

POWER MOVES AND POWER FAILURES

A first
assessment
of European
utilities'
transition
plans



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Institute for Energy Economics and Financial Analysis



Platforma pro
sustainable energy
transition



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EXECUTIVE SUMMARY

The power sector has a key role to ensure the terms of the UN Paris Agreement are met. Readily-available and easily-deployable sustainable power solutions (wind, solar, storage and grids) will not only decarbonise electricity production, but also pave the way for other sectors to follow suit. A renewables-based power system is key to unlock the electrification and flexibility potentials of the wider economy. To achieve a deep decarbonisation pathway, European power utilities must implement robust and comprehensive transition plans that follow a coherent and transparent roadmap, leading to the transformation of the power generation system. Considering the lack of a standardised approach, this report aims to lay the groundwork for a comprehensive framework to assess power utilities' transition plans. It has been applied to five of the main European power utilities – Enel, ENGIE, EPH, Iberdrola and Statkraft – representing a diverse range of geographic areas and showcasing a variety of transition strategies. Divided into four main categories – emission reduction plan, energy planning, CAPEX and climate planning – the proposed framework and methodology is a robust comparative tool to identify both the strengths and the loopholes in utilities' transition plans. It constitutes a strategic instrument to help financial actors evaluate power utilities' climate policies, and for power utilities to identify ways to improve their transition plans.

This report highlights gaps and weaknesses in utilities' transition plans as well as the need for significantly higher ambition in specific areas to reach a solid and trustworthy 1.5°C aligned trajectory. It also highlights some best practices that are already being implemented and could be encouraged and replicated among other utilities.

The tool highlights the sharp contrasts between the strategy of utilities such as Iberdrola or Statkraft – mainly based on the deployment of sustainable power solutions – and that of EPH: largely based on a refusal to let go of its coal assets and the development of gas power plants. It also brings to light the conflicting situation of utilities such as ENGIE and Enel, which remain trapped in strategies relying partly on fossil gas, and technologies that are incompatible with the rapid and just transition of our energy system (e.g. biomethane, hydrogen, CCUS, nuclear), despite being on course to make important developments in sustainable power capacity.



An essential aspect of any legitimate transition plan is that it corresponds with a 1.5°C warming pathway with no or low overshoot, something that key players such as ENGIE and EPH continue to fall short of. Many utilities need to ensure their emission reduction targets are much more robust and, crucially, cover aspects such as absolute emissions for scopes 1, 2, and 3 throughout the entirety of their value chains.

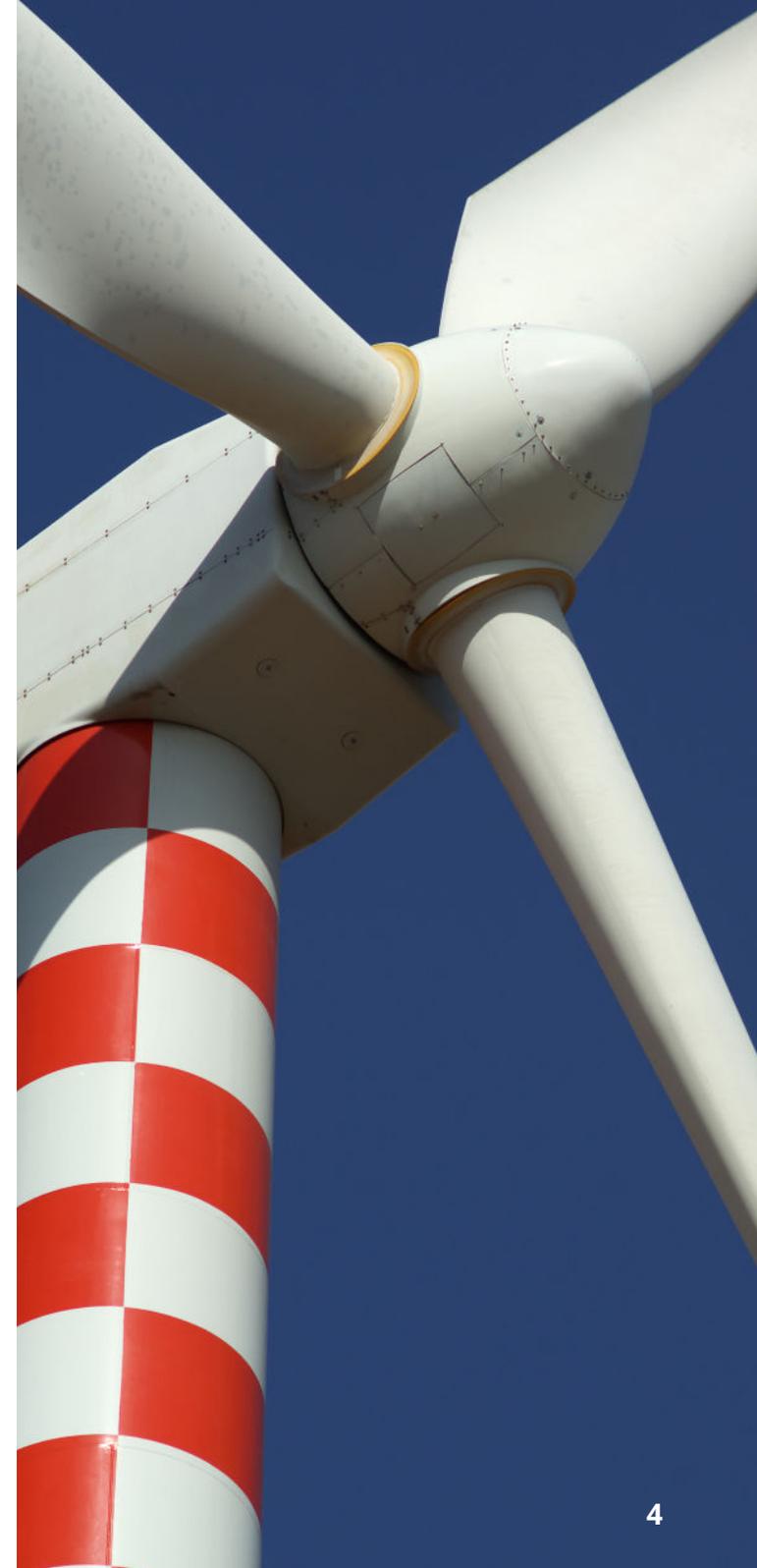
A key component of a credible transition plan that is lacking from each of the five utilities under review is the commitment to phase-out gas power in Europe / the OECD by 2035. By refusing to let go of their fossil assets, utilities are undermining the efforts they may be putting into sustainable power solutions. This is true across the board but particularly for Enel and ENGIE. Alongside EPH, they remain significant developers of fossil gas-fired power plants,¹ contradicting the goal to phase-out fossil gas.² This threatens their capacity to follow a rapid decarbonisation pathway and undermines the efforts made by any utilities to develop new sustainable power capacity (wind, solar, storage and grids) that builds up a renewables-based system.

The analysis of the utilities' CAPEX plans shows a promising upward trend in renewable energy investment (apart from EPH which remains entrenched in a fossil-based strategy), but a substantial portion is still allocated to fossil gas power plants and infrastructures. The development of hydrogen and biomass remains a strong part of Enel, ENGIE and EPH's strategies. This will lock them into gas, as hydrogen and biomethane technologies are immature or non-existent at a commercial scale and rely on fossil gas assets. Iberdrola and Statkraft demonstrate that better practices that minimise the use of fossil fuels are achievable and exemplify power generation systems widely based on renewable energy.

The financing decisions being made today will determine how successful we will be at decarbonising our power sector by 2035. That is why it is crucial that financial institutions engage with their power utility clients so that they develop credible transition plans that contribute to the decarbonisation of the power sector - so that it becomes renewables-based and offers tangible benefits to communities - and implement strong governance practices.

¹ See Beyond Fossil Fuels' gas database, <https://beyondfossilfuels.org/gas/>

² From here onwards, unless specified otherwise "gas" refers to fossil gas.





INTRODUCTION

At a time when all European power utilities are claiming to be 'leading actors of the energy transition', this briefing seeks to provide a tool to discern which are genuinely advancing toward the crucial goal of limiting global warming to 1.5°C, and which are merely paying lip service. The International Energy Agency's (IEA) 'Net-zero Emissions by 2050' (NZE) scenario clearly identifies 2035 as a necessary milestone for a net-zero emission power system in OECD countries, in addition to a coal phase-out by 2030. The phase-out of fossil gas power is key to accomplishing this net-zero emission objective. As this scenario offers only a 50% chance of limiting global warming to 1.5°C, it is critical for any investment/financing targets to be driven by support for sustainable energy sources, rather than other technologies (so-called 'clean solutions'). Scaling back ambition on renewables is not an option. European utilities must establish a clear and ambitious direction of travel for renewables deployment, and stay the course.

Beyond Fossil Fuels is a coalition of over 60 European civil society organisations united in the mission to transition to a fossil-free, renewables-based European power system by 2035 that benefits communities, people and nature. This, combined with electrification of the wider economy and energy demand reductions, is key for a successful energy transition. We have developed a framework of 45 Key Performance Indicators (KPIs) across five categories to uniformly assess the transition plans of power utilities, and identify key components that can help ensure their plans are credible. Not all KPIs are equal: commitments to phase out coal by 2030 in the OECD and 2040 globally, and fossil gas power by 2035 in the OECD and 2040 globally, are crucial. These targets, combined with the rapid and substantial deployment of sustainable power solutions like wind, solar, storage and grids at a significant speed and scale, are of utmost importance.

This briefing applies our tool to five European utilities, each with different transition trajectories. We hope that this assessment offers valuable insights into the credibility of their plans, and equips financial institutions with the resources they need to engage their clients/investees over any shortcomings they present. It is also our ambition that this tool contributes to the European Financial Reporting Advisory Group (EFRAG)'s efforts to develop guidance for corporate climate transition plans' disclosure and to shape power utility sector-specific standards.

KEY MESSAGES

1

A robust transition plan implies **a commitment to phase-out fossil gas power in Europe / the OECD by 2035, which is lacking** in all the utilities' strategies covered by this report.

2

Enel, ENGIE and EPH remain significant developers of fossil gas-fired power plants, undermining the phase-out of fossil gas and pursuing strategies that will lock them and the countries in which they operate into the continued burning of gas.

3

Coal phase-out plans that result in closures rather than sales or replacements are needed from Enel, ENGIE and EPH to ensure an absolute emission reduction regarding this kind of assets.

4

At the COP28 climate summit in Dubai, governments committed to transitioning away from fossil fuels, doubling the global average annual rate of energy efficiency improvements and tripling global renewable energy capacity by the end of this decade. In relation to this last point, **all utilities must focus their efforts and resources on deploying sustainable power solutions (wind, solar, storage and grids) and not be distracted by other technologies (e.g. hydrogen, biomethane, CCUS, nuclear)** that are incompatible with a rapid and just transition of our power system, or that are immature or non-existent at a commercial scale.

5

Though they fall short on their fossil gas phase-out, **Iberdrola and Statkraft show that a coherent transition plan towards a sustainable-based power system** (wind, solar, storage and grids) **is possible**. They exemplify better practices regarding their fossil fuel phase-out ambitions.

6

Financial institutions must engage with their power utility clients so that they develop credible transition plans that contribute to the decarbonisation of the power sector, and implement strong governance practices.

