Equity Valuation of Iberdrola S.A.

Dylan Luís
152421076

Dissertation written under the supervision of Professor Fani Kalogirou

Dissertation submitted in partial fulfilment of requirements for the MSc in International Finance, at the Universidade Católica Portuguesa, March 2024.

Abstract

Author: Dylan Luís

Title: Equity Valuation of Iberdrola S.A.

Key words: utility; Iberdrola; valuation; Adjusted Present Value; trading multiples; scenarios; renewables; premium; buy; target price.

The purpose of this dissertation is to value the giant Spanish electric utility company, **Iberdrola S.A.** The valuation is supported by in-depth industry and company analysis, and is based on the *Adjusted Present Value* (**APV**) method. Three scenarios are designed using the industry forecasts provided by the *International Energy Agency* and Iberdrola's historical developments. The **APV** method is complemented by a **relative valuation** based on current trading multiples observed for Iberdrola's peers. The **APV** yields an equity share value of **€12.43** in the base scenario (a 15.45% upside). Based on the trading multiples the company is valued at a premium compared to its peers. However, I am convinced that at the current price (**€10.77**) Iberdrola's stock is below its fair value based on the detailed and forward-looking analysis performed in the **APV** and the promising outlook for renewables in this decade. Consequently, I conclude with a **BUY** recommendation based on a target price of **€11.98** (**+11.25%** upside), slightly more conservative than the mean target prices of analysts following the stock (€12.19).

Abstrato

Autor: Dylan Luís

Título: Avaliação financeira da empresa Iberdrola S.A.

Palavras-chave: utilidade; Iberdrola; avaliação; Valor Presente Ajustado; múltiplos de negociação; cenários; renováveis; prémio; comprar; preço-alvo.

O propósito desta dissertação é avaliar a gigante companhia elétrica espanhola, **Iberdrola S.A.** A avaliação é fundamentada por uma análise pormenorizada da indústria e da empresa, e é baseada no método do *Valor Presente Ajustado* (**VPA**). Três cenários são desenhados usando as previsões da indústria elaboradas pela Agência Internacional de Energia (**IEA**) e a evolução histórica da Iberdrola nos últimos anos. O método **VPA** é complementado por uma **avaliação relativa** baseada nos múltiplos de negociação atuais observados para empresas comparáveis. O **VPA** resulta num valor de ação igual à **€12.43** no cenário central (uma valorização de 15.45%). Usando os múltiplos, a empresa se encontra valorizada à um prémio em comparação com as comparáveis. No entanto, estou convencido que, ao preço atual (**€10.77**), a ação da Iberdrola está abaixo do seu valor justo tendo em conta a análise detalhada e prospectiva realizada dentro do **VPA** e a perspetiva promissora para as energias renováveis nesta década. Consequentemente, concluo com uma recomendação de **COMPRA** baseada num preço-alvo de **€11.98** (**+11.25%** de valorização), ligeiramente mais conservador do que o preço-alvo médio dos analistas que acompanham a ação (€12.19).

Acknowledgements

I want to express my considerable gratitude towards **Católica-Lisbon School of Business & Economics** and **Universidade Católica Portuguesa**. I am honored to be part of this great Portuguese institution, and I will represent it in the best way possible wherever I go.

Those two years as a student in the international MSc in Finance have been both challenging and exciting. I can say without any doubt that they are the best in my life so far. Going out of my comfort zone is definitely the best decision I took. Those who know me very well are aware of the challenge it has been to arrive here, in this moment of gratitude.

These two years I owe them not only to my work but also to all the professors involved in the MSc program. In particular I want to deeply thank Professor **Fani Kalogirou** for her great support and important help during the entire process. Thank you Professor. I want to thank Professor **José Faias** too for his considerable contribution to this prestigious MSc program, which I am sure will continue to thrive.

Moreover, I am grateful for all the great people I met at Católica-Lisbon, in particular my **close friends**. I want to thank my best friend, **Ivan Diogo Queirós**, and my sister **Mélanie Luís**.

Finally, this incredible journey will not have been possible without my mother, **Helena Maria Da Silva Pereira**, who has always believed in her son, and without God. I am grateful to both.

Let's continue the road and achieve the best possible version of oneself. I will always be active and interested in the Católica-Lisbon community, of which I am proudly part of.

Table of Contents

List of figures

List of tables

List of abbreviations

IEA: International Energy Agency

IRENA: International Renewable Energy Agency

IMF: International Monetary Fund

EU: European Union

U.K.: United Kingdom

U.S.: United States

bn: billion

m: million(s)

€m: Euro millions

incl.: including

c.: circa

EJ: Exajoule

kW: kilowatt

GW: gigawatt

GHG: Greenhouse gas

FY: Financial Year

RoW: Rest of the World

EP&C: Electricity Production & Customers

CAPEX: Capital Expenditures

NWC: Net Working Capital

APV: Adjusted Present Value

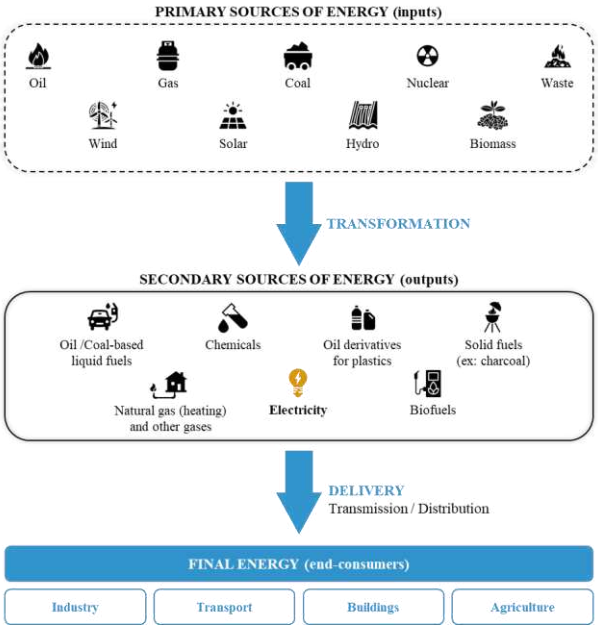
FCFF: Free Cash Flow to Firm

1. INDUSTRY ANALYSIS

Electricity is a secondary energy source, meaning it is derived from a primary energy source[1] (transformation). The conversion of energy into electricity is necessary because primary energy sources cannot be used directly by human activities. Additionally, electricity has numerous advantages such as high energy density (efficiency) and versatility (easily convertible).

Figure 1 illustrates a simplified scheme of the energy supply chain, of which electricity plays a central role today.

Figure 1: The energy supply chain



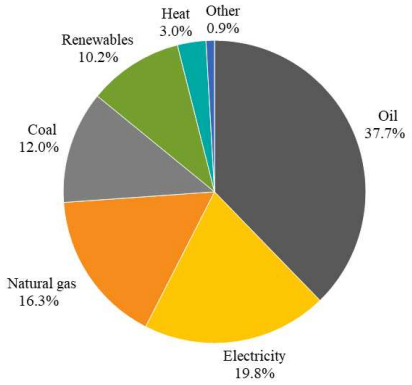
Source: U.S. Energy Information Administration

Electricity, and energy in general, is a critical sector in every region of the world, as it is an input to the economic system.

[1] *Primary* energy sources are those directly available in nature (sun, water, wind, geothermal, biomass, fossil fuels, minerals)

Electricity consumption worldwide amounted to **c.87.0** EJ in 2021, representing a significant **19.8%** of the total final energy consumption. However, when looking in detail at the global final energy mix (**figure 2**), oil remains the most used energy source (**37.7%** share), which suggests that the energy mix is still highly dependent on fossil fuels. However, this is expected to change[2].

Figure 2: Global final energy consumption mix (2021)



Source: IEA (2022)

Understanding the industry characteristics is an essential component of a company valuation, providing valuable information about the market dynamics. This chapter gives an overview of the global electricity industry, with references to the countries relevant for Iberdrola).

1.1. Historical developments: capacity, supply and demand

1.1.1. Power generation

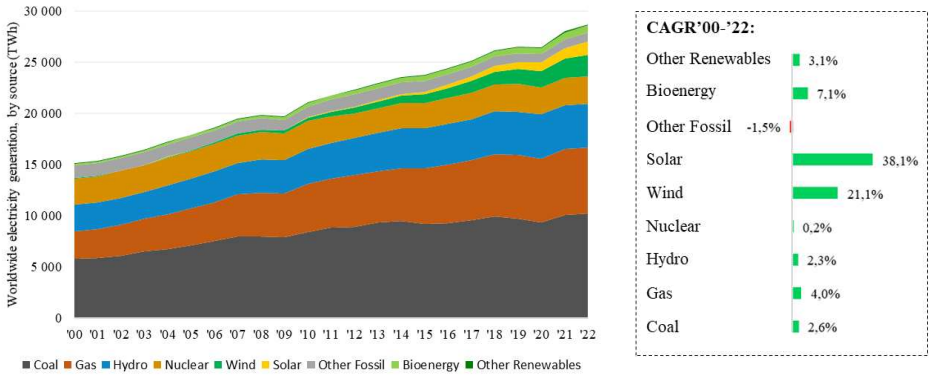
Global electricity supply has experienced consistent growth, increasing at a **3.0%** CAGR from 2000 and 2022, and representing **c.39%** of total energy supply today. Electricity production is essentially determined by the *installed power capacity*, *demand* and *environmental conditions*.

In terms of generation mix, fossil fuels**,** mainly coal and natural gas, are still prominent today, originating **61%** of electricity supply in 2022. However, the growth of renewable sources producing electricity is noteworthy, especially *solar* and *wind* energy. Those two

[2] Described in section 1.5.

sources accounted jointly for **12%** of the power output worldwide in 2022 (versus **4.6%** in 2015).

Figure 3: Global power generation mix, evolution 2000-2022

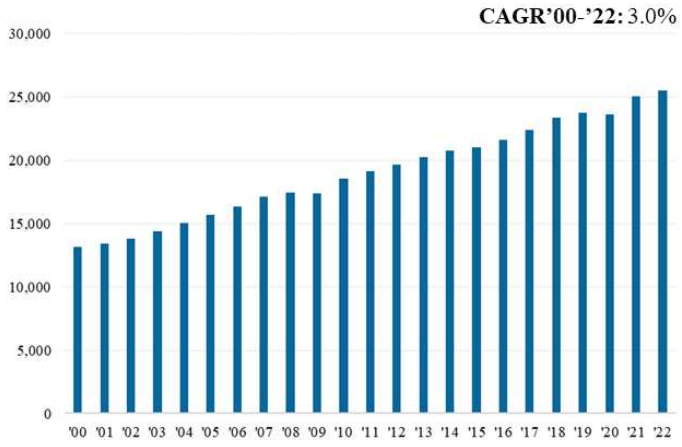


Source: Ember Climate, yearly electricity data

1.1.2. Electricity demand

Global electricity demand reached a record level of **25,530 TWh** in 2022, almost twice its 2000 level. There are three main factors driving this growth: the increase in population count worldwide from **6.1bn** in 2000 to **8.0bn** in 2022, the accelerated economic growth in emerging countries, and the expansion of technological appliances in human daily lives.

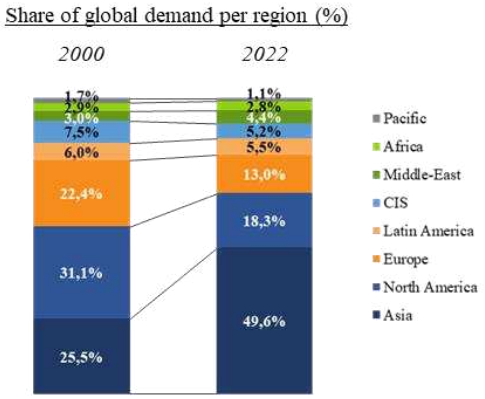
Figure 4: Global electricity demand, 2000-2022 evolution (TWh)



Source: Ember Climate, yearly electricity data

Figure 5 illustrates the evolution of the geographical mix of electricity demand. The bulk of global electricity demand has shifted from West to East. Today Asia accounts for almost half of demand.

Figure 5: Geographical mix of electricity demand, 2000-2022



Source: Ember Climate, yearly electricity data

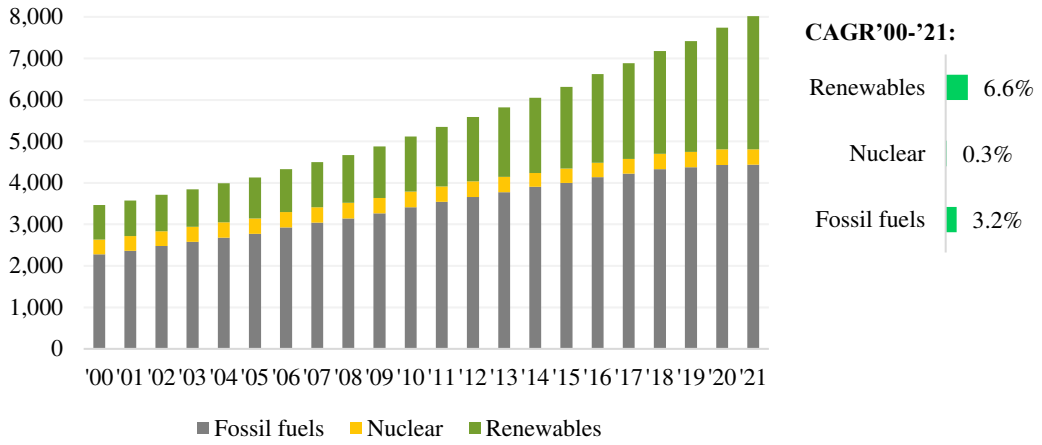
1.1.3. Installed capacity

Capacity is the maximum electricity output a generator can produce from a given primary energy source. **Net capacity factor**[3] is a measure of the utilization rate of a given plant during the year. It differs across energy sources and plant localizations, but is naturally always inferior to 100%.

Since 2000 global electric capacity increased from **3,468 GW** to **8,017 GW** (i.e., **4.1%** CAGR). Moreover, renewable installed capacity has been the fastest growing, with a **6.6%** CAGR, reaching **3,509 GW** in 2022. The bulk of renewable capacity growth has come from *solar* and *wind*, with outstanding CAGRs of close to **36%** and **20%** respectively.

[3] Structurally renewables have lower capacity factors than coal and gas since they are non-dispatchable.

Figure 6: Global installed capacity, 2000-2021 (GW)



Source: Ember Climate, yearly electricity data

1.2. Electricity demand and supply drivers[4]

Electricity consumption is directly linked to population growth. According to the United Nations World Population Prospects, the global population size is expected to rise from **c.8bn** in 2022 to **8.5bn** in 2030. Europe and North America are forecasted to reach their peak population size and initiate a population decline in the late 2030s.

Electrification is another important factor driving electricity demand. This phenomenon refers to the expansion of the use of electricity to end-uses that were until recently running on fossil-fuel energy sources. Almost all sectors are affected: residential, commercial, industrial, and transportation. The most illustrative example is the case of transportation with EVs. In 2022, the number of electric cars in the market was five times that of 2018, with more than **26 million** electric cars in circulation. Housing is the second fastest growing sector with regards to electrification, with new technologies for air heating and cooling, in particular heat pumps. Sales of heat pumps grew by **11%** in 2022 compared to 2021. Due to intense market competition and long lifetime of equipment, the electrification of industrial end-uses lags behind the other demand sectors. Electrification is a central component in the path to net zero CO_2 emissions and one of the main factors pushing up the share of electricity in total final energy consumption from **19.8%** in 2022 to an expected **27%** in 2030, -according to the IEA.

[4] Focus is on electricity produced from renewables

Lastly, the change in consumer behavior, with a preference towards green electricity is the third factor impacting demand. According to the IEA, climate awareness and the energy crisis triggered by the Russian-Ukraine war have increased citizens' interest regarding the energy transition. This third factor accelerates electrification and the adoption of more energy efficient appliances.

Turning to energy supply, there are five main drivers: *electricity demand*, *installed power capacity*, *technological innovation*, *regulatory policies*, and *grid infrastructure*.

Installed capacity is a critical variable affecting electricity supply in the medium-to-long term. More installed capacity means more electricity that can be produced. Creating additional capacity, e.g., new wind farms, solar PV parks, and hydroelectric plants, requires large investments[5]. Therefore, CAPEX are generally planned for a period of four to five years. The energy transition has significantly raised the investments in renewable energy deployment. For the first time, renewables capacity additions have been sufficient to meet the increase in electricity demand in 2022 which points towards the beginning of a decline in fossil fuels. Additionally, *critical minerals* became essential to the energy system since the manufacturing of renewable technologies[6] and batteries depend on the supply of these minerals, in particular copper, cobalt, nickel, lithium, silicon, and silver. As a result, the market for critical minerals has doubled over the past five years.

Technological innovation is another important driver of electricity supply, and renewables' expansion. Indeed, some technologies become more competitive than others over time. This translates into technologies with improving average net capacity factors and lower cost of generation, which drives up their profitability and their expansion in the electricity mix. It is the case of wind and solar: larger and more resistant wind turbines / solar panels installed in more remote locations, where the availability of wind and solar energy is greater, have caused a sharp *decline* in the *cost per kW* and, therefore, a greater adoption of both sources. Innovation in the market is key to enhance the penetration of renewables required for electrification and largely influences investments in additional capacity.

Regulatory policies further impact electricity supply and the energy mix given that they are able to promote investments in renewable technologies. Regulatory frameworks have

[5] Key driver of revenue growth for electric utilities
[6] Especially wind and solar

well developed since the Kyoto Protocol[7] (1997), the first international treaty on the reduction of GHG emissions. Following heightened concerns over a worsening climate change, the Paris Agreement (2015) targets the limit of the global average temperature increase to well below 2ºC above pre-industrial levels. To achieve this goal, GHG emissions must be reduced by **43%** by 2030. More recently, renewables have gained further traction especially in Europe (*European Green Deal*[8]) and the U.S. (*Inflation Reduction Act)*.

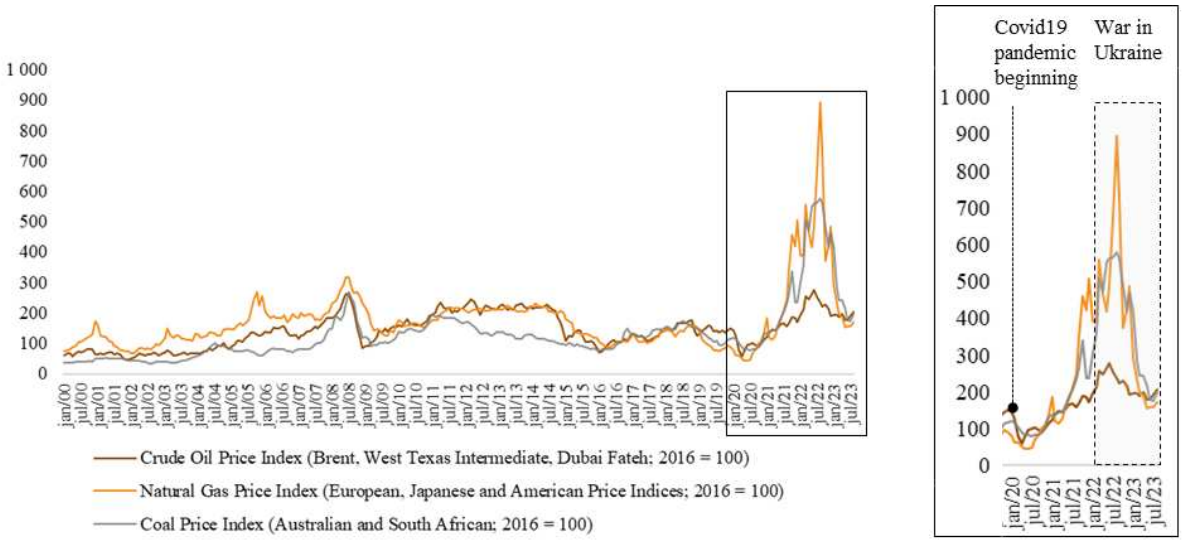
Lastly, a well-functioning *grid*[9] *infrastructure* plays a key role in electricity supply and its management. Renewables' expansion requires more power lines, with greater technological sophistication to ensure in-real time electricity supply to customers.

1.3. The Russia-Ukraine conflict: energy independence as a resurging priority

The invasion of Ukraine by Russian troops in 2022 has triggered considerable energy price increases, due to squeezed supplies, which have spread to other economic sectors leading to aggravated inflation globally. Although prices dropped later in the year, in January 2023 natural gas and coal global prices were still **25%** and **45%** above their pre-war levels. Today they are still above their long-term historical average. These higher prices inflated the revenues of electric utilities in 2022, but delayed the industry's investment commitments for that year. That said, the geopolitical context has increased momentum for the energy transition given heightened energy security concerns from governments. *Energy independence*, as a shield against the volatility of fossil fuel prices has become a key strategic priority for governments, particularly in Europe.

[7] Created the International Emissions Trading mechanism, allowing trading of emission units to incentivize emission reduction
[8] Europe to be the world's first climate-neutral continent by 2050
[9] Network of transmission and distribution lines

Figure 7: Energy commodities' price dynamics (2000-2023)



Source: IMF data

1.4. Macroeconomic outlook

GDP growth

According to IMF World Economic Outlook, global growth is expected to slow down from **3.5%** in 2022 to **3.0%** in 2023 and **2.9%** in 2024, notably below the historical average of **3.8%** (2000 - 2019). Developed countries are anticipated to decelerate from **2.6%** in 2022 to **1.5%** in 2023 and **1.4%** in 2024. Spain is expected to be less impacted with a **2.5%** real GDP growth in 2023, then expected to oscillate from **1.7%** in 2024 to **2.1%** in 2025. Contrary, the U.K. is expected to reach low rates with **0.5%** in 2023 and **0.6%** in 2024, but prospects should increase to **2%** in 2025. The U.S. real GDP is expected to stay steady at **2.1%** in 2023, but should reach **1.5%** in 2024 before increasing to **2.1%** in 2026. Finally, although Brazil is expected to have an above average GDP growth at **3.1%** in 2023, prospects indicate real GDP growth will drop to **1.5%** in 2024 before increasing to **2%** in 2027.

Inflation rates

Global inflation is expected to decline gradually, according to the IMF. It should drop from **8.7%** in 2022 to **6.9%** in 2023 and **5.8%** in 2024, supported by tighter monetary policies and lower international commodity prices. Spain's inflation is expected to drop from **8.3%** to **3.5%** in 2023, gradually reaching **1.7%** in 2028. Inflation in the UK should decrease from **9.1%** in 2022 to **7.7%** 2023 and **3.7%** in 2024. Similarly, inflation in the USA should decrease from **8%** in 2022 to **4.1%** in 2023 and then to **2.8%** in 2024.

Finally, Brazil should also experience an inflation cut from **9.3%** in 2022 to **4.7%** in 2023, but is expected to remain steady at **3%** from 2025 onwards.

Commodity prices

Commodity prices are expected to be down at the end of 2023 compared to 2021/2022. The *Commodity Natural Gas Price Index* should decrease by **61%** in 2023 before it increases again by **29%** in 2024. However, from 2025 onwards the index is expected to keep decreasing to **156** (versus **521.6** in 2022). The *Australian and south African Coal Index* should also experience an important decrease of **51%** in 2023, from **485** in 2022 to **235**. A slower decrease is expected after 2023.

1.5. Current market trends and outlook for renewables

An analysis of the PORTER's five forces is provided in **appendix 1** to complement this section.

An improved policy environment

Recently enacted regulations increased investment efforts in renewables and provided more predictable frameworks uplifting private investment.

In Europe, the European Green Deal has been complemented by the *REPowerEU Plan* (2022), in response to the energy crisis. The aim is to increase the EU's target for renewable energy in the energy mix to **45%** by 2030, up from the previous goal of **40%**. The plan targets the additions of almost **600 GW** of solar PV and **16** GW of wind capacities by 2030. **€300bn** are mobilized for renewables and grids. A central matter of the plan is the speeding-up of renewables' permit to minimize the time for the roll-out of renewable projects and grid infrastructure improvements.

In the U.S., the *Inflation Reduction Act* (2022) represents an historical investment in renewable energy and grid infrastructure, targeting a reduction of carbon emissions by roughly **40%** by 2030. Indeed, total investment in renewables and grids are estimated at **$370bn**. It extends and introduces new tax credits for renewable energy projects, in particular the *Investment Tax Credit* (ITC) and the *Production Tax Credit* (PTC). It includes massive investments for grid improvement in transmission infrastructure to connect renewable energy resources with demand centers.

Additionally, those policies commonly set up an improvement in remuneration schemes for renewables with better designed long-term contracts between utilities and consumers such as PPAs[10] which provide for the predictability required to foster investments.

Scenarios for renewables expansion

This dissertation's *industry projections* rely on the *World Energy Outlook 2023* publication from the IEA. This publication examines different possible scenarios for the evolution of global energy supply and demand including electricity, taking into account the current state of the industry and setting different assumptions regarding the economy, populations, technological developments and costs, energy prices, regulations and policies. The IEA draws three main scenarios about the future of energy:

- *Net Zero Emissions by 2050* Scenario (*NZE*): it is a normative scenario in the sense that it starts from the hypothetical situation in which net zero emissions are achieved in 2050. It can be considered as an ideal scenario, whose forecasts are not taken as reference for our industry projections.
- The *Announced Pledges* Scenario (*APS*): this scenario relies on the meeting of all the climate-related commitments that have been announced by governments so far. *We consider this scenario's forecasts an optimistic case for the industry.*
- The *Stated Policies* Scenario (*STEPS*): this scenario is based on existing policies and measures undertaken by governments, providing an analysis of the current policy landscape, markets, infrastructures and barriers. *We consider this scenario's forecasts a pessimistic case for the industry.*

In this dissertation the **base** scenario will be the *mean* expectations resulting from the APS and the STEPS.

In the APS the IEA forecasts renewable installed capacity at **9,786 GW** in 2030, implying a CAGR of **13%** between 2022 and 2030.

[10] Power purchase agreements: most common forms are feed-in tariff and feed-in premium PPAs.

