UTILITIES BEYOND FOSSIL FUELS

CASE STUDY: ENGIE
Author
Sarah Brown (Ember)

Published date
February 2021

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Executive summary

With countries across the world pledging to reach net zero emissions by 2050 and the need to limit global warming to 1.5 degrees celsius, the full decarbonisation of the electricity sector has never been so essential and urgent.

While governments are creating the regulatory environment necessary to achieve these objectives, this is not the only solution. The private sector must also accept responsibility and take affirmative action to adapt its objectives, behaviours and impact. To highlight the crucial role of utility companies, this report specifically examines ENGIE’s global strategy to transition from coal-fired power generation and any associated limitations and risks.

ENGIE is a France-based global energy company that employs 170,000 people globally and is the world’s largest independent electricity producer. It has approximately 100GW of installed electricity generation capacity.

Key findings

- ENGIE announced in 2016 that it would stop producing electricity from coal, however it still does not have confirmed shutdown dates for 70% of its remaining coal-fired power fleet.

- ENGIE’s goal is to have renewables providing 58% of its total power generation by 2030.

- ENGIE intends to convert coal-fired plants to fossil gas and biomass as a key component of its global electricity transition.

- ENGIE may source shale gas with high levels of methane emissions for its fossil gas plants.

- ENGIE’s Science Based Target initiative (SBTi) accreditation is for 2°C. This is not aligned with the Paris Agreement objective of well below 2°C and, in October 2019, the SBTi stopped accepting target submissions for 2°C.

- Our assessment of the current outlook for climate policy, investor preferences and the cost of renewable electricity alternatives, such as wind and solar, identifies key risks in ENGIE’s transition strategy.
To limit global warming to 1.5°C above pre-industrial levels, the International Panel on Climate Change (IPCC) identifies the need for net zero emissions and a full decarbonisation of electricity generation by 2050. In the power sector, this means that OECD nations need to end coal use for electricity production by 2030 and coal-fired power stations must be shut down in the rest of the world by 2040.

The absence of a comprehensive coal phase-out schedule means that ENGIE’s current strategy is not aligned with the objectives of the Paris Agreement. To mitigate its risks and meet its climate obligations, ENGIE needs to announce a complete coal phase-out and increase investment in renewable projects to accelerate its transition to clean electricity rather than commit to fossil gas conversions and new-build plants.
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive summary</td>
<td>iii</td>
</tr>
<tr>
<td>Coal phase-out strategy</td>
<td>1</td>
</tr>
<tr>
<td>Renewable electricity strategy</td>
<td>3</td>
</tr>
<tr>
<td>Coal conversion strategy</td>
<td>3</td>
</tr>
<tr>
<td>Case study: Italy</td>
<td>4</td>
</tr>
<tr>
<td>Case study: Chile</td>
<td>6</td>
</tr>
<tr>
<td>Coal-to-gas conversion risks</td>
<td>7</td>
</tr>
<tr>
<td>Fossil gas emissions</td>
<td>9</td>
</tr>
<tr>
<td>Fossil gas procurement risks</td>
<td>10</td>
</tr>
<tr>
<td>Fossil gas regulatory risks</td>
<td>12</td>
</tr>
<tr>
<td>Biomass emissions and risks</td>
<td>13</td>
</tr>
<tr>
<td>New build gas assets</td>
<td>15</td>
</tr>
<tr>
<td>Paris Agreement alignment</td>
<td>17</td>
</tr>
<tr>
<td>Conclusion</td>
<td>20</td>
</tr>
</tbody>
</table>
Coal phase-out strategy

In 2015, ENGIE committed to not build any new coal-fired power plants and then, in 2016, it announced it would stop producing electricity from coal. At that time, 15% of their electricity generation was from coal, currently it is around 4.9%. However, ENGIE still does not have confirmed closure dates for all its remaining coal-fired assets and its global coal phase-out plan contains inconsistencies.

Between 2016 and 2019 ENGIE sold 3,970MW of coal plants across Germany, The Netherlands, Indonesia and Thailand, but they also commissioned three new coal-fired plants in that period. These were Safi power station in Morocco in 2018, Mejillones Unit 4 (IEM1) in Chile in 2019 and Pampa Sul in Brazil in 2020 as well as a port to receive coal, Puerto Andino in Mejillones.