METHODOLOGY: FRAMEWORK AND OVERVIEW OF KPIS

To assess the transition plans of power utilities, we have established a comprehensive analytical framework based on both the European Sustainability Reporting Standards (ESRS)³ requirements, and the baseline of “forward-looking indicators” provided in Reclaim Finance’s analysis.⁴

Our assessment of the companies’ transition plans is based on reports and data publicly available as of 15 March 2024. A questionnaire addressing 45 KPIs was sent to the five power utilities to complete or correct the public data.

Those 45 KPIs (see Annex 1) are clustered into four main categories, and a fifth category evaluates the transparency of the utilities’ in their answers to the questionnaire:

1

Emission reduction plan

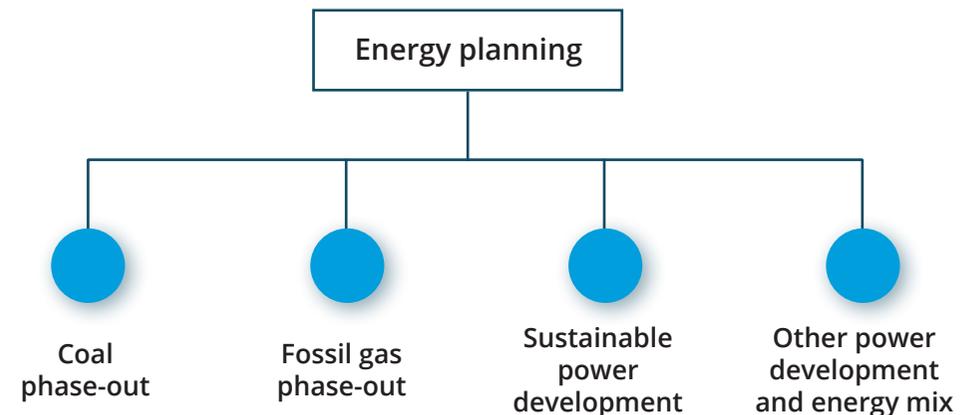
Assesses the robustness of the reference scenario, targets, perimeters and timeline that outline the decarbonisation pathway planned by the power utility. This category also addresses the issue of emission compensation, and the progress the company has made towards its targets over the previous year.

Energy planning

2

Assesses a utility’s coal and fossil gas phase-out strategy, its development plan for sustainable power solutions (solar, wind, storage and grids) and other power sources (hydropower, hydrogen, nuclear, biomass), as well as their projected share in its planned energy mix.

To analyse the core aspects of their transition plans in detail, the category “Energy planning” is divided into four sub-categories presented below:



3 EU European Sustainability Reporting Standards (ESRS) Annex 1, C(2023) 5303 final, supplementing Directive 2013/34/EU, July 2023

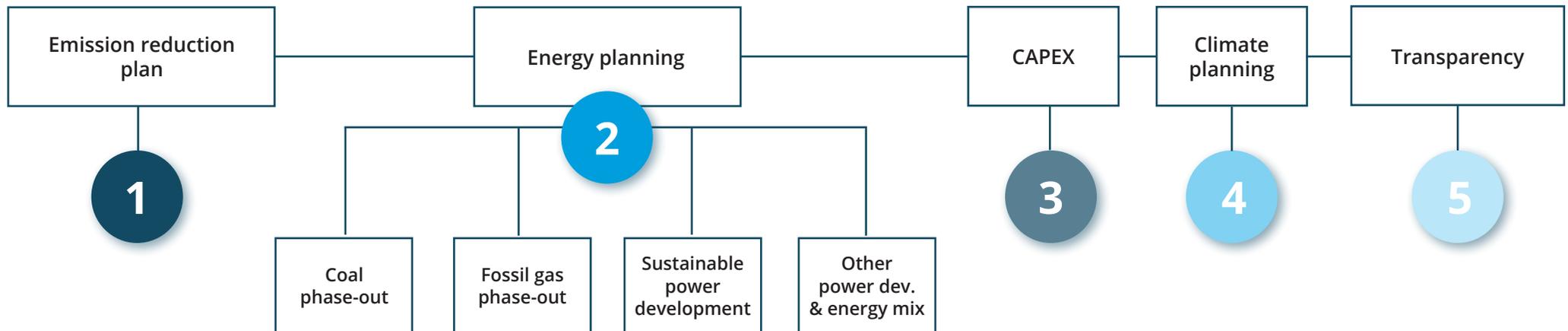
4 Reclaim Finance, CORPORATE CLIMATE TRANSITION PLANS: WHAT TO LOOK FOR, January 2024

3

CAPEX

Assesses the coherence between the required material developments and the effective investments (CAPEX) planned by the company, as well as their evolution over the previous year. Based on the IEA's NZE scenario, Beyond Fossil Fuels advocates for a 6:1 financing ratio,⁵ meaning that for every euro spent on fossil fuels, six euros ought to be spent on sustainable power solutions (wind, solar, storage and grids). This 6:1 financing ratio is designed to be applied to financial actors, rather than that of power utilities. The latter have very little involvement in upstream oil and gas activities, and should therefore have a much higher CAPEX ratio. It is used in our analysis as an absolute minimum and as a point of comparison between utilities, highlighting those that have not initiated yet their transition from fossil fuels toward sustainable power solutions. It is not considered as an objective for power utilities and those exceeding this ratio can't be considered as having sufficient renewable targets solely on the basis of this indicator.

Thus, the transition plans are assessed through the following grid:



⁵ <https://beyondfossilfuels.org/2024/02/13/6-to-1-financing-ratio-by-2030/>

Climate planning

4

Assesses the alignment between the company's general strategy and its climate plan through the involvement of its board members and main managers in implementing climate objectives, and the company's ability to generate revenue from activities aligned with its climate strategy.

Transparency

5

To complete the analysis, an additional category evaluates the transparency of each power utility based on the answers it provided to the questionnaire. It assesses how relevant the answers provided by the utility are to the questions asked, irrespective of its technical content. Some questions were deemed high priority to our analysis. Answering the top priority questions is considered the strict minimum level of transparency for a transition plan.

This comprehensive list of criteria is combined with “critical indicators” based on “red lines” and “yellow lines”. The “red lines” establish the essential elements that need to be included in a power utility’s transition plan. The “yellow lines” set the bar for a robust, coherent and comprehensive transition plan (see the list in Annex 2). These indicators are associated with the different categories of KPIs. When a red line is crossed, it indicates that the power utility fails to reach the basic criteria of a transition plan in the related category and will be flagged in red. When a yellow line is crossed, it signifies that the power utility has failed to deliver a robust and comprehensive transition plan in this category and will be flagged in yellow – assuming no red line has been crossed in the same category. If no red or yellow line is crossed, the utility is considered to have reached the core criteria of a robust transition plan regarding the related category, and will be flagged in green.

It has to be noted that a green rating does not mean that the company has a fully robust and comprehensive transition plan for the related category, but that it complies with the main requirements of such a plan. Only a detailed analysis of all KPIs presented in this methodology can enable a thorough evaluation of the power utilities’ transition plans.

The criteria that form this framework will be reviewed and evolve as needed in future iterations of our assessment of European utilities.



PRESENTATION OF SELECTED UTILITIES

The five European utilities covered by this report have been selected as a representative sampling of European utilities to assess the balance between their fossil fuel and renewable energy power generation assets.⁶ This assessment takes into account the size of the utilities as measured by installed electricity generation capacity, as well as future planned capacity for fossil fuels and renewables. The utilities represent a range of ownership structures and transitory stages, from what can be considered industry laggards – utilities reliant on thermal fossil assets with little in the way of transition plans to those with a demonstrated commitment to a sustainable power transition, and are making inroads therein. Each of these power utilities have an important role to play in delivering a fossil-free, renewables-based European power sector by 2035.

⁶ <https://reclaimfinance.org/site/en/2023/10/27/the-limits-of-not-so-clean-energy/>

Iberdrola

Headquartered in Spain, it is one of the largest power utilities globally generating €49.3 billion in revenues last year and operations in Europe and North and South America.⁷ By the end of 2023, Iberdrola had nearly 25 GW of installed renewables capacity in Spain and the UK.

Statkraft

Headquartered in Norway, it operates throughout Europe, North and South America, generating €10.5 billion in revenue last year.⁸ Almost 97% of Statkraft's power generation portfolio is renewables-based and its global carbon intensity is one of the lowest in the industry at 12 g CO₂e/kWh. Most of its current renewables assets are made of legacy hydropower, which makes it important that the company keeps making investments in solar, wind, grids and storage going forward.

Both are utilities with no coal assets and limited fossil gas generation capacity. They are committed to no new fossil fuel power, and have energy portfolios predominantly based on sustainable, renewable forms of energy. Whereas Iberdrola is a publicly traded company, Statkraft is wholly state-owned by the Norwegian government.

⁷ <https://www.iberdrola.com/documents/20125/3894078/results-23FY.pdf>

⁸ <https://www.statkraft.com/globalassets/0/.com/6-investor-relations/reports-and-presentations/2023/q4/statkraft-as---annual-report-2023.pdf>

Enel

Headquartered in Rome, it is the largest fossil gas utility in Italy, a country that accounts for a quarter of Europe's gas power capacity. Enel has committed to achieving net-zero by 2040 but at the same time its European portfolio contains 6.9 GW of gas and 4.6 GW of coal capacity, with an additional 3.8 GW in new gas power capacity in the pipeline. Enel was also the fourth largest emitter in Europe 2022, responsible for 29 Mt CO₂e.

ENGIE

Headquartered in France, it has operations in Europe, Africa, Asia, and North and South America. The company has positioned itself as not only one of the largest European power generation utilities but one of the largest midstream gas operators globally. ENGIE plans to increase its gas power capacity by an additional 1.37 GW, while doubling its renewables capacity by 2030.

Both Enel and ENGIE are characterised by similar revenue flows: €82.6 billion and €93.6 billion⁹ respectively, and conflicting commitments to both renewable power and fossil fuels. Both are publicly traded companies in which the government of the country where they are headquartered have a large stake.

EPH

Lastly, Energetický a průmyslový holding (EPH), is headquartered in Czechia. Its large coal and fossil gas assets, as well as fossil gas power development plans, remain a significant hurdle to Europe being coal-free by 2030, and achieving a fossil-free, renewables-based power sector by 2035. EPH is a privately held utility, majority-owned by Czech magnate Daniel Křetínský. Present in 10 European countries, EPH was the third largest greenhouse gas (GHG) emitter in Europe in 2022, emitting 69 Mt CO₂e.¹⁰

9 <https://www.enel.com/media/explore/search-press-releases/press/2024/03/enel-solid-results-in-2023-with-ordinary-ebitda-at-22-billion-euros-116-and-net-ordinary-income-at-65-billion-euros-207>

10 <https://ember-climate.org/insights/research/eu-ets-2022/#supporting-material>

COMPARATIVE ANALYSIS

The International Energy Agency's (IEA) 'Net-zero Emissions by 2050' (NZE) scenario offers only a 50% chance of limiting global warming to 1.5°C. For this ambition to be met, it will be critical for Europe's power sector to be fossil-free and renewables-based by 2035. As such, it is critical for utilities to:

1. phase out coal by 2030 in Europe / the OECD;
2. phase out gas by 2035 in Europe / the OECD;
3. ensure that any investment/financing targets are driven by support for sustainable energy sources, rather than other technologies (so-called 'clean solutions').