Table 1: Industry installed capacity projections, by source, APS, IEA

			Announced Pledges Scenario (GW)				Shares (%)			CAAGR (%) 2022 to:	
	2010	2022	2030	2035	2040	2050	2022	2030	2050	2030	2050
Total capacity	**5 187**	**8 643**	**15 285**	**20 332**	**25 195**	**32 100**	**100**	**100**	**100**	**7.4**	**4.8**
Renewables	1 333	3 629	9 786	14 426	18 893	25 368	42	64	79	13	7.2
Solar PV	39	1 145	5 377	8 648	11 787	16 041	13	35	50	21	9.9
Wind	181	902	2 420	3 418	4 337	5 879	10	16	18	13	6.9
Hydro	1 027	1 392	1 620	1 804	1 991	2 304	16	11	7	1.9	1.8
Bioenergy	74	168	300	407	524	706	2	2	2	7.6	5.3
of which BECCS	-	-	8	32	56	94	-	0	0	n.a.	n.a.
CSP	1	7	29	86	165	295	0	0	1	19	14
Geothermal	10	15	34	51	67	100	0	0	0	11	7.0
Marine	0	1	5	12	23	44	0	0	0	27	15
Nuclear	403	417	497	587	677	769	5	3	2	2.2	2.2
Hydrogen and ammonia	-	-	31	134	174	195	-	0	1	n.a.	n.a.
Fossil fuels with CCUS	-	0	8	71	121	206	0	0	1	70	30
Coal with CCUS	-	0	4	50	88	153	0	0	0	53	29
Natural gas with CCUS	-	-	5	21	34	53	-	0	0	n.a.	n.a.
Unabated fossil fuels	3 439	4 535	4 225	3 725	3 289	2 432	52	28	8	-0.9	-2.2
Coal	1 614	2 236	2 036	1 749	1 474	911	26	13	3	-1.2	-3.2
Natural gas	1 389	1 875	1 905	1 743	1 613	1 371	22	12	4	0.2	-1.1
Oil	436	423	283	234	202	150	5	2	0	-4.9	-3.6
Battery storage	1	45	725	1 377	2 029	3 121	1	5	10	41	16

Source: World energy outlook 2023, IEA

In the STEPS the IEA projects that renewable installed capacity will grow at a **11%** CAGR over the period 2023-2030, achieving **8,611 GW** at the end of the decade. Again, *solar* and *wind* are the drivers of renewables' expansion with **19%** and **11%** CAGRs until 2030 respectively.

Table 2 : Industry installed capacity projections, by source, STEPS, IEA

			Stated Policies Scenario (GW)				Shares (%)			CAAGR (%) 2022 to:	
	2010	2022	2030	2035	2040	2050	2022	2030	2050	2030	2050
Total capacity	**5 187**	**8 643**	**14 168**	**17 923**	**21 328**	**25 956**	**100**	**100**	**100**	**6.4**	**4.0**
Renewables	1 333	3 629	8 611	11 949	14 965	19 120	42	61	74	11	6.1
Solar PV	39	1 145	4 699	7 174	9 500	12 639	13	33	49	19	9.0
Wind	181	902	2 064	2 747	3 242	3 874	10	15	15	11	5.3
Hydro	1 027	1 392	1 571	1 681	1 801	2 028	16	11	8	1.5	1.4
Bioenergy	74	168	232	272	311	393	2	2	2	4.1	3.1
of which BECCS	-	-	1	1	1	1	-	0	0	n.a.	n.a.
CSP	1	7	16	29	46	85	0	0	0	11	9.4
Geothermal	10	15	27	37	47	63	0	0	0	7.4	5.3
Marine	0	1	3	9	18	36	0	0	0	17	15
Nuclear	403	417	482	521	557	622	5	3	2	1.8	1.4
Hydrogen and ammonia	-	-	8	17	24	19	-	0	0	n.a.	n.a.
Fossil fuels with CCUS	-	0	2	12	22	31	0	0	0	41	22
Coal with CCUS	-	0	1	6	11	13	0	0	0	32	18
Natural gas with CCUS	-	-	1	6	11	18	-	0	0	n.a.	n.a.
Unabated fossil fuels	3 439	4 535	4 498	4 364	4 216	3 800	52	32	15	-0.1	-0.6
Coal	1 614	2 236	2 126	1 956	1 795	1 363	26	15	5	-0.6	-1.8
Natural gas	1 389	1 875	2 071	2 139	2 185	2 259	22	15	9	1.2	0.7
Oil	436	423	301	269	236	178	5	2	1	-4.2	-3.0
Battery storage	1	45	552	1 047	1 531	2 352	1	4	9	37	15

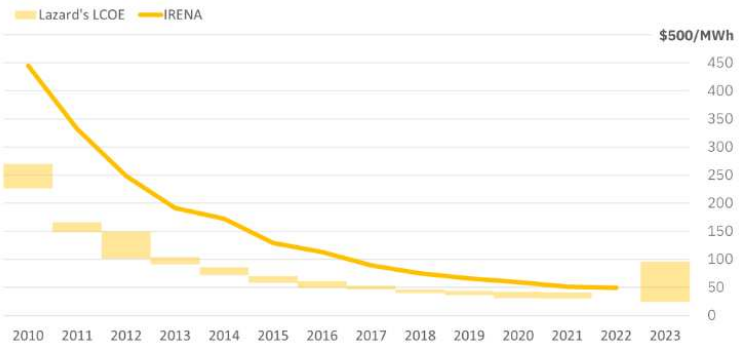
Source: World energy outlook 2023, IEA

IEA's projections regarding electricity output by source are presented in **appendix 2**. Regarding the final consumption, global electricity demand is expected to grow at a **2.6%** and **2.5%** CAGRs in the APS and the STEPS scenarios respectively.

In both scenarios, *solar* and *wind* benefit from a strong outlook. Apart from the energy transition momentum and energy independence interests, this outlook is due to a declining LCOE[11]of **89%** for *solar*, **69%** for *onshore wind* and **59%** for *offshore wind* between 2010 and 2022 (**figures 8, 9, 10** below). The main contributing factors are technological improvements associated with declining manufacturing costs. However, between 2021 and 2023, LCOEs increased as a result of inflation and supply chain bottlenecks. Industry expectations are that LCOEs of *solar* and *onshore wind* in 2030 will be slightly lower compared to 2022, while *offshore wind* LCOE is expected to decrease more significantly. Note that solar and onshore wind are already cost-competitive technologies compared to fossil fuels. Additionally, the higher expected growth rate for solar capacity is also due to the greater speed of deployment of solar parks, in comparison to wind farms.

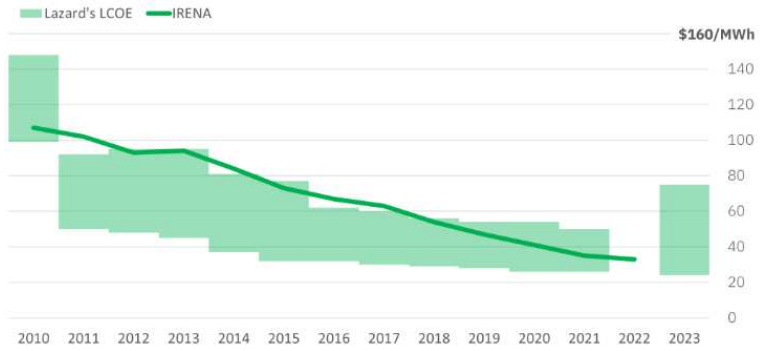
[11] Levelized cost of electricity: cost of producing one MWh (or kWh) of electricity with a given technology ($/MWh or /kWh)

Figure 8: Average LCOE of solar PV projects, 2010-2023



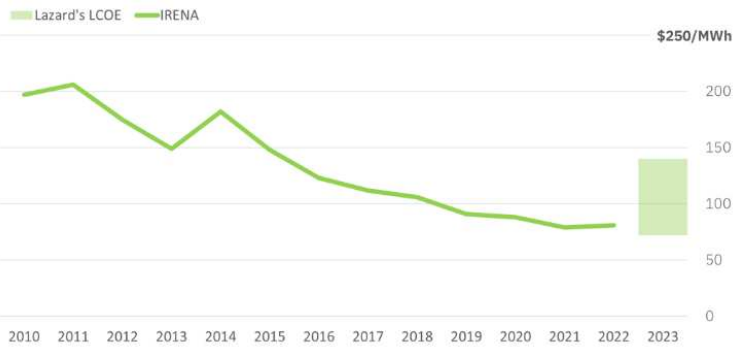
Source: IRENA (2022)

Figure 9: Average LCOE of onshore wind projects, 2010-2023



Source: IRENA (2022)

Figure 10: Average LCOE of offshore wind projects, 2010-2023



Source: IRENA (2022)

Main challenges implied by the expansion of renewables

These challenges include output variability, smart grids' implementation, electricity storage, large supply of critical minerals.

Output variability is inherent to renewable sources like wind and solar power. They are dependent on weather conditions, making their output variable. This unpredictability

challenges grid operators in balancing supply and demand quickly. Technology improvements are key to enhance capacity factors and grid infrastructure needs to be upgraded.

The variability nature of renewable power creates the *need for smart grids*: electricity grids were designed for stable, centralized power generation sources, not for renewables. Thus highly flexible grids are necessary to integrate massive amounts of renewable output in the near-term future.

In a renewables-backed energy system *electricity storage* becomes essential for energy security since the flexibility required can only be achieved if renewable output can be stored when demand is low. Batteries and green hydrogen seem to be the solutions to the storage question, but they are still at a early stage of development.

Lastly, ensuring a *scale-up of the supply in critical minerals* is essential to renewables' expansion and storage development. A supply shortage of these minerals represent a significant risk for renewables' expansion and the energy transition.

2. COMPANY ANALYSIS

2.1. Iberdrola at a glance, a leader in renewables

2.1.1. Overview

Iberdrola S.A. is a utility company headquartered in Spain, incorporated in 1992 as a result from the merger of *Iberduero* and *Hidroeléctrica Española*. With **c.36m** customers, a workforce of **c.40,000** people a3nd a market capitalization of approximately **€68bn** (as of 16/02/2024), Iberdrola is the **5th** largest electricity player in the world, and the **2nd** with regards to *renewable energy* based on revenue (FY'22). It is recognized as a global clean energy leader for its early move into renewables 20 years ago. The company is number one in *wind generation* worldwide. Iberdrola's equity is traded on the Madrid stock exchange, being a constituent of the IBEX-35, the main Spanish stock index.

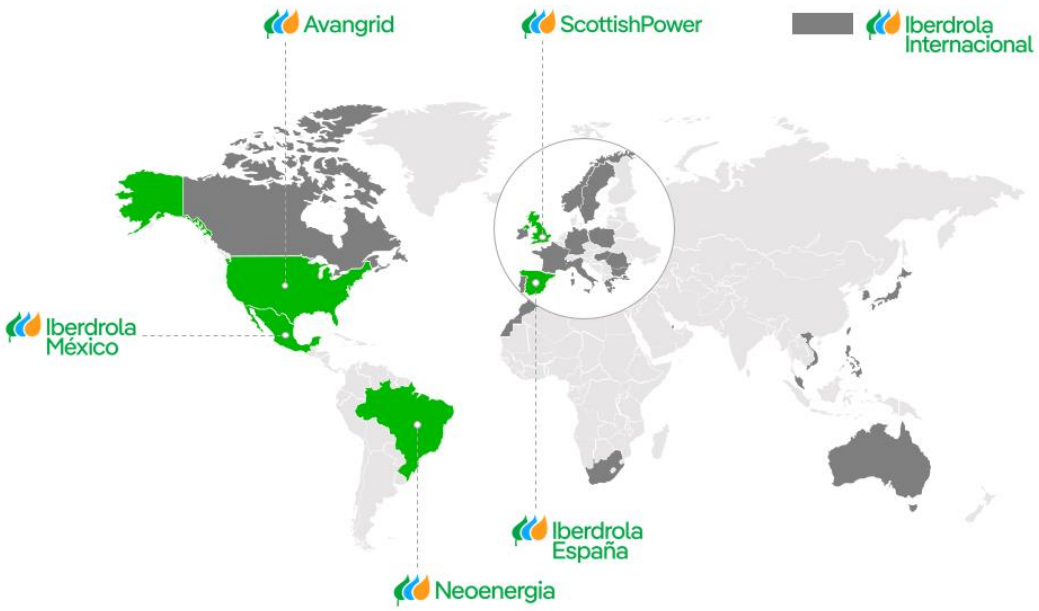
Iberdrola is engaged in the entire electricity value chain, more precisely in the following activities:

- Power generation, mainly from renewable energy sources;
- Transmission and distribution of electricity;
- Large-scale storage (GWh) using pumped hydroelectricity;
- Electricity and gas supply to the end-user;
- Smart energy solutions for residential customers (heat pumps, electric mobility, solar panels, etc …) and industrial clients (green hydrogen, industrial heat).

2.1.2. Geographical footprint

Iberdrola operates in close to **30** countries, with a focus on **5** geographies: Spain, the U.K., the U.S, Brazil and Mexico (to a lower extent). The group's corporate structure reflects this focus, with a specific subholding company for each of these **5** countries, while operations in other countries[12] ("rest of the world") are managed by *Iberdrola Energia Internacional (I.E.I.)*.

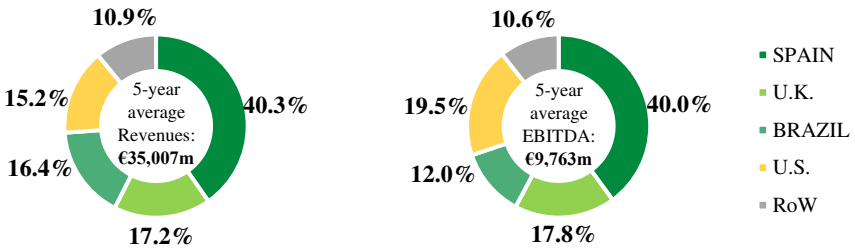
Figure 11: Geographical footprint of *Iberdrola*'s operations and head entities of the group



Source: *Company website; Sustainability Report 2022*

Financially, Iberdrola's 5-year average total revenues are split in the following order: **40.3%** in Spain, **17.2%** in the U.K., **16.4%** in Brazil, **15.2%** in the U.S., and **10.9%** for the RoW[13].

Figure 12: Geographical split of consolidated 5-year average Revenues and EBITDA



Source: Company's integrated reports

[12] RoW, of which the most important countries are Mexico, Australia, France, and Germany
[13] Mexico included in the rest of the world, since it no longer has a strategic importance similar to Spain, the U.K., Brazil and the U.S., after the sale of 55% of the business in the country to Mexico Infrastructure Partners in 2023

2.1.3. Management team (key members)

Ignacio Galán,
Executive chairman

Armando Martínez,
Chief executive officer

José Sáinz Armada,
Director of Finance and Corporate Development (CFO equivalent)

Mr. Armando Martínez Martínez became the CEO on October 25, 2022, succeeding Mr. José Ignacio Sánchez Galán, who now serves as the Executive Chairman. The Executive Committee, acting on behalf of the Board of Directors, includes **6** members from the Board. The Remuneration Committee, consisting of **3** to **5** non-executive directors, the majority of whom must be independent, determines the remuneration of the Directors and members of the senior management.

2.1.4. Key operating metrics

Table 4 : Key operating metrics (2017-2022)

	FY'17	FY'18	FY'19	FY'20	FY'21	FY'22	CAGR'17-'22
Total installed capacity (MW)	**48,446**	**46,693**	**52,082**	**55,110**	**58,320**	**60,761**	**4.6%**
Net owned capacity (MW)*	43,832	42,057	45,702	47,964	51,174	53,615	4.1%
Renewable installed capacity (MW)	**29,008**	**29,197**	**31,939**	**34,819**	**38,036**	**39,963**	**6.6%**
Renewable installed capacity (% of net owned capacity)	66%	69%	70%	73%	74%	75%	2.4%
Electricity output (GWh)	**137,550**	**145,603**	**151,758**	**162,841**	**164,268**	**163,031**	**3.5%**
Net owned output (GWh)*	106,953	115,132	114,250	123,463	129,360	125,541	3.3%
Renewable electricity output (% of net owned output)	47%	53%	52%	55%	57%	59%	4.7%
Supplied energy (GWh)	**230,151**	**233,435**	**233,541**	**224,998**	**237,752**	**235,506**	**0.5%**
Lines (Km)	**1,156,611**	**1,173,672**	**1,191,513**	**1,206,783**	**1,240,137**	**1,264,641**	**1.8%**
Total retail contracts (millions)	**22.2**	**23.3**	**25.0**	**26.2**	**28.1**	**29.9**	**6.1%**
**excludes share of third parties' capacity / production*							

Source: Company integrated and sustainability reports (FY'17/18/19/20/21/22)

Table 4 reports the key metrics of Iberdrola's operations since FY'17. Renewable installed capacity increased at a **6.6%** CAGR, exceeding the growth of total installed capacity, which resulted in a greater share of renewables in the group's total installed capacity (**75%** at the end of FY'22, considering net owned capacity[14]).

[14] Excluding Iberdrola's share in third parties' generation assets in Mexico (7,146 MW in 2022)

2.1.5. Key financial metrics

Table 5: Key financial metrics (2017-2022)

€m	FY'17	FY'18	FY'19	FY'20	FY'21	FY'22	CAGR'17-'21	FY'22 vs '21
REVENUES	**31,263**	**35,076**	**36,438**	**33,145**	**39,113**	**53,949**	**5.8%**	**37.9%**
TOTAL OPERATING EXPENSES	(28,551)	(29,637)	(30,561)	(27,581)	(31,771)	(45,966)	2.7%	44.7%
EBITDA	**7,319**	**9,349**	**10,104**	**10,038**	**12,006**	**13,228**	**13.2%**	**10.2%**
EBITDA margin (%)	*23%*	*27%*	*28%*	*30%*	*31%*	*25%*	*7.0%*	*-20.1%*
NET PROFIT	**2,804**	**3,014**	**3,466**	**3,611**	**3,885**	**4,339**	**8.5%**	**11.7%**
NET PROFIT margin (%)	*9%*	*9%*	*10%*	*11%*	*10%*	*8%*	*2.6%*	*-19.0%*
TOTAL ASSETS	**110,689**	**113,038**	**122,369**	**122,518**	**141,752**	**154,668**	**6.4%**	**9.1%**
SHAREHOLDERS' EQUITY	42,733	43,977	47,195	47,219	56,126	58,114	7.1%	3.5%
NET CASH FLOW FROM OPERATIONS	**5,027**	**6,795**	**7,255**	**7,291**	**8,914**	**11,123**	**15.4%**	**24.8%**

Source: Company integrated and financial auditors' reports (FY'17/18/19/20/21/22)

Revenues have risen at a **5.8%** CAGR over the period 2017-2021, and **37.9%** in 2022[15]. EBITDA margins have increased – except for FY'22 when costs increased disproportionally due to inflation – signaling a greater efficiency in cost management.

2.1.6. Shareholder structure

Table 6: *Iberdrola*'s top shareholders (31/12/2023)

Top Investors	Ownership share (%)
Qatar Investment Authority	8.59%
BlackRock Institutional Trust Company	5.23%
Norges Bank Investment Management	3.61%
The Vanguard Group, Inc.	2.77%
BlackRock Advisors (UK) Limited	0.93%

Source: Refinitiv Eikon

Table 7: Share capital characteristics

Share capital characteristics	
Shares outstanding	**6,350,278,000**
Free float	99.75%
Traded shares	**6,334,084,791**
Daily trading volume (average 2023)	12,052,470

Source: Company website

Iberdrola's equity is owned by a broad range of investors, with no investor having a controlling interest in the company. Circa **600,000** entities form the shareholder structure of Iberdrola. *Qatar Investment Authority* tops the shareholder list with **8.59%** of shares, followed by *BlackRock* which owns **5.23%** of shares.

As of 31/12/2023, there are **6,350,278,000** shares outstanding, and a free float of **99.75%**. The remaining **0.25%** shares outstanding are held by the board of directors.

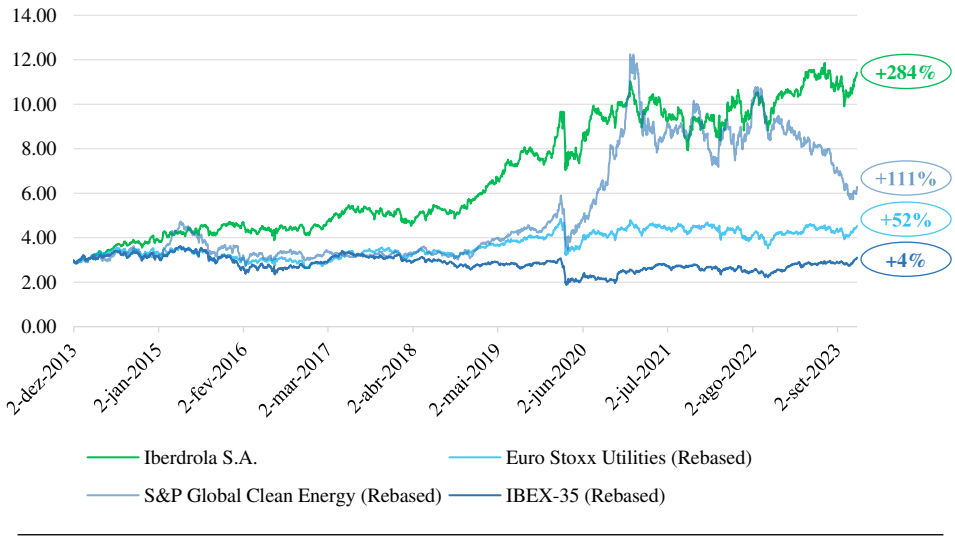
2.1.7. Share price performance[16]

[15] Driven by accelerated inflation

[16] On figure 14:

- Prices rebased to Iberdrola's initial stock price (at 02/12/2013);
- The S&P Global Clean Energy Index tracks companies that produce energy from solar, wind, hydro, biomass, and other renewable sources, as well as companies that build and provide clean technology.

Figure 13: Iberdrola and Benchmark Indexes – Share price performance



Source: Refinitiv Eikon (Datastream)

Table 8: Iberdrola, European peers, Benchmark Indexes – Share price statistics

Annualized stock returns

	10-Year	5-Year	2-Year	YTD
Iberdrola	**15.2%**	**17.4%**	**14.7%**	**10.5%**
EUROPEAN PEERS WITH HIGH INTERNATIONAL PRESENCE				
Enel	10.1%	9.4%	2.3%	29.1%
EDP	7.7%	10.7%	-0.9%	-3.9%
Engie	2.5%	8.7%	14.3%	21.0%
Naturgy	6.8%	8.0%	8.7%	14.4%
RWE	10.8%	19.1%	11.6%	-2.0%
Oersted	n/a	2.5%	-31.5%	-54.9%
National Grid	4.7%	7.6%	3.8%	8.4%
Average peers	**7.1%**	**9.4%**	**1.0%**	**1.8%**
BENCHMARK INDEXES				
IBEX-35	2.4%	4.4%	11.4%	23.4%
Euro Stoxx Utilities	5.9%	8.2%	3.4%	10.7%
S&P Global Clean Energy	10.3%	16.1%	-15.2%	-32.8%

Annualized return volatilities

	10-Year	5-Year	2-Year	YTD
Iberdrola	**20.0%**	**22.4%**	**20.4%**	**15.4%**
EUROPEAN PEERS WITH HIGH INTERNATIONAL PRESENCE				
Enel	25.3%	25.7%	24.3%	18.7%
EDP	24.4%	25.6%	23.6%	20.7%
Engie	24.9%	26.9%	25.7%	18.9%
Naturgy	23.5%	26.2%	24.2%	16.7%
RWE	33.0%	29.1%	27.6%	20.5%
Oersted	n/a	39.0%	48.8%	53.9%
National Grid	21.3%	23.7%	21.0%	18.0%
Average peers	**25.7%**	**28.4%**	**29.2%**	**26.9%**
BENCHMARK INDEXES				
IBEX-35	20.0%	20.8%	17.2%	14.3%
Euro Stoxx Utilities	18.7%	19.8%	18.3%	13.6%
S&P Global Clean Energy	23.9%	28.3%	26.4%	20.2%

Source: Refinitiv Eikon (Datastream)

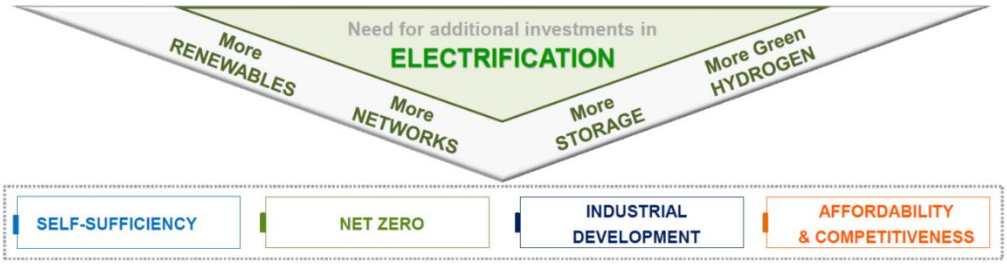
The company's share price performance over the period 02/12/2013-01/12/2023 demonstrates the quality of Iberdrola as an investment. Over the last 10 years the Iberdrola share has grown (cumulatively) by **284%**, surpassing its benchmark indexes *S&P Global Clean Energy* (**+111%**), *Euro Stoxx Utilities* (**+52%**) and *IBEX-35* (**+4%**). Iberdrola's and S&P Global Clean Energy's prices have soared in 2019 and 2020, due to three trends: improving economics of low-carbon energy, regulatory and political tailwinds driving adoption of green technologies, and growing investor concern with ESG issues. This trend declined in 2022, amid near-term challenges to the rollout of renewable energy projects caused by inflation. However, share prices of solid electric utilities like Iberdrola have shown resilience even in this context.

2.2. Business model

Today the business model of Iberdrola is designed to solve the challenges of climate change. Indeed, the company focuses on generation and distribution of electricity from renewable energy sources, networks through smart grids, and storage (**figure 14**). Over the last two decades Iberdrola invested more than **€140bn** in *renewables* and *networks*. The company is committed to achieving zero emissions in generation, electricity

distribution and own consumption plants by 2030 (scopes 1 and 2 in the SDG[17] 13 of the United Nations), and net zero emissions (including scope 3) by 2040.

Figure 14: Key pillars of Iberdrola's business model

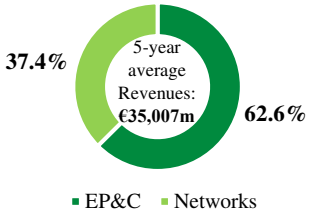


Source: Iberdrola's sustainability report 2022

2.3. Business segments

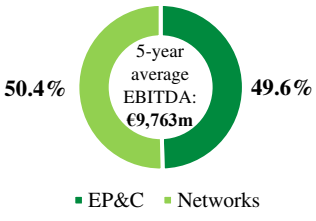
Iberdrola reports on its activities splitting them into 2 business segments: *Electricity Production and Customers* (EP&C) and *Networks*.