Of its remaining coal fired generation, 76% is in South America, 14% is in Morocco and 10% is in Portugal. 722MW is scheduled to be shut down in Chile and Peru between 2022 and 2024.

In total, ENGIE has 70% (almost 3GW) of its global coal-fired electricity generation with no current phase-out plan.
There has been no shutdown strategy announced for Mejillones Unit 4 (375MW), also known as IEM I, in Chile or the Safi power station in Morocco (1386MW), which were only commissioned in 2019 and 2018 respectively. ENGIE has a 35% share of the Safi plant. ENGIE has been trying for some time to sell - rather than close down - a further 1500MW of coal generation in Brazil and Chile. 61% of its gross capacity in Chile is currently coal-fired; this is 12% in Brazil.

A recent parliamentary vote in Chile approved a bill that prohibits the installation and operation of coal-fired plants that are less than 30 years old. If this becomes law, it will take effect on 31 December 2025 and have significant implications for ENGIE’s ability to sell or operate its remaining coal assets in Chile that currently do not have a phase-out date – totalling 705MW.

In the past, ENGIE has stated that the Chilean government would not permit it to close its remaining coal-fired plants. This may have changed with the Government’s new phase-out target of 2025 and the fact that Enel Chile was granted approval in July 2020 to close its last remaining coal plant, Bocamina (478MW). Unit I (128MW) was decommissioned on 31 December 2020 and Unit II (350MW) will be shut down on 31 May 2022. In its press release on 27 May 2020 confirming the request for early closure, Enel Chile made clear its intentions to replace the coal generation with renewable energy sources.

**ENGIE needs to accelerate its coal phase-out and commit to the closure of all its coal-fired power plants to align with global regulatory requirements and its own transition goals.**

1. ENGIE Chile investor report Q320
Renewable electricity strategy

ENGIE’S goal is to have renewables providing 58% of its total power generation by 2030. In 2019, renewables accounted for 27%. From 2010 to 2020, ENGIE’s renewable generation increased from 13GW to 27.5GW with an additional 5.5GW currently under construction.² It is on target to achieve its goal of an additional 9GW from 2019 to 2021.

This includes 1 GW of renewable generation in Chile to replace a proportion of the phased-out coal fired production. Renewable sources currently only make up 7% of ENGIE Chile’s installed capacity compared to 61% for coal.

The Chilean renewable energy projects include:

• Capricorn Solar Park (100MW)
• Calama Wind Farm (150MW)
• Tamaya Solar Park (120MW)
• Vientos del Loa Wind Farm extension (+78MW = 205MW total)

ENGIE has also acquired Los Loros and Andacollo solar PV plants (55MW).

ENGIE Chile has a loan for $125 million from the Inter-American Development Bank group (IDB) specifically for renewable projects.

The Chilean President announced in April 2019 that the country is now aiming for renewables to make up 70% of the energy mix by 2030. Wind and solar are projected to account for 40%. So the political will is definitely there to enable an acceleration in renewables deployment.

Even with its current renewables commitment, ENGIE still does not have a comprehensive coal phase-out schedule and the plan is for fossil gas to play a significant role in its transition from coal-fired electricity.

Coal conversion strategy

Despite actions to decrease coal generation and increase solar and wind capacity, and stated intentions to eventually transition to ‘green’ gases, ENGIE’s strategy focuses on switching from coal to fossil gas and biogas/biomass for power generation from now until 2050.

². ENGIE’s 2020 Integrated Report
“ENGIE is restructuring its portfolio of businesses and is progressively divesting assets involving coal-fired generation. The Group is repositioning its thermal power plants towards gas and cogeneration, complementing its development in renewable energies. ENGIE is therefore planning to switch progressively its gas operations to biogas or renewable hydrogen by 2050.”

Isabelle Kocher, former Chief Executive Officer.