Table 1: Comparative assessment of the five power utilities' transition plans



With these considerations in mind, here is how our five European utilities have performed based on our framework and critical indicators:

	Emission reduction plan	Coal phase-out	Fossil gas phase-out	Sustainable power development	Other power and energy mix	CAPEX	Climate planning	Transparency
Enel	Yellow	Yellow	Red	Green	Yellow	Yellow	Yellow	Yellow
ENGIE	Red	Yellow	Red	Green	Yellow	Red	Green	Green
EPH	Red	Red	Red	Red	Yellow	Red	Red	Red
Iberdrola	Yellow	Green	Red	Green	Yellow	Yellow	Green	Yellow
Statkraft	Red	Green	Red	Green	Yellow	Red	Green	Red

The fossil gas power phase-out strategy of all utilities is rated as poor and inadequate.

While Statkraft and Enel have committed to phasing out gas power by 2040 globally, none of them has officially committed to stop burning fossil gas by 2035 in Europe / the OECD to ensure a fully decarbonised power sector, as recommended by the IEA. No fossil gas phase-out plan has been presented so far. This is a critical point that prevents all five utilities from presenting a robust transition plan.

ENGIE, Enel and EPH have plans to develop significant new gas power capacity in the coming years. Iberdrola and Statkraft do not have plans for new gas-fired power development projects (including the purchase of existing plants). **A commitment to phase-out gas power by 2035 in Europe / the OECD is required from those power utilities that want to pursue credible transition plans.**

ENGIE plans to continue its LNG operations with LNG supply contracts for fracked gas from the US running beyond 2040. Enel plans to build an onshore LNG plant in Sicily, while Iberdrola has committed not to develop new LNG terminals.

Coal phase-out still cannot be taken for granted: while Iberdrola and Statkraft are coal-free, EPH does not have any timeline for the closure of its coal assets, and ENGIE and Enel still have not committed not to sell or convert coal-fired power plants, preventing effective greenhouse gas emission reduction.

Almost all utilities have **ambitious renewable energy** (wind, solar and hydropower) development plans by 2030. ENGIE, Iberdrola, and Statkraft are targeting the implementation of 40 GW, 38 GW, and 30 GW of new capacities respectively. Enel has a respectable 13 GW target by 2026 (its plans for 2030 need to be clarified and its commitment to the deployment of renewables confirmed).

Meanwhile, EPH plans to develop only 7 GW of renewable energy in Europe by 2030, a mere fraction of its counterparts. These developments are mainly based on sustainable energy (wind and solar).

Utilities also target the necessary development of new battery storage capacities and investments in grids to ensure the flexibility of a renewables-based power system. ENGIE will, for example, add 10 GW of additional storage capacity by 2030 on top of 40 GW of sustainable energy, and Enel plans very ambitious investments in grids' development.

Enel, ENGIE, Iberdrola and Statkraft are all on track to align the renewables share of their energy mix with the IEA's NZE pathway, which requires a 68% of renewable installed capacities globally by 2030.¹¹ We do not have sufficient information to assess whether their renewable installed capacity in Europe would be high enough in 2030 to ensure a net zero transition for this region or whether these renewables will provide tangible community benefits and have limited impact on biodiversity.



A commitment to phase-out gas power by 2035 in Europe / the OECD is required from those power utilities that want to pursue credible transition plans.

¹¹ IEA, World Energy Outlook 2023, p.279, Table A.3c, October 2023.

In any case, without phasing out fossil fuels like coal and gas, even the most ambitious development of sustainable energy won't be enough to limit global warming to 1.5°C.

Other technologies are those that **are incompatible with a rapid and just transition of our power system (e.g. biomass, hydropower, nuclear energy, and hydrogen) or immature or non-existent at a commercial scale (e.g. carbon capture utilisation and storage)**, some of which pave the way for continued fossil gas usage. As such, their development is deemed undesirable and even counterproductive. Instead, sustainable power solutions (wind, solar, batteries and grids) should be favoured as much as possible while also being respectful of social and environmental impacts.

The development of other technologies plays a significant role in the strategies of most of the utilities. This often equals making investments in a thermal-based power system (biomethane, CCUS, hydrogen) that envisages a continued use of fossil fuels beyond 2035. ENGIE and EPH's decarbonisation pathways rely heavily on the development of hydrogen or biomass, and Statkraft and Iberdrola have plans for new hydropower developments.

The **emission reduction plans** of the five power utilities analysed in this study **leave room for improvement**. Two of them, ENGIE and EPH, did not commit to a 1.5°C aligned decarbonisation pathway, and their net zero targets are foreseen for 2045 and 2050 respectively. Iberdrola, Enel and Statkraft have commitments to achieve net zero, although Iberdrola and Enel are leading the way with commitments to achieve this by 2040. However, none have clear net zero emission targets for Europe, which should be set for 2035. All scopes (1, 2, 3) are not systematically covered by absolute emissions targets in the short term and the medium term (ENGIE, EPH, Statkraft), and only ENGIE and Enel have a specific methane target.

Regarding their **CAPEX plans**, EPH, Statkraft and Iberdrola don't provide a plan with sufficient granularity to adequately analyse the share dedicated to renewable energies or fossil fuels in the next few years. Most of the utilities' CAPEX¹² is / will be directed towards the development of technologies in support of the energy transition. The majority of investments from Iberdrola, Statkraft, ENGIE and Enel is / will go towards sustainable technologies (wind, solar, batteries and grids).

¹² EPH provided its CAPEX only for 2022. Iberdrola and Statkraft provided their CAPEX only for 2023. Enel provided its CAPEX for the period 2024-2026. ENGIE provided its CAPEX for the period 2023-2025.

However, ENGIE and Enel dedicate a significant portion of their CAPEX to the development of fossil fuels, which impedes their efforts to transition. EPH dedicates most of its CAPEX to the development of fossil fuels, and Statkraft still relies on significant investments in hydropower (new and refurbishment).

The **6:1 financing ratio** for sustainable power investment,¹³ normally applied to financial actors, has been applied here on the CAPEX of the five power utilities. As they are not involved in upstream activities, power utilities should be able to reach much higher rates of renewable development versus fossil fuels. However, EPH and ENGIE do not reach such a ratio,¹⁴ with respectively €0.1 and up to €4.3¹⁵ invested in renewables for €1 invested in fossil fuels.

Most utilities take into consideration **climate-related risks and opportunities in their strategy** and have mechanisms to involve the responsibility and accountability of their board members and main managers in the achievement of the company's climate targets. Only EPH did not mention such mechanisms. However, companies' disclosures would generally benefit from much higher transparency to reassure investors and stakeholders of the adequate governance of the climate risks in their strategy.

ENGIE has demonstrated quite high levels of **transparency** in the answers they provided to the questionnaire sent to utilities to assess their transition plan. Enel and Iberdrola provided quality answers for most questions although they failed to do so for all of them. Although Statkraft answered almost all questions of the questionnaire, they provided some superficial answers which prevented a thorough assessment of their transition plan. EPH has clearly shown very weak levels of compliance and little in the way of transparency regarding its data.

¹³ IEA, The Oil and Gas Industry in Net Zero Transitions, p.141, February 2024.

¹⁴ For all utilities, without further details planned investments, we assumed that CAPEX categories such as "others" are to be considered as allocated to fossil fuels activities.

¹⁵ ENGIE reported its investment plan through CAPEX ranges. The 4.3:1 ratio presented here is the maximum value estimated based on these ranges.



INDIVIDUAL CASE STUDY ASSESSMENTS

About Enel

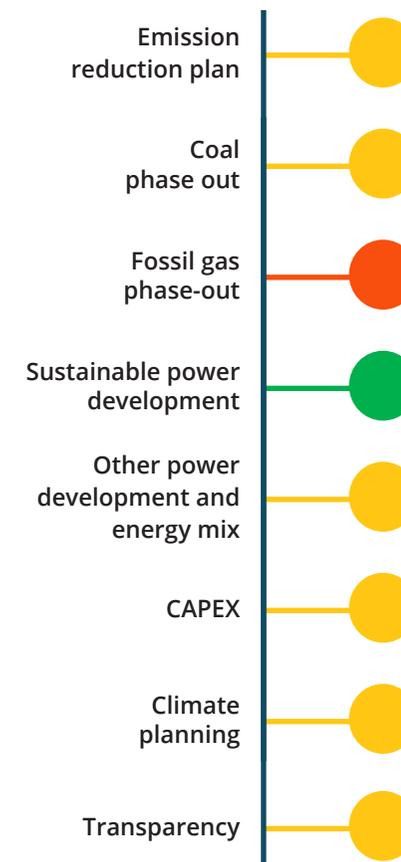
Enel is among the three largest integrated utilities in Europe, alongside ENGIE and Iberdrola. It ranks among the largest utilities in the world by capitalisation and is active in approximately 30 countries. The Italian government retains significant influence over the company, holding a 30% stake through a “golden share” which, under EU rules, allows it to appoint Enel’s CEO, its President, and two-thirds of its board.

In 2023, Enel experienced a significant change in its leadership. After nine years, CEO Francesco Starace – responsible for transforming the company and putting it on a decarbonisation pathway – stepped down. He was replaced by Flavio Cattaneo, who has less experience in the energy sector. Notably, the former CEO of Eni, Paolo Scaroni, a strong proponent of gas and nuclear development, was appointed as President and Chair of the Board of Enel.

Enel’s transition plan in a nutshell

Our assessment of ENEL’s climate plan reveals a strong willingness to develop sustainable energies (solar and wind) by 2030 as well as battery storage capacities. However, this progress could be undermined if the company pursues its planned coal-to-gas replacement projects and the construction of an onshore LNG plant in Sicily. The absence of a consistent plant-by-plant phase-out strategy for gas casts a shadow over Enel’s commitment to be fossil-free by 2040 and align with the International Energy Agency’s (IEA) ‘Net Zero Emission by 2050’ (NZE) pathway limiting global warming to 1.5°C, including decarbonising electricity by 2035 in Europe and 2040 in the rest of the world. Furthermore, Enel has not ruled out new investments in hydropower and nuclear power. In particular, Enel has recently decided to invest in nuclear research. It is also planning substantial refurbishment and repowering of hydropower plants.

- fails to reach the basic criteria of a transition plan
- fails to deliver a robust and comprehensive transition plan
- reach the core criteria of a comprehensive transition plan

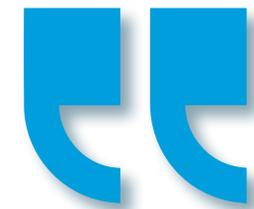


In November 2023, the company's new management presented a corporate strategy for 2024-2027 which dials down the company's ambitions to scale-up renewables. Instead, the leadership opted for a more conservative investment path in order to reduce the company's debt. Enel claims that this will not impact the achievement of its climate targets, and plans to invest in "economically secure" renewable energy solutions projects, regulated business, and grids and storage – the latter being investments required to develop a sustainable-based power system. Enel is also offloading assets as part of a cost-cutting strategy that triggered a strike from its workers in early 2024.

Enel is a significant issuer of green and sustainability-linked bonds. However, having ramped up coal production during the recent energy crisis at the behest of the Italian government, Enel failed to meet one of its bond's carbon intensity targets for 2023.

1 Emission reduction plan

Enel has a direct and indirect emission reduction strategy across the entire value chain validated by the Science-Based Target initiative (SBTi) and in line with a 1.5°C pathway, delivering net zero emissions by 2040. Enel's corporate strategy aims for an 80% greenhouse gas emission reduction in 2030 versus 2017. Enel has both absolute and intensity reduction targets covering scope 1, 2 and 3 emissions across the whole group worldwide, which is an essential component of an ambitious emission reduction plan. Enel has no explicit stand alone reduction target for methane emissions, but they are included in scope 1 counting. Enel also lacks an explicit fossil gas phase-out objective for 2035 for Europe / the OECD. Enel is committed to zero emissions by 2040 with the ambition of going beyond net zero targets. The company has so far not engaged in carbon removal practices, nor CCUS, but considers these potential future options (up to 2.5 Mt CO₂e/year) if it cannot fully mitigate its emissions as it nears 2040.