Figure 15: 5-year average Revenue share by segment (FY'17-'21)



Source: Company's integrated reports

Figure 16: 5-year average EBITDA share by segment (FY'17-'21)



Source: Company's integrated reports

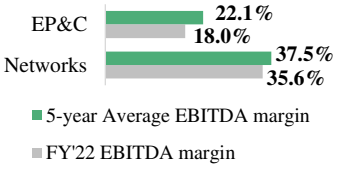
- ***EP&C***: 1- ensures electricity generation with management of the asset portfolio; 2- sells energy and related solutions in Spain, the U.K., the U.S., Brazil, Mexico and other markets (I.E.I);

- ***Networks***: 1- carries out distribution operations in Spain; 2- transmission and distribution operations in the U.K, the U.S. and Brazil; 3- as well as the regulated sale of electricity (and gas) in the U.S and Brazil.

Figure 15 shows that the *EP&C* segment accounts on average for **62.6%** of total revenues, whereas *Networks* generates the remaining **37.4%**. However, in terms of EBITDA shares (**Figure 16**), *Networks* contributes slightly more to Iberdrola's consolidated EBITDA (**Figure 17**).

[17] Sustainable Development Goal

Figure 17: FY'17-'21 average vs FY'22 EBITDA margins by segment



Source: Company's integrated reports

2.3.1. Electricity Production and Customers

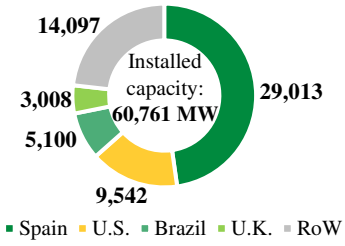
This segment combines information on two sub-segments: *Renewables Generation*[18] and *Generation and Customers*[19]. EP&C activities correspond mainly to liberalized activities, meaning they are more exposed to market prices, although Iberdrola has a large share of electricity sold under PPA contracts (**c. 90%**).

2.3.1.1. Renewables and conventional electricity generation

A geographically diversified generation assets portfolio…

At the end of 2022 Iberdrola has **60,761 MW** of total installed capacity.

Figure 18: Iberdrola's installed capacity by geography (FY'22; MW)

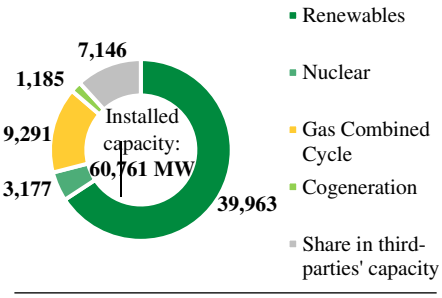


Source: Company's sustainability reports

Iberdrola's portfolio is geographically well diversified, with a focus on countries that offer high growth potential.

At the end of 2022 countries other than Spain (domestic market) represented slightly more than half (**52%**) the group's total installed capacity. Diversification reduces the overall regulatory risk it is exposed to in its *renewables generation* activities.

Figure 19: Iberdrola's installed capacity by technology (FY'22; MW)



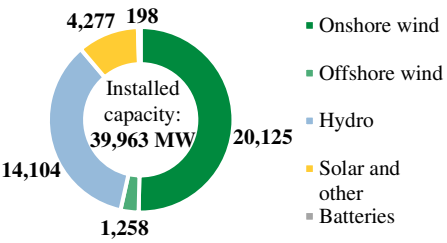
Source: Company's sustainability reports

A highly "green" generation portfolio showing Iberdrola's historical strength in wind and hydro, and recent aggressive growth of solar capacity …

The generation portfolio shows a strong focus on renewables, which represent c. two-third of total installed capacity with **39,963 MW**. Share in third-parties' capacity mainly includes Gas Combined Cycle power plants (**7,043 MW**, in Mexico).

[18] Electricity production from renewable sources and sale
[19] Electricity from nuclear, combined cycle gas and cogeneration, and all energy commercialization to clients

Figure 20: Iberdrola's renewables capacity by technology (FY'22; MW)



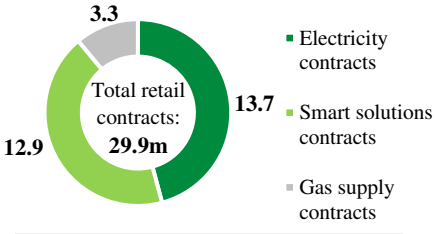
Source: Company's sustainability reports

Table 9: Renewables capacity growth by technology (%)

	CAGR '17-'22
Onshore wind	5.5%
Offshore wind	18.3%
Hydro	1.9%
Solar and other	81.2%
Batteries	n/a
Iberdrola Group	6.6%

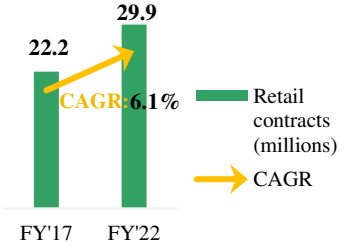
Source:
Company's sustainability reports

Figure 21: Breakdown of retail contracts (FY'22; millions)



Source: Company's integrated reports

Figure 22: Retail contracts evolution (millions)



Source: Company's integrated reports

With **20,125** and **14,104 MW** of installed capacity respectively, *onshore wind* and *hydro* are the group's most significant renewable assets. *Solar* comes third, with **4,277 MW** of capacity. Additionally, Iberdrola has **1,258 MW** of *offshore wind* capacity. Storage capacity includes **198 MW** of *batteries* and *green-hydrogen* capacity.

Over the period 2017-2022, *onshore wind* and *solar* have been the *key* growth drivers of renewables installed capacity, with **5.5%** and **81.2%** CAGRs respectively. Of the **10,955 MW** of renewable installed capacity added over the referred period, **4,696 MW** corresponds to *onshore wind* and **4,058 MW** comes from *solar*.

2.3.1.2. Customers (Retail activities)

This sub-segment is responsible for the commercialization of electricity to end-consumers and energy-related services that foster decarbonization and promotes energy efficiency. Iberdrola markets 4 main solutions:

- "*Smart Home*": services that improve energy efficiency and savings on customers' electricity consumption;
- "*Smart Mobility*": installation and management of charging points for EVs;
- "*Smart Solar*": installation and maintenance of solar panels for self-consumption;
- "*Smart Clima*": electric heating services through the development of heat pumps.

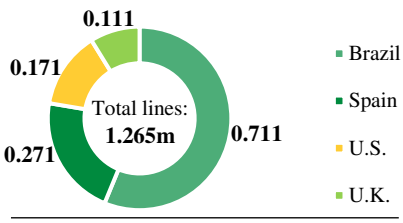
At the end of 2022 the company has **29.9m** retail contracts (see **figure 21**), of which mainly are electricity and smart solutions contracts, and serve **c.36m** end-consumers.

Retail contracts have increased at a **6.1%** CAGR over the last 5 years (**figure 22**). Moreover, most of customers are in the residential and in the commercial segments (**86%** and **12%** of the **c.36m** end-consumers respectively).

Geographically, most of the retail contracts are in the Spanish and U.K. markets (**70%** and **24%** respectively).

2.3.2. Networks

Figure 23: Total transmission and distribution lines by geography (FY'22; millions of Km)

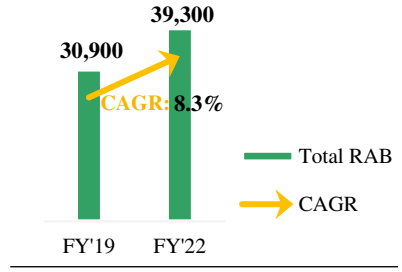


Source: Company's sustainability reports

This segment involves 100% regulated activities which consist in construction, management and maintenance of grid infrastructure. The returns from these activities are approved through regulatory frameworks, and reviewed periodically (at the end of each regulatory period). The base for calculating the remunerations of networks activities is the value of its operating assets called the *RAB*[20]. Networks provide predictable revenues and cash flows.

At 31/12/2022 the company operates **1.265m** km of distribution and transmission lines, spanning Brazil, Spain, the U.S. and the U.K. The group is engaged in transmission and distribution activities in Brazil, the U.S. and the U.K. (only distribution operations in Spain).

Figure 24: Total RAB evolution (€m)



Source: Company's integrated reports

Since 2019 Iberdrola's total RAB has grown at a **8.3%** CAGR, reaching **€39,300m** at the end of 2022.

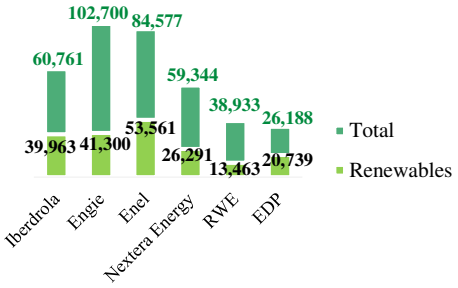
2.4. Key competitors (peers)

This section aims at comparing Iberdrola and its key peers with regards operational metrics. The comparison is based on the **5** main Iberdrola's peers[21] in terms of installed capacity and geographical presence, which are: *Engie*, *Enel*, *Nextera Energy*, *RWE*, and *EDP*.

The company has one of the largest generation portfolio in the utilities industry globally, surpassed by only two of its peers: Engie and Enel (**figure 25**). In terms of renewables capacity, Iberdrola is positioned among the best in the world, close to surpass Engie but still behind Enel. Iberdrola is one of the "greenest" electric utilities with its **66%** share of renewables, exceeding by far the peer average of **52%** (**Figure 26**).

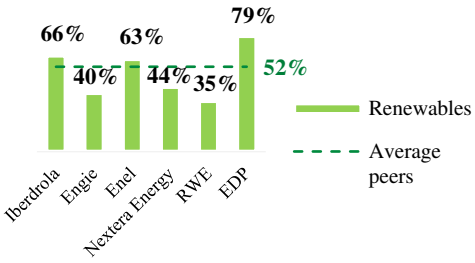
[20] Regulated Asset Base.
[21] See appendix 4 for the peer selection.

Figure 25: Total and Renewables installed capacities (FY'22; MW)



Source: Companies' annual reports

Figure 26: Renewables' share in total installed capacity (FY'22; MW)



Source: Companies' annual reports

Table 10: Renewables' share in total installed capacity (FY'22; MW)

	Total Installed Capacity		Renewables Capacity	
	CAGR '19-'22	21-'22 change (%)	CAGR '19-'22	21-'22 change (%)
Iberdrola	5.3%	4.2%	7.8%	5.1%
Engie	2.0%	2.4%	15.5%	9.5%
Enel	0.1%	-2.8%	8.3%	7.0%
Nextera Energy	4.7%	4.9%	13.5%	14.0%
RWE	-3.2%	6.2%	13.6%	23.6%
EDP	-0.4%	6.9%	1.9%	5.7%

Source: Companies' annual reports

Engie: Total installed capacity is up **2.0%** annually since 2019 year-end. Despite an increase in renewables capacity (**+15.5%** CAGR), the overall timid growth is due to a phaseout from coal, a decision took in 2016 and expected to be concluded by 2027. Renewables capacity additions were driven by onshore wind and solar, similarly to Iberdrola.

Enel: Total installed capacity is almost flat in **3** years but renewables are growing (**+8.3%**), slightly faster than Iberdrola over this period. Installed capacity growth was impacted by the reduction in coal- and oil-fired capacity. Enel targets the end of its coal generation by 2027. Additional renewable capacity was driven by wind and solar[22].

Nextera Energy: Total installed capacity grew at a **4.7%** CAGR, driven by wind and solar. The company has very low coal- and oil-fired generation (**c.3%** of total capacity), but significant gas-fueled and nuclear capacities (**53.0%** of the capacity mix).

RWE: Total installed capacity is down **-3.2%** (CAGR), due to a progressive decline in coal-fired capacity. However, renewables have grown rapidly over the last **3** years. Renewables capacity addition were driven by onshore and offshore wind. The company is a leader in offshore wind. It still has significant coal in its generation portfolio (**c.25%**). RWE expects to be phased out from coal generation by 2030.

EDP: Total installed capacity is almost flat in **3** years, while renewables increased slowly at a **1.9%** CAGR (the lowest growth among the peers). Growth was based on solar and wind again. EDP has **c.10%** coal-fired capacity, but the phaseout from coal is expected to be completed by 2025.

Overall, compared to its peers, Iberdrola presents a solid generation capacity, with an above average share of renewables.

2.5. Past financial analysis

[22] Specific data on onshore/offshore wind not disclosed

2.5.1. Profitability analysis

Table 11: Key profitability metrics – Long-term view

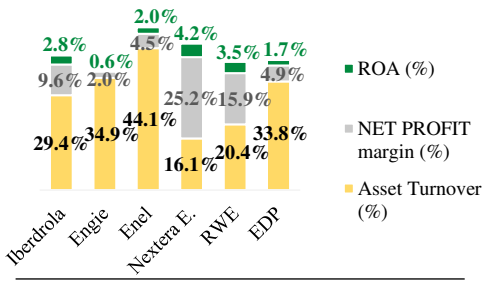
	Average over period 2017-2021		
	Revenue growth (CARG'17-'21)	EBITDA margin (%)	NET PROFIT margin (%)
Iberdrola	5.8%	27.9%	9.6%
Engie	-0.7%	17.2%	2.0%
Enel	3.0%	21.1%	4.5%
Nextera E.	-1.3%	54.3%	25.2%
RWE	15.5%	15.8%	15.9%
EDP	-1.2%	25.1%	4.9%

Source: Company financials, Renitiv Eikon

With a **5.8%** CAGR during the 2017-2021[23] period, Iberdrola shows higher growth in revenues than all of its peers less RWE. The company's EBITDA margin (**27.9%**) also exceeds its peers, except for Nextera which displays an above-average EBITDA margin. From this comparison can be deducted that Iberdrola has a *more efficient* (operating) cost structure than most of its peers.

2.5.2. Efficiency analysis

Figure 27: ROA decomposition (Average 2017-2021)



Source: Company financials, Renitiv Eikon

With an asset turnover of **29.4%**, Iberdrola is outperformed by Enel, Engie, and EDP. This implies that there is still an improvement possibility for Iberdrola with regards optimizing revenues generated by its assets. For electric utilities, fixed (ie. non-current) assets represent most of total assets[24]. Over the period 2017-2021 Iberdrola's fixed asset turnover improved at **2.5%** CAGR, better than most of its peers.

Regarding working capital management, Iberdrola is relatively well-positioned since its cash conversion cycle in days displays a negative value of **-41.3**. Only Enel and Nextera outperform Iberdrola since they have longer days payables outstanding.

Table 12: Working Capital efficiency metrics and Cash cycle (Average 2017-2021)

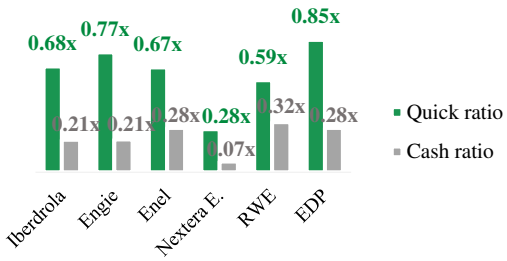
	Average over period 2017-2021			
	Days Sales Outstanding	Days Inventory Held	Days Payable Outstanding	Cash Conversion Cycle
Iberdrola	87.4	43.5	172.3	-41.3
Engie	220.2	44.4	253.7	10.8
Enel	85.2	28.8	237.0	-122.9
Nextera E.	61.0	63.5	276.1	-151.6
RWE	173.5	61.5	136.5	98.5
EDP	111.9	14.2	112.0	14.0

Source: Company financials, Renitiv Eikon

2.5.3. Liquidity analysis

[23] 2022 is not addressed here since financials were impacted by inflation
[24] Same for liabilities

Figure 28: Quick and Cash ratios, Iberdrola and main peers (Average 2017-2021)



Source: Company financials, Renitiv Eikon

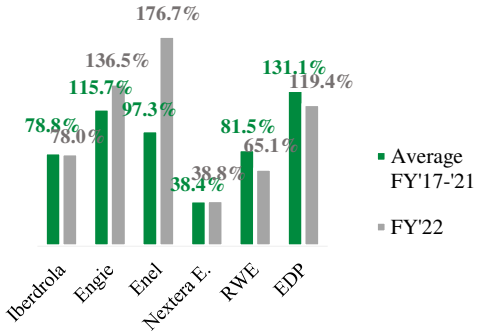
With a quick ratio of **0.68x**, Iberdrola outperforms Enel, Nextera, and RWE (**figure 28**). Compared to Enel and RWE, this is explained by the fact that Iberdola's current liabilities represent (on average) a lower percentage share of total assets (**16%**) on the balance sheet. Iberdrola and Engie have equal cash ratios (**0.21x**), which is below-average (**0.23x**).

It is concluded that Iberdrola's liquidity position is slightly riskier than its peers (on average). That explains the company's strategic commitment to financial strength.

2.5.4. Leverage (solvency) analysis

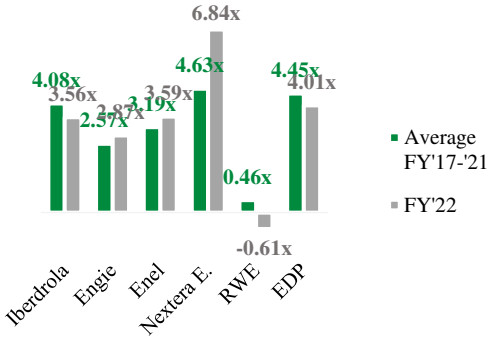
Leverage analysis is a key component in the assessment of a company's overall riskiness.

Figure 29: D/E ratios, Iberdrola and main peers



Source: Company financials, Refinitiv Eikon

Figure 30: Net Debt/EBITDA, Iberdrola and main peers



Source: Company financials, Refinitiv Eikon

D/E ratio (**Figure 29**[25]): With an average **78.8%** D/E between 2017 and 2022, Iberdrola has lower leverage than all of its peers less Nextera. The company has been deleveraging when comparing to 2017, year in which its D/E amounted to **97.1%**. On the contrary, Enel and Engie increased their leverage. Both companies are now divesting from certain geographies, which is partially motivated by the need to reduce leverage.

Net Debt/EBITDA ratio: With an average **4.08x** Net Debt/EBITDA the company has borne more debt in proportion of its EBITDA than its peers. Since its D/E ratios have been moderate, it is the cash position[26] that tends to be lower than in the cases of Engie and Enel.

The leverage position of Iberdrola is moderated, which is reflected in its BBB investment grade rating.

2.6. Company strategy and investments

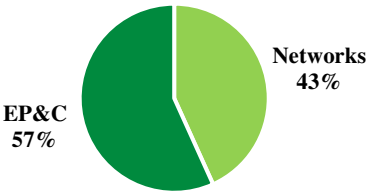
2.6.1. Historical perspective (2017-2022)

[25] D/E ratios computed using end-year market capitalizations for equity and book values for (financial) debt

[26] In proportion of total assets

Between 2017 and 2022 the company based its growth on regulated activities (networks) and renewable assets whose output is mainly sold under long-term contracts[27]. These strategic choices reflect the company's aim at consistent growth, with limited exposure to the volatility of electricity spot markets. Since regulatory frameworks for renewables have been quite unstable before 2019, Iberdrola used networks activities as its cautious growth lever, while selecting renewables projects with attractive risk-return profiles.

Figure 31: Historical CAPEX, split by business segment (2017-2022)



Source: Company integrated reports

Two additional strategic aspects are important for Iberdrola: geographical diversification[28], and operational efficiency[29].

Iberdrola has invested a total c.**€47,959m** of CAPEX, **43%** of which in *Networks* (**€20,494m**), and **57%** in *EP&C* (**€27,465m**). Within EP&C, *Renewables* accounted for **c.45%** of Iberdrola's total CAPEX between 2017 and 2022.

In *Networks*, growth has been focused on smart grid and smart meters deployment.

In *EP&C*, Iberdrola focused on *onshore wind* and *solar* driven by the cost competitiveness of these technologies continued to improve[30]. Storage capacity was increased trough pumped-storage hydro, batteries and green hydrogen investments, and has begun investing more in offshore wind (in the U.S., U.K., France and Germany), a technology in which Iberdrola has lower installed capacity than most of its key competitors referred previously (RWE, Oersted, and Engie).

2.6.2. Strategic Plan 2023-2025 and guidance through 2030

In its capital markets' day of 9 november 2022 Iberdrola announced its strategic plan for the period 2023-2025, with guidance up to 2030. This subsection is complemented by a SWOT analysis in **appendix 5**.

The *key* components of the company's three-year strategy are as follows:

- Growth primarily based on *networks*;

[27] And marginally on volatile wholesale markets
[28] Focused countries with high climate ambitions and solid regulatory frameworks
[29] Improving energy yields of its assets and streamlining costs
[30] Described in the industry analysis

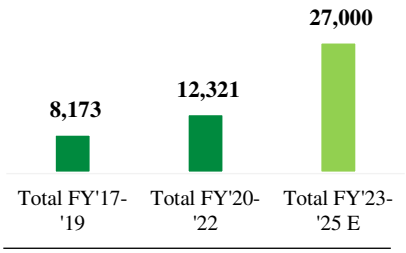
- Selective investments in *Renewables*, backed by regulatory schemes that optimize the return of these investments;
- Focus on high-rating countries with stable regulatory frameworks;
- And strengthening margins and financial position.

The 2023-2025 strategic plan expects CAPEX of **€47,000m** allocated as follows:

- **€27,000m**[31] in Networks;
- **€20,000m** in EP&C, of which **€17,000m** in Renewables and **€3,000m** to Customers solutions.

In Networks:

Figure 32: CAPEX attributed to Networks (€m)

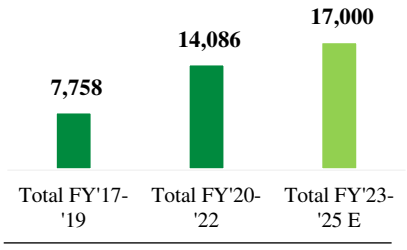


Source: Company integrated reports

Record investment is expected for the period 2023-2025 in comparison to the previous periods (**Figure 32**). CAPEX are driven by the massive scale-up in grids' modernization required to integrate the increasing share of renewables into the electric system. By 2025 RAB should reach **€56,000m**.

In EP&C:

Figure 33: CAPEX attributed to Renewables (company Strategic Plan; €m)



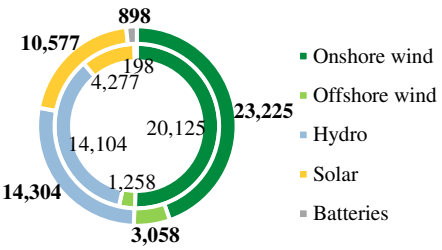
Source: Company integrated reports

The investment planned in renewables for the period 2023-2025 exceeds the previous ones (periods 2017-2019 and 2020-2022, see **figure 33**).

Iberdrola expects to add **12,100 MW** of *renewables installed capacity* by 2025, with half already under construction.

[31] Of which €11,000m related to the acquisition of utility PNM Resources in the U.S.

Figure 34: Renewable installed capacity: FY'25 E vs FY'22 (MW)



Source: Company integrated reports

- **46%** of the **€17,000m** investment will go to *offshore wind* which should reach a capacity of **3,058 MW** at 2025 year-end (**figure 34**[32]). Offshore wind projects are concentrated in the U.K., U.S., France and Germany.
- **25%** of CAPEX are allocated to *onshore wind*, with a target **23,225 MW** of capacity by 2025.
- **24%** of investments are focused on *solar*, which should reach a capacity of **10,577 MW**.
- The remaining **5%** goes to *hydro* and *batteries*[33].

Table 13: Renewable installed capacity growth FY'22-FY'25 E (%)

	Company guidance CAGR'22-'25 E
Onshore wind	4.9%
Offshore wind	34.4%
Hydro	0.5%
Solar	35.2%
Batteries	65.5%
Renewables	9.2%

Source: Company integrated reports

Table 13 complements **figure 35** by providing the expected capacity growth rates for each technology. Numbers clearly show the focus of Iberdrola on *solar*, *offshore* and *onshore wind*. Expected growth in offshore wind is close to double the growth over the period 2017-2022, which denotes Iberdrola's willingness to speed-up the increase in offshore wind capacity. Based on *Iberdrola's guidance*, total renewable capacity is expected to reach **c.52,000 MW** at the end of 2025, and by 2030 renewable capacity should reach at least **80,000 MW**[34].

Generation (conventional) and *Customers* activities receive the lowest fraction of the total **€47,000m** company CAPEX plan, with **€3,000m** to further develop Iberdrola's green hydrogen retail solutions namely for industrial clients.

Financial targets 2023-2025:

The company projects consolidated EBITDA at **c.€17,000m**, split equally across EP&C and Networks.

	FY '22	Company guidance FY'25 E	CAGR'22-'25 E
EBITDA	13,228	17,000	8.7%
Net Profit	4,339	5,400	7.6%
Net OPEX /Gross margin	-25.8%	-24.6%	-1.6%

[32] Exterior (Interior) doughnut corresponds to FY'25 E (FY'22)
[33] In Spain, U.K., and the RoW
[34] 100,000 MW incl. non-renewable sources

3. VALUATION

The valuation of Iberdrola is based on the Adjusted Present Value method, whose result is then compared to a relative valuation using peers' current market multiples. The valuation exercise is performed on the 16/02/2024.

3.1.Adjusted Present Value (APV)

The choice of the APV method is motivated by the industry current stage, which require significant investments in renewables' expansion and grids' modernization. As a result of the disruption in global energy and electricity systems, industry players' debt-to-equity ratios should be variable in the near future. Additionally in its strategic plan 2023-2025 Iberdrola reiterates its commitment to financial strength with the intention to limit additional debt issuance in the short-term and to preserve a BBB investment grade credit rating. CAPEX will be primarily funded by the free cash flow from operations. After 2025 debt should increase again to support the investments needed for long-term growth. Therefore the APV method is the most suitable intrinsic valuation approach for Iberdrola.

To value Iberdrola, three scenarios of operational development have been built, which namely vary in renewables capacity growth. Scenarios' assumptions are supported by the *World Energy Outlook 2023* analysis published by the *IEA*, and referred previously in the industry analysis section.