Case study: Italy

On 11 November 2020 Tirreno Power (50% owned by ENGIE) announced that it is planning to install a 800MW Combined Cycle Gas Turbine (CCGT) plant on the site of its former coal units in Vado Ligure, Italy. This verifies that ENGIE intends to increase its gas exposure by converting at least some of its global coal-fired sites to gas-fired power plants.

Italy is already an EU leader in fossil gas generation, with 46% of its electricity coming from this fuel source.
In contrast, it is lagging far behind other member states in terms of investment and growth in wind and solar. There was only a 1.24% increase in wind and solar’s share of production in 2020.

As a result, Italy will have the third highest power sector CO₂ emissions in the EU by 2030.
Italy's National Energy and Climate Plan (NECP) includes a 22 percentage point increase in renewable energy use for electricity from 2018 to 2030. The European Commission has stated in an impact report that a 30 percentage point increase is required across the region to achieve the 55% reduction in greenhouse gas (GHG) emissions by 2030 vs 1990 levels. As for gas demand, a recent scenario analysis by Climact finds that fossil gas use for the power sector needs to decrease by 50-65% to achieve the 55% target.³

Italy will need to rapidly increase its deployment of renewable electricity and decrease its dependence on fossil gas to meet its obligations under the EU target of a 55% reduction in GHG emissions by 2030. Consequently, the conversion of this coal asset to a CCGT baseload plant exposes ENGIE to the risk of being left holding a stranded asset as the switch to cheaper renewable electricity sources accelerates.

Case study: Chile

As further evidence of ENGIE’s conversion strategy, its acting CEO, Claire Waysand, when questioned about the coal-fired generation in Chile in an interview on 12 December 2020, reiterated that ENGIE aims to convert its coal plants to gas or biomass. It had been anticipated that this would be its preference rather than sufficiently increasing investment in renewable electricity. Fossil gas already accounts for 28% of ENGIE Chile’s installed capacity, while fossil fuels in total account for 93%.

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³ Climact (June 2020) Increasing the EU’s 2030 Emissions Reduction Target
Coal-to-gas conversion risks

Any strategy that relies on switching from coal to fossil gas-fired power generation compounds ENGIE’s reliance on fossil fuels and has high associated financial risks - especially compared to alternative investment opportunities, such as wind and solar power.

The International Energy Agency’s (IEA) World Energy Outlook 2020 report predicts that:

...the window for coal-to-gas switching rapidly closes in the 2020s, especially in the United States and the European Union, as slowing growth in electricity demand and expanding renewables narrow the space in which gas and coal compete for market share.

In Latin America, research from December 2019 identifies that to achieve the temperature targets of the Paris Agreement and remain within the regional carbon budget, approximately 52% of existing and planned fossil-fuel power plants will need to be underutilised, retired early or fitted with expensive CCS. ENGIE’s strategy to convert South American coal assets to fossil-gas rather than directly switching to renewable electricity sources seems incongruous with these findings.

And options for financing fossil gas projects are rapidly closing too.

For example, ENGIE has specifically campaigned against the proposed emissions limit of 100g CO₂/kWh in the EU Taxonomy for sustainable finance as this would exclude any new or existing fossil gas plants (without Carbon, Capture and Storage capabilities) from being labelled as sustainable. Engie stated that:

“Existing highly efficient gas-fired units from Member States with a later starting point in energy transformation should benefit from an interim arrangement from the proposed emission performance standard of 100g CO₂/kWh.”

However, the European Investment Bank (EIB) already only financially supports power plants that emit less than 250g CO₂/kWh and, according to its climate roadmap published in November 2020, intended to phase out funding for all fossil fuels by the end of last year.

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4. Gonzalez-Mahecha et al (23 December 2019) Committed emissions and the risk of stranded assets from power plants in Latin America and the Caribbean
The President of the EIB presented the bank’s results on 20 January 2021 and stated that “gas is over”:

“This is a serious departure from the past, but without the end to the use of unabated fossil fuels, we will not be able to reach the climate targets.”

The EIB intends to increase its share of finance dedicated to green investment to over 50% by 2025 and align all its activities with the Paris Agreement. This trend in favouring investment in renewable solutions over fossil fuels is very likely to continue to spread across global financial institutions.