Enel lacks an explicit fossil gas phase-out objective for 2035 for Europe / the OECD.

2

Energy planning

No clear roadmap for a fossil gas phase-out, while leaving the door open to dubious technologies

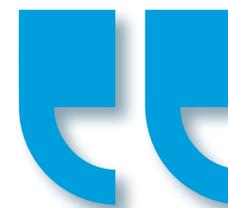
Enel has committed to phase-out coal by 2027 and has a plant-by-plant closure roadmap. However, it lacks a similar plan for fossil gas, despite its commitment to exit all fossil fuels by 2040 and requests from civil society and some shareholders to publish one. Enel has also not ruled out coal-to-gas replacements, or the use of technologies such as hydrogen and biomass. The company also lacks any commitment against new hydropower (in Europe), biomass and nuclear. Indeed, Enel has recently decided to invest in nuclear research with Ansaldo Energia and is planning refurbishments and repowering of 20 hydropower plants totalling 4.5 GW capacity.

Despite stating that the Porto Empedocle onshore LNG plant is not part of the company's 2024 strategy, Enel has not ruled out proceeding with the project, which has already been authorised by Italy's Environment Ministry and which the Italian government recently defined as a strategic asset for Italy's energy security. This designation could potentially include it in the regulated energy market at the concession of a publicly guaranteed return on the investment.

Scaling up renewables investment, "only if value accretive"

Enel has significantly grown its renewables capacity from 45GW in 2020 to 59 GW in 2023. This includes 26 GW of wind, solar and Battery Energy Storage Systems (BESS), which will continue to be a primary focus of future investments as well as grids. Enel plans to add 13 GW of wind, solar and BESS over the next three years.

Enel has a target of 73 GW of Renewable Energy Sources (RES) or low-carbon capacity (78% of a total 93 GW, including 29 GW of existing hydropower, 1 GW of existing geothermal and 3 GW of existing nuclear) by 2026 and 86% GHG-free production by the same year. This target implies that, by the end of 2026, Enel's capacity will come close to 40 GW made up of wind, solar and BESS, including ownership, partnership and stewardship. Enel is also targeting 85% RES capacity by 2030 and 90% GHG-free production by the same year. However, the planned total installed capacity for 2030 remains unclear due to the retirement of some hydropower and fossil-fired plants making it uncertain what the total amount of wind, solar and BESS in Enel's fleet will be in 2030.



Enel has committed to phase-out coal

by 2027 and has a plant-by-plant closure roadmap. However, it lacks a similar plan for fossil gas, despite its commitment to exit all fossil fuels by 2040.

3

CAPEX

Enel's overall gross CAPEX for the period 2024-2026 amounts to €35.8 billion. Approximately 5% (€1.8 billion) of this CAPEX is allocated to fossil fuel capacity, which includes coal-to-gas replacement projects and one regasification plant. This level of investment is out of sync with the IEA's NZE scenario, which requires almost no investment in fossil fuels by 2030.

The distribution of the CAPEX is as follows:

- 30%, or €10.7 billion, is invested in renewables (including €4.5 billion in solar, €3.9 billion in onshore wind, €0.7 billion in hydropower, and €1.6 billion in geothermal maintenance CAPEX), of which 60% is within Europe. This represents a 5% reduction compared to the 2021-2023 period.
- 53%, or €19 billion, is directed towards grids, with 80% of this investment in Europe, marking a 4% increase from the previous period.
- 4%, or €1.4 billion, is allocated to BESS.
- 8% is spent on customer-oriented initiatives, including digitalisation and energy services.
- 5% or €1.8 billion to fossil fuel capacities.

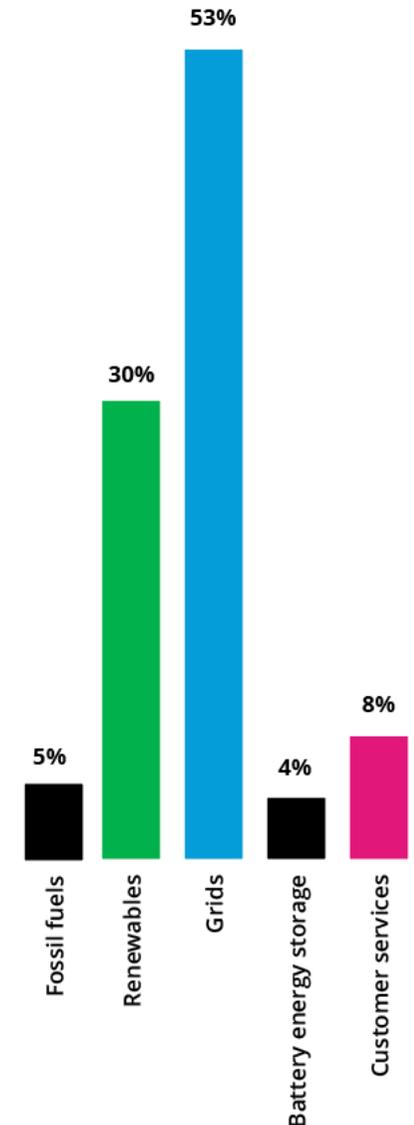
The high investments planned by Enel in grids' development - a key element to support a renewable-based power system - is noticeable. However, considering the decrease in investments planned over the next couple of years compared to the 2021-2023 period, Enel should strengthen its commitment to investing in renewable energies - specifically in wind and solar.

4

Climate planning: strategy and governance

Enel annually reports on the incremental progress made towards its targets, detailing the main drivers and actions that contribute to its progress by quantifying the impact of each action and factor. While ENEL does report on some plant closures, the absence of specific plant-by-plant closure dates for its gas fleet complicates the monitoring of its progress. As previously noted, Enel failed its carbon intensity target for 2023, which negatively impacted on its commitments under one of its sustainability-linked bonds. Enel's CEO has responsibility for climate-related issues and reports directly to the board, with incentives structured to boost the achievement of climate transition plan KPIs. However, accountability mechanisms are limited to potential financial losses if KPIs are not met.

Enel capital expenditure (CAPEX)
2024-2026



About ENGIE

Headquartered in France, ENGIE is one of the biggest independent electricity producers worldwide with 100 GW of installed generation capacity. It has operations in Europe, Africa, Asia, and North and South America. It is also one of the highest emitting energy companies in Europe. It is partly owned by the French state which holds a 23% stake in the company.

ENGIE has significant plans to increase its sustainable energy (wind and solar) and battery storage capacities by 2030 but also relies on fossil gas activities – development of fossil gas-fired plants, gas infrastructure and LNG supply – and the associated development of technologies such as hydrogen and biomethane.

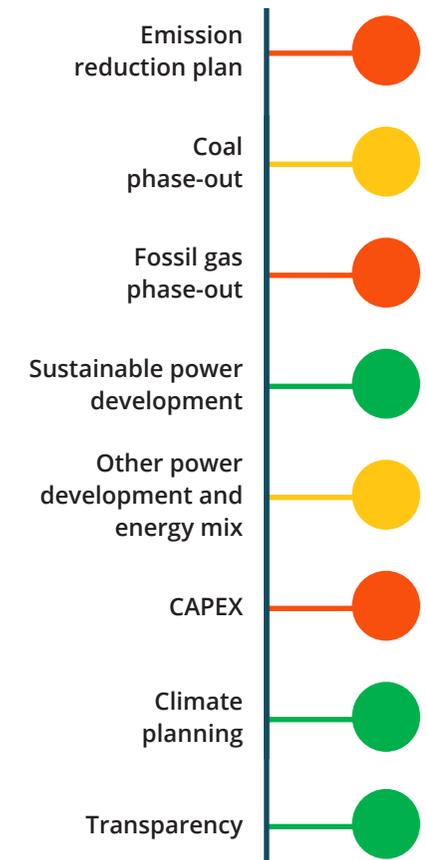
ENGIE's transition plan in a nutshell

Our assessment of ENGIE's climate plan indicates a strong willingness to develop sustainable energy sources by 2030 and increase battery storage capacities. However, these are undermined by a continuous expansion of gas power and by a “low-carbon” strategy that relies on the development of technologies that are incompatible with a rapid and just transition of our energy system (e.g. biogas) or technologies that are immature or non-existent at a commercial – hydrogen, Carbon Capture, Utilisation and Storage (CCUS) – and pave the way for continued use of fossil gas. The absence of a clear commitment to end fossil gas expansion and the lack of a commitment to a fossil gas phase-out strategy by 2035 in Europe / the OECD is currently preventing ENGIE from aligning with a 1.5°C pathway.

1 Emission reduction plan

ENGIE's GHG emission reduction trajectory is not aligned with a 1.5°C trajectory and only certified “well below 2°C” for its near-term targets by the SBTi. Its long-term targets remain uncertified. According to the International Energy Agency's (IEA) 'Net Zero Emissions by 2050' (NZE) scenario, the net zero target must be achieved by 2040 globally and by 2035 in advanced economies for the power sector. ENGIE only commits to a 90% emission reduction in 2045, and plans to rely on offsets and carbon capture technologies for its remaining emissions. Its short-term (2025) absolute emission targets

- fails to reach the basic criteria of a transition plan
- fails to deliver a robust and comprehensive transition plan
- reach the core criteria of a comprehensive transition plan



cover a maximum of 66% of all emissions scopes, and lack clear distinction between one another. ENGIE's mid-term (2030) absolute emission targets perform better and cover 82% of its emissions. The remaining 18% relates to the generation of energy that the group purchases and resells to end users. No specific target is provided regarding methane emissions although it constitutes a major greenhouse gas.

2 Energy planning

Ongoing development of renewable energy

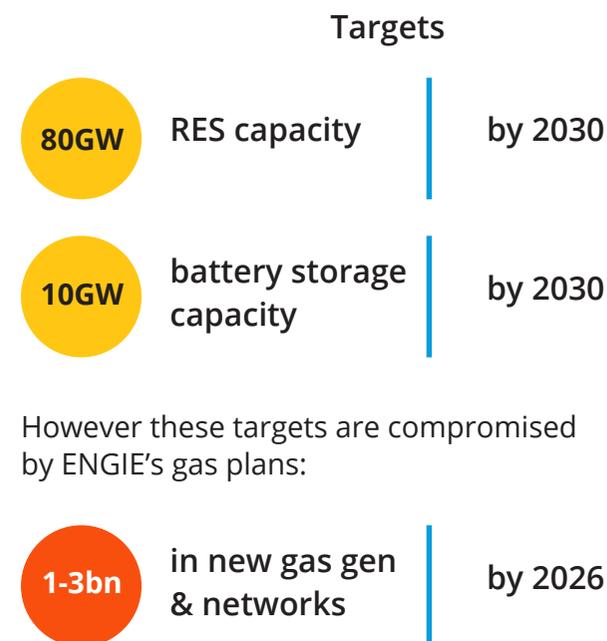
ENGIE plans to almost double its renewable capacity from 42 GW in 2023 to 80 GW in 2030, primarily by developing new solar and wind capacity that will account for 58% of its electricity production mix by the end of the decade. In parallel, the group will develop 10 GW of battery storage capacity over the same period; essential for ensuring a renewable-based power system is flexible. However, these notable developments barely reach the IEA's NZE pathway, which requires 68% of renewable installed capacities globally by 2030. These ambitions thus need to be strengthened to reach a 1.5°C target.

