recurring EBIT	**$1,788**	**($345)**	**$464**	**$669**	**$269**	**$468**	**$470**	**$402**	**$446**	**$439**	**$429**	**$438**	**$435**	**$433**
Statutory Taxes	($78)	$66	($54)	($78)	($31)	($55)	($55)	($47)	($52)	($51)	($50)	($51)	($51)	($51)
Tax adjustments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in non core invested capital	$4,335	$548	($1,985)	$976	($96)	($261)	$206	($50)	($35)	$40	($15)	($3)	$7	($4)

OCI	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Unlevered Free Cash Flows	**$10,076**	**$7,428**	**$3,887**	**$8,836**	**$6,491**	**$6,734**	**$7,605**	**$3,654**	**$3,911**	**$4,003**	**$3,985**	**$4,100**	**$4,164**	**$4,221**

NOVA SCHOOL OF
BUSINESS & ECONOMICS

Refining & Chemicals	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F
Core EBIT	**$8,308**	**$4,359**	**$2,497**	**$1,963**	**$1,822**	**$1,655**	**$1,579**	**$1,559**	**$1,521**	**$1,494**	**$1,464**	**$1,433**	**$1,405**	**$1,377**
Statutory taxes	($2,299)	($947)	($629)	($494)	($459)	($417)	($497)	($491)	($479)	($470)	($461)	($451)	($442)	($434)
Recurrent NOPLAT	**$6,009**	**$3,412**	**$1,868**	**$1,468**	**$1,363**	**$1,238**	**$1,082**	**$1,068**	**$1,042**	**$1,024**	**$1,003**	**$982**	**$963**	**$944**
Depreciation, depletion and impairment	$1,533	$1,685	$1,600	$1,626	$1,656	$1,749	$1,788	$1,741	$1,712	$1,675	$1,641	$1,609	$1,576	$1,545
Gross Free Cash Flow	**$7,542**	**$5,097**	**$3,468**	**$3,094**	**$3,019**	**$2,987**	**$2,870**	**$2,809**	**$2,755**	**$2,698**	**$2,644**	**$2,592**	**$2,539**	**$2,489**
Net Capex - PPE and Investment in Intangibles	$1,174	$2,447	$1,950	$1,976	$2,006	$2,099	$2,138	$1,398	$1,438	$1,406	$1,378	$1,351	$1,323	$1,297
Change in other assets	($38)	$107	($222)	($79)	$14	($18)	($6)	($3)	($9)	($7)	($6)	($7)	($7)	($6)
Change in other core liabilities	$80	$54	$938	$515	($22)	$54	$50	$25	$47	$46	$38	$42	$40	$38
Change in WC	($1,787)	($2,152)	$3,918	$419	($177)	$362	($27)	$48	$133	$63	$78	$87	$73	$76
Core and Recurrent Unlevered Free Cash Flows	**$6,971**	**$5,553**	**$10,053**	**$5,925**	**$4,840**	**$5,484**	**$5,026**	**$4,278**	**$4,363**	**$4,206**	**$4,132**	**$4,064**	**$3,969**	**$3,894**
Non core / Core but Non-Recurring EBIT	**$885**	**($42)**	**$388**	**$284**	**$277**	**$391**	**$373**	**$279**	**$332**	**$322**	**$328**	**$337**	**$328**	**$320**
Statutory Taxes	($245)	$9	($98)	($71)	($70)	($98)	($94)	($70)	($84)	($81)	($83)	($85)	($83)	($81)
Tax adjustments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in non core invested capital	$702	($152)	($170)	$127	($65)	$1	$21	($14)	$3	$3	($3)	$1	$0	($1)
OCI	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Unlevered Free Cash Flows	**$8,313**	**$5,368**	**$10,173**	**$6,264**	**$4,982**	**$5,778**	**$5,326**	**$4,472**	**$4,613**	**$4,450**	**$4,374**	**$4,317**	**$4,215**	**$4,133**