The International Panel on Climate Change (IPCC) pathways to limit warming to 1.5°C identify that investment in low carbon technology will overtake fossil investment globally by 2025.

Is ENGIE also underestimating the rapid decline in cost of wind and solar PV and the economic and environmental benefits of investing more in these sources now rather than converting or building new gas-fired power stations? In the last decade, the levelised cost of energy (LCOE) has fallen by 89% and 70% for solar PV and onshore wind respectively. For a Combined Cycle Gas Turbine (CCGT) the price decrease was only 32% over the same period.

The wind and solar share of the electricity mix will inevitably increase, pushing more expensive and less-responsive baseload fossil gas plants down the merit order.
The investment constraints and economic non-viability of fossil gas projects are only set to increase with the inevitable shift in global investment policies and financial regulations.

In addition to the evident financial risks, there are also environmental and regulatory issues associated with converting existing coal-fired plants to fossil gas or biomass.

Fossil gas emissions

CO₂ emissions are lower from the combustion of fossil gas than from coal, however even the newest fossil gas plants still produce over 300g CO₂/kWh. In 2019, ENGIE reported that its global electricity related fossil gas activities were responsible for direct emissions of 38 million tonnes CO₂e with an emissions intensity of 394g CO₂/kWh.

Importantly, the methane emissions from fossil gas are frequently overlooked when assessing its environmental impact. Methane emissions occur during the exploration, production, transportation and distribution of fossil fuels. According to the IEA’s Methane Tracker 2021, the energy sector accounted for 122.6 million tonnes of all methane emissions in 2020, with 43.1 million tonnes (35%) attributed to gas.
Methane (CH4) traps 86 times more heat than CO2 over a twenty-year period and 28 times more over a 100-year timespan. This means that in 2020, gas was responsible for over 1 billion tonnes of CO2e emissions through methane alone. Methane is also responsible for 24% of global heating.

Therefore, it does not make sense to consider CO2 emissions in isolation when assessing the environmental impact of fossil gas:

*The environmental case for gas does not depend on beating the emissions performance of the most carbon-intensive fuel (coal), but in ensuring that its emissions intensity is as low as practicable.*

ENGIE argues that fossil gas is “a more climate friendly alternative to coal or oil in heating, transport and power generation”. This might be the case on average but it is not a more climate friendly alternative to renewable energy and the methane emissions intensity of fossil gas varies significantly depending on its source.

**Fossil gas procurement risks**

ENGIE may source a proportion of its fossil gas in the form of shale gas (produced through fracking) from the US or Argentina’s Vaca Muerta field.

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6. CAN-Europe (2020) EU gas infrastructure does not need more subsidies
7. IEA Methane Tracker 2020
Argentina has the second largest gas shale reserves in the world after the US and Vaca Muerta covers an area of 30,000 square kilometres.

There are valid and serious concerns regarding the levels of greenhouse gas emissions from shale gas and its wider environmental and social impact. The recognition of the associated risks has led to fracking being banned in many countries, including France.

According to data collected by the Environmental Defense Fund, approximately 1.4 million metric tons of methane per annum escape from fields in the Permian Basin, an oil and gas production area in the US covering West Texas and eastern New Mexico. Analysis by Kayrros puts the fugitive emissions as high as 2.9 million tons for 2019.

Satellite measurements taken from May 2018 to March 2019 estimate that Permian methane leakage rates are 60% higher than the US average leakage rate. This contributes to US LNG being ranked as the dirtiest in the world and responsible for over 10 times more fugitive methane emissions per unit of gas than the cleanest (Russia).

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8. Concerned Health Professionals of NY (December 2020) Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking
9. Yuzhong Zhang et al (2020) Quantifying methane emissions from the largest oil-producing basin in the United States from space
10. Kayrros (July 2020) Stopping Methane: What are we waiting for?
ENGIE negotiated with US producer NextDecade to acquire liquefied natural gas (LNG) from the Rio Grande LNG export facility in Brownsville, Texas. This facility receives shale gas from the Permian Basin and Eagle Ford Shale. These commercial discussions have been cancelled due to pressure from the French government but this demonstrates that it is crucial to evaluate the source (and associated GHG emissions) of any future LNG supplies.