An insufficient fossil fuel phase-out strategy

ENGIE plans to invest between €1 and €2 billion in new gas generation plants and €1 billion in gas networks by 2026, compromising the efforts it is making on renewables. To decarbonise its gas assets, ENGIE is banking on the development of "green gases" such as biomethane and hydrogen and the use of CCUS for residual emissions. Not only are these technologies incompatible with a rapid and just transition of our energy system – some are also immature or non-existent at a commercial scale – they also pave the way for the continued use of fossil gas as they are based on the same generation assets. Furthermore, ENGIE is invested in long term LNG contracts for fracked U.S. gas that run beyond 2040, and are therefore incompatible with decarbonising the power sector by 2035 in advanced economies and 2040 in the rest of the world.



trajectory is not aligned with a 1.5°C trajectory and only certified "well below 2°C" for its near-term targets by the SBTi.



3 CAPEX

ENGIE continues to allocate about 6% of its growth CAPEX to gas power plants, contrary to the IEA's NZE scenario that calls for next to no fossil fuel investments by 2030. Furthermore, 17% of ENGIE's growth CAPEX to 2026 is primarily for gas infrastructure or gas power plants. The remaining 83% consists of:

- €14.5 billion invested in the development of low-carbon energy, essentially for solar and wind development.
- €2 to €3 billion invested in electrical grids, low carbon mobility and heating and cooling networks.
- €3 to €4 billion invested in "green gases" (biogas, biomethane and hydrogen) and energy storage such as batteries.

Based on ENGIE's CAPEX over the 2023-2025 period, for every euro ENGIE will spend on fossil fuels, it will spend up to €4.3¹⁶ on sustainable power solutions – wind, solar, storage and grids – which is well below the 6:1 ratio recommended by the IEA for financial actors.¹⁷ ENGIE should therefore strengthen its commitment to investing in sustainable energies and decrease its investments in fossil fuels.

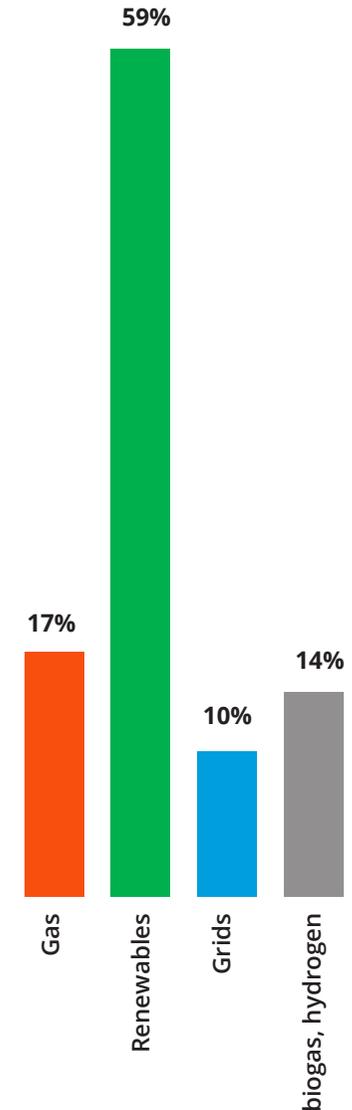
4 Climate planning: strategy and governance

ENGIE outlines specific decarbonisation levers for its 2030 emission targets, providing stakeholders with crucial insights into the credibility of the company's strategy. For two targets, covering absolute reductions in emissions from energy production and sold products, the contribution of the decarbonisation levers is quantified. However, a third of ENGIE's emissions are still not covered by this quantified approach. In particular, it is still unclear what main levers ENGIE will mobilise to reduce upstream emissions of the fuels it buys. This includes gas bought as LNG, for which long term contracts run as far into the future as the 2040s, and whose upstream emissions are currently incompletely reported as they don't consider methane. Furthermore, ENGIE has not fulfilled some investors' requests for a normalised 'Say on Climate' consultation; a process that provides investors with key insights on the group's climate strategy.

¹⁶ ENGIE reported its investment plan through CAPEX ranges. The 4.3:1 ratio presented here is the maximum value estimated based on these ranges.

¹⁷ This ratio targets financial actors and is considered as an absolute minimum for power utilities which have very little involvement in up-stream oil and gas activities, and should therefore have a higher rate of investment in sustainable power solutions.

ENGIE capital expenditure (CAPEX)
2024-2026



About Energetický a průmyslový holding (EPH)

Headquartered in Czechia, EPH (also known as EP Corporate Group) operates coal and gas power plants in 10 European countries, including Germany, the UK, Italy and France. The utility, comprised of many subsidiaries, is owned by Czech billionaire Daniel Křetínský, whose strategy is to build a fossil fuel empire by acquiring ageing coal assets slated for closure, ramp up their operations, and then cash-in on government compensation schemes intended to convince utilities to close their coal plants. EPH uses this money to expand its gas infrastructure, further undermining attempts to decarbonise Europe’s energy systems. As of 2022, the company states it is now “actively seeking renewable opportunities”.

EPH’s transition plan in a nutshell

Our assessment of EPH’s transition plans was complicated by the fact that the Czech utility chose to provide answers to only 32 of the 45 questions featured in our questionnaire. Complementary information was provided by EPH’s 2022 sustainability report; the 2023 issue having not been published at the time. Lack of transparency aside, the answers provided by EPH can be deemed perfunctory at best, and the content provided indicates their transition plans are backward. The lack of commitment to phasing-out coal in Europe by 2030, and the company’s insistence on developing new gas power capacity seriously go against EPH’s claims that it is supporting Europe’s energy transition.

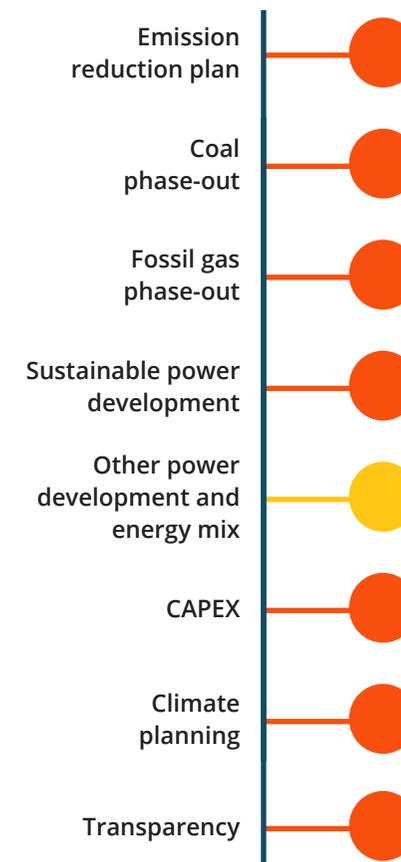
1 Emission reduction plan

EPH lacks a greenhouse gas emission reduction strategy based on a science-based 1.5°C scenario, nor does it have a net zero target by 2035 in the EU / OECD, instead aiming for 2050. Furthermore, EPH’s emissions targets do not cover scope 3. The reduction of methane emissions is only addressed by a specific reduction target focused solely on its subsidiary EP Infrastructure¹⁸ (EPIF), and not EP Power Europe, which accounts for 85% of EPH’s total emissions.¹⁹

¹⁸ <https://www.epinfrastructure.cz/en/activities/sustainability-reports/>

¹⁹ In EPH’s 2023 sustainability report published on 10 May 2024, EPH clarifies that it “also aims to address its methane leakage and reduce these emissions at least in line with the Global Methane Pledge announced at the COP 26 summit in November 2021” (p. 12)

- fails to reach the basic criteria of a transition plan
- fails to deliver a robust and comprehensive transition plan
- reach the core criteria of a comprehensive transition plan



2

Energy planning

Stalled renewable energy development

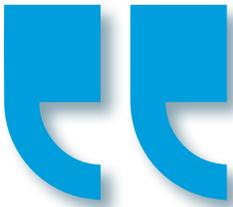
The information provided by EPH on their solar and wind capacity targets was first found in a media release dated September 2022, in which it was announced that EPH’s subsidiaries would develop 7GW of new renewable energy capacity by 2030^{20,21}. While this initial foray into renewables development is positive, it remains very modest compared to that of the other European utilities covered by our assessment (for instance, Iberdrola is planning to have 12 GW of new renewable capacity installed over the 2022-2025 period). It should be noted that EPH counts biomass under its ‘installed capacity of renewables’ and that it constitutes the bulk (82%) of said capacity.²² EPH also failed to provide any information on its battery/storage/flexibility capacity or research and development targets.²³

No clear fossil fuel phase-out strategy

The utility does not have a fossil gas power phase-out target, other than a commitment “implicitly implied by the carbon neutrality 2050 target” (sic). The information provided by EPH on its gas development plans is vague and consists of three new hydrogen-ready gas power plants and some heating plants in Czechia. Our estimate is that EPH plans to develop over 5 GW of new fossil gas power capacity on top of its 10 GW of existing fossil gas power capacity.

EPH announced in its 2022 sustainability report that it has plans to be ‘almost’ coal-free by 2025 and coal-free by 2030. But to date, the company does not have a plant-by-plant closure plan for its coal-fired power plants. Furthermore, to achieve this coal exit, EPH is dependent on the creation of a new EPH subsidiary, EP Energy Transition, to absorb its coal and some of its gas power assets. EPH claims that, “this company will have a clearly defined decommissioning strategy”. However, this was not communicated to us during the process of compiling this report. Without guarantees regarding the timeline for the closure of EPH’s coal assets, Beyond Fossil Fuels cannot consider EPH’s coal phase-out plans credible.

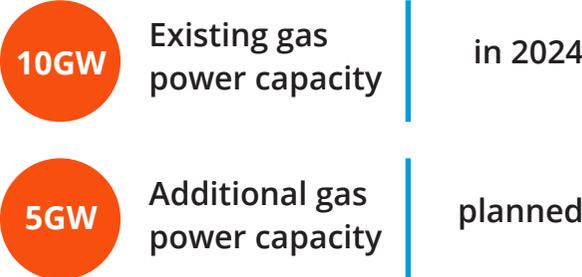
20 <https://epne.de/en/news/detail/7-gigawatts-by-2030-for-germanys-largest-renewable-energy-center/>
21 In EPH’s 2023 sustainability report, published on 10 May 2024, EPH clarifies that it “operates a portfolio of renewable generation sources [...] with total installed capacity of 157 MWe (p.262).
22 EPH 2022 sustainability report, p.62
23 In EPH’s 2023 sustainability, published on 10 May 2024, EPH announces it is planning to develop an additional 11 GW of storage by 2030.



EPH lacks a GHG emission reduction

strategy based on a science-based 1.5°C scenario, nor does it have a net zero target by 2035, instead aiming for 2050.

Fossil gas plans (estimates)



3

CAPEX

As of 2022, only 7.5% of EPH's CAPEX was allocated to sustainable power solutions (0.7% for wind and 6.8% for transformation and distribution of electricity), with the vast majority (75%) directed towards fossil fuel activities. This includes 54% to gaseous fossil fuels and 21% to EU taxonomy-non-eligible activities (i.e. generation of power from hard coal and lignite, cogeneration of heat and power from lignite or municipal waste, gas storage and supply, and trading of power and gas). Based on EPH's CAPEX in 2022, we estimate that for every euro EPH spends on fossil fuels, it spends €0.1 on sustainable power solutions – wind, solar, storage and grids – well below the 6:1 ratio.²⁴ According to its 2022 sustainability report: “EPH committed CAPEX of €1.1 billion to develop highly flexible gas-fired power plants with partial readiness for hydrogen combustion” versus a meagre €5 million for electricity generation from wind power.