Marketing & Services	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F
Core EBIT	**$2,363**	**$1,796**	**$2,001**	**$1,560**	**$1,354**	**$1,235**	**$1,112**	**$1,047**	**$997**	**$951**	**$907**	**$867**	**$831**	**$801**
Statutory taxes	($794)	($559)	($631)	($492)	($427)	($389)	($351)	($330)	($315)	($300)	($286)	($273)	($262)	($253)
Recurrent NOPLAT	**$1,569**	**$1,237**	**$1,370**	**$1,068**	**$927**	**$845**	**$761**	**$717**	**$683**	**$651**	**$621**	**$594**	**$569**	**$548**
Depreciation, depletion and impairment	$1,033	$905	$910	$904	$952	$989	$1,021	$983	$938	$896	$859	$825	$795	$766
Gross Free Cash Flow	**$2,602**	**$2,142**	**$2,279**	**$1,972**	**$1,879**	**$1,834**	**$1,783**	**$1,700**	**$1,620**	**$1,547**	**$1,480**	**$1,419**	**$1,364**	**$1,315**
Net Capex - PPE and Investment in Intangibles	$575	($519)	$1,260	$1,254	$1,302	$1,339	$1,371	$650	$568	$557	$550	$547	$548	$529
Change in other assets	($55)	$208	($220)	($202)	($5)	($48)	($35)	($29)	($38)	($31)	($27)	($27)	($23)	($21)
Change in other core liabilities	$175	$36	$28	$289	$28	$24	$52	$34	$38	$38	$31	$30	$27	$23
Change in WC	($1,156)	$414	$301	$89	$108	$50	$24	$56	$45	$39	$39	$34	$31	$28
Core and Recurrent Unlevered Free Cash Flows	**$2,141**	**$2,281**	**$3,648**	**$3,402**	**$3,312**	**$3,199**	**$3,196**	**$2,411**	**$2,234**	**$2,149**	**$2,073**	**$2,003**	**$1,946**	**$1,874**
Non core / Core but Non-Recurring EBIT	**($20)**	**$2,208**	**$493**	**$462**	**$480**	**$530**	**$599**	**$671**	**$769**	**$571**	**$582**	**$599**	**$616**	**$628**
Statutory Taxes	$7	($687)	($132)	($129)	($135)	($151)	($171)	($190)	($218)	($161)	($165)	($170)	($175)	($179)
Tax adjustments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in non core invested capital	($35)	$825	($779)	$4	$16	($12)	$3	($25)	($23)	($21)	($19)	($17)	($16)	($14)
OCI	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Unlevered Free Cash Flows	**$2,093**	**$4,626**	**$3,230**	**$3,738**	**$3,674**	**$3,566**	**$3,627**	**$2,868**	**$2,762**	**$2,538**	**$2,471**	**$2,414**	**$2,372**	**$2,309**

Corporate	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F
Core EBIT	**($1,194)**	**($750)**	**($827)**	**($825)**	**($853)**	**($869)**	**($861)**	**($870)**	**($820)**	**($830)**	**($843)**	**($856)**	**($867)**	**($878)**
Statutory taxes	$370	$261	$328	$327	$338	$345	$341	$345	$325	$329	$334	$339	$344	$348
Recurrent NOPLAT	**($824)**	**($489)**	**($499)**	**($498)**	**($515)**	**($524)**	**($519)**	**($525)**	**($495)**	**($501)**	**($509)**	**($516)**	**($523)**	**($530)**
Depreciation, depletion and impairment	$138	$110	$87	$94	$102	$107	$107	$107	$102	$101	$103	$104	$104	$104
Gross Free Cash Flow	**($686)**	**($379)**	**($412)**	**($404)**	**($412)**	**($417)**	**($412)**	**($419)**	**($393)**	**($400)**	**($406)**	**($412)**	**($419)**	**($426)**
Net Capex - PPE and Investment in Intangibles	$169	$119	$71	$102	$103	$105	$109	$106	$102	$101	$103	$104	$105	$104
Change in other assets	($179)	$11	$48	($37)	$16	$5	($3)	$5	$3	$1	$3	$3	$2	$3
Change in other core liabilities	$113	$160	($139)	$39	$62	($40)	$32	$13	$5	$16	$12	$11	$13	$12
Change in WC	$827	($1,203)	$519	$53	($432)	$191	($125)	($96)	($25)	($77)	($72)	($58)	($72)	($69)
Core and Recurrent Unlevered Free Cash Flows	**$244**	**($1,292)**	**$86**	**($247)**	**($663)**	**($157)**	**($399)**	**($391)**	**($309)**	**($359)**	**($360)**	**($352)**	**($371)**	**($376)**
Non core / Core but Non-Recurring EBIT	**$288**	**($28)**	**$119**	**$123**	**$129**	**$140**	**$119**	**$130**	**$105**	**$123**	**$124**	**$124**	**$123**	**$121**
Statutory Taxes	($89)	$10	($47)	($49)	($51)	($56)	($47)	($52)	($41)	($49)	($49)	($49)	($49)	($48)
Tax adjustments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Change in non core invested capital	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
OCI	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Total Unlevered Free Cash Flows	$443	($1,310)	$157	($173)	($585)	($72)	($327)	($312)	($246)	($284)	($285)	($278)	($296)	($303)