**Fossil gas regulatory risks**

ENGIE refers to fossil gas as the “ultimate transition energy” and has raised concerns with the European Commission (EC) about it not qualifying as a transition fuel within EU policy.

“The Commission should consider identifying a dedicated category for transition economic activities more explicitly, with their own technical screening criteria (including GHG emission thresholds).”

ENGIE appears to recognise that gas activities exceed required emissions restrictions but, rather than reducing the level of those emissions, it is instead proposing that the permitted limits should be increased.

In March 2020, the EC highlighted the risks associated with fossil gas assets due to the levels of methane emissions:

“Methane emissions harm the credibility of gas today as a transition fuel towards a decarbonized energy system and put in jeopardy the potential of renewable and decarbonized gases in the longer term as gas infrastructure may be abandoned as a consequence.”

ENGIE has made submissions to the European Commission arguing that fossil gas should be considered sustainable within EU policy:

“A ‘black and white’ approach to activities classifying them as either sustainable or ‘environmentally harmful’ should be avoided as some activities (such as e.g. those relating to natural gas) may pave the way in the short and medium term to fully sustainable solutions (e.g. biomethane, green hydrogen).”

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11. ENGIE’s submission to EU consultation on the Action Plan on Financing Sustainable Growth
Any failure to acknowledge and address the extremely harmful emissions associated with fossil gas is a significant threat to the very activities that ENGIE is referring to - and ultimately to its entire gas strategy.

According to the IEA Sustainable Development Scenario, which is aligned with the Paris Agreement, global methane emissions need to fall by 70% compared to 2020 levels by 2030. And unabated fossil gas needs to be replaced by renewables at scale in conjunction with increased energy efficiency by 2040.\(^\text{12}\)

![Greenhouse gas emissions reductions due to changes in fossil gas supply](chart.png)

**Gas use and related emissions are affected by a variety of measures in the SDS; while there is some switching to gas, the net effect is a reduction in demand to 2040**

Source: IEA World Energy Outlook 2020

The conversion of assets to fossil gas with no greenhouse gas abatement capability and the expansion of LNG terminals are not aligned with this urgent emissions reduction requirement and, therefore, may not be compatible with the Paris Agreement. This is of particular concern if shale gas is the fuel source.

**Biomass emissions and risks**

ENGIE has confirmed its intention to convert its coal-fired plants to biomass as well as fossil gas.

12. IEA World Energy Outlook 2020 p.278
Wood, in the form of pellets or chips sourced from the forestry sector, is the predominant form of solid biomass for power and heat generation. ENGIE supplies, trades, transports and handles 2.5 million tons of biomass per annum and has a 10% market share in the global trade in industrial wood pellets.\(^{13}\)

The carbon impacts of burning wood, and the timescales over which they occur, are affected by many factors regarding the type of wood used and the impacts on forest carbon sinks of harvesting wood for biomass. This is before considering the emissions associated with harvesting, transporting, processing and burning the wood.

In a recent report, *The Burning Question*, Ember highlighted how the carbon impacts of burning biomass can vary significantly based on the source of wood:

<table>
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<tr>
<th>Carbon intensity of electricity generated under different biomass sourcing scenarios</th>
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<tr>
<td><strong>High-end scenario</strong></td>
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<tr>
<td><strong>Mid-range scenario (SIG)</strong></td>
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<td><strong>Mid-range scenario (BEIS)</strong></td>
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<tr>
<td><strong>Low-end scenario</strong></td>
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\(^b\) Biomass in a low-carbon economy. CCC, 2018.


\(^d\) Drax Annual Report 2019. [Enabling a zero carbon, lower cost energy future](https://www.drax.com/)

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13. ENGIE renewable Energy Sources Outlook 2020 Edition
The sources of wood with the lowest carbon impacts represent a very specific and small proportion of forestry products. As it is very complex and difficult for operators to ensure that high-carbon sources of wood are excluded from supply chains and only low-carbon sources of wood are burned in power stations, replacing coal with wood carries significant risks of increasing carbon emissions.