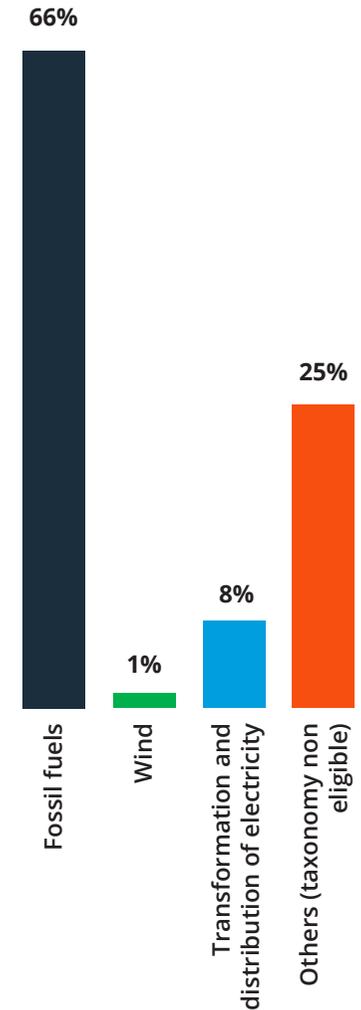
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Climate planning: strategy and governance

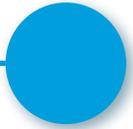
EPH's 2022 sustainability report announced that the utility was actively seeking renewable opportunities and that the majority of EPH's coal intensive assets would be separated into a newly created subsidiary company, EP Energy Transition, which “will have a clearly defined decommissioning strategy”. As of the time of drafting this report, no such strategy exists.

EPH did not provide answers to address our questions regarding the role its board would play in achieving the company's climate targets and disclosing evidence. Nor did it disclose how its management's responsibilities and accountability for target implementation are defined. We were unable to find publicly available information that could verify if such measures have been put in place.

EPH capital expenditure (CAPEX)
2022



²⁴ This ratio targets financial actors and is considered as an absolute minimum for power utilities which have very little involvement in upstream oil and gas activities, and should therefore have a higher rate of investment in sustainable power solutions.



About Iberdrola

Headquartered in Spain, Iberdrola is one of the largest electricity companies at a global level, with activities in over 30 countries. Its key markets are Spain, the UK, the United States, Brazil and Mexico. The company's current strategy is focused on the expansion, reinforcement and digitalisation of transmission and distribution grids, selective growth in higher value-added renewable technologies, and a commitment to storage as the backbone of a system with a high penetration of clean energy. However, around 17% of its capacity is still gas-based and Iberdrola has failed to disclose what plans it has for the future of these plants.



Iberdrola's transition plan in a nutshell

Overall, our assessment shows that Iberdrola has a coherent and ambitious transition plan that is overshadowed by a lack of information on the future of its gas power plant fleet. For the company to continue being a leader in the energy transition, it must commit to closing all of its gas plants in Europe by no later than 2035.²⁵



1 Emission reduction plan

Iberdrola's greenhouse gas emission reduction trajectory is in line with a 1.5°C aligned SBTi decarbonisation pathway and covers scope 1, 2 and 3 emissions²⁶. It aims for a 65% decrease of absolute emissions on all scopes between 2020 and 2030, and to be net-zero by 2040, reducing its emissions by 90% in 2039, with offsets to neutralise the residual emissions.²⁷ Its sustainability scorecard and SBTi commitment provide more information on the levers envisioned to reach their 2030 and 2040 targets.

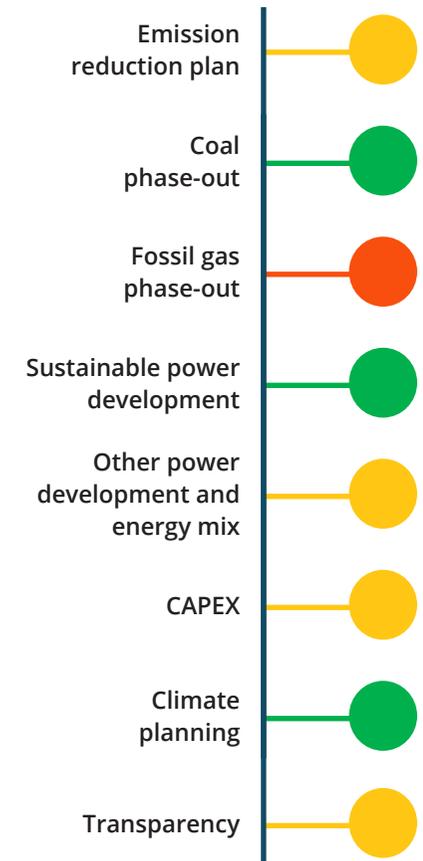
²⁵ This analysis is based on information provided by Iberdrola on 15 March 2024. Further data has been disclosed since by the company.

²⁶ <https://sciencebasedtargets.org/target-dashboard>

²⁷ Iberdrola, Statement of Non-Financial Information. Sustainability Report, 2023, p.25 and 53. https://www.iberdrola.com/documentos/20125/42388/IB_Sustainability_Report.pdf

Iberdrola

- fails to reach the basic criteria of a transition plan
- fails to deliver a robust and comprehensive transition plan
- reach the core criteria of a comprehensive transition plan



By 2030, Iberdrola also aims to achieve carbon neutrality in its electricity generation, targeting the threshold of 10g CO₂e/kWh²⁸ which, according to the company, equates to a 83% decrease in the carbon intensity of its electricity generation compared to 2020. Additional granularity on its carbon intensity would be welcome, especially as Iberdrola's commitment means that 17% of its electricity generation emissions are to be captured or offset, which is a significant bet on these mechanisms. These comprehensive targets cover all company emissions, including CO₂, methane, and other GHGs, and aim for an absolute decrease by 2030. However, its transition plan lacks a specific target dedicated to methane, the second most powerful GHG. Its near-term effects require dedicated, targeted action (a 75% reduction in methane emissions is required by the International Energy Agency's (IEA) 'Net Zero Emission by 2050' (NZE) pathway limiting global warming to 1.5°C).

2 Energy planning

Renewable deployment at speed and scale

When the IEA's Net Zero scenario was published in 2021, Iberdrola was already a first-mover with 65% of its installed capacity consisting of renewables.²⁹ The company intends to increase its renewable energy capacity by 12 GW (from 40 GW to 52 GW) between 2022 and 2025.³⁰ As of 2023, 68% of Iberdrola's total capacity was based on renewable energy, reaching almost 74% in Europe (Spain and the UK). In terms of generation, in Europe, 56% of its total generation came from renewables, with 100% in the UK and 48% in Spain.³¹ By 2030, Iberdrola intends its total installed capacity to be above 100 GW, with around 80 GW of that capacity being renewable³², and some hydropower capacity in Europe.

28 Iberdrola, Statement of Non-Financial Information. Sustainability Report, 2023, p.82.

29 Iberdrola, Sustainability Scorecard <https://www.iberdrola.com/sustainability/sustainable-management/sustainability-scorecard>

30 3.1 GW of onshore wind, 6.3 GW of solar, 1.8 GW of offshore wind, 700 MW of batteries and 200 MW of hydro are expected.

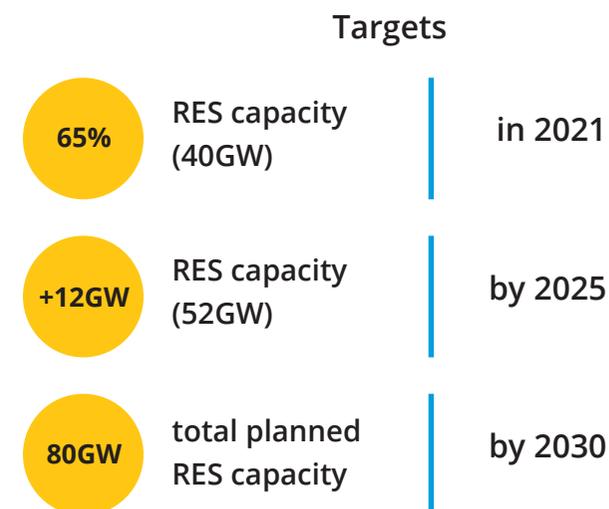
<https://www.iberdrola.com/sala-comunicacion/noticias/detalle/iberdrola-consolida-potencia-instalada-como-una-mas-limpia-mundo-rozar-40000-mw-verdes>

31 Financial information - Iberdrola

32 Iberdrola, Annual Consolidated Accounts 2023, p.58 <https://www.iberdrola.com/documents/20125/3643974/gsm24-annual-accounts-consolidated-2023.pdf>



Iberdrola's GHG emission reduction trajectory is in line with a 1.5°C aligned SBTi decarbonisation pathway and covers Scope 1, 2 and 3 emissions.



While Iberdrola has specified targets for installed renewable capacity by 2025 and 2030, it has so far failed to disclose its planned generation mix for other sources which according to published data would amount to 25% of its power in 2025 and 20% in 2030 compared to 31% now.³³ These calculations are based on the information Iberdrola disclosed for its renewable generation capacity. The company does not disclose information per technology on its future nuclear and fossil gas capacity.³⁴

A fossil fuel exit strategy in progress

In November 2017, during COP23, Iberdrola announced it would shut down its two remaining coal plants in Spain, Lada and Velilla (a combined capacity of 874 MW). Both closed in 2020, aligning with Spanish civil society's demand for coal to be phased out in Spain by 2025.

By the end of 2023, its existing gas plants represented 26% of the company's installed capacity (16.3 GW), with 15% owned and operated directly by Iberdrola – almost two third of which is in Europe, and 11% managed by third parties, such as those in Mexico operating under the Independent Power Producer regime contracted with the Comisión Federal de la Electricidad (CFE).³⁵ However, the latter were acquired by Mexico Infrastructure Partners (MIP) in February 2024, together with 1.4 GW of Iberdrola's own capacity in Mexico.³⁶ Iberdrola has therefore reduced its gas capacity by more than a half since the end of 2023, and now owns 9.2GW of gas plants.

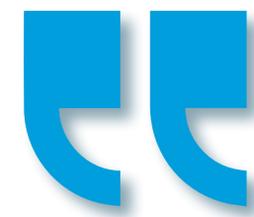
The company has committed to not develop new gas plants or LNG infrastructure, which is critical to achieve a 1.5°C aligned pathway. It now needs to announce a 2035 gas power phase-out to give credibility to its transition plan. The company has committed to be carbon neutral in scope 1 and 2 emissions by 2030 with offsets. However this commitment does not indicate when the last of its gas plants will shut down, which must happen no later than 2035 for its European plants. The late closure of its remaining gas assets would put its 2030 carbon neutrality target for electricity generation at risk.

³³ Iberdrola, Sustainability Report, p.30

³⁴ Strategic Vision (iberdrola.com), p.13 and p.21

³⁵ IBEWATCH FY 2023 (iberdrola.com)

³⁶ <https://www.iberdrola.com/sala-comunicacion/noticias/detalle/iberdrola-cierra-venta-negocio-ciclos-combinados-en-mexico-por-6200-mil-lones-de-dolares>



The company has committed

to not develop new gas plants or LNG infrastructure, which is critical to achieve a 1.5°C aligned pathway. It now needs to announce a 2035 gas power phase-out to give credibility to its transition plan.