The STEPS and APS scenarios from the IEA were taken as a framework and starting point for the valuation of Iberdrola. This choice is justified by the inherent link between the future development of both Iberdrola and the industry in which it operates, and the fact that Iberdrola specifies its strategy using the APS scenario for its industry outlook assumptions. The forecast are based on the *APS* scenario in the *optimistic* scenario, whereas the forecasts based on the *STEPS* corresponds to the *pessimistic* scenario. The *base scenario* is the **average** between the forecasts based on the *APS* and the *STEPS*.

The explicit horizon period ranges from 2023 to 2030, to match the company's detailed planning for the period 2023-2025 and long-term guidance for the years 2026-to-2030.

In the three scenarios, the **important assumption that Iberdrola reaches its operational targets[35] in the short term (2023-2025)[36] is made**, so that *operational uncertainty in the model lies in the period 2026-2030*. Besides the valuation is performed **by segment**[37] instead of geography– given the data available. Consequently, financial forecasts are exclusively denominated in euros, which reduces the risks of forecasting errors as a result of misevaluating the impact of currency exchange rates[38].

3.1.1. Revenues

For the *EP&C segment* revenues are derived from three main components:

- Total installed capacity (renewable and non-renewable);
- Net capacity factors (renewable and non-renewable);
- Revenue per GWh (that I call electricity price per GWh).

An emphasis is put on solar and offshore wind, which are the key strategic priorities of Iberdrola in renewables.

For the *networks segment* revenues are derived from two main components:

- RAB, whose additions depend on the *average RAB addition for* ***€1m*** *of CAPEX* and on the *projected CAPEX* for networks;
- Revenue per each euro of RAB.

As stated previously, **for the period 2023-2025, I take the values given by the Strategic Plan, since it is assumed that Iberdrola successfully achieves its targets over the timeframe of its Strategic Plan.** The scenarios begin to diverge in 2026.

3.1.1.1.Electricity Production and Customers segment

3.1.1.1.1. Renewable installed capacity and net capacity factor

Installed capacity represents the quantity of electricity that can be produced[39] and net capacity factor measures the efficiency at which the company's generation assets produce electricity. *These two variables determine the electricity output which is sold to generate revenue.* First step is to forecast the evolution of Iberdrola's installed capacity based on

[35] Installed capacity additions (EP&C segment) and RAB additions (Networks segment)
[36] Strategic Plan 2023-2025
[37] Until EBIT, then EBIT are consolidated
[38] Additionally Iberdrola limits foreign Exchange rate risk for each geography by realizing all financial flows in local currency
[39] At a 100% utilization rate

the industry developments and forecasts provided by the IEA (APS and STEPS scenarios) as well as the company's historical[40] installed capacity expansion. Regarding 2026-2030[41] period, the company only provides guidance on the renewable and total installed capacities. The guidance states a total installed capacity of **100 GW**, of which more than **80%** renewables in 2030. For this period I need to look at the capacity forecasts for the industry, taken from the IEA, in order to derive growth rates for Iberdrola.

Table 14 below shows the forecasts by technology of renewable installed capacity and CAGRs for the industry[42] in each scenario:

Table 14: Industry renewable installed capacity, by technology and scenario, 2023-2030

Optimistic scenario (IEA's APS)										
	Cumulated balance (GW)					CAGRs				
	2017	2022	2025 E	2028 E	2030 E	'17-'22	'22-'25 E	'25-'28 E	'28-'30 E	'22-'30 E
Total capacity	2,181	3,482	**5,428**	**8,121**	**10,142**	*9.8%*	**16.0%**	**14.4%**	**11.7%**	***14.3%***
Onshore wind	*496*	*836*	***1,195***	***1,638***	***2,044***	*11.0%*	***12.7%***	***11.1%***	***11.7%***	***11.8%***
Offshore wind	*19*	*63*	***126***	***245***	***376***	*27.4%*	***25.7%***	***25.0%***	***23.8%***	***25.0%***
Wind	514	899	**1,321**	**1,883**	**2,420**	11.8%	**13.7%**	**12.5%**	**13.4%**	**13.2%**
Hydro	1,271	1,393	**1,477**	**1,569**	**1,620**	*1.8%*	**2.0%**	**2.0%**	**1.6%**	***1.9%***
Solar and other	396	1,145	**2,502**	**4,307**	**5,377**	*23.7%*	**29.8%**	**19.8%**	**11.7%**	***21.3%***
Batteries	n/a	45	**128**	**362**	**725**	*n/a*	**41.4%**	**41.4%**	**41.4%**	***41.4%***

Pessimistic scenario (IEA's STEPS)										
	Cumulated balance (GW)					CAGRs				
	2017	2022	2025 E	2028 E	2030 E	'17-'22	'22-'25 E	'25-'28 E	'28-'30 E	'22-'30 E
Total capacity	2,181	3,482	**4,898**	**6,596**	**8,886**	*9.8%*	**12.1%**	**10.4%**	**16.1%**	***12.4%***
Onshore wind	*496*	*836*	***1,073***	***1,321***	***1,791***	*11.0%*	***8.7%***	***7.2%***	***16.4%***	***10.0%***
Offshore wind	*19*	*63*	***105***	***189***	***273***	*27.4%*	***18.6%***	***21.5%***	***20.1%***	***20.1%***
Wind	514	899	**1,179**	**1,510**	**2,064**	11.8%	**9.5%**	**8.6%**	**16.9%**	**11.0%**
Hydro	1,271	1,393	**1,434**	**1,476**	**1,571**	*1.8%*	**1.0%**	**1.0%**	**3.2%**	***1.5%***
Solar and other	396	1,145	**2,170**	**3,313**	**4,699**	*23.7%*	**23.8%**	**15.2%**	**19.1%**	***19.3%***
Batteries	n/a	45	**116**	**297**	**552**	*n/a*	**36.9%**	**36.6%**	**36.4%**	***36.7%***

Central scenario										
	Cumulated balance (GW)					CAGRs				
	2017	2022	2025 E	2028 E	2030 E	'17-'22	'22-'25 E	'25-'28 E	'28-'30 E	'22-'30 E
Total capacity	2,181	3,482	**5,163**	**7,359**	**9,514**	*9.8%*	**14.0%**	**12.5%**	**13.7%**	***13.4%***
Onshore wind	*496*	*836*	***1,134***	***1,479***	***1,918***	*11.0%*	***10.7%***	***9.3%***	***13.9%***	***10.9%***
Offshore wind	*19*	*63*	***116***	***217***	***324***	*27.4%*	***22.3%***	***23.4%***	***22.2%***	***22.7%***
Wind	514	899	**1,250**	**1,697**	**2,242**	11.8%	**11.6%**	**10.7%**	**15.0%**	**12.1%**
Hydro	1,271	1,393	**1,455**	**1,523**	**1,596**	*1.8%*	**1.5%**	**1.5%**	**2.4%**	***1.7%***
Solar and other	396	1,145	**2,336**	**3,810**	**5,038**	*23.7%*	**26.8%**	**17.7%**	**15.0%**	***20.3%***
Batteries	n/a	45	**122**	**330**	**638**	*n/a*	**39.2%**	**39.2%**	**39.2%**	***39.2%***

Source: IEA for 2030 forecasts and IRENA for in-between years

[40] Our historical period ranges from 2017 to 2023 until the end of the third quarter (9-month realized data published)
[41] Reminder: Capacity additions for the period 2023-2025 are taken from the three-year Strategic Plan
[42] Geothermal and bioenergy excluded since Iberdrola does not operate with those resources

Iberdrola's forecasts are performed by technology too, since each technology has its own growth prospects, which depend on technological maturity and policy frameworks. According to its strategic plan 2023-2025[43] and its 9-month 2023 results report, **offshore wind and solar are the key priorities of Iberdrola.** Thus, the three scenarios primarily differ in terms of growth assumptions of these two technologies' capacity: higher ones in the optimistic scenario, lower growths in the pessimistic one, and an in-between growth for the base scenario.

Secondly[44] for the year 2023, installed capacity additions are based on 9-month realized figures and a linear extrapolation of 2023 realized values for the last quarter. For the subsequent 2024 and 2025, are input the remaining capacity additions to achieve the target total renewable installed capacity stated in the strategic plan 2023-2025, which is **52.0 GW**.

Thirdly, the 2026-2030 period, forecasts are based on Iberdrola's guidance on total capacity reached in 2030 and the share of renewables. The 2026-2030 period was divided into 2 sub-periods, 2026-2028 and 2029-2030 because applying the same growth rate from 2026 onwards would result in excessive total installed capacity by 2030 for offshore wind and solar, and consequently for the total renewable capacity.

Fourthly, for the resources considered "less" strategic for the next years (onshore wind, hydro) growth rates are assumed to be in line with historical values for onshore wind and hydro, returning to their historical CAGR'17-'22 after 2028, while considering the industry growth forecasts for Iberdrola's battery capacity additions.

More specifically regarding offshore wind and solar:

- In the optimistic scenario:

  For offshore wind, the industry expected growth is applied over the two-year sub-period 2029-2030, and the growth between 2025 and 2028 is derived by averaging the growth rates observed over the 2022-2025 and 2029-2030 periods (**34.1%** and **23.8%** respectively). The same is performed for solar. This enables me to account for accelerated growth.

[43] See company analysis section
[44] For the three scenarios

- In the base scenario:

For both offshore wind and solar the industry expected growth rates are applied to the respective 2026-2028 and 2029-2030 periods (**17.7%** and **15.0%**). Since, for these resources, Iberdrola grows its capacity at a higher rate than the industry between 2022 and 2025, when applying the industry growth rates for 2026 onwards the result over the entire explicit horizon forecast period (2023-2030) is still that Iberdrola grows (moderately) above the industry in offshore wind and solar.[45]

- In the pessimistic scenario growth in offshore wind and solar is derived from the optimistic and base cases.

Below are presented Iberdrola's renewable capacity forecasts and CAGRs.

Table 15: Renewable capacity forecasts by technology and scenario, Iberdrola, 2023-2030

Optimistic scenario										
	Cumulated balance (GW)					CAGRs				
	2017	2022	2025 E	2028 E	2030 E	'17-'22	'22-'25 E	'25-'28 E	'28-'30 E	'22-'30 E
Total capacity	29.0	40.0	**52.0**	**71.4**	**86.0**	*6.6%*	**9.2%**	**11.1%**	**9.8%**	***10.0%***
Onshore wind	*15.4*	*20.1*	***23.2***	***27.2***	***30.3***	*5.5%*	***4.9%***	***5.5%***	***5.5%***	***5.2%***
Offshore wind	*0.5*	*1.3*	***3.0***	***6.5***	***10.0***	*18.3%*	***34.1%***	***29.0%***	***23.8%***	***29.6%***
Wind	16.0	21.4	**26.3**	**33.8**	**40.3**	6.0%	**7.1%**	**8.7%**	**9.2%**	**8.2%**
Hydro	12.8	14.1	**14.3**	**15.1**	**15.7**	*1.9%*	**0.5%**	**1.9%**	**1.9%**	***1.4%***
Solar and other	0.2	4.3	**10.6**	**19.9**	**24.9**	*81.2%*	**35.2%**	**23.5%**	**11.7%**	***24.6%***
Batteries	0.0	0.2	**0.9**	**2.5**	**5.1**	*n/a*	**65.5%**	**41.4%**	**41.4%**	***50.0%***

Pessimistic scenario										
	Cumulated balance (GW)					CAGRs				
	2017	2022	2025 E	2028 E	2030 E	'17-'22	'22-'25 E	'25-'28 E	'28-'30 E	'22-'30 E
Total capacity	29.0	40.0	**52.0**	**62.7**	**75.4**	*6.6%*	**9.2%**	**6.4%**	**9.7%**	***8.3%***
Onshore wind	*15.4*	*20.1*	***23.2***	***26.4***	***29.3***	*5.5%*	***4.9%***	***4.3%***	***5.5%***	***4.8%***
Offshore wind	*0.5*	*1.3*	***3.0***	***4.9***	***6.0***	*18.3%*	***34.1%***	***17.3%***	***10.4%***	***21.5%***
Wind	16.0	21.4	**26.3**	**31.3**	**35.3**	6.0%	**7.1%**	**6.0%**	**6.3%**	**6.5%**
Hydro	12.8	14.1	**14.3**	**14.5**	**15.1**	*1.9%*	**0.5%**	**0.5%**	**1.9%**	***0.8%***
Solar and other	0.2	4.3	**10.6**	**14.6**	**20.8**	*81.2%*	**35.2%**	**11.3%**	**19.3%**	***21.8%***
Batteries	0.0	0.2	**0.9**	**2.3**	**4.3**	*n/a*	**65.5%**	**36.6%**	**36.4%**	***46.9%***

Central scenario										
	Cumulated balance (GW)					CAGRs				
	2017	2022	2025 E	2028 E	2030 E	'17-'22	'22-'25 E	'25-'28 E	'28-'30 E	'22-'30 E
Total capacity	29.0	40.0	**52.0**	**67.0**	**80.7**	*6.6%*	**9.2%**	**8.8%**	**9.7%**	***9.2%***
Onshore wind	*15.4*	*20.1*	***23.2***	***26.8***	***29.8***	*5.5%*	***4.9%***	***4.9%***	***5.5%***	***5.0%***
Offshore wind	*0.5*	*1.3*	***3.0***	***5.7***	***8.0***	*18.3%*	***34.1%***	***23.4%***	***18.3%***	***26.0%***
Wind	16.0	21.4	**26.3**	**32.5**	**37.8**	6.0%	**7.1%**	**7.4%**	**7.8%**	**7.4%**
Hydro	12.8	14.1	**14.3**	**14.8**	**15.4**	*1.9%*	**0.5%**	**1.2%**	**1.9%**	***1.1%***
Solar and other	0.2	4.3	**10.6**	**17.3**	**22.8**	*81.2%*	**35.2%**	**17.7%**	**15.0%**	***23.3%***
Batteries	0.0	0.2	**0.9**	**2.4**	**4.7**	*n/a*	**65.5%**	**39.2%**	**39.2%**	***48.5%***

Source: Author's analysis

[45] Our base scenario assumes Iberdrola pursues its above-industry growth in solar and accelerates its growth in offshore to catch-up in this resource compared to its key competitors

The ***industry*** net capacity factors are derived from the installed capacities and electricity output expected in 2030 for each technology by the IEA in its APS and STEPS scenarios (**table 16** below). By computing the CAGRs based on the 2030 expected and the 2022 realized values I arrive at an estimation of the industry net capacity factors for the years between 2022 and 2030. Note that because of insufficient data it was not possible to reliably predict the capacity factors for onshore and offshore wind separately.

A careful reader will note that the industry total net capacity factor is greater in the pessimistic scenario than in the other two ones, which seems counterintuitive, but it is the result of a slightly higher share of solar in the total industry renewable capacity mix[46].

Table 16: Industry renewable net capacity factors, by technology and scenario, 2023-2030[47]

	Historical development			Optimistic scenario (IEA's APS)		Pessimistic scenario (IEA's STEPS)		Central scenario	
	Values		CAGR	Values	CAGR	Values	CAGR	Values	CAGR
	2017	2022	'17-'22	2030 E	'22-'30 E	2030 E	'22-'30 E	2030 E	'22-'30 E
Total net capacity factor	31.6%	27.2%	-2.9%	**22.5%**	**-2.4%**	**22.9%**	**-2.1%**	**22.7%**	**-2.3%**
Onshore wind	*25.9%*	*26.5%*	*0.4%*	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***
Offshore wind	*39.1%*	*35.4%*	*-2.0%*	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***
Wind	26.3%	27.0%	0.5%	**31.1%**	**1.8%**	**31.1%**	**1.8%**	**31.1%**	**1.8%**
Hydro	38.0%	36.3%	-0.9%	**36.0%**	**-0.1%**	**36.8%**	**0.1%**	**36.4%**	**0.0%**
Solar and other	14.3%	14.2%	-0.1%	**14.3%**	**0.1%**	**14.3%**	**0.0%**	**14.3%**	**0.0%**
Batteries	n/a	n/a	n/a	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**

Source: IEA for APS and STEPS, average for base scenario (2023)

Regarding Iberdrola's net capacity factors (**table 17**):

- In the optimistic scenario:

  For wind and solar the industry CAGRs'22-'30 (**1.8%** and **0.1%** respectively) are applied, while the company's historical average is used for hydro (**19.0%**), given that its output is highly volatile (between **c.17.0%** and **21.0%**).

- In the pessimistic scenario:

  The historical Iberdrola's averages are input for each technology (**26.6%** for wind, **19.0%** for hydro, and **13.2%** for solar)

- Expected capacity factors in the base scenario correspond to the averages of the values from the optimistic and pessimistic cases.

[46] Solar has a structurally lower capacity factor than wind (and lower cost)

[47] Industry total net capacity factor is greater in the pessimistic scenario than in the other two ones, which seems counterintuitive, but it is the result of a slightly higher share of solar in the total industry renewable capacity mix

Thanks to this methodology the estimated total renewable net capacity factors are reasonable compared to industry expectations: **23.7%**, **21.2%** and **22.5%** in the optimistic, pessimistic and base scenarios respectively[48].

Table 17: Renewable net capacity forecasts by technology and scenario, Iberdrola, 2023-2030

	Historical development			Optimistic scenario		Pessimistic scenario		Central scenario	
	Values		CAGR	Values	CAGR	Values	CAGR	Values	CAGR
	2017	2022	'17-'22	2030 E	'22-'30 E	2030 E	'22-'30 E	2030 E	'22-'30 E
Total net capacity factor	24.1%	21.9%	-1.9%	**23.7%**	**1.0%**	**21.2%**	**-0.4%**	**22.5%**	**0.3%**
Onshore wind	*26.8%*	*26.1%*	*-0.5%*	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***
Offshore wind	*34.5%*	*40.8%*	*3.4%*	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***
Wind	27.0%	27.0%	0.0%	**31.2%**	**1.8%**	**26.6%**	**-0.2%**	**29.0%**	**0.9%**
Hydro	20.8%	16.9%	-4.0%	**19.0%**	**1.4%**	**19.0%**	**1.4%**	**19.0%**	**1.4%**
Solar and other	12.9%	12.1%	-1.1%	**14.5%**	**2.3%**	**13.2%**	**1.0%**	**13.9%**	**1.7%**
Batteries	n/a	n/a	n/a	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**

Source: Author's analysis

Once installed capacity and net capacity factors are forecasted, the total renewable net electricity output can be computed. The results are presented after completing the same predicting work for non-renewable resources.

3.1.1.1.2. Non-renewable installed capacity and net capacity factor

The IEA provides the industry nuclear and fossil fuel expected installed capacities by 2030 in its APS and STEPS scenarios (**table 18**). The CAGRs based on the 2030 expected and the 2022 effective values are used to estimate the industry capacities for the years between 2022 and 2030.

Table 18: Industry non-renewable installed capacity, by scenario, 2023-2030

	Historical development			Optimistic scenario (IEA's APS)		Pessimistic scenario (IEA's STEPS)		Central scenario	
	Cumulated balance (GW)		CAGR	Cumulated balance (GW)	CAGR	Cumulated balance (GW)	CAGR	Cumulated balance (GW)	CAGR
	2017	2022	'17-'22	2030 E	'22-'30 E	2030 E	'22-'30 E	2030 E	'22-'30 E
Total capacity	4,456	4,951	2.1%	**4,721**	**-0.6%**	**4,980**	**0.1%**	**4,851**	**-0.3%**
Nuclear	399	417	0.9%	**497**	**2.2%**	**482**	**1.8%**	**489**	**2.0%**
Unabated fossil fuels*	4,057	4,535	2.3%	**4,225**	**-0.9%**	**4,498**	**-0.1%**	**4,361**	**-0.5%**

*include coal, natural gas, oil and cogeneration

Source: IEA for APS and STEPS, average for base scenario (2023)

The approach followed to predict Iberdrola's non-renewable installed capacity is easier since non-renewable resources do not represent a strategic priority for the company. In the three scenarios it is assumed that nuclear and cogeneration installed capacities stay flat over the future, which is a reasonable premise given historical variations, and that gas combined cycle is the variable that changes across the scenarios.

More specifically (**table 19**):

[48] In **table 17** the careful reader will point out the decreasing total net capacity factor between 2017 and 2022, this is due to the growth of solar in Iberdrola's renewable capacity mix

- In the optimistic scenario:

I apply directly to the total non-renewable capacity the expected industry CAGR (-**0.6%**). Since renewables growth is higher, a decrease in non-renewable capacity in line with the industry is coherent. Given that nuclear and cogeneration capacities are assumed to stay flat, I derive the gas combined cycle capacity by subtracting the previous both from the projected total[49].

- In the pessimistic scenario:

I apply the average[50] between the expected industry CAGR (**0.1%**) and the historical company growth rate (**1.4%**). In this case, since renewables grow at a lower pace, it is reasonable to predict a modest growth in conventional technologies. Then, gas combined cycle capacity is obtained similarly to the optimistic case.

- Projections for the base scenario correspond to the average between the optimistic and pessimistic cases.

Table 19: Non-renewable capacity forecasts by technology and scenario, Iberdrola, 2023-2030

	Historical development			Optimistic scenario		Pessimistic scenario		Central scenario	
	Cumulated balance (GW)		CAGR	Cumulated balance (GW)	CAGR	Cumulated balance (GW)	CAGR	Cumulated balance (GW)	CAGR
	2017	2022	'17-'22	2030 E	'22-'30 E	2030 E	'22-'30 E	2030 E	'22-'30 E
Total capacity	19.4	20.8	1.4%	**19.8**	**-0.6%**	**21.1**	**0.2%**	**20.5**	**-0.2%**
Nuclear	3.2	3.2	0.0%	**3.2**	**0.0%**	**3.2**	**0.0%**	**3.2**	**0.0%**
Gas Combined Cycle	14.1	16.4	3.1%	**15.5**	**-0.8%**	**16.7**	**0.2%**	**16.1**	**-0.3%**
of which: share in third-parties' capacity	*4.6*	*7.1*	*9.1%*	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***
Cogeneration	1.3	1.2	-1.8%	**1.2**	**0.0%**	**1.2**	**0.0%**	**1.2**	**0.0%**
Coal	0.9	0.0	-100.0%	**n/a**	**0.0%**	**n/a**	**0.0%**	**n/a**	**n/a**

Source: Author's analysis

Regarding non-renewable net capacity factors, since these are quite volatile (more than installed capacities), it is more accurate to make forecasts for each technology separately. According to industry available data, I only obtain projections for the aggregate "unabated fossil fuels". Therefore it is more suited to rely on historical values to predict Iberdrola's non-renewable capacity factors, as described below:

- In the optimistic scenario:

  I apply the historical CAGR (**0.4%**) for nuclear capacity factor's projections. Gas combined cycle capacity factors are assumed to stay flat at the 9-month 2023 realized value (**40.6%**), and the average historical value (**65.8%**) is considered for cogeneration over the entire forecast period.

[49] Same calculation applied for the pessimistic scenario
[50] Weighted by the number of years: 8 for the industry CAGR (2023-2030) and 5 for the historical rate

- In the pessimistic scenario:

  The historical average (**85.3%**) is taken for nuclear, while the historical CAGR (-**1.7%**) is used for the projections of gas combined cycle. Lastly, I assume cogeneration's capacity factors stay flat at the 9-month 2023 realized value (**54.6%**). It is verified that the total non-renewable net capacity factors obtained for Iberdrola does not diverge significantly from the industry projections for total unabated fossil fuel[51].

Table 20: Non-renewable net capacity factors forecasts by technology and scenario, Iberdrola, 2023-2030

	Historical development			Optimistic scenario		Pessimistic scenario		Central scenario	
	Values		CAGR	Values	CAGR	Values	CAGR	Values	CAGR
	2017	2022	'17-'22	2030 E	'22-'30 E	2030 E	'22-'30 E	2030 E	'22-'30 E
Total net capacity factor	52.0%	49.2%	-1.1%	**49.8%**	**0.1%**	**44.5%**	**-1.2%**	**47.1%**	**-0.5%**
Nuclear	84.6%	85.8%	0.3%	**88.4%**	**0.4%**	**85.3%**	**-0.1%**	**86.9%**	**0.1%**
Gas Combined Cycle	44.4%	41.5%	-1.3%	**40.6%**	**-0.3%**	**36.1%**	**-1.7%**	**38.3%**	**-1.0%**
of which: share in third-parties' capacity	75.2%	59.9%	-4.5%	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***	***Insufficient data***	***n/a***
Cogeneration	69.5%	56.1%	-4.2%	**65.8%**	**2.0%**	**54.6%**	**-0.4%**	**60.2%**	**0.9%**
Coal	21.4%	n/a	n/a	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**

Source: Author's analysis

3.1.1.1.3. Electricity selling price per GWh of output

The second component necessary to obtain the revenue forecasts is the average price at which Iberdrola will sell its electricity output. The methodology here starts by computing this average price[52] over the historical period (2017- first 9 months of 2023) to observe the recent trend. Without surprise the selling price has spiked in 2022, explaining the huge rise in the EP&C segment revenues.

Then, assuming the historical average selling price for the next years would be mistaken, since electricity prices are still well above pre-Ukraine War levels[53]. Iberdrola's selling price should be correlated to energy commodities' inflation, in particular coal and natural gas. The analysis of various commodities price indices leads to the selection of two indices provided by the IMF:

- The *Natural Gas and Coal* Price Index
- The *Australian and South African Coal* Price Index

The selection is based on the strong correlations between the historical changes in those two price indices and the changes in Iberdrola's output selling price (**0.68** with the first, and **0.89** with the second). In **appendix 6** are presented the regressions' results, with the

[51] Between 40 and 50%
[52] Average annual output selling price = Segment Revenues (€m) / Electricity produced (GWh) for that year
[53] Although a decrease in electricity prices has occurred in 2023

two equations used to predict the changes in Iberdrola's electricity selling price based on the IMF projections of the changes in the two price indices from 2024 until 2028. The selling price for the full year 2023 is assumed to stay flat at its observed value over the first 9 months (**0.194 €m/GWh**). Additionally, I make projections based on two indices instead of one in order to introduce price differences among the three scenarios.

- The *Natural Gas and Coal* Price Index leads to higher prices until 2028, which are plug-in into the pessimistic scenario, since it is reasonable to consider that in this scenario electricity prices decrease at a slower rate (inflation persisting) and that renewables grow "less" in this more uncertain environment
- The *Australian and South African Coal* Price Index induces lower prices until 2028, which fits well into the optimistic scenario in which prices decrease at a faster rate
- Iberdrola's electricity selling prices in the base scenario correspond to the average of the prices in both previous cases.