Biomass is an inefficient and expensive source of energy that relies on significant public subsidies to compete with wind and solar power. Drax power station in the UK is forecast to receive subsidies of £10 billion by 2027 in addition to their carbon tax breaks for being 'carbon neutral'.

There are also regulatory risks associated with biomass. It is possible that, in future, the EU or other governments will determine that certain forms of biomass are no longer considered carbon neutral under carbon pricing schemes and ENGIE could be obligated to purchase carbon credits to offset any greenhouse gas emissions. With the EU ETS carbon price consistently reaching record highs in January, this represents significant financial risk. Governments could also introduce stricter sustainability criteria, increasing the cost of biomass fuel sources.

This has become increasingly likely with the publication of a recent report by the Joint Research Centre - the European Commission’s science and knowledge service, which found that in 96% of the scenarios biomass produces greater levels of emissions than fossil fuels for at least 30 years and/or increased risk to biodiversity and ecosystem health. Therefore, in the majority of cases, burning biomass is not consistent with Net Zero Emissions by 2050 policies or EU targets of a 55% reduction in emissions by 2030 vs 1990.

In conclusion, coal-to-biomass conversions are costly projects that carry significant climate, environmental and economic risks.

New build gas assets

In addition to converting old coal-fired power plants to fossil gas, ENGIE is also investing in new-build gas assets. All of the risks and negative impacts detailed above in relation to the conversion from coal to fossil gas also apply to this strategy.

ENGIE plans to build an 870MW Combined Cycle Gas Turbine (CCGT) power station at Vilvoorde, Belgium after purchasing the existing gas plant from EM Generation Brussels in April 2020.

14. Ember - The Burning Question (June 2020)
The construction is contingent on their being a Belgium capacity market in operation in 2021 – confirming that it is not economically viable without such subsidies. It would, therefore, be vulnerable to future regulatory change.

ENGIE has also been active in the Middle East for more than 30 years, generating 30GW of power and around 5 million cubic metres of desalinated water. It operates multiple fossil-fuel fired power plants in the region including three in Bahrain, one in Kuwait, six in Oman, two in Qatar, four in Saudi Arabia and six in the UAE. In its Integrated Report 2020, ENGIE highlights that it has a major presence in the Middle East in relation to thermal power generation.15

ENGIE operates the LNG import/regasification terminal at Mejillones in Chile (63% share) with a capacity of 5.5 million cubic metres/day. There is a proposed expansion project to increase the capacity to 8.25 mcm.day. The facility was commissioned in 2010 in response to the curtailment of imports from Argentina – these resumed in October 2018 after 12 years.

ENGIE also operates two LNG import terminals in France, which it intends to expand, and ENGIE Australia and New Zealand announced on 7 December 2020 that it will co-develop an LNG regasification terminal in Geelong, South Australia as part of its “transition to a carbon neutral economy”.

15. ENGIE’s 2020 Integrated Report
Key risks are identified in the International Energy Agency's (IEA) World Energy Outlook 2020 in relation to investing in new fossil gas-fired generation that is reliant on delivering baseload electricity to be economically viable:

Some new gas-fired plants are installed globally, the majority of which are concentrated in developing economies, where they help to provide an alternative to coal-based generation as well as offer a potential pathway to the generation of electricity from low-carbon gases such as biomethane and hydrogen. However, the main role for gas-fired plants increasingly becomes the provision of power system flexibility to help integrate the increasing share of variable renewables.\(^\text{16}\)

Gas-fired power plants remain important sources of flexibility in renewables-rich power systems over the longer term, but even fewer volumes of gas are required in the power sector to fulfil these functions.\(^\text{17}\)

In Europe, the risks of operating fossil gas assets have further increased with the higher ambition of a 55% reduction in GHG emissions by 2030 and the European Commission Methane Strategy, which takes effect in 2024. The strategy proposes the imposition of a border tax to reflect the carbon content of imported fossil gas. This could make LNG more expensive, especially relative to renewable energy.

As a result of a combination of all of the issues, risks and scenarios detailed in the above sections, ENGIE could find itself with stranded gas assets including any new or converted power plants, its LNG terminals in France and Chile and its share in the Nordstream 2 pipeline.