3

CAPEX

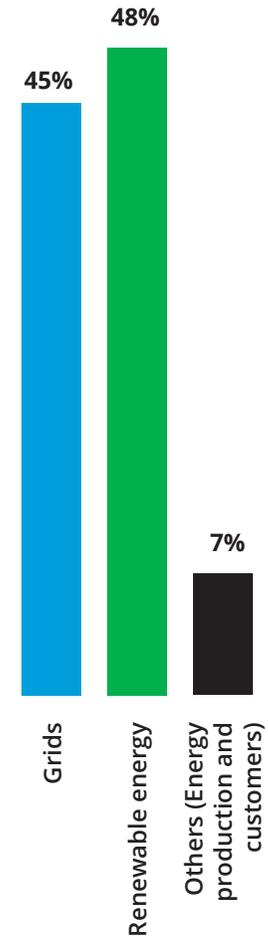
In 2023, 9.8% of Iberdrola’s CAPEX was allocated to activities non-aligned with the taxonomy. The company has not disclosed the specific details of these investments. 90.2% of its CAPEX was taxonomy-eligible with 1.4% invested³⁷ in electricity generation from fossil gaseous fuels. In the latest disclosure of its CAPEX plan,³⁸ for the period 2023-2025, the company outlined that more than €27bn are earmarked for grids (circa €16 billion as the acquisition of PNM has not gone through)³⁹ and €17 billion for renewable energy and battery development. This equates to more than 90% of Iberdrola’s CAPEX allocated to activities supporting the energy transition and leaves €2.3 billion earmarked for “Other Energy Production and Customers”, with no further details specified. Given Iberdrola’s commitment not to develop new gas plants or LNG terminals, it is likely that this investment will not go to fossil gas infrastructure. However, further details regarding this portion of the company’s CAPEX would be welcomed, so that stakeholders can fully assess its investment plan.

4

Climate planning: strategy and governance

Our assessment shows that Iberdrola has implemented governance measures aimed at achieving global climate neutrality by 2050. These measures include assigning the Board of Directors the responsibility for approving and producing regular reports on a climate action plan, requiring the Board to report annually on climate management,⁴⁰ and establishing a 2023-2025 Strategic Bonus⁴¹ as a long-term incentive for management and other Iberdrola professionals, linked to the company’s performance in relation to specific parameters such as increasing ESG financing⁴² and reducing CO2 emission intensity.⁴³

Iberdrola capital expenditure (CAPEX) 2023-2025



37 Iberdrola, Sustainability Report, p. 304.

38 Capital Markets and ESG Day in November 2022. <https://vipfiles.valor.com.br/BDEmpresas/fc49147a-bb9e-4576-864a-ad324da56588.pdf>

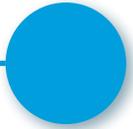
39 <https://www.reuters.com/markets/deals/iberdrolas-avangrid-terminates-83-bln-deal-buy-pnm-resources-2024-01-02/>

40 Art. 32(4), Iberdrola By-Laws. https://www.iberdrola.com/documents/20125/42013/by_laws.pdf

41 Annual Director Remuneration Report, 2023, p. 36 <https://www.iberdrola.com/documents/20125/3643974/gsm24-annual-director-remuneration-report-2023.pdf>

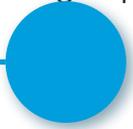
42 Expected to represent at least 80% of the financing issued by the Iberdrola group from 2023-2025.

43 27% reduction compared to the Group's 2021 CO2 emission intensity.



About Statkraft

Headquartered in Norway, Statkraft describes itself as a “leading company in hydropower internationally and Europe’s largest generator of renewable energy”. The group produces hydropower, wind power, solar power, gas-fired power and supplies district heating. Present in over 20 countries, the group says it aims to be one of the world’s leading renewables companies by 2025.



Statkraft’s transition plan in a nutshell

Statkraft’s transition is well underway as the company’s portfolio was built on hydropower and it started developing onshore wind back in the early 2000s. In 2023, 96.8% of its power generation was based on renewable energy sources. The group’s carbon intensity is among the lowest in the global energy sector. Recently, the group has also invested in solar and battery storage. However, Statkraft’s ambition to be net-zero by 2050 is regrettably late and ought to be brought forward.

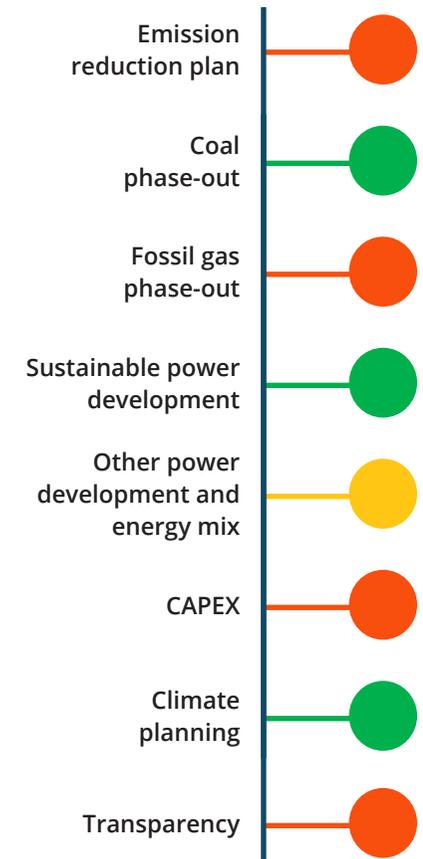


1 Emission reduction plan

Statkraft’s growth strategy is based on 100% renewable energy. The utility is committed to a greenhouse gas emission reduction trajectory compatible with a 1.5°C global warming target. In its 2023 sustainability report, Statkraft states that it wants to secure science-based third-party verification of its emissions targets by 2025. The company is targeting carbon neutrality for its scope 1 and scope 2 emissions by 2040 and aims to achieve net zero emissions for scope 1, 2 and 3 by 2050. These late net-zero targets aren’t aligned with the International Energy Agency’s (IEA) recommendations for the power sector. Statkraft aims for its carbon intensity (scope 1 and 2) to fall below 50g CO₂e/kWh by 2025 and 35g CO₂e/kWh by 2035. However, despite being ambitious, these targets do not account for methane or scope 3.

Statkraft

- fails to reach the basic criteria of a transition plan
- fails to deliver a robust and comprehensive transition plan
- reach the core criteria of a comprehensive transition plan



2

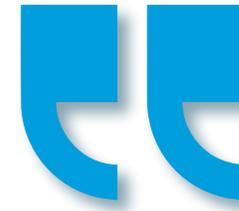
Energy planning

Renewable energy development that favours wind and solar

In 2023, Statkraft's consolidated installed renewables capacity accounted for 17.3 GW of its 19.4 GW installed power generation capacity. This includes 15.5 GW of hydropower – primarily located in the Nordics and accounting for about 75% of Statkraft's portfolio – and 1.7 GW of onshore wind power. Investment decisions concerning onshore wind, solar, battery and grid services were made for a further 1.3 GW on top of Statkraft's target of 1 GW for that year. The company is targeting an annual delivery rate of 2.5-3 GW of new capacity by 2025 and 4 GW by 2030. Statkraft has also stated its ambition to become an industrial player in offshore wind with plans to have 10 GW in operation in Northern Europe by 2040.

A solid fossil phase-out strategy that ought to be sped up

Statkraft is one of the rare utilities to reject gas development opportunities in Germany as it continues with its coal phase-out. The utility is without coal assets and has only four gas plants in operation in Germany. The company has announced that by 2040, these must either be sold, phased-out, retrofitted with CCUS technology, or use low-carbon fuels in combination with existing fossil fuel sources. For its transition plan to become near-perfect, the company should announce a fossil gas phase-out by 2035 at the latest, rather than 2040, and an ambition to close and not sell or convert its gas assets.



For its transition plan to become

near-perfect, Statkraft should announce a fossil gas phase-out by 2035 at the latest, rather than 2040, and an ambition to close and not sell or convert its gas assets.

3

CAPEX

As per its 2023 sustainability report, the proportion of Statkraft's CAPEX⁴⁴ allocated to sustainable power solutions – wind, solar, transmission and distribution of electricity, and storage – is 70%. Electricity generation from wind power benefits from the largest share of allocated CAPEX, totaling €1.28 billion. However, CAPEX allocated to solar, €64 million, is well behind that allocated to hydropower, which is €360 million.

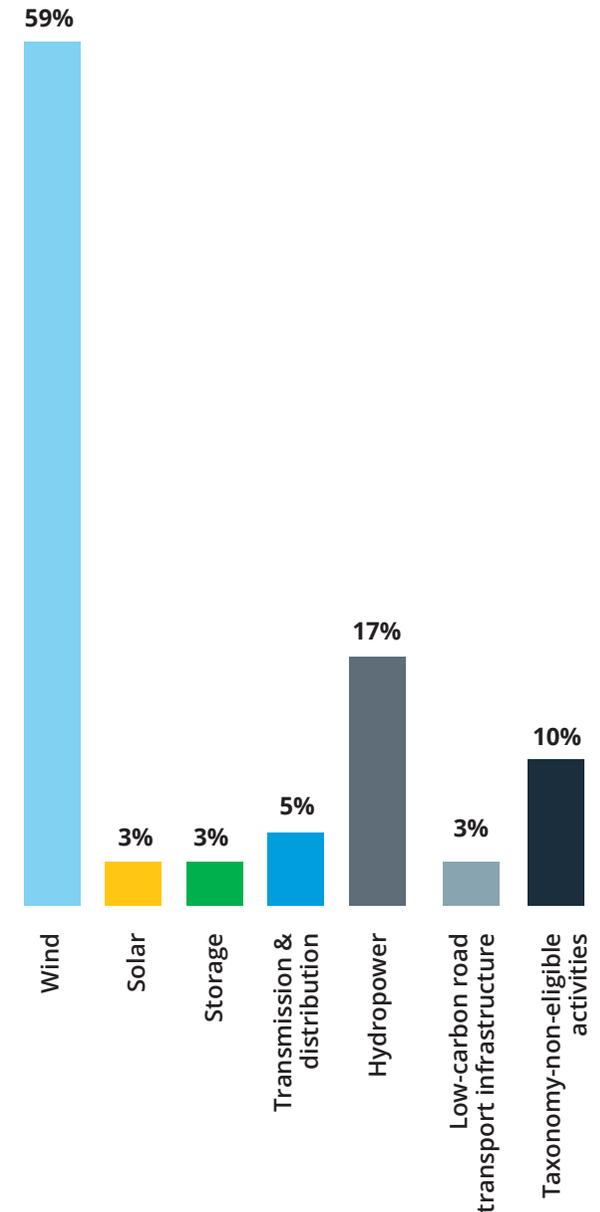
In 2023, Statkraft allocated €100 million to its transmission and distribution of electricity activities and €55 million to the storage of electricity, representing 5% and 3% of its CAPEX allocation, respectively. In comparison, only €1.5 million of its CAPEX goes to electricity generation from fossil gaseous fuels. Another €210 million is allocated to taxonomy non-eligible activities.

4

Climate planning: strategy and governance

Our assessment shows that Statkraft has implemented governance measures aimed at aligning the company with a 1.5°C scenario. These measures include assigning the Board of Directors the responsibility for monitoring and overseeing progress related to Statkraft's sustainability strategy, processes, and reporting, including targets and activities related to climate and environmental considerations. Additionally, the company ties the CEO and board bonuses to specific indicators, such as achieving predefined levels for construction run rates and pipeline additions for wind, solar, and battery projects.

Statkraft capital expenditure (CAPEX) 2023



⁴⁴ In this section, all costs are presented in euros (€), converted from the Norwegian krone (NOK) with a rate of 1 NOK = 0.087 € at the date of writing.