Note that after 2028, in the three scenarios, it is assumed prices equalize values of the base scenario, **i.e. prices "normalize" after 2028.**

Table 21: Iberdrola's electricity selling prices, by scenario, 2023-2030

€m /GWh	2017	2022 Average w/2022 & 2020	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical	€ 0.150	€ 0.223 € 0.150								
Optimistic			€ 0.194	€ 0.187	€ 0.183	€ 0.178	€ 0.175	€ 0.172	€ 0.175	€ 0.175
Pessimistic			€ 0.194	€ 0.196	€ 0.192	€ 0.186	€ 0.182	€ 0.179	€ 0.175	€ 0.175
Central			€ 0.194	€ 0.192	€ 0.187	€ 0.182	€ 0.178	€ 0.175	€ 0.175	€ 0.175

Source: Author's analysis

3.1.1.1.4. Electricity output projections and revenue calculation

The three components required to properly compute the revenues of the EP&C segment are obtained for both renewables and non-renewables: annual installed capacities, net capacity factors, and selling prices.

Annual electricity output is computed as follows:

$$Electicity\ Output\ (GWh) = Installed\ Capacity\ (GW) \times 24 \times 365 \times NCF^{54}\ (\%)$$

Annual revenues calculation is as follows:

$$EP\&C\ annual\ revenues\ (€m) = Electricity\ Output\ (GWh) \times Selling\ Price\ (€m\ /GWh)$$

[54] Net Capacity Factor (%)

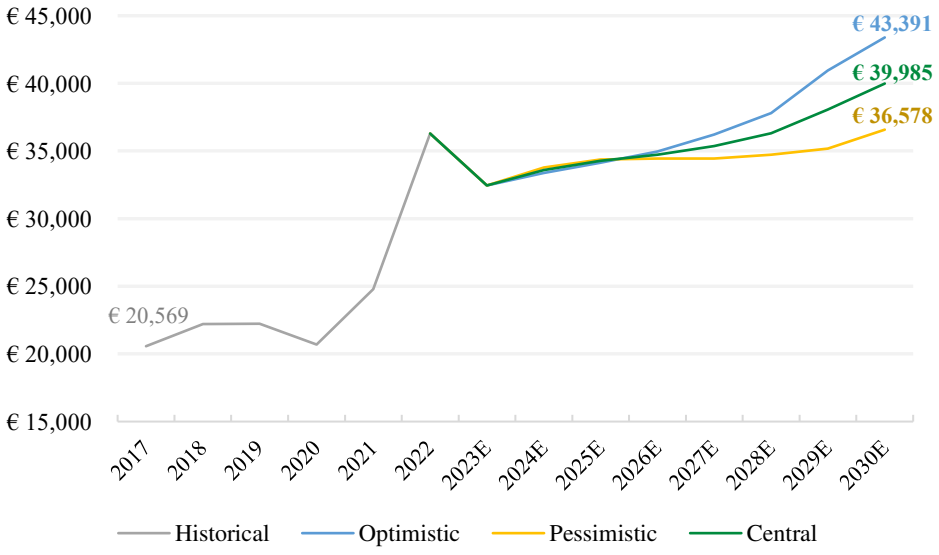
The results obtained are shown below.

Table 22: Installed capacity and electricity output projections, by scenario, Iberdrola, 2023-2030

	2017	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical										
Renewables, Installed capacity (GW)	**29.0**	**40.0**								
Total Installed capacity (GW)	**48.4**	**60.8**								
Share of renewables	60%	66%								
Renewables, Electricity Output (GWh)	**50,500**	**74,525**								
Total Electricity Output (GWh)	**137,550**	**163,031**								
Optimistic										
Renewables, Installed capacity (GW)			**42.2**	**46.9**	**52.0**	**57.3**	**63.7**	**71.4**	**78.1**	**86.0**
Total Installed capacity (GW)			**62.8**	**67.5**	**72.5**	**77.6**	**83.9**	**91.4**	**98.0**	**105.8**
Share of renewables			67%	70%	72%	74%	76%	78%	80%	81%
Renewables, Electricity Output (GWh)			**79,141**	**89,310**	**98,458**	**108,439**	**119,667**	**132,932**	**146,786**	**161,061**
Total Electricity Output (GWh)			**167,707**	**178,016**	**186,842**	**196,480**	**207,369**	**220,296**	**233,817**	**247,761**
Pessimistic										
Renewables, Installed capacity (GW)			**42.2**	**46.9**	**52.0**	**55.3**	**58.8**	**62.7**	**68.6**	**75.4**
Total Installed capacity (GW)			**62.8**	**67.7**	**72.8**	**76.1**	**79.7**	**83.6**	**89.6**	**96.5**
Share of renewables			67%	69%	71%	73%	74%	75%	77%	78%
Renewables, Electricity Output (GWh)			**79,141**	**85,688**	**93,229**	**99,781**	**105,144**	**110,875**	**117,997**	**126,729**
Total Electricity Output (GWh)			**167,707**	**172,214**	**178,998**	**184,803**	**189,428**	**194,430**	**200,834**	**208,856**
Central										
Renewables, Installed capacity (GW)			**42.2**	**46.9**	**52.0**	**56.3**	**61.2**	**67.0**	**73.3**	**80.7**
Total Installed capacity (GW)			**62.8**	**67.6**	**72.6**	**76.9**	**81.8**	**87.5**	**93.8**	**101.2**
Share of renewables			67%	69%	72%	73%	75%	77%	78%	80%
Renewables, Electricity Output (GWh)			**79,141**	**87,499**	**95,844**	**104,110**	**112,406**	**121,903**	**132,392**	**143,895**
Total Electricity Output (GWh)			**167,707**	**175,115**	**182,920**	**190,641**	**198,398**	**207,363**	**217,325**	**228,308**

Source: Author's analysis

Figure 35: EP&C segment revenues, by scenario, 2023-2030 (in €m)



Source: Author's analysis

3.1.1.2. Networks

3.1.1.2.1. Regulated Asset Base (RAB) forecasts

The revenues earned from networks activities depend on the amount of regulated assets (RAB). The RAB calculation, which is subject to regulatory rules, namely depends on CAPEX[55].

RAB additions are projected based on both:

- The level of total CAPEX allocated to networks;
- The average net RAB additions over CAPEX ratio (ie- the **€m** increase in RAB for **€1m** of CAPEX)

For the level of total CAPEX:

- Over the three-year period of the strategic plan 2023-2025, similarly to the EP&C segment, it is assumed that Iberdrola achieves its operational targets. Consequently, Iberdrola should increase its RAB by **€16,800m** compared to 2022 reaching **€56,000m** at the end of 2025. Total RAB additions for 2023 is linearly determined based on the 9-month realized values. The additions remaining to reach **€56,000m** in 2025 is split and allocated equally over 2024 and 2025.

- For the period 2026-2030 it is necessary to determine a percentage of total CAPEX attributed to networks, given that Iberdrola only gives guidance on its **total** CAPEX over this period (between **€65,000m** and **€75,000m**). I consider the same total CAPEX amount for the three scenarios, as there is no sufficient insights to derive different comfortable assumptions. Prudence led **€65,000m** amount for CAPEX over the 2026-2030 period.

  Additionally Iberdrola provides guidance on the RAB that should be reached in 2030, which is **c.€65,000m**. It is considered that RAB forecast in 2030 should be different across the scenarios, since installed capacity differs in each scenario[56]. Since total CAPEX are fixed, it is the **percentage allocated to networks** that varies across scenario. The analysis considers that in the optimistic scenario in which growth in renewables is more pronounced Iberdrola invests the "less" in networks and reaches its **c.€65,000m** RAB minimum target. Based on historical RAB additions compared to networks' CAPEX, it implies a **24%** share of total CAPEX directed to networks. In the pessimistic scenario I increase this share by

[55] More precisely *allowed* CAPEX in the technical jargon
[56] Important for the model's consistency

3 times the standard deviation of Networks CAPEX (in percentage of the total) which results in a **40% share**[57]. The average share between the optimistic and pessimistic

For the average net RAB additions over CAPEX ratio (€m):

The ratio is computed for each year of the historical period[58] and the average (**0.58**) is used for the years to forecast.

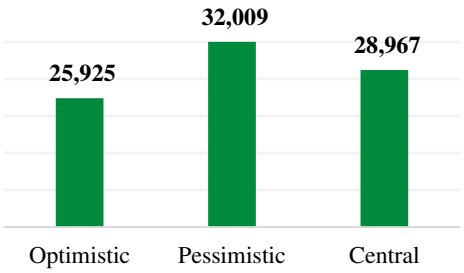
Thus, the projections of RAB additions for the entire period are obtained (**table 23**).

Table 23: RAB projections (€m), by scenario, Iberdrola, 2023-2030

€m	2018	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical										
RAB	29,200	39,200								
Optimistic										
RAB			42,000	49,000	56,000	57,825	59,650	61,475	63,300	65,125
Pessimistic										
RAB			42,000	49,000	56,000	59,042	62,084	65,125	68,167	71,209
Central										
RAB			42,000	49,000	56,000	58,433	60,867	63,300	65,734	68,167

Source: Author's analysis

Figure 36: Total RAB additions (€m), by scenario, Iberdrola, 2023-2030



Source: Author's analysis

3.1.1.2.2. Revenue Calculation

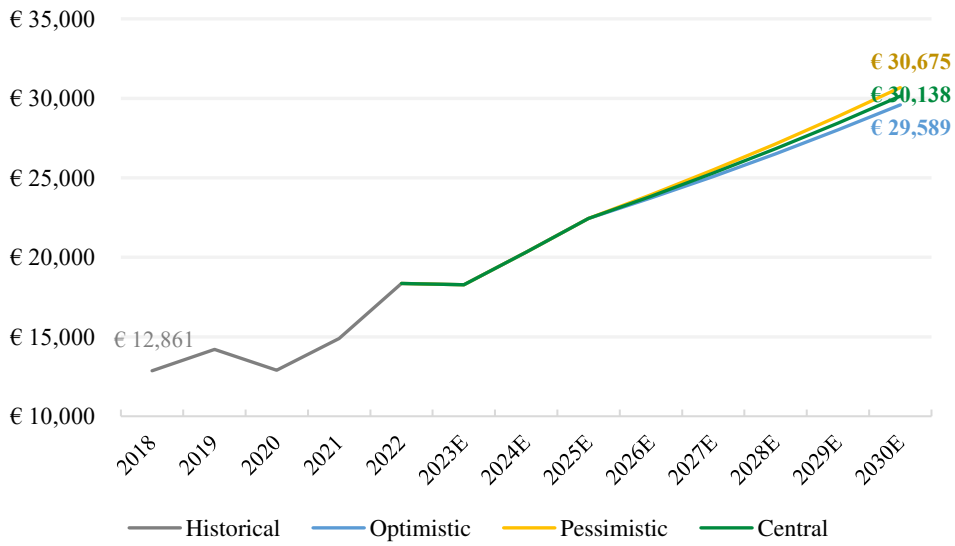
Given the observed strong correlation (**0.83**) between the annual variations of both RAB and revenues a linear regression analysis is performed, whose result can be found in **appendix 7**.

With the resulting equation, the projected annual variations in networks' revenues are obtained based on the variations of projected RAB. Networks' revenues are then derived

[57] A greater share of Networks' CAPEX in the pessimistic scenario is coherent since networks is a stable and predictable business
[58] Including the realized 9-month 2023

from these projected variations. Different cases for inflation are not considered here since most of networks' revenues are inflation-indexed.

Figure 37: Networks segment revenues, by scenario, 2023-2030 (in €m)



Source: Author's analysis

3.1.2. Operating costs

Operating costs include procurements (supplies), operational expenses (excl. D&A) and depreciation, amortization, provision (D&A).

For operating cost, the same forecast method is used: the historical average proportion of revenues. Additionally I do not introduce differences in those proportions *among the scenarios*, because they already account for different operational development[59].

For the EP&C segment the historical proportions applied are:

- Procurements: **65.3%**
- OPEX excl. D&A: **15.5%**
- D&A: **10.2%**

For networks the historical proportions applied are:

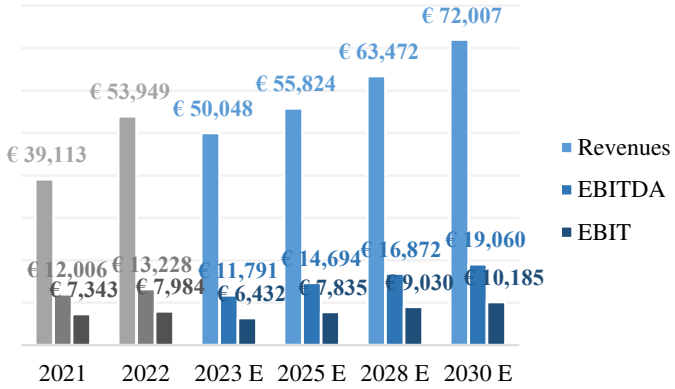
- Procurements: **42.2%**
- OPEX excl. D&A: **21.8%**
- D&A: **14.3%**.

[59] Installed capacity, net capacity factor, electricity output selling price, RAB additions and CAPEX

3.1.3. Consolidated revenues, EBITDA and EBIT

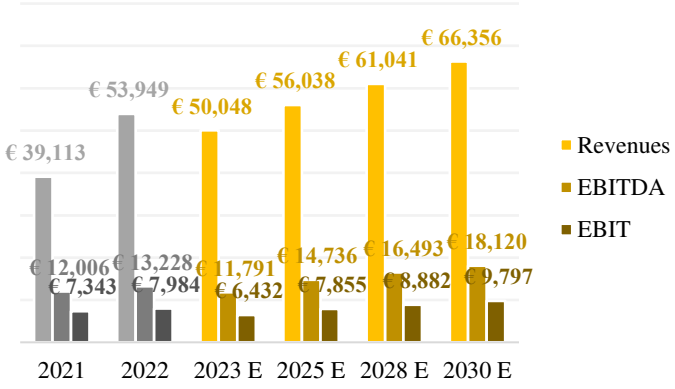
Below are shown our forecasts of Iberdrola's revenues, EBITDA, and EBIT in each scenario.

Figure 38: Total revenues, EBITDA, and EBIT, Iberdrola, optimistic scenario



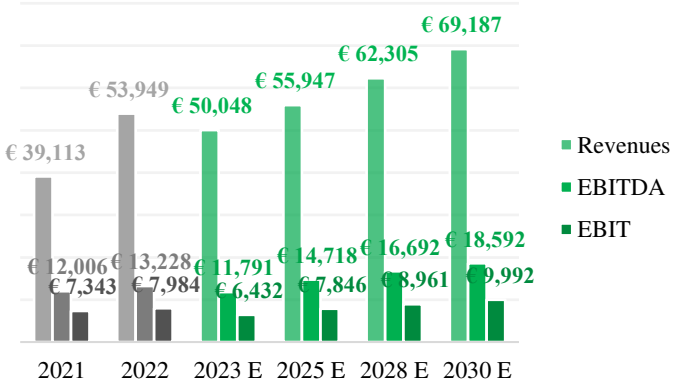
Source: Author's analysis

Figure 39: Total revenues, EBITDA, and EBIT, Iberdrola, pessimistic scenario



Source: Author's analysis

Figure 40: Total revenues, EBITDA, and EBIT, Iberdrola, base scenario



Source: Author's analysis

The detailed consolidated and segment P&L information is presented in appendix 8,9 and 10.

3.1.4. Capital expenditures (CAPEX)

The industry is capital-intensive: growth depends largely on CAPEX. Revenues have been forecasted taking into consideration the required CAPEX. I check that the CAPEX attributed to the EP&C segment imply realistic values of capacity additions based on historical capacity added.

Consistently with the forecast approach, the CAPEX of the 2023-2025 period is taken from the strategic plan since our operational forecasts for that period correspond to the targets set in the plan[60].

- Between 2023 and 2025:

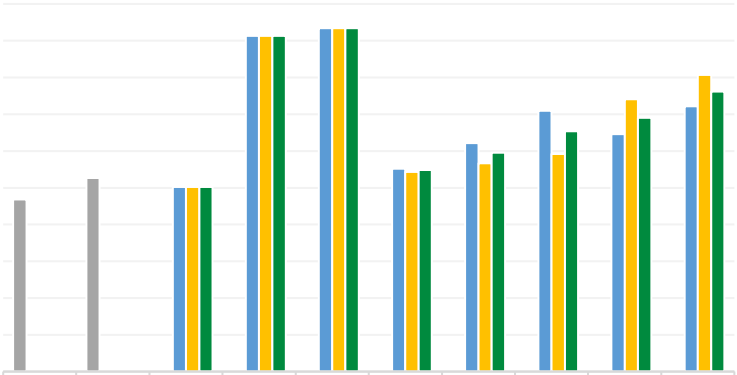
  CAPEX of **€47,000m**, of which **€27,000m** in networks and **€20,000m** in EP&C, are taken as forecasts. For both networks and EP&C **the 2023 projections are linearly derived from the 9 months realized values.** Then the remaining is split equally across 2024 and 2025 for networks, but proportionally to the amount of additional capacity forecasts regarding the EP&C segment[61].

- From 2026 to 2030:

  As described previously in the "**Error! Reference source not found.** Regulated A sset Base forecasts", the total CAPEX considered for this period is **€65,000m**. I determine the share (%) attributed to networks, diverging in each scenario, being the lowest in the optimistic case, the largest in the pessimistic one, and the average in the base scenario. The share of CAPEX attributed to the EP&C segment is simply obtained as follows: one minus share of Networks' CAPEX (%). The resulting total CAPEX in EP&C are then split across the 5 years in proportion of capacity additions.

[60] Reminder: the model assumes Iberdrola achieves its operational targets set in the short term (2023-2025)
[61] Capacity additions were divided by capacity additions-over-CAPEX ratio

Figure 41: Total CAPEX per year, by scenario, Iberdrola, 2023-2030 (€bn)



	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical	€ 9,368	€ 10,53								
Optimistic			€ 10,05	€ 18,27	€ 18,67	€ 11,03	€ 12,42	€ 14,18	€ 12,91	€ 14,44
Pessimistic			€ 10,05	€ 18,27	€ 18,67	€ 10,86	€ 11,33	€ 11,84	€ 14,82	€ 16,13
Central			€ 10,05	€ 18,27	€ 18,67	€ 10,96	€ 11,91	€ 13,07	€ 13,81	€ 15,22

Source: Author's analysis

Table 24: CAPEX split across EP&C and Networks, by scenario (Source: *Author's analysis)*

€m	2018-2022	2023-2025	2026-2030
Historical			
Total CAPEX	**43,345**		
EP&C (%)	56%		
Networks (%)	44%		
Optimistic			
Total CAPEX		**47,000**	**65,000**
EP&C (%)		43%	76%
Networks (%)		57%	24%
Pessimistic			
Total CAPEX		**47,000**	**65,000**
EP&C (%)		43%	60%
Networks (%)		57%	40%
Central			
Total CAPEX		**47,000**	**65,000**
EP&C (%)		43%	68%
Networks (%)		57%	32%

3.1.5. Changes in Net Working Capital

Electric utilities do not display a specific pattern regarding net working capital, which can be positive or negative depending on the variations of days receivables and days payables.

The forecast method is performed directly for the entire group[62] and based on historical proportions, described as follows:

- Working capital assets:

They contain three items: nuclear fuel, inventories, and trade & other receivables. For nuclear fuel and inventories the historical proportion of procurements is applied

[62] Complete segment balance sheet data is not provided

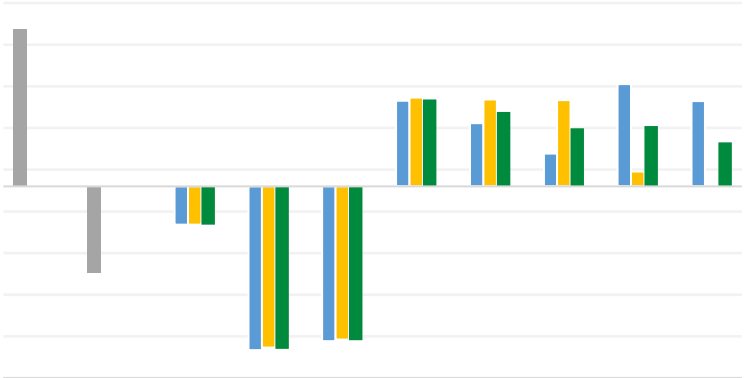
(**1.5%** and **12.7%** respectively). For trade & other receivables the historical percentage of revenues is used (**21.2%**).

- Working capital liabilities:

They include four items: other provisions, trade payables, other payables, and other current liabilities. The first three items is projected using average historical proportions of total operating expenses (excl. D&A): **2.4%**, **21.2%** and **4.3%** respectively. Regarding other current liabilities, after analysis, it is mainly composed of the current year's CAPEX that have not been paid in cash (credit of suppliers). Consequently, other current liabilities were forecasted based on the historical proportion of CAPEX (**35%**).

Figure 43 and **table 25** exhibit the forecasts of net working capital. Note that, in 2024 and 2025 net working capital is significantly negative as a result of elevated CAPEX targeted by Iberdrola in its strategic plan, similarly to 2022, when the company negotiated an extension of days payables with its suppliers of fixed assets.

Figure 42: Net Working Capital forecasts per year, by scenario, 2023-2030 (€m)



	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical	1,889	(1,039)								
Optimistic			(458)	(1,965)	(1,856)	1,028	759	393	1,226	1,023
Pessimistic			(458)	(1,934)	(1,839)	1,064	1,044	1,036	178	(9)
Central			(458)	(1,949)	(1,846)	1,042	891	697	722	529

Source: Author's analysis

Table 25: Changes in Net Working Capital per year, by scenario, 2023-2030

€m	2017	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical														
ΔNet Working Capital		352	426	(47)	1,242	(2,928)								
Optimistic														
ΔNet Working Capital							581	(1,507)	110	2,884	(270)	(365)	833	(203)
Pessimistic														
ΔNet Working Capital							581	(1,476)	95	2,903	(20)	(8)	(858)	(187)
Central														
ΔNet Working Capital							581	(1,491)	103	2,887	(150)	(194)	25	(193)

Source: Author's analysis

3.1.6. Free-Cash Flow to Firm (FCFF)

Since net working capital forecasts are expressed for the entire group (and not by segment), FCFF are calculated directly at the group level.

FCFF is computed for each year as follows:

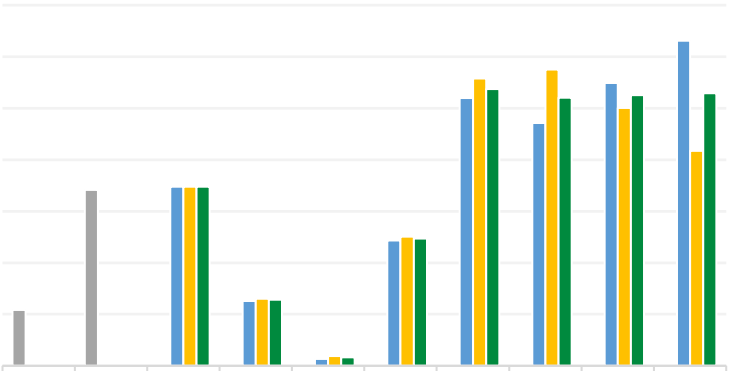
$$FCFF = EBIT - income\ tax + D\&A + Sale\ of\ fixed\ assets\ \&\ intangibles - \Delta NWC - CAPEX\ cash\ outflows$$

For *Income tax*[63] the average historical effective tax rate (**20.5%**) is applied, since the marginal tax rate is more theoretical and applicable to companies with mature operations and stable debt.

Sale of fixed assets & intangibles is considered because of its recurrence as part of asset rotation plans, as the company sell assets at a certain stage of their lives in order to optimize the efficiency of its asset portfolio and to balance financial risk. For 2023-to-2025 it is forecasted following the asset rotation plan indicated by Iberdrola's management (**c.€4,700m** split equally over the three years). After 2025, the annual historical average (**€389m**) is applied since no precise amount is disclosed.

CAPEX cash outflows are calculated based on the average historical proportion of total CAPEX[64] (**74%**). The CAPEX financed by suppliers are recorded in the balance sheet[65].

Figure 43: FCFF, by scenario, Iberdrola, 2023-2030 (€m)



	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical	1,581	3,914								
Optimistic			3,976	1,759	636	2,934	5,697	5,212	5,987	6,812
Pessimistic			3,976	1,799	689	3,009	6,078	6,252	5,505	4,674
Central			3,976	1,780	665	2,968	5,872	5,703	5,751	5,788

[63] Based on EBIT
[64] Total CAPEX released by Iberdrola in its annual reports divided by CAPEX recorded in the cash-flow statement
[65] *Other current liabilities* item

Source: Author's analysis

FCFF of the years 2024 and 2025 drop as a result of significant CAPEX. The detailed information regarding FCFF, including FFO[66], are shown in **appendix 12**.

3.1.7. Debt, cost of Debt and interest expense projections

Given the lack of a detailed debt plan disclosed by Iberdrola, I assume that the country risk premium factor included in the cost of debt stays unchanged (0.59%) over the entire period, and that from 2026 onwards debt issuances and repayment return to normal patterns.

For debt:

Iberdrola's debt is composed of **interest bearing** debt (non-current and current) and **non-interest bearing** debt (non-current only). **Non-interest bearing** debt is not significant and very stable, representing on **average 4%**[67] of non-current interest-bearing debt.

Note that we do not introduce large differences between the scenarios, in order **to avoid the risk of black box into the model. Therefore the results presented in this section are for the base scenario.**

More precisely:

Debt issuances are indicated in Iberdrola's strategic plan for the period 2023-2025 (**c.€12,200m**), representing low levels of issuances compared to historical values. This is in line with the company's intention to limit additional debt issuance over this period, preferring internal funding (FFO). The target issuance (**c.€12,200m**) is spread over the three-years in proportion of CAPEX. After 2025 debt issuances are forecasted applying the average historical proportion of total CAPEX (**157%**).