**Paris Agreement alignment**

ENGIE points to its Science Based Target initiative (SBTi) accreditation to confirm its green credentials and alignment with the Paris Agreement. The SBTi targets for Scope 1 and 2 emissions and are classified into three categories:

- 2° Celsius
- Well below 2° Celsius
- 1.5° Celsius

17. IEA World Energy Outlook 2020 p.190
ENGIE’s target classification for scope 1 and 2 emissions is 2°C Celsius. In October 2019, the SBTi stopped accepting target submissions for 2°C.

ENGIE commits to reduce power generation GHG emissions from scope 1 and scope 3, 52% per kWh by 2030 from a 2017 base year. ENGIE commits to reduce absolute scope 3 emissions from use of sold products 34% by 2030 from a 2017 base year. The targets covering greenhouse gas emissions from company operations (scopes 1 and 2) are consistent with reductions required to keep warming to 2°C.

In 2019, ENGIE’s total Scope 1, 2 & 3 emissions were 69.2 million tonnes CO₂e (53mt, 2.5mt and 13.7mt respectively). Its 2017 Scope 1 emissions were 89 million tonnes CO₂e, 40% higher than in 2019. ENGIE’s Scope 1 target for 2050 is less than 20 million tonnes CO₂e.

The principal objective of The Paris Agreement is to keep a global temperature rise to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C. Consequently, ENGIE’s current targets to ‘keep warming to 2°C’ are not in line with The Paris Agreement.

The International Panel on Climate Change (IPCC) Special Report on global warming of 1.5°C identifies the need for net zero emissions and a full decarbonisation of electricity generation by 2050. OECD nations need to end coal use for electricity production by 2030 and coal-fired power stations must be shut down in the rest of the world by 2040.

According to the IEA Net Zero emissions by 2050 scenario (NZE2050), all subcritical and virtually all supercritical coal-fired plants must be decommissioned by 2030. All of ENGIE’s coal plants without current phase-out dates are subcritical, apart from Safi in Morocco.

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18. Science Based Targets initiative website
19. Climate Analytics: Insights from the IPCC Special Report on 1.5°C
20. IEA World Energy Outlook 2020 p.132
The IPCC 1.5°C pathways also stipulate that unabated fossil gas generation must peak now and begin its decline. Depending on how ENGIE’s new and converted fossil gas plants are operated and supplied, there is the risk that these assets will not be compatible with the IEA Sustainable Development Scenario and, therefore, the Paris Agreement. The use of shale gas as a fuel source, due to its high associated methane emissions, may result in non-compliance.

While ENGIE continues to lack a coal-phase strategy for all its power plants and its SBTi commitment remains at 2°C, its goals are not aligned with the Paris Agreement.
Conclusion

ENGIE has taken steps since 2015 to reduce its coal-fired electricity production. However, in 2019 this activity was still responsible for 13 million tonnes of greenhouse gas emissions and, with 70% of its remaining coal generation with no confirmed shutdown dates, ENGIE needs to urgently address its coal phase-out plan. The absence of a comprehensive coal-phase out strategy and the existence of a SBTi target of 2°C are both inconsistent with the objectives of the Paris Agreement.

The collapse in the cost of producing electricity from renewable sources, especially onshore wind and solar PV, is decreasing the financial viability of fossil gas assets. This is a trend that looks set to continue. This, combined with the increase in low-carbon electricity that is required to meet the objectives of the Paris Agreement, will ultimately lead to stranded fossil-fuel assets. Consequently, ENGIE should further increase its investment in wind and solar projects globally rather than convert plants to fossil gas or biomass or build or extend fossil gas infrastructure.

ENGIE has made it abundantly clear that it intends to heavily rely on fossil gas over the next decades until it transitions to clean energy. This exposes ENGIE to potential climate and regulatory risks. The Paris Agreement requires global methane emissions to fall by 70% compared to 2020 levels by 2030. This may also be incompatible with ENGIE’s global fossil gas strategy and is of particular concern if ENGIE deploys shale gas, due to the higher associated fugitive emissions.

In conclusion, there are significant environmental, economic and reputational risks associated with ENGIE’s current transition and conversion plans.