ANNEX 1 - Assessment criteria - List of KPIs

Category	Sub-category	n°	KPI
Emission reduction plan	Emission transition plan - Targets	1	Does the company have an emission reduction strategy based on a science-based 1.5°C scenario with no or low overshoot?
		2	Are targeted emission reduction levels consistent with reductions foreseen in the electricity pathway of the company's reference scenario?
	Emission transition plan - Timeline	3	Short-term ambition: does the company have emission reduction target(s) by 2027?
		4	Medium-term ambition: does the company have emission reduction target(s) by 2030?
		5	Long-term ambition: does the company have net zero target(s) by 2035 in the EU/OECD and/or 2040 in the rest of the world?
		6	Are emissions targets set in absolute values and address gross emissions (and can be complemented by intensity targets)?
	Emission transition plan - Perimeter	7	Do emissions targets cover all the entity value chain and activities on an operational basis?
		8	Do emissions targets cover scope 1, 2 and 3?
		9	Do emissions targets cover all GHGs?
		10	Are methane emissions addressed through specific targets?
	Emission transition plan - Compensation of emissions	11	Does the company have plans to employ emission capture technology or emissions offsets?
		12	What is the contribution of emission capture technology or emission offsets to net targets?
	Emission transition plan - Progress against target	13	Does the company report on the incremental progress made on its target over the last reporting year?
		14	Provide details on the actions and factors that led to emission reductions or increases in the last reporting year
		15	Provide details on the progress made on company emission targets since the last targets' baseline

Energy planning	Energy planning - coal phase-out	16	Does the company have coal power development plans (including purchasing existing coal power plants)?
		17	Does the company have a commitment to phase out coal-fired power plants?
		18	Does the company have a plant-by-plant closure plan for coal-fired power plants?
	Energy planning - fossil gas phase-out	19	Does the company have a commitment to close and not sell or convert coal-fired power plants to fossil gas, hydrogen, biogas, etc?
		20	Does the company have fossil gas-fired power development projects (including buying existing gas-fired power plants)?
		21	Does the company have a commitment to phasing out fossil gas power globally and/or in Europe, and if yes, by which date(s)?
		22	Do you have a fossil gas plant-by-plant closure plan?
	Energy planning - other power development	23	Does the company have a commitment to close and not sell or retrofit fossil gas plants to biomass, hydrogen, etc?
		24	Does the company have LNG infrastructure developments projects (Including plans to purchase existing infrastructure)?
	Energy planning - sustainable power development	25	Has the company committed to not develop new hydropower in Europe or biomass and nuclear power globally?
		26	If there is existing hydropower capacity in the company portfolio, do you plan to retrofit it to increase efficiency?
27		Does the company have solar/wind capacity targets in Europe and/or globally?	
28		Does the company have battery/storage/flexibility capacity or R&D targets in Europe and/or globally?	
29		If there are renewable targets, benchmark them against the IEA's NZE growth factors for renewable development by 2030	
CAPEX	Last reported financial	30	What was the average power capacity / generation mix over the last 12-18 months?
		31	What is the planned capacity and/or generation mix in the near-term and by 2030?
		32	Share of last year's CAPEX, with sufficient granularity on generation technology and flexibility
	Near-term financial	33	Share of last year's CAPEX related to coal, oil and fossil gas activities
		34	Share of last year's CAPEX aligned with the company's climate transition plan
		35	Near-term CAPEX, with sufficient granularity on generation technology and flexibility (supply storage, demand side management)
		36	Share of near-term CAPEX related to coal, oil and fossil gas activities
		37	Share of near-term CAPEX aligned with the company's climate transition plan
		38	Share of near-term CAPEX aligned with the sustainable finance taxonomy
		39	If near-term CAPEX is available, how does it benchmark against IEA's NZE 6:1 investment ratio

 Climate planning	Climate strategy	40	Does the company meet the exclusion criteria of the EU Paris-Aligned Benchmarks?
		41	Has the company set targets to increase its share of revenues from activities (products and services) aligned with its climate transition plan or the EU taxonomy?
		42	Has the company incorporated climate-related risks and opportunities with specific indicators and/or management processes in place?
	Climate governance	43	Has there been an announcement made publicly and by leadership on transition plans?
		44	Has the company established responsibility at board level for the achievement of climate targets and discloses evidence of this board oversight?
		45	Has the company defined management responsibilities and accountability for target implementation?

ANNEX 2 - Red and Yellow lines

Red lines: absolute minimum to be able to superficially claim to have a coherent transition plan

- Red line #1:** No mention of the reference scenario
- Red line #2:** No emission reduction target in 2030
- Red line #3:** No net zero target
- Red line #4:** All scopes (1, 2, 3) are not covered by absolute emission targets (> 90% Short-term, 100% Long-term)
- Red line #5:** No report over the last three years
- Red line #6:** The utility has coal power development plans
- Red line #7:** No coal-fired power phase-out commitment by 2030 in EU/OECD and 2040 in the rest of the world
- Red line #8:** No commitment on fossil gas power phase-out by 2035
- Red line #9:** LNG development or new fossil gas power development (base load or peak load)
- Red line #10:** Renewables < 55% capacity in 2030
- Red line #11:** No plan to develop battery/storage/flexibility capacities
- Red line #12:** No report on last years' progress
- Red line #13:** No information on the near-term CAPEX allocation
- Red line #14:** CAPEX ratio < 6:1
- Red line #15:** The company does not consider climate-related risks and opportunities in its strategy
- Red line #16:** No responsibility at board level for climate targets

Yellow lines: elements to improve/change to reach a robust, coherent and comprehensive transition plan

- Yellow line #1:** The reference scenario is not a science-based 1.5°C with no/low overshoot scenario
- Yellow line #2:** No emission reduction target by 2027
- Yellow line #3:** Net-zero target after 2035 in EU/OECD and 2040 in the rest of the world
- Yellow line #4:** Gross emissions / all GHGs are not addressed
- Yellow line #5:** No methane emission specific target
- Yellow line #6:** Capture technologies or emission offsets are considered as a lever of decarbonisation or for more than 10% of the long-term decarbonisation strategy
- Yellow line #7:** Plans to sell or convert coal-fired power plants
- Yellow line #8:** Plans to sell or retrofit fossil gas-fired power plants
- Yellow line #9:** Plans to develop new hydropower in Europe, and biomass or nuclear power globally
- Yellow line #10:** Power capacity generation mix detailed per technology (at least fossil / sustainable (wind/solar) / others)
- Yellow line #11:** Renewables < 2/3 capacity in 2030
- Yellow line #12:** No detail between fossil fuel and renewable in last year's CAPEX
- Yellow line #13:** No detail between fossil fuel and renewable on the near-term CAPEX
- Yellow line #14:** Capex in new fossil fuels capacity
- Yellow line #15:** The company does not respect the exclusion criteria of the EU Paris-aligned benchmarks
- Yellow line #16:** No management's responsibility and accountability for climate targets

ANNEX 3 - Transparency assessment

Utilities were questioned on 45 KPIs, ranked according to different levels of priority:

Priority 1 - KPI 1 - 4 - 5 - 6 - 8 - 13 - 16 - 17 - 18 - 20 - 21 - 24 - 25 - 27 - 28 - 31 - 32 - 35 - 42 - 44 - 45

1

KPI 1 - Does the company have an emission reduction strategy based on a science-based 1.5°C scenario with no or low overshoot?

KPI 4 - Medium-term ambition: does the company have emission reduction target(s) by 2030?

KPI 5 - Long-term ambition: does the company have net zero target(s) by 2035 in the EU/OECD and/or 2040 in the rest of the world?

KPI 6 - Are emissions targets set in absolute values and address gross emissions (and can be complemented by intensity targets)?

KPI 8 - Do emissions targets cover scope 1, 2 and 3?

KPI 13 - Does the company report on the incremental progress made on its target over the last reporting year?

KPI 16 - Does the company have coal power development plans (including purchasing existing coal power plants)?

KPI 17 - Does the company have a commitment to phase out coal-fired power plants?

KPI 18 - Does the company have a plant-by-plant closure plan for coal-fired power plants?

KPI 20 - Does the company have fossil gas-fired power developments projects (including buying existing gas-fired power plants)?

KPI 21 - Does the company have a commitment to phasing out fossil gas power globally and/or in Europe and if yes, by which date(s)?

KPI 24 - Does the company have LNG infrastructure developments projects (including plans to purchase existing infrastructure)?

KPI 25 - Has the company committed to not develop new hydropower in Europe or biomass and nuclear power globally?

KPI 27 - Does the company have Solar/Wind capacity targets in Europe and/or globally?

KPI 28 - Does the company have battery/storage/flexibility capacity or R&D targets in Europe and/or globally?

KPI 31 - What is the planned capacity and/or generation mix in the near-term and by 2030?

KPI 32 - Last year's CAPEX, with sufficient granularity on generation technology and flexibility

KPI 35 - Near-term CAPEX, with sufficient granularity on generation technology and flexibility (supply storage, demand side management)

KPI 42 - Has the company incorporated climate-related risks and opportunities with specific indicators and/or management processes in place?

KPI 44 - Has the company established responsibility at board level for the achievement of climate targets and discloses evidence of this board oversight?

KPI 45 - Has the company defined management responsibilities and accountability for target implementation?

Priority 2 - KPI 2 - 3 - 9 - 10 - 11 - 12 - 14 - 15 - 19 - 22 - 23 - 30 - 33 - 36 - 38 - 40

KPI 2 - Are targeted emission reduction levels consistent with reductions foreseen in the electricity pathway of the company's reference scenario?

KPI 3 - Short-term ambition: does the company have emission reduction target(s) by 2027?

KPI 9 - Do emissions targets cover all GHGs?

KPI 10 - Are methane emissions addressed through specific targets?

KPI 11 - Does the company have plans to employ emission capture technology or emissions offsets?

KPI 12 - What is the contribution of emission capture technology or emission offsets to net targets?

KPI 14 - Provide details on the actions and factors that led to emission reductions or increases in the last reporting year.

KPI 15 - Provide details on the progress made on company emission targets since the last targets' baseline

KPI 19 - Does the company have a commitment to close and not sell or convert coal-fired power plants to fossil gas, hydrogen, biogas, etc?

KPI 22 - Do you have a fossil gas plant-by-plant closure plan?

KPI 23 - Does the company have a commitment to close and not sell or retrofit fossil gas plants to biomass, hydrogen, etc?

KPI 30 - What was the average power capacity / generation mix over the last 12-18 months?

KPI 33 - Share of last year's CAPEX related to coal, oil and fossil gas activities

KPI 36 - Share of near-term CAPEX related to coal, oil and fossil gas activities

KPI 38 - Share of near-term CAPEX aligned with the sustainable finance taxonomy

KPI 40 - Does the company meet the exclusion criteria of the EU Paris-Aligned benchmarks?

Priority 3 - KPI 7 - 26 - 30 - 34 - 37 - 41 - 43

KPI 7 - Do emissions targets cover all the entity value chain and activities on an operational basis?

KPI 26 - If there is existing hydropower capacity in the company portfolio, do you plan to retrofit it to increase efficiency?

KPI 34 - Share of last year's CAPEX aligned with the company's climate transition plan

KPI 37 - Share of near-term CAPEX aligned with the company's climate transition plan

KPI 41 - Has the company set targets to increase its share of revenues from activities (products and services) aligned with its climate transition plan or the EU taxonomy?

KPI 43 - Has there been an announcement made publicly and by leadership on transition plans?





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