Debt repayments forecast methodology differs from debt issuances since no guidance is available. They are historically lower than issuances. For more accuracy I use the **ratio** of *debt repayments* over the sum of *Net cash flow available to all investors* and *debt issuances*. For the years 2023-2025 we used the average ratio observed for the years 2021 and 2022 (64%), which is lower than

[66] Funds from operations
[67] The 4% percentage was applied to non-current interest-bearing debt forecasts to project non-interest bearing debt

the 2017-2022 average (**74%**) but, given that *debt issuances* are below average over this three-year period, it makes sense that *debt repayments* also adjust down. From 2026 onwards, debt repayments projections are in line with the historical trend (**74%** of sum of *Net cash flow available to all investors* and *debt issuances).*

Net cash flow available to all investors differs from FCFF since I account for recurrent non-operating investment cash flow items in order to obtain realistic debt and dividend projections. It is computed as follows:

FCFF
(-) Acquisition of associates
(+) Transactions with Minority interests
(+) Proceeds / (Purchases) for securities and other investments
(+) Finance income received
= Net Cash Flow available to Investors

Detailed information on this calculation is provided in appendix 13.

Table 26: Debt modelling results, base scenario, 2023-2030

€m	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical													
Interest bearing Debt - beginning balance	**39,312**	**38,712**	**42,085**	**41,282**	**44,284**								
(+) Issuance of Debt	13,838	18,045	13,013	12,410	15,973								
(-) Repayment of Debt	(13,203)	(13,161)	(12,271)	(7,873)	(9,300)								
= Interest bearing Debt - ending balance	**39,947**	**43,595**	**42,827**	**45,818**	**50,957**								
Other non-current financial liabilities - ending balance	-	1,235	1,510	1,545	1,534								
Total Debt - ending balance	**39,947**	**44,830**	**44,336**	**47,363**	**52,491**								
Central													
Interest bearing Debt - beginning balance						**50,957**	**49,501**	**50,373**	**51,993**	**54,512**	**55,102**	**56,228**	**57,575**
(+) Issuance of Debt						2,618	4,759	4,866	17,264	18,758	20,585	21,746	23,975
(-) Repayment of Debt						(4,074)	(3,887)	(3,245)	(14,745)	(18,169)	(19,459)	(20,400)	(22,163)
= Interest bearing Debt - ending balance						**49,501**	**50,373**	**51,993**	**54,512**	**55,102**	**56,228**	**57,575**	**59,387**
Other non-current financial liabilities - ending balance						1,987	2,022	2,087	2,188	2,212	2,257	2,311	2,383
Total Debt - ending balance						**51,487**	**52,395**	**54,080**	**56,700**	**57,313**	**58,485**	**59,886**	**61,770**

Source: Author's analysis

For interest expense:

It is computed based on the average debt balance across the year:

$$Interest\ expense(t) = \frac{Debt(t-1) + Debt(t)}{2} \times Cost\ of\ Debt$$

Two separate interest expense calculations are performed for each year: one for the existing debt prior to the forecast period[68] and one for new debt issued from 2023 onwards. The **average cost of debt over the period 2018-2022**[69] (3.29%) is used to obtain interest expense on debt existing prior to 2023. Regarding interest

[68] Debt existing at the end of 2022
[69] Reported by Iberdrola

expense on new debt, **DAMODARAN's synthetic rating-based cost of debt** approach is applied in which the cost of debt contains a synthetic-rating based default spread plus a country risk premium factor that accounts for the exposition of Iberdrola to Brazil and Mexico[70].

The synthetic-rating based default spread is computed annually based on the Interest Coverage Ratio (ICR) observed in the previous year[71].

The country-risk premium factor is fixed (0.59%) and derived from DAMODARAN's sovereign rating-based default spreads for Brazil and Mexico (2.95% jointly) adjusted for Iberdrola's forward percentage of total EBITDA generated in Latin America in the next years (20% mentioned in the guidance).

The risk-free rate corresponds to the average yield observed on the 10-year German government's bond in February[72] (2.38%).

Table 27: Synthetic rating-based spreads using ICR

ICR > to:	Rating	Spread
0.8	CCC	8.51%
1.25	B-	5.24%
1.5	B	3.61%
1.75	B+	3.14%
2	BB	2.21%
2.25	BB+	1.74%
2.5	**BBB**	**1.47%**
3	A-	1.21%
4.25	A	1.07%
5.5	A+	0.92%

Source: Damodaran, non-financial services firms, updated as of January 2024

Table 28: Cost of debt results, base scenario, Iberdrola, 2023-2030

	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical													
ICR	2.73	2.72	2.74	3.24	2.62								
Credit rating	BBB	BBB	BBB	A-	BBB								
Spread	1.47%	1.47%	1.47%	1.21%	1.47%								
Cost of debt	**2.97%**	**3.24%**	**2.86%**	**3.24%**	**4.14%**								
Central													
ICR						**2.55**	**2.87**	**2.96**	**2.87**	**2.75**	**2.72**	**2.80**	**2.89**
Credit rating						BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB
Spread						1.47%	1.47%	1.47%	1.47%	1.47%	1.47%	1.47%	1.47%
Cost of debt						**4.44%**	**4.44%**	**4.44%**	**4.44%**	**4.44%**	**4.44%**	**4.44%**	**4.44%**

Source: Author's analysis

The cost of debt stabilizes at 4.44% and Iberdrola's BBB "investment grade" credit rating is preserved, aligned with the company's financial management strategy to maintain at least a BBB credit rating.

[70] The use of this method better captures the evolution of fundamentals (EBIT) than using the same Iberdrola long-term bonds' yield over the entire period
[71] Otherwise we would have a circularity issue
[72] Until February 16th, 2024

Table 29: Interest expense and Interest tax shield forecasts, base scenario, 2023-2030

€m	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Central									
Existing debt prior 2023	50,956	46,883	42,995	39,750	25,005	6,837	-	-	-
New debt		2,618	7,377	12,243	29,507	48,265	56,228	57,575	59,387
Average existing debt prior 2023		48,920	44,939	41,373	32,378	15,921	3,418	-	-
Average new debt		1,309	4,998	9,810	20,875	38,886	52,247	56,901	58,481
Average cost of debt 2018-2022 (existing debt)		**3.29%**							
Interest expense on existing debt prior 2023	(2,003)	1,609	1,478	1,361	1,065	524	112	-	-
Cost of debt (new debt)		**4.44%**	**4.44%**	**4.44%**	**4.44%**	**4.44%**	**4.44%**	**4.44%**	**4.44%**
Interest expense on new debt		58	222	435	926	1,726	2,319	2,525	2,595
Total interest expense	(2,003)	**1,668**	**1,700**	**1,797**	**1,992**	**2,249**	**2,431**	**2,525**	**2,595**
Average Effective Corporate Tax rate		**20.5%**							
Interest Tax Shield		**341**	**348**	**368**	**407**	**460**	**497**	**517**	**531**

Source: Author's analysis

Interest tax shields are obtained by a simple multiplication of interest expense with the average effective corporate tax rate (20.5%).

3.1.8. Unlevered beta and cost of Equity

The calculation of Iberdrola's cost of equity is based on the CAPM model.

In the CAPM model the cost of equity is determined as follows:

$$E(Ke) = rf + \beta \times (E(Rm) - rf)$$

E(Ke) is the expected cost of equity for the company, while E(Rm) represents the expected return obtained from the market. Beta (β) measures the sensitivity of the company's equity securities to the systematic risk, which is the risk inherent to the broader equity market.

Beta estimation:

Three methods are applied: the excess returns' regression, the bottom-up approach[73] and DAMODARAN Western Europe Power industry beta.

An estimate of Iberdrola's unlevered beta[74] is required, since the FCFF are discounted at the unlevered cost of equity and the value of debt is considered separately in the APV.

For the excess returns' regression approach, it is performed a regression of Iberdrola's monthly excess returns on the STOXX Europe 600 Index's monthly excess returns[75]. The

[73] Based on the betas observed for the company's peers
[74] Corresponds to Iberdrola's asset (industry) beta
[75] Returns of both Iberdrola and STOXX Europe 600 are total returns retrieved from Refinitiv Eikon Datastream

period considered ranges from 16/01/2017 to 16/02/2024 (similar length as the forecast period). The regression equation is as follows:

$$ER(ibe) = \alpha + \beta \times ER(STOXX\ Eu\ 600) + s.e.$$

The regression analysis leads to a levered beta of 0.64. The p-value obtained for the levered beta is $5.6x10^{-6}$. Therefore it is significant at 1% confidence level. The full table of regression results can be found in appendix 14.

To obtain the unlevered beta, I apply the Hamada formula using the average Iberdrola's D/E ratio since 2017 and the average marginal corporate tax rate as suggested by common practice.

Table 30: Unlevered beta, based on regression analysis

Levered beta	0.64
Average D/E Ratio	78.6%
Average Marginal Tax Rate	25.8%
Unlevered Beta	**0.40**

Source: Author's analysis

Regarding the second method, the bottom-up approach, unlevered beta for each of Iberdrola's peers is computed based on their 5-year average levered betas, market capitalizations, market values of debt and tax rates, all retrieved from Refinitiv Eikon Datastream. The resulting average of the peers' unlevered betas equals 0.44.

Table 31: Unlevered beta, based on the bottom-up approach

Peer Company	Country of Headquarters	Levered Beta	Market Cap. (€m)	Debt (€m)	D/E Ratio	Tax Rate	Unlevered Beta
Nextera Energy	UNITED STATES	0.288	€ 137,916	€ 57,094	41.4%	13.1%	0.212
Enel	ITALY	0.920	€ 66,859	€ 70,637	105.7%	31.1%	0.532
Oersted	DENMARK	0.500	€ 300,903	€ 77,459	25.7%	18.9%	0.414
Endesa	SPAIN	0.658	€ 22,025	€ 10,768	48.9%	23.8%	0.479
EDP Energias de Portugal	PORTUGAL	0.662	€ 16,975	€ 18,700	110.2%	20.6%	0.353
NATURGY ENERGY GROUP	SPAIN	0.982	€ 23,083	€ 17,033	73.8%	23.9%	0.629
SSE	UNITED KINGDOM	0.620	€ 16,019	€ 10,807	67.5%	18.3%	0.400
NATIONAL GRID	UNITED KINGDOM	0.430	€ 34,626	€ 37,261	107.6%	28.1%	0.242
ENGIE	FRANCE	1.021	€ 31,954	€ 43,294	135.5%	38.7%	0.558
RWE	GERMANY	0.728	€ 22,534	€ 9,212	40.9%	37.8%	0.581
					Peer group's average Unlevered Beta		**0.440**

Source: Author's analysis

The third method consisted in computing the Western Europe Power Industry beta based on the levered beta, the average D/E ratio and marginal tax rate retrieved from DAMODARAN's website[76]. This results in a 0.50 unlevered beta.

[76] Latest update in January 2024

Consequently, I obtain three possible values for the unlevered beta: 0.40, 0.44, and 0.50. Since the sensitivity analysis later on will account for variations in the cost of equity, only one of those betas is retained: the one in-between (0.44), obtained from the bottom-up approach.

Expected return from the market estimation:

The annualized average historical monthly return of the STOXX Europe 600 Index was selected as the proxy for the expected market return (9.3%). The period considered is identical to the one used to estimate the unlevered beta based on the regression[77].

Risk-free rate estimation:

As described previously regarding the cost of debt calculations, I consider the average yield observed on the 10-year German government's bond in February[78] 2024 (2.38%) as the appropriate risk-free rate estimate.

Finally, the result for the unlevered cost of equity is as follows:

Table 32: Cost of equity estimate[79], Iberdrola

Rf	**2.38%**
Rm	9.31%
ERP	**6.94%**
Unlevered beta	**0.44**
Country Risk Premium	**0.59%**
Unlevered cost of equity	**6.02%**

Source: Author's analysis

3.1.9. Iberdrola Enterprise Value and Equity Value

The final part of the valuation work is characterized by the following points regarding **Enterprise Value** computation :

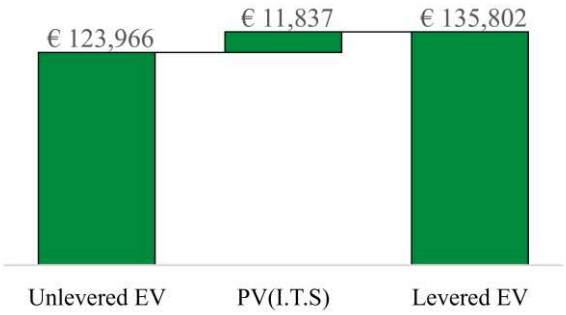
[77] 16/01/2017-16/02/2024
[78] Until February 16th, 2024
[79] The country risk premium is identical to the one used in the cost of debt calculations (see section **Error! Reference source not found.** on debt modelling), we chose not to account for the additional v olatility of equity markets compared to bond markets, an option that is possible according to DAMODARAN

- The valuation is performed on February 16th, 2024 which implies the following time exponents for each year when discounting FCFF:

	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Time exponent for discounted FCFF	**0**	**0.875**	**1.875**	**2.875**	**3.875**	**4.875**	**5.875**	**6.875**

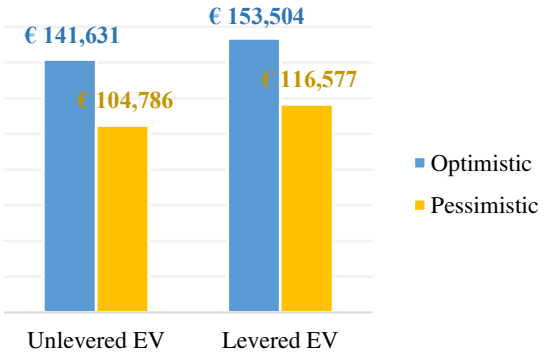
- FCFF are discounted at the unlevered cost of equity (6.02%)
- The terminal growth rate (after 2030) is assumed to be 2%, the target inflation rate within the Euro zone
- Interest Tax Shields are discounted at the pre-tax cost of debt (4.44%)
- No terminal growth rate applied to the ITS terminal value (after 2030 it is assumed perpetual, *in accordance with the APV method*, and the terminal value is calculated based upon the 2030 ITS value)
- The previous point implies constant debt after 2030, equal to its value at the end of 2030

Figure 44: Levered Enterprise Value results, base scenario, Iberdrola (€m)



Source: Author's analysis

Figure 45: Levered and Unlevered Enterprise Values, Optimistic and pessimistic cases (€m)



Source: Author's analysis

The EV-EQ[80] bridge implies applying adjustments to the levered Enterprise Value in order to obtain the Equity Value of the company.

The book value as of 30/09/2023[81] is applied for each item, except for the market value of debt, which is computed based on the debt cash flows projections and the cost of debt obtained from the debt and interest expense modelling.

Table 32: EV-EQ bridge and Equity Value, by scenario (€m)

€m	Central	Optimistic	Pessimistic
Total EV-EQ bridge	**(56,842)**	**(57,240)**	**(56,402)**
(-) Market Value of Debt	(50,958)	(51,355)	(50,518)
(-) Minority interests	(8,762)	(8,762)	(8,762)
(-) Hybrid instruments	(8,250)	(8,250)	(8,250)
(-) Financial derivatives (liabilities)	(3,763)	(3,763)	(3,763)
(+) Cash and cash equivalents	2,690	2,690	2,690
(+) Investments accounted by equity method	948	948	948
(+) Other non-current and current financial assets	8,322	8,322	8,322
(+) Financial derivatives (assets)	2,930	2,930	2,930
Equity Value	**€ 78,960**	**€ 96,264**	**€ 60,175**

Source: Author's analysis

The **Equity Value per share** is obtained by dividing the Equity Value by the total number of shares outstanding as of 30/09/2023[82]. Those amount to 6,350,278. I checked in both Iberdrola's website and Refinitiv Eikon that between 30/09/2023 and 16/02/2024 no major operation affecting share capital had occurred.

The resulting Equity Values per share are presented below:

[80] Enterprise Value-Equity Value
[81] Latest actual figures available at the time of the valuation (9-month 2023 results)
[82] Latest actual figures available at the time of the valuation

Figure 46: Equity Value per share, by scenario, APV results

Source: Author's analysis

The APV approach leads to a €12.43 Equity Value per share for Iberdrola in the base scenario, which implies an upside of 15.5%, compared to the observed closing share price on February 16th, 2024 (€10.77).

The pessimistic scenario results in an Equity Value per share of €9.48, representing a 12.0% downside compared to the current share price. Finally, the optimistic scenario entails a €15.16 Equity Value per share, offering a 40.8% upside.

3.1.10. Sensitivity analysis

I perform three sensitivity analysis on the critical variables of the model, the ones that have significant impact on the equity value per share. These variables, which are subject to higher uncertainty are the renewable installed capacity, the renewable net capacity factor, the electricity selling price per GWh, the unlevered cost of equity and the terminal growth rate. The analysis focuses here on the base scenario.

Figure 47: Sensitivity analysis results, base scenario

		Renewables, Net Capacity Factor 2030E					
	€ 12.43	19.5%	20.5%	21.5%	22.5%	23.5%	24.5%
Renewable Installed Capacity 2030E (MW)	75,699	€ 10.42	€ 10.95	€ 11.48	€ 12.01	€ 12.54	€ 13.07
	76,699	€ 10.49	€ 11.03	€ 11.56	€ 12.10	€ 12.63	€ 13.16
	77,699	€ 10.57	€ 11.10	€ 11.64	€ 12.18	€ 12.72	€ 13.26
	78,699	€ 10.64	€ 11.18	€ 11.72	€ 12.26	€ 12.81	€ 13.35
	79,699	€ 10.71	€ 11.26	€ 11.80	€ 12.35	€ 12.89	€ 13.44
	80,699	€ 10.79	€ 11.34	€ 11.88	€ 12.43	€ 12.98	€ 13.53
	81,699	€ 10.86	€ 11.41	€ 11.97	€ 12.52	€ 13.07	€ 13.62
	82,699	€ 10.93	€ 11.49	€ 12.05	€ 12.60	€ 13.16	€ 13.72
	83,699	€ 11.01	€ 11.57	€ 12.13	€ 12.69	€ 13.25	€ 13.81
	84,699	€ 11.08	€ 11.64	€ 12.21	€ 12.77	€ 13.34	€ 13.90
	85,699	€ 11.15	€ 11.72	€ 12.29	€ 12.86	€ 13.43	€ 13.99

Max		Upside (downside)
€	13.99	29.93%
Min		**Upside (downside)**
€	10.42	-3.25%
Mean		**Upside (downside)**
€	12.16	12.90%

		Electricity selling price (€m /GWh) 2030E					
		€ 0.160	€ 0.165	€ 0.170	€ 0.175	€ 0.180	€ 0.185
€ 12.43		€ 10.75	€ 11.31	€ 11.87	€ 12.43	€ 12.99	€ 13.55

Max		Upside (downside)
€	13.55	25.85%
Min		**Upside (downside)**
€	10.75	-0.14%
Mean		**Upside (downside)**
€	12.15	12.85%

		Terminal growth rate					
	€ 12.43	2.0%	2.1%	2.2%	2.3%	2.4%	2.5%
Unlevered cost of equity	5.52%	€ 15.29	€ 15.84	€ 16.43	€ 17.05	€ 17.71	€ 18.42
	5.62%	€ 14.66	€ 15.18	€ 15.72	€ 16.31	€ 16.93	€ 17.58
	5.72%	€ 14.06	€ 14.54	€ 15.06	€ 15.61	€ 16.19	€ 16.80
	5.82%	€ 13.49	€ 13.95	€ 14.43	€ 14.95	€ 15.49	€ 16.07
	5.92%	€ 12.95	€ 13.38	€ 13.84	€ 14.32	€ 14.83	€ 15.37
	6.02%	€ 12.43	€ 12.84	€ 13.28	€ 13.73	€ 14.21	€ 14.72
	6.12%	€ 11.95	€ 12.33	€ 12.74	€ 13.17	€ 13.62	€ 14.10
	6.22%	€ 11.48	€ 11.85	€ 12.24	€ 12.64	€ 13.07	€ 13.52
	6.32%	€ 11.04	€ 11.39	€ 11.75	€ 12.14	€ 12.54	€ 12.97
	6.42%	€ 10.62	€ 10.95	€ 11.29	€ 11.66	€ 12.04	€ 12.44
	6.52%	€ 10.21	€ 10.53	€ 10.86	€ 11.20	€ 11.56	€ 11.94

Max		Upside (downside)
€	18.42	71.02%
Min		**Upside (downside)**
€	10.21	-5.19%
Mean		**Upside (downside)**
€	13.69	27.10%

Source: Author's analysis

The sensitivity analysis yield a share value ranging from €10.21 to €18.42, all variables considered. The three mean share values lead to upsides compared to the current share price. Even when renewable installed capacity and net capacity factor are below the main forecasts, the obtained share values still imply an upside. There is however a greater risk coming from the electricity selling price.

3.2.Relative Valuation

A relative valuation based on current trading multiples is performed to complement the APV approach, providing further insights on the company's real value.

Three types of multiples are applied *in accordance with common practice for utility companies*: EV/EBITDA, P/E, and P/B[83].

[83] P/E and P/B refer to *Price-Earnings* and *Price-to-Book value of Equity* ratios respectively

Additionally, I consider both **trailing 12-month (TTM)** and **forward 12-month** multiples, which results in the computation of six multiples. These are computed for each of Iberdrola's ten peers[84].

In the computation of the median multiples to be applied to Iberdrola's drivers, three peers were dropped:

- *Engie* because it has still significant gas operations[85], which is reflected in its lower trading multiples;
- *Oersted* given that its TTM P/E ratio is negative;
- *RWE* because of both quite significant coal-fired generation still today and the deeper energy crisis affecting Germany with the ongoing war in Ukraine, which impact more negatively its current valuation multiples compared to electric utilities elsewhere.

Below are the valuation multiples obtained for the peers and the resulting median multiples.

Table 33: Peers' valuation multiples

		VALUATION MULTIPLES					
		Trailing 12 months			Forward 12 months		
Peer Company	**Country of Headquarters**	**EV/EBITDA**	**P/E**	**P/B**	**EV/EBITDA**	**P/E**	**P/B**
Nextera Energy	UNITED STATES	12.74x	17.46x	2.40x	13.96x	16.10x	2.23x
Enel	ITALY	5.20x	9.16x	2.11x	5.08x	8.82x	1.72x
Endesa	SPAIN	6.51x	14.41x	3.15x	5.60x	10.28x	2.82x
EDP Energias de Portugal	PORTUGAL	7.99x	12.88x	1.76x	7.87x	12.35x	1.46x
Naturgy Energy Group	SPAIN	7.48x	11.15x	2.29x	8.21x	12.72x	2.52x
SSE	UNITED KINGDOM	9.00x	10.08x	2.03x	8.23x	9.29x	1.48x
ENGIE	FRANCE	4.57x	6.91x	1.34x	4.90x	8.55x	1.06x
Oersted	DENMARK	10.74x	-9.93x	2.81x	7.84x	17.02x	2.07x
National Grid	UNITED KINGDOM	11.70x	15.18x	1.30x	10.84x	13.80x	1.25x
RWE	GERMANY	3.50x	5.91x	0.84x	4.88x	10.94x	0.78x
		MEDIAN					
Dropped		7.99x	12.88x	2.11x	8.21x	12.35x	1.72x

Source : Refinitiv Eikon Datastream

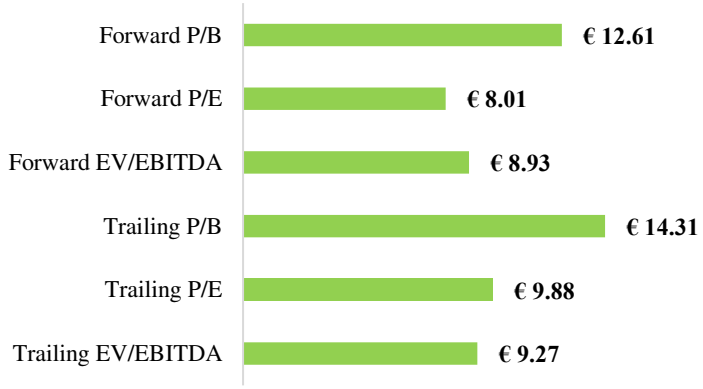
Based on the median multiples, we can infer that analysts are not expecting drastic changes for the next twelve months in valuation multiples, since their estimates of EBITDA, earnings and book values are higher, pushed by a decrease in cost inflation, while expected declines in European interest rates for the second half of 2024 should support Enterprise Values.

[84] See appendix 4 on our methodology for selecting Iberdrola's peers
[85] Although it is a key competitor of Iberdrola in renewable electricity generation

Since EV/EBITDA is an Enterprise Value multiple, it is necessary to account for the EV-EQ bridge in order to obtain the Equity Value. I applied the EV-EQ bridge calculated when applying the APV approach.

The results for Iberdrola's Equity Value per share are as follows:

Figure 48: Equity Value per share, Relative valuation



Source: Author's analysis

Note that all the multiples lead to a downside, except for the trailing and forward P/B. The forward P/B yields a share value **(€12.61),** aligned with the APV's base scenario **(€12.43).** Even though they are quite similar to trailing multiples, the forward EV/EBITDA and P/E yield lower shares values, because our projected EBITDA and earnings for 2024 are slightly lower than the trailing EBITDA and earnings as electricity price per GWh decreases gradually.

Based on the trailing multiples it could be inferred that Iberdrola may be slightly overvalued at the current share price compared to its peers. However I believe that Iberdrola's strong operating performance, as well as the risk-balanced growth in renewables preserving its balance sheet, are the main reasons explaining a valuation premium applied to Iberdrola by investors[86].

That said, since Iberdrola is valued at a premium, the relative valuation leads to some prudence when setting my final target price regarding Iberdrola's stock.

4. Target price, recommendation and analysts' mean expectations

Given both the detailed and forward-looking nature characterizing the APV valuation approach but taking into account the disruption that the electric industry is experiencing,

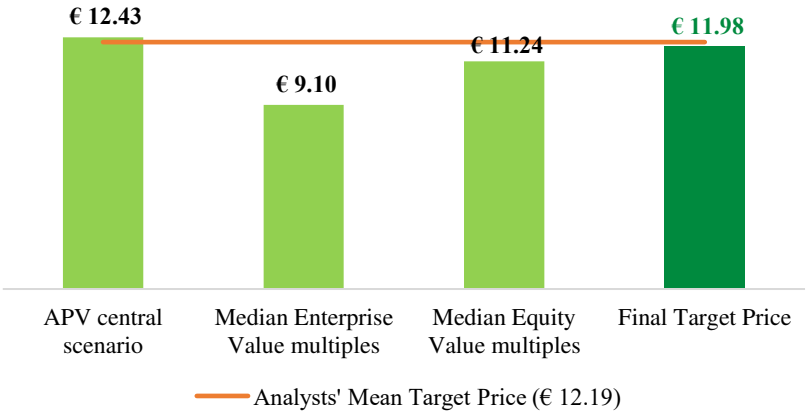
[86] In other words, the company finances its assets at a lower cost of capital than its peers on average

which translates into high uncertainty regarding the future path of renewables, it was decided to apply the following weights:

- 80% to the share value obtained from the APV;
- 10% to the share value resulting from the median Enterprise Value multiple (forward and trailing);
- And 10% to the share value implied by the median Equity Value multiples (forward and trailing).

This cautious method yields a target price of **€11.98**, corresponding to a **buy** investment recommendation (**+11.25%** upside). My target price is slightly lower than the analysts' mean target price as of February 2024 (€12.19), and is closest to BERENBERG's estimate[87] (€11.80). Overall a high level of confidence is achieved with this target price.

Figure 49: Summary of Equity Values per share, Final Target Price and Analysts' mean Target Price



Source: Author's analysis and Refinitiv Eikon

5. Appendices

Appendix 1: Porters' 5 forces, Electricity sector

The bargaining power of suppliers is moderate to high as there are limited actors which are concentrated geographically and switching costs are relatively high.

The bargaining power of buyers is moderate. Buyers can easily switch to a cheaper energy provider. However, since usually prices are fixed on long term take-or-pay

[87] See appendix X presenting the summary table of analysts' target prices for Iberdrola

contracts and the customer base is large with a growing demand, their power is limited in favor of providers.

Competitive rivalry is moderate to high since actors operating in the market usually offer the same services, which makes it difficult to develop an competitive advantage. Meanwhile fossil fuel providers are incentivized to reduce polluting activities and to develop renewable energy segments.

Threat of substitution is moderate. Fossil fuel energies stay prominent in the market, with competitive prices. However, prospects are in favor of renewable energies, as advanced technologies and government subsidies make these energies more affordable and more efficient compared to fossil fuel.

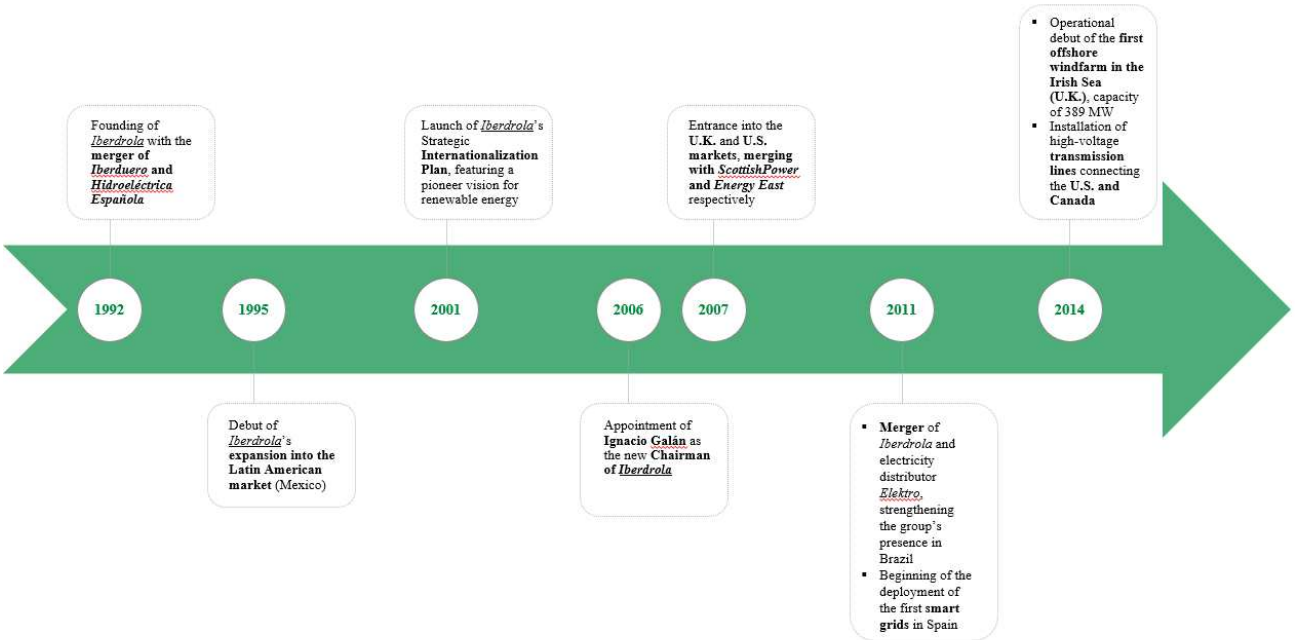
Threat of new entrants is low to moderate since it is capital intensive to entry the market and there are high regulatory requirements. However, government incentives support the development of new actors in the market.

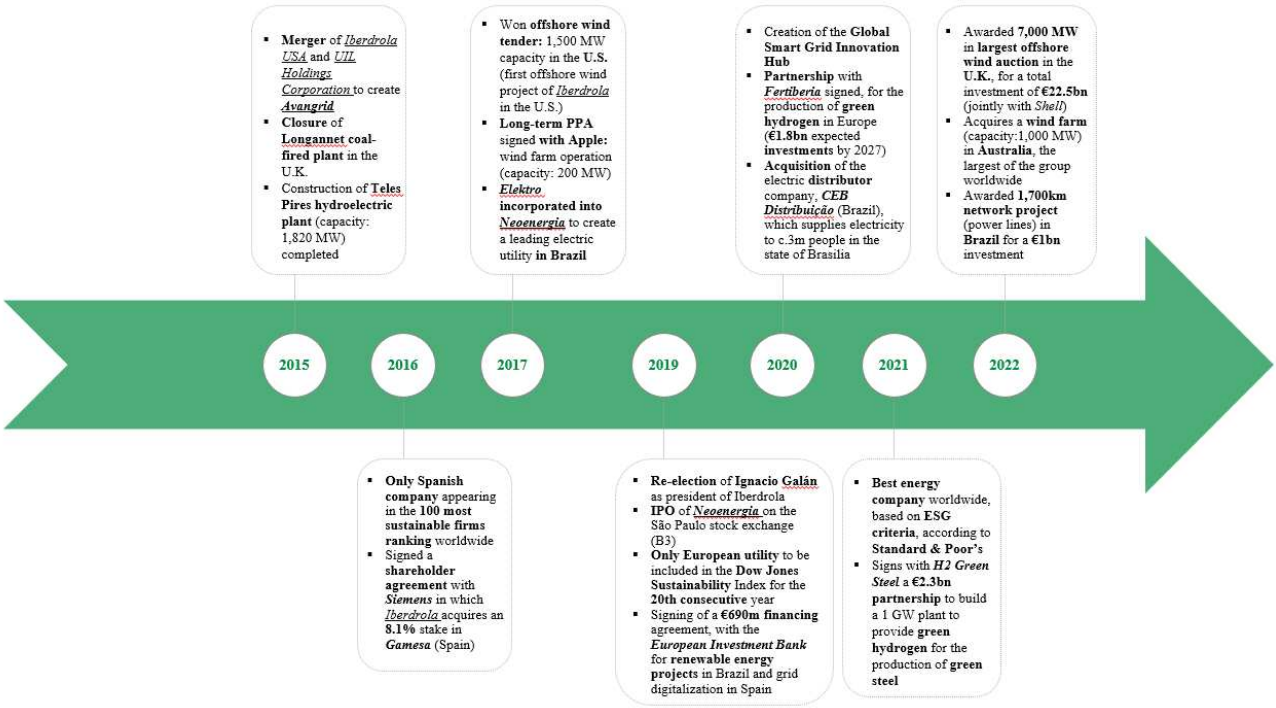
Appendix 2: Industry electricity output by source, APS and STEPS

			Announced Pledges Scenario (TWh)				Shares (%)			CAAGR (%) 2022 to:	
	2010	2022	2030	2035	2040	2050	2022	2030	2050	2030	2050
Total generation	**21 533**	**29 033**	**36 370**	**42 933**	**51 710**	**66 760**	**100**	**100**	**100**	**2.9**	**3.0**
Renewables	4 209	8 599	19 295	28 795	38 551	55 057	30	53	82	11	6.9
Solar PV	32	1 291	6 390	11 240	16 296	24 297	4	18	36	22	11
Wind	342	2 125	6 208	9 524	12 701	18 432	7	17	28	14	8.0
Hydro	3 456	4 378	5 071	5 653	6 284	7 432	15	14	11	1.9	1.9
Bioenergy	309	687	1 314	1 736	2 184	3 005	2	4	5	8.4	5.4
of which BECCS	-	-	32	158	302	538	-	0	1	n.a.	n.a.
CSP	2	16	84	278	581	1 101	0	0	2	23	16
Geothermal	68	101	217	335	448	677	0	1	1	10.0	7.0
Marine	1	1	11	29	56	113	0	0	0	36	18
Nuclear	2 756	2 682	3 496	4 086	4 701	5 301	9	10	8	3.4	2.5
Hydrogen and ammonia	-	-	78	229	344	606	-	0	1	n.a.	n.a.
Fossil fuels with CCUS	-	1	48	328	566	949	0	0	1	70	29
Coal with CCUS	-	1	22	236	409	710	0	0	1	54	28
Natural gas with CCUS	-	-	27	92	157	239	-	0	0	n.a.	n.a.
Unabated fossil fuels	14 479	17 636	13 356	9 407	7 458	4 759	61	37	7	-3.4	-4.6
Coal	8 669	10 427	6 976	4 249	2 932	1 534	36	19	2	-4.9	-6.6
Natural gas	4 847	6 500	6 028	4 896	4 314	3 080	22	17	5	-0.9	-2.6
Oil	963	709	352	262	212	144	2	1	0	-8.4	-5.5

			Stated Policies Scenario (TWh)				Shares (%)			CAAGR (%) 2022 to:	
	2010	2022	2030	2035	2040	2050	2022	2030	2050	2030	2050
Total generation	**21 533**	**29 033**	**35 802**	**40 494**	**45 418**	**53 985**	**100**	**100**	**100**	**2.7**	**2.2**
Renewables	4 209	8 599	16 915	23 051	28 721	37 973	30	47	70	8.8	5.4
Solar PV	32	1 291	5 405	8 657	11 961	17 220	4	15	32	20	9.7
Wind	342	2 125	5 229	7 502	9 275	11 801	7	15	22	12	6.3
Hydro	3 456	4 378	4 981	5 293	5 554	6 351	15	14	12	1.6	1.3
Bioenergy	309	687	1 073	1 241	1 410	1 746	2	3	3	5.7	3.4
of which BECCS	-	-	4	5	5	5	-	0	0	n.a.	n.a.
CSP	2	16	46	91	161	322	0	0	1	14	11
Geothermal	68	101	175	247	317	439	0	0	1	7.1	5.4
Marine	1	1	6	20	44	93	0	0	0	24	18
Nuclear	2 756	2 682	3 351	3 665	3 886	4 353	9	9	8	2.8	1.7
Hydrogen and ammonia	-	-	22	59	82	91	-	0	0	n.a.	n.a.
Fossil fuels with CCUS	-	1	7	30	59	90	0	0	0	33	19
Coal with CCUS	-	1	4	14	22	29	0	0	0	25	14
Natural gas with CCUS	-	-	3	16	37	61	-	0	0	n.a.	n.a.
Unabated fossil fuels	14 479	17 636	15 406	13 593	12 568	11 373	61	43	21	-1.7	-1.6
Coal	8 669	10 427	8 333	6 973	6 145	4 949	36	23	9	-2.8	-2.6
Natural gas	4 847	6 500	6 611	6 222	6 067	6 150	22	18	11	0.2	-0.2
Oil	963	709	462	398	356	274	2	1	1	-5.2	-3.3

Appendix 3: Key historic developments





Appendix 4 : Peers selection

Peers have been selected from the wider lists of companies included in the Eikon Global Electric Utilities and Eikon Europe Electric Utilities indices, based on five criteria: size, profitability, growth, investment and capital structure. The selection is based on a computational method which consists in retaining the firms that minimize the difference in their metrics of each criteria with the ones of Iberdrola. This enables to selected the most comparable firms. An additional condition is applied: the peer must have a market cap or revenues of at least 20% that of Iberdrola. The table below presents the list of selected peers and their metrics.

			Size						Profitability							Growth		Investment	Capital structure: Leverage metrics				
RIC	Company name	Country of headquarters	Market Cap (€m)	Revenues latest FY (€m)	12M forward Revenues (€m)	EBITDA latest FY (€m)	12M forward EBITDA (€m)	Cash flow from operations (€m)	EBITDA margin latest FY	Net profit margin latest FY	EPS latest FY (€)	12M forward EPS (€)	Dividend yield	Return on Invested Capital	Return on Equity	Revenues 5 years CAGR	EBIT 5 years CAGR	12M forward CAPEX (€m)	Net Debt latest FY (€m)	12M forward Net Debt (€m)	12M forward Net Debt/EBIT DA	Total Debt /Total Capital	Net D/E ratio lastes FY
NEE.N	Nextera Energy Inc	UNITED STATES	108,955	19,635	24,666	8,453	13,240	7,355	43.1%	19.8%	1.96	3.10	3.3%	4.3%	10.9%	4.6%	-0.6%	17,549	57,793	64,464	4.9x	52.7%	53.0%
ENEI.MI	Enel SpA	ITALY	65,118	135,653	112,871	17,628	21,675	13,353	13.0%	1.2%	.17	.67	6.5%	2.7%	5.8%	13.3%	-5.4%	11,470	49,794	55,942	2.6x	60.0%	76.5%
ORSTED.CO	Oersted A/S	DENMARK	17,634	17,787	14,240	4,126	3,563	1,139	23.2%	11.0%	4.66	2.32	4.3%	11.1%	21.4%	17.2%	1.9%	5,828	3,568	10,151	2.8x	45.1%	20.2%
RWEG.DE	RWE AG	GERMANY	24,145	38,366	32,459	3,161	5,587	5,306	13.8%	7.1%	3.93	2.94	2.8%	9.4%	12.7%	-2.0%	N/A	5,750	(3,246)	10,957	2.0x	6.9%	-13.4%
ENGIE.PA	ENGIE SA	FRANCE	34,338	93,865	91,396	2,710	13,999	10,363	11.0%	0.2%	.06	1.77	9.9%	1.6%	0.4%	7.6%	-3.5%	10,580	12,304	36,914	2.6x	23.2%	35.8%
ELE.MC	Endesa SA	SPAIN	20,741	32,896	24,620	5,366	4,903	4,951	16.3%	7.7%	2.40	1.58	8.1%	13.5%	46.5%	10.6%	25.3%	2,746	8,940	12,156	2.5x	55.2%	43.1%
EDP.LS	EDP Energias de Portugal SA	PORTUGAL	17,903	20,651	20,673	4,373	5,115	3,083	21.2%	3.3%	.19	.30	4.4%	3.7%	7.5%	5.6%	3.1%	5,027	16,835	17,375	3.4x	56.9%	94.0%
NTGY.MC	NATURGY ENERGY GROUP	SPAIN	26,121	33,965	27,355	4,655	4,921	4,514	13.7%	4.9%	1.72	1.79	5.6%	8.0%	24.5%	7.8%	11.4%	2,693	11,530	13,522	2.7x	59.5%	44.1%
SSE.L	SSE PLC	UNITED KINGDOM	22,402	14,215	14,749	944	4,057	2,818	6.6%	-1.0%	(.17)	1.94	4.9%	1.5%	-1.5%	-16.7%	-5.5%	3,437	10,214	12,228	3.0x	64.3%	45.6%
NG.L	NATIONAL GRID PLC	UNITED KINGDOM	42,793	24,649	23,460	7,752	8,212	6,198	31.5%	36.0%	.93	.82	5.6%	12.5%	29.2%	7.3%	4.4%	9,738	45,595	53,934	6.6x	61.4%	106.5%

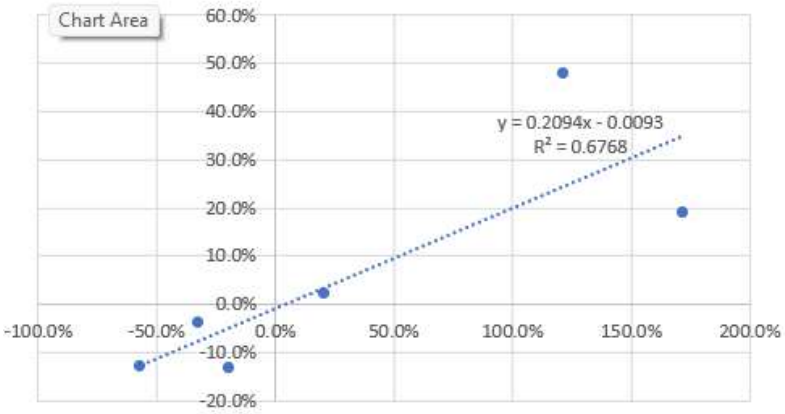
Appendix 5 : SWOT Analysis

Strengths	Weaknesses
● Geographical diversification: global presence, protecting against the risk of dependence on a particular geography in line with a strategy of focus on attractive markets ● Business diversification: half of the group's EBITDA comes from Networks, and the other half from renewables and customers (EP&C) ● Technological diversification of the capacity mix: renewable assets portfolio is not focused only on one or two technologies (onshore and offshore wind, solar, hydro), which reduces regulatory risks specific to one technology ● Strong Research and Development activities: many initiatives fostering innovation, including formed partnerships with universities and entrepreneurs to stay at the forefront of technological advancements Examples: - In 2022, Inauguration of the Iberdrola Campus, a global center for knowledge with 13,000 people working on innovation projects. - Iberdrola Ventures, a startup program started in 2008 that supports entrepreneurs in the electricity sector. ● Company's size giving Iberdrola relevant negotiation power with regards suppliers ● Prudent financial policy with 75% (expected) of debt with fixed interest rate over the period 2023-2025 versus 55% EBITDA secured (fixed) trough long-term sale contracts, and flexible approach including partnerships / joint ventures in some investments ● High EBITDA margin compared to peers, driven by cost efficiency (O&M costs) and CAPEX optimization ● In-house knowledge and expertise in onshore wind, solar and hydro	● Dependency on weather: exposition to climate-related risks impacting the net capacity factor of generation assets ● Dependency of state regulations (key to the long-term planning of investments) ● Exposition to currency fluctuations: in particular to the volatile Brazilian real (inflation-linked debt in Brazil), mitigated by inflation-adjusted revenue ● Behind some key peers in offshore wind (Engie, RWE, Oersted) ● Cash position slightly below peers (in proportion of current liabilities) ● Exposition to wholesale electricity market prices for electricity not sold under long-term contracts ● Little presence in Asia

Opportunities	Threats
● Higher government support (E.U., U.K., U.S., Brazil) and increasing electrification will driving both renewables penetration and smart grid infrastructure ● Expected significant growth for wind energy in the U.S. ● Offshore wind uptake driven by decreasing costs (LCOE): a key priority in Iberdrola's Strategic Plan 2023-2025 ● Floating wind and solar farms: Iberdrola is currently building 2 floating solar farms, in France and Brazil ● Green hydrogen / methanol / ammonia for large-scale electricity storage and decarbonization of heavy industry & transport: more than 60 projects under development in 8 countries ● Strategic alliances to strengthen position on key markets while limiting risks Example: €15bn partnership agreement with Abu Dhabi-based renewable energy firm MASDAR to co-invest in offshore wind and green hydrogen in Germany, the U.K., and the U.S. ● Growth opportunities in Asia	● Negative changes in regulations and government incentives (or lack of predictability) ● Increasing industry competition coming from: - Oil & Gas giants who seek to diversify into renewable energy (BP, Shell, TotalEnergies) - Independent Power Producers Risks of oversupply (in the long run) and canibalization of margins on electricity sales, to be mitigated by energy efficiency constraints (lowering aggregate demand) and regulations ● Cyber attacks disrupting electricity production ● Physical attacks to infrastructure ● Adverse regulations or penalties for negative impact on natural ecosystems (biodiversity) ● Catastrophic natural events

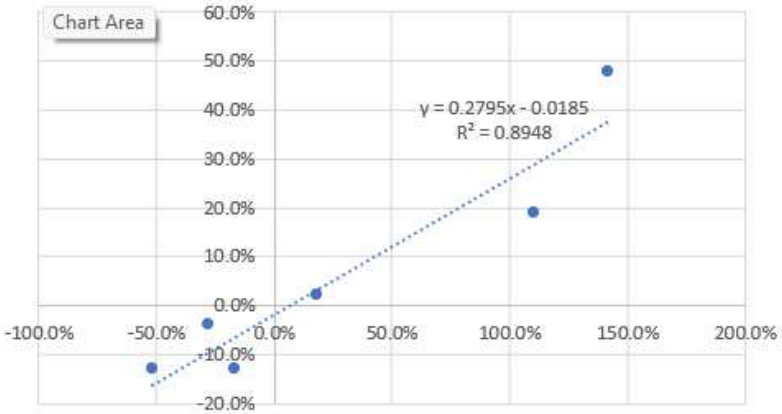
Appendix 6 : Regression results, Iberdrola price per GWh

Natural gas and Coal Price Index



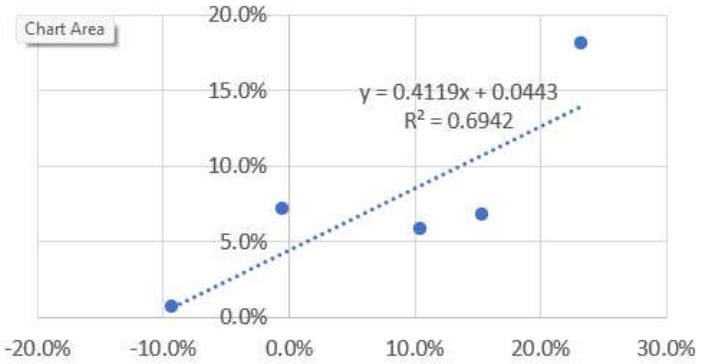
R	0.82	R2	0.6768
N	6		
t-stat	2.894325		
df	4		
p-value	4.44%	**Significant**	
Coefficient	0.2094		
Intercept	-0.0093		

Commodity Coal Price Index (Australian and South African Coal)



R	0.95	R2	0.8948
N	6		
t-stat	5.832449		
df	4		
p-value	0.43%	**Significant**	
Coefficient	0.2795		
Intercept	-0.0185		

Appendix 7: Variations of networks' revenues regressed on variations of RAB



R	0.83	R2	0.6942
N	5		
t-stat	2.609875		
df	3		
p-value	7.97%	**Significant at alpha 10%**	
Coefficier	0.4119		
Intercept	0.0443		

Appendix 8: EP&C' Revenues, costs and EBIT by scenario

EP&C

€m	2017	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical														
Revenues	€ 20,569	€ 22,215	€ 22,228	€ 20,692	€ 24,777	€ 36,294								
Procurements	€ (14,021)	€ (14,437)	€ (14,095)	€ (12,141)	€ (15,970)	€ (25,972)								
Gross Margin	€ 6,548	€ 7,778	€ 8,133	€ 8,550	€ 8,806	€ 10,323								
Operating Expenses	€ (3,330)	€ (3,295)	€ (3,279)	€ (3,378)	€ (2,381)	€ (3,623)								
EBITDA	€ 3,218	€ 4,483	€ 4,854	€ 5,173	€ 6,426	€ 6,699								
Depreciation, Amortization & Provision	€ (2,163)	€ (1,947)	€ (2,141)	€ (2,444)	€ (2,510)	€ (2,736)								
EBIT	€ 1,055	€ 2,536	€ 2,714	€ 2,728	€ 3,916	€ 3,963								
Optimistic														
Revenues							€ 32,452	€ 33,371	€ 34,145	€ 34,966	€ 36,220	€ 37,814	€ 40,949	€ 43,391
Procurements							€ (22,070)	€ (21,776)	€ (22,281)	€ (22,817)	€ (23,635)	€ (24,675)	€ (26,721)	€ (28,315)
Gross Margin							€ 10,382	€ 11,595	€ 11,864	€ 12,149	€ 12,585	€ 13,138	€ 14,228	€ 15,076
Operating Expenses							€ (4,778)	€ (5,180)	€ (5,301)	€ (5,428)	€ (5,623)	€ (5,870)	€ (6,357)	€ (6,736)
EBITDA							€ 5,605	€ 6,414	€ 6,563	€ 6,721	€ 6,962	€ 7,268	€ 7,871	€ 8,341
Depreciation, Amortization & Provision							€ (2,661)	€ (3,394)	€ (3,473)	€ (3,556)	€ (3,684)	€ (3,846)	€ (4,165)	€ (4,413)
EBIT							€ 2,944	€ 3,020	€ 3,090	€ 3,165	€ 3,278	€ 3,422	€ 3,706	€ 3,927
Pessimistic														
Revenues							€ 32,452	€ 33,770	€ 34,362	€ 34,440	€ 34,446	€ 34,725	€ 35,173	€ 36,578
Procurements							€ (22,070)	€ (22,036)	€ (22,423)	€ (22,474)	€ (22,478)	€ (22,660)	€ (22,952)	€ (23,869)
Gross Margin							€ 10,382	€ 11,733	€ 11,939	€ 11,966	€ 11,968	€ 12,065	€ 12,221	€ 12,709
Operating Expenses							€ (4,778)	€ (5,242)	€ (5,334)	€ (5,346)	€ (5,347)	€ (5,391)	€ (5,460)	€ (5,678)
EBITDA							€ 5,605	€ 6,491	€ 6,605	€ 6,620	€ 6,621	€ 6,675	€ 6,761	€ 7,031
Depreciation, Amortization & Provision							€ (2,661)	€ (3,435)	€ (3,495)	€ (3,503)	€ (3,504)	€ (3,532)	€ (3,577)	€ (3,720)
EBIT							€ 2,944	€ 3,056	€ 3,110	€ 3,117	€ 3,118	€ 3,143	€ 3,183	€ 3,310
Central														
Revenues							€ 32,452	€ 33,583	€ 34,270	€ 34,727	€ 35,367	€ 36,316	€ 38,061	€ 39,985
Procurements							€ (22,070)	€ (21,914)	€ (22,363)	€ (22,661)	€ (23,079)	€ (23,698)	€ (24,837)	€ (26,092)
Gross Margin							€ 10,382	€ 11,668	€ 11,907	€ 12,066	€ 12,288	€ 12,618	€ 13,224	€ 13,893
Operating Expenses							€ (4,778)	€ (5,213)	€ (5,320)	€ (5,391)	€ (5,490)	€ (5,638)	€ (5,908)	€ (6,207)
EBITDA							€ 5,605	€ 6,455	€ 6,587	€ 6,675	€ 6,798	€ 6,981	€ 7,316	€ 7,686
Depreciation, Amortization & Provision							€ (2,661)	€ (3,416)	€ (3,486)	€ (3,532)	€ (3,597)	€ (3,694)	€ (3,871)	€ (4,067)
EBIT							€ 2,944	€ 3,039	€ 3,102	€ 3,143	€ 3,201	€ 3,287	€ 3,445	€ 3,619

Appendix 9: Networks' Revenues, costs and EBIT by scenario

€m	2017	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical														
Revenues	€ 10,694	€ 12,861	€ 14,210	€ 12,900	€ 14,888	€ 18,356								
Procurements	€ (3,907)	€ (5,219)	€ (6,079)	€ (5,284)	€ (6,615)	€ (8,447)								
Gross Margin	€ 6,787	€ 7,642	€ 8,131	€ 7,616	€ 8,273	€ 9,910								
Operating Expenses	€ (2,559)	€ (2,727)	€ (2,868)	€ (2,833)	€ (2,879)	€ (3,384)								
EBITDA	€ 4,228	€ 4,915	€ 5,262	€ 4,783	€ 5,394	€ 6,526								
Depreciation, Amortization & Provision	€ (1,568)	€ (1,881)	€ (1,966)	€ (1,903)	€ (2,033)	€ (2,375)								
EBIT	€ 2,660	€ 3,034	€ 3,296	€ 2,880	€ 3,362	€ 4,151								
Optimistic														
Revenues							€ 18,272	€ 20,336	€ 22,434	€ 23,729	€ 25,088	€ 26,516	€ 28,015	€ 29,589
Procurements							€ (8,263)	€ (8,580)	€ (9,465)	€ (10,011)	€ (10,585)	€ (11,187)	€ (11,820)	€ (12,483)
Gross Margin							€ 10,009	€ 11,756	€ 12,969	€ 13,718	€ 14,504	€ 15,329	€ 16,195	€ 17,105
Operating Expenses							€ (3,911)	€ (4,437)	€ (4,895)	€ (5,177)	€ (5,474)	€ (5,785)	€ (6,112)	€ (6,456)
EBITDA							€ 6,098	€ 7,319	€ 8,074	€ 8,540	€ 9,030	€ 9,544	€ 10,083	€ 10,650
Depreciation, Amortization & Provision							€ (2,560)	€ (2,909)	€ (3,209)	€ (3,395)	€ (3,589)	€ (3,793)	€ (4,008)	€ (4,233)
EBIT							€ 3,538	€ 4,410	€ 4,865	€ 5,146	€ 5,441	€ 5,750	€ 6,075	€ 6,417
Pessimistic														
Revenues							€ 18,272	€ 20,336	€ 22,434	€ 23,929	€ 25,497	€ 27,141	€ 28,866	€ 30,675
Procurements							€ (8,263)	€ (8,580)	€ (9,465)	€ (10,096)	€ (10,757)	€ (11,451)	€ (12,179)	€ (12,942)
Gross Margin							€ 10,009	€ 11,756	€ 12,969	€ 13,834	€ 14,740	€ 15,690	€ 16,687	€ 17,733
Operating Expenses							€ (3,911)	€ (4,437)	€ (4,895)	€ (5,221)	€ (5,563)	€ (5,922)	€ (6,298)	€ (6,693)
EBITDA							€ 6,098	€ 7,319	€ 8,074	€ 8,613	€ 9,177	€ 9,769	€ 10,389	€ 11,041
Depreciation, Amortization & Provision							€ (2,560)	€ (2,909)	€ (3,209)	€ (3,423)	€ (3,648)	€ (3,883)	€ (4,129)	€ (4,388)
EBIT							€ 3,538	€ 4,410	€ 4,865	€ 5,189	€ 5,530	€ 5,886	€ 6,260	€ 6,652
Central														
Revenues							€ 18,272	€ 20,336	€ 22,434	€ 23,829	€ 25,293	€ 26,830	€ 28,444	€ 30,138
Procurements							€ (8,263)	€ (8,580)	€ (9,465)	€ (10,054)	€ (10,671)	€ (11,320)	€ (12,001)	€ (12,715)
Gross Margin							€ 10,009	€ 11,756	€ 12,969	€ 13,776	€ 14,622	€ 15,511	€ 16,443	€ 17,423
Operating Expenses							€ (3,911)	€ (4,437)	€ (4,895)	€ (5,199)	€ (5,518)	€ (5,854)	€ (6,206)	€ (6,575)
EBITDA							€ 6,098	€ 7,319	€ 8,074	€ 8,577	€ 9,104	€ 9,657	€ 10,238	€ 10,847
Depreciation, Amortization & Provision							€ (2,560)	€ (2,909)	€ (3,209)	€ (3,409)	€ (3,618)	€ (3,838)	€ (4,069)	€ (4,311)
EBIT							€ 3,538	€ 4,410	€ 4,865	€ 5,168	€ 5,485	€ 5,819	€ 6,169	€ 6,536

Appendix 10: Consolidated Revenues, costs and EBIT by scenario

€m	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical											
Revenues	€ 33,145	€ 39,113	€ 53,949								
Procurements	€ (17,000)	€ (22,052)	€ (33,750)								
Gross Margin	€ 16,145	€ 17,062	€ 20,199								
Operating Expenses	€ (6,107)	€ (5,056)	€ (6,971)								
EBITDA	€ 10,038	€ 12,006	€ 13,228								
Depreciation, Amortization & Provision	€ (4,474)	€ (4,663)	€ (5,244)								
EBIT	€ 5,564	€ 7,343	€ 7,984								
Optimistic											
Revenues				€ 50,048	€ 52,991	€ 55,824	€ 57,912	€ 60,491	€ 63,472	€ 68,045	€ 72,007
Procurements				€ (29,651)	€ (29,674)	€ (31,032)	€ (32,090)	€ (33,451)	€ (35,056)	€ (37,674)	€ (39,881)
Gross Margin				€ 20,397	€ 23,317	€ 24,792	€ 25,822	€ 27,040	€ 28,416	€ 30,370	€ 32,126
Operating Expenses				€ (8,606)	€ (9,526)	€ (10,098)	€ (10,504)	€ (10,991)	€ (11,544)	€ (12,350)	€ (13,066)
EBITDA				€ 11,791	€ 13,792	€ 14,694	€ 15,318	€ 16,050	€ 16,872	€ 18,020	€ 19,060
Depreciation, Amortization & Provision				€ (5,359)	€ (6,470)	€ (6,859)	€ (7,135)	€ (7,465)	€ (7,841)	€ (8,389)	€ (8,875)
EBIT				€ 6,432	€ 7,322	€ 7,835	€ 8,183	€ 8,584	€ 9,030	€ 9,631	€ 10,185
Pessimistic											
Revenues				€ 50,048	€ 53,384	€ 56,038	€ 57,591	€ 59,144	€ 61,041	€ 63,185	€ 66,356
Procurements				€ (29,651)	€ (29,928)	€ (31,171)	€ (31,838)	€ (32,488)	€ (33,344)	€ (34,341)	€ (35,983)
Gross Margin				€ 20,397	€ 23,456	€ 24,868	€ 25,754	€ 26,656	€ 27,697	€ 28,844	€ 30,373
Operating Expenses				€ (8,606)	€ (9,587)	€ (10,131)	€ (10,466)	€ (10,806)	€ (11,204)	€ (11,646)	€ (12,253)
EBITDA				€ 11,791	€ 13,870	€ 14,736	€ 15,287	€ 15,850	€ 16,493	€ 17,198	€ 18,120
Depreciation, Amortization & Provision				€ (5,359)	€ (6,512)	€ (6,882)	€ (7,109)	€ (7,340)	€ (7,611)	€ (7,911)	€ (8,323)
EBIT				€ 6,432	€ 7,358	€ 7,855	€ 8,178	€ 8,510	€ 8,882	€ 9,287	€ 9,797
Central											
Revenues				€ 50,048	€ 53,200	€ 55,947	€ 57,776	€ 59,852	€ 62,305	€ 65,618	€ 69,187
Procurements				€ (29,651)	€ (29,809)	€ (31,112)	€ (31,979)	€ (32,991)	€ (34,231)	€ (36,009)	€ (37,935)
Gross Margin				€ 20,397	€ 23,391	€ 24,835	€ 25,796	€ 26,860	€ 28,074	€ 29,609	€ 31,253
Operating Expenses				€ (8,606)	€ (9,558)	€ (10,117)	€ (10,489)	€ (10,904)	€ (11,382)	€ (11,999)	€ (12,661)
EBITDA				€ 11,791	€ 13,833	€ 14,718	€ 15,307	€ 15,957	€ 16,692	€ 17,610	€ 18,592
Depreciation, Amortization & Provision				€ (5,359)	€ (6,492)	€ (6,872)	€ (7,125)	€ (7,407)	€ (7,731)	€ (8,150)	€ (8,600)
EBIT				€ 6,432	€ 7,341	€ 7,846	€ 8,183	€ 8,550	€ 8,961	€ 9,460	€ 9,992

Since Iberdrola is assumed to achieve its 2023-2025 targets, the scenarios diverge more clearly from 2025 onwards. In 2030 each scenario shows important differences in revenues, that said those differences are less pronounced for EBITDA and EBIT since costs are proportional to revenues, and because a greater share of CAPEX attributed to networks (base and pessimistic cases) has positive EBITDA and EBIT contributions[88].

Appendix 11: Working capital detailed projections, by scenario

[88] Reminder: Networks activities exhibit on average higher EBITDA margins than EP&C activities

€m	2017	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical														
EBIT	2,713	5,439	5,877	5,564	7,343	7,984								
(-) Income tax on EBIT	(555)	(1,215)	(1,136)	(1,197)	(2,243)	(1,490)								
= After-tax EBIT	2,158	4,225	4,741	4,368	5,100	6,493								
(+) Depreciation, Amortization & Provision	4,606	3,910	4,227	4,474	4,663	5,244								
(+) Other adjustments P&L	(1,765)	(196)	(1,627)	(541)	(414)	(4,222)								
(-) ΔNet Working Capital	686	(352)	(426)	47	(1,242)	2,928								
= Funds From Operations (FFO)	5,685	7,586	6,915	8,347	8,106	10,443								
(-) CAPEX cash outflows	(6,125)	(6,351)	(5,580)	(5,851)	(6,918)	(6,787)								
(+) Sale of fixed assets and intangibles	3	427	542	326	393	258								
= FCFF	(437)	1,662	1,877	2,822	1,581	3,914								
Optimistic														
EBIT							6,432	7,322	7,835	8,183	8,584	9,030	9,631	10,185
(-) Income tax on EBIT							(1,316)	(1,498)	(1,603)	(1,674)	(1,756)	(1,847)	(1,970)	(2,084)
= After-tax EBIT							5,116	5,824	6,232	6,509	6,828	7,183	7,661	8,101
(+) Depreciation, Amortization & Provision							5,359	6,470	6,859	7,135	7,465	7,841	8,389	8,875
(+) Other adjustments P&L														
(-) ΔNet Working Capital							(581)	1,507	(110)	(2,884)	270	365	(833)	203
= Funds From Operations (FFO)							9,894	13,801	12,981	10,760	14,563	15,390	15,217	17,179
(-) CAPEX cash outflows							(7,485)	(13,608)	(13,912)	(8,215)	(9,255)	(10,566)	(9,619)	(10,756)
(+) Sale of fixed assets and intangibles							1,567	1,567	1,567	389	389	389	389	389
= FCFF							3,976	1,759	636	2,934	5,697	5,212	5,987	6,812
Pessimistic														
EBIT							6,432	7,358	7,855	8,178	8,510	8,882	9,287	9,797
(-) Income tax on EBIT							(1,316)	(1,505)	(1,607)	(1,673)	(1,741)	(1,817)	(1,900)	(2,004)
= After-tax EBIT							5,116	5,852	6,248	6,505	6,769	7,065	7,387	7,793
(+) Depreciation, Amortization & Provision							5,359	6,512	6,882	7,109	7,340	7,611	7,911	8,323
(+) Other adjustments P&L														
(-) ΔNet Working Capital							(581)	1,476	(95)	(2,903)	20	8	858	187
= Funds From Operations (FFO)							9,894	13,840	13,034	10,712	14,129	14,684	16,156	16,303
(-) CAPEX cash outflows							(7,485)	(13,608)	(13,912)	(8,092)	(8,440)	(8,821)	(11,040)	(12,018)
(+) Sale of fixed assets and intangibles							1,567	1,567	1,567	389	389	389	389	389
= FCFF							3,976	1,799	689	3,009	6,078	6,252	5,505	4,674
Central														
EBIT							6,432	7,341	7,846	8,183	8,550	8,961	9,460	9,992
(-) Income tax on EBIT							(1,316)	(1,502)	(1,605)	(1,674)	(1,749)	(1,833)	(1,935)	(2,044)
= After-tax EBIT							5,116	5,839	6,241	6,509	6,801	7,128	7,525	7,948
(+) Depreciation, Amortization & Provision							5,359	6,492	6,872	7,125	7,407	7,731	8,150	8,600
(+) Other adjustments P&L														
(-) ΔNet Working Capital							(581)	1,491	(103)	(2,887)	150	194	(25)	193
= Funds From Operations (FFO)							9,894	13,822	13,010	10,746	14,358	15,053	15,650	16,741
(-) CAPEX cash outflows							(7,485)	(13,608)	(13,912)	(8,168)	(8,875)	(9,739)	(10,288)	(11,342)
(+) Sale of fixed assets and intangibles							1,567	1,567	1,567	389	389	389	389	389
= FCFF							3,976	1,780	665	2,968	5,872	5,703	5,751	5,788

Appendix 12: Consolidated FCFF by scenario

€m	2017	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical														
EBIT	2,713	5,439	5,877	5,564	7,343	7,984								
(-) Income tax on EBIT	(555)	(1,215)	(1,136)	(1,197)	(2,243)	(1,490)								
= After-tax EBIT	2,158	4,225	4,741	4,368	5,100	6,493								
(+) Depreciation, Amortization & Provision	4,606	3,910	4,227	4,474	4,663	5,244								
(+) Other adjustments P&L	(1,765)	(196)	(1,627)	(541)	(414)	(4,222)								
(-) ΔNet Working Capital	686	(352)	(426)	47	(1,242)	2,928								
= Funds From Operations (FFO)	5,685	7,586	6,915	8,347	8,106	10,443								
(-) CAPEX cash outflows	(6,125)	(6,351)	(5,580)	(5,851)	(6,918)	(6,787)								
(+) Sale of fixed assets and intangibles	3	427	542	326	393	258								
= FCFF	(437)	1,662	1,877	2,822	1,581	3,914								
Optimistic														
EBIT							6,432	7,322	7,835	8,183	8,584	9,030	9,631	10,185
(-) Income tax on EBIT							(1,316)	(1,498)	(1,603)	(1,674)	(1,756)	(1,847)	(1,970)	(2,084)
= After-tax EBIT							5,116	5,824	6,232	6,509	6,828	7,183	7,661	8,101
(+) Depreciation, Amortization & Provision							5,359	6,470	6,859	7,135	7,465	7,841	8,389	8,875
(+) Other adjustments P&L														
(-) ΔNet Working Capital							(581)	1,507	(110)	(2,884)	270	365	(833)	203
= Funds From Operations (FFO)							9,894	13,801	12,981	10,760	14,563	15,390	15,217	17,179
(-) CAPEX cash outflows							(7,485)	(13,608)	(13,912)	(8,215)	(9,255)	(10,566)	(9,619)	(10,756)
(+) Sale of fixed assets and intangibles							1,567	1,567	1,567	389	389	389	389	389
= FCFF							3,976	1,759	636	2,934	5,697	5,212	5,987	6,812
Pessimistic														
EBIT							6,432	7,358	7,855	8,178	8,510	8,882	9,287	9,797
(-) Income tax on EBIT							(1,316)	(1,505)	(1,607)	(1,673)	(1,741)	(1,817)	(1,900)	(2,004)
= After-tax EBIT							5,116	5,852	6,248	6,505	6,769	7,065	7,387	7,793
(+) Depreciation, Amortization & Provision							5,359	6,512	6,882	7,109	7,340	7,611	7,911	8,323
(+) Other adjustments P&L														
(-) ΔNet Working Capital							(581)	1,476	(95)	(2,903)	20	8	858	187
= Funds From Operations (FFO)							9,894	13,840	13,034	10,712	14,129	14,684	16,156	16,303
(-) CAPEX cash outflows							(7,485)	(13,608)	(13,912)	(8,092)	(8,440)	(8,821)	(11,040)	(12,018)
(+) Sale of fixed assets and intangibles							1,567	1,567	1,567	389	389	389	389	389
= FCFF							3,976	1,799	689	3,009	6,078	6,252	5,505	4,674
Central														
EBIT							6,432	7,341	7,846	8,183	8,550	8,961	9,460	9,992
(-) Income tax on EBIT							(1,316)	(1,502)	(1,605)	(1,674)	(1,749)	(1,833)	(1,935)	(2,044)
= After-tax EBIT							5,116	5,839	6,241	6,509	6,801	7,128	7,525	7,948
(+) Depreciation, Amortization & Provision							5,359	6,492	6,872	7,125	7,407	7,731	8,150	8,600
(+) Other adjustments P&L														
(-) ΔNet Working Capital							(581)	1,491	(103)	(2,887)	150	194	(25)	193
= Funds From Operations (FFO)							9,894	13,822	13,010	10,746	14,358	15,053	15,650	16,741
(-) CAPEX cash outflows							(7,485)	(13,608)	(13,912)	(8,168)	(8,875)	(9,739)	(10,288)	(11,342)
(+) Sale of fixed assets and intangibles							1,567	1,567	1,567	389	389	389	389	389
= FCFF							3,976	1,780	665	2,968	5,872	5,703	5,751	5,788

Appendix 13: Net cash flow available to equity investors by scenario

€m	2017	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical														
FCFF	**-437**	**1662**	**1877**	**2822**	**1581**	**3914**								
(-) Acquisition of associates	(77)	(91)	(205)	(59)	(203)	(65)								
(+) Transactions with Minority interests	(68)	132	1,473	206	615	698								
(+) Proceeds / (Purchases) for securities and other investments	579	(757)	(1,080)	(1,037)	(1,470)	(2,473)								
(+) Finance income received														
= Net Cash Flow available to Investors	**44**	**1,321**	**650**	**1,480**	**(1,289)**	**490**								
Optimistic														
FCFF							**3,976**	**1,759**	**636**	**2,934**	**5,697**	**5,212**	**5,987**	**6,812**
(-) Acquisition of associates							122	(117)	(117)	(117)	(117)	(117)	(117)	(117)
(+) Transactions with Minority interests							1,360	1,360	1,360	506	506	506	506	506
(+) Proceeds / (Purchases) for securities and other investments							(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)
(+) Finance income received							798	798	798	798	798	798	798	798
= Net Cash Flow available to Investors							**3,783**	**1,328**	**204**	**1,648**	**4,411**	**3,927**	**4,701**	**5,527**
Pessimistic														
FCFF							**3,976**	**1,799**	**689**	**3,009**	**6,078**	**6,252**	**5,505**	**4,674**
(-) Acquisition of associates							122	(117)	(117)	(117)	(117)	(117)	(117)	(117)
(+) Transactions with Minority interests							1,360	1,360	1,360	506	506	506	506	506
(+) Proceeds / (Purchases) for securities and other investments							(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)
(+) Finance income received							798	798	798	798	798	798	798	798
= Net Cash Flow available to Investors							**3,783**	**1,367**	**257**	**1,723**	**4,793**	**4,966**	**4,220**	**3,388**
Central														
FCFF							**3,976**	**1,780**	**665**	**2,968**	**5,872**	**5,703**	**5,751**	**5,788**
(-) Acquisition of associates							122	(117)	(117)	(117)	(117)	(117)	(117)	(117)
(+) Transactions with Minority interests							1,360	1,360	1,360	506	506	506	506	506
(+) Proceeds / (Purchases) for securities and other investments							(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)
(+) Finance income received							798	798	798	798	798	798	798	798
= Net Cash Flow available to Investors							**3,783**	**1,348**	**233**	**1,682**	**4,587**	**4,417**	**4,465**	**4,502**

Appendix 14: CAPM beta regression (Iberdrola and STOXX Europe 600)

regression output

ression Statistics	
R	0.470229111
e	0.221115417
l R Square	0.211731265
l Error	0.050970458
tions	85

A

	df	*SS*	*MS*	*F*	*Significance F*
ion	1	0.061215455	0.06121545	23.5626433	5.60342E-06
	83	0.215632969	0.00259799		
	84	0.276848424			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
t	0.005590481	0.005532611	1.01045968	0.3152118	-0.005413661	0.016594622	-0.005413661	0.016594622
ole 1	0.639900676	0.131825845	4.85413672	5.60342E-06	0.377704372	0.902096981	0.377704372	0.902096981

		P-value
nonthly)	0.56%	*0.3152*
(CAPM levered beta)	0.6399	*5.6E-06*

Appendix 15: Debt projections by scenario

€m	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Historical													
Interest bearing Debt - beginning balance	**39,312**	**38,712**	**42,085**	**41,282**	**44,284**								
(+) Issuance of Debt	13,838	18,045	13,013	12,410	15,973								
(-) Repayment of Debt	(13,203)	(13,161)	(12,271)	(7,873)	(9,300)								
= Interest bearing Debt - ending balance	**39,947**	**43,595**	**42,827**	**45,818**	**50,957**								
Other non-current financial liabilities - ending balance	-	1,235	1,510	1,545	1,534								
Total Debt - ending balance	**39,947**	**44,830**	**44,336**	**47,363**	**52,491**								
Central													
Interest bearing Debt - beginning balance						**50,957**	**49,501**	**50,373**	**51,993**	**54,512**	**55,102**	**56,228**	**57,575**
(+) Issuance of Debt						2,618	4,759	4,866	17,264	18,758	20,585	21,746	23,975
(-) Repayment of Debt						(4,074)	(3,887)	(3,245)	(14,745)	(18,169)	(19,459)	(20,400)	(22,163)
= Interest bearing Debt - ending balance						**49,501**	**50,373**	**51,993**	**54,512**	**55,102**	**56,228**	**57,575**	**59,387**
Other non-current financial liabilities - ending balance						1,987	2,022	2,087	2,188	2,212	2,257	2,311	2,383
Total Debt - ending balance						**51,487**	**52,395**	**54,080**	**56,700**	**57,313**	**58,485**	**59,886**	**61,770**
Optimistic													
Interest bearing Debt - beginning balance						50,957	49,501	50,386	52,025	54,593	55,497	57,394	58,243
(+) Issuance of Debt						2,618	4,759	4,866	17,365	19,563	22,334	20,332	22,735
(-) Repayment of Debt						(4,074)	(3,874)	(3,227)	(14,797)	(18,658)	(20,438)	(19,483)	(21,995)
= Interest bearing Debt - ending balance						**49,501**	**50,386**	**52,025**	**54,593**	**55,497**	**57,394**	**58,243**	**58,983**
Other non-current financial liabilities - ending balance						1,987	2,022	2,088	2,191	2,227	2,303	2,338	2,367
Total Debt - ending balance						**51,487**	**52,408**	**54,113**	**56,784**	**57,725**	**59,697**	**60,580**	**61,350**
Pessimistic													
Interest bearing Debt - beginning balance						50,957	49,501	50,361	51,967	54,418	54,644	54,914	56,804
(+) Issuance of Debt						2,618	4,759	4,866	17,105	17,840	18,646	23,335	25,403
(-) Repayment of Debt						(4,074)	(3,899)	(3,260)	(14,653)	(17,614)	(18,376)	(21,445)	(22,408)
= Interest bearing Debt - ending balance						**49,501**	**50,361**	**51,967**	**54,418**	**54,644**	**54,914**	**56,804**	**59,799**
Other non-current financial liabilities - ending balance						1,987	2,021	2,086	2,184	2,193	2,204	2,280	2,400
Total Debt - ending balance						**51,487**	**52,382**	**54,052**	**56,603**	**56,837**	**57,118**	**59,084**	**62,199**

Appendix 16: Dividends

Iberdrola executes a policy of distributing at least 65% of its EPS. My dividend projections are based both on this policy and the level of the *net cash flow available to equity investors*.

It is assumed that no shares are repurchased by Iberdrola in the future. I consider that a share issuance occurs *only* in the case of a negative *net cash flow available to equity investors*.

Shareholder remuneration occurs if this net cash flow is positive, and equals the minimum between 65% of Iberdrola's EPS and the *net cash flow available to equity investors*.

Payout	65%						65%	65%	65%	65%	65%	65%	65%	65%
Total dividends	291	304	509	712	799	1,309	1,675	1,130	729	2,983	3,440	3,559	3,768	4,007
Dividends paid to Iberdrola shareholders	187	143	330	562	570	890	1,453	976	624	2,526	2,901	2,998	3,186	3,404
Dividends paid to minority interests	104	161	179	150	229	419	222	154	105	457	539	561	582	603

Appendix 17: Pro-forma income statement, base scenario

€ millions	2017	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Revenues	€ 31,263	€ 35,076	€ 36,438	€ 33,145	€ 39,113	€ 53,949	€ 50,048	€ 53,200	€ 55,947	€ 57,776	€ 59,852	€ 62,305	€ 65,618	€ 69,187
Procurements	€ (17,899)	€ (19,641)	€ (20,175)	€ (17,000)	€ (22,052)	€ (33,750)	€ (29,651)	€ (29,809)	€ (31,112)	€ (31,979)	€ (32,991)	€ (34,231)	€ (36,009)	€ (37,935)
Gross Margin	€ 13,364	€ 15,435	€ 16,263	€ 16,145	€ 17,062	€ 20,199	€ 20,397	€ 23,391	€ 24,835	€ 25,796	€ 26,860	€ 28,074	€ 29,609	€ 31,253
Operating Expenses	€ (6,045)	€ (6,086)	€ (6,159)	€ (6,107)	€ (5,056)	€ (6,971)	€ (8,606)	€ (9,558)	€ (10,117)	€ (10,489)	€ (10,904)	€ (11,382)	€ (11,999)	€ (12,661)
EBITDA	€ 7,319	€ 9,349	€ 10,104	€ 10,038	€ 12,006	€ 13,228	€ 11,791	€ 13,833	€ 14,718	€ 15,307	€ 15,957	€ 16,692	€ 17,610	€ 18,592
Depreciation, Amortization & Provision	€ (4,606)	€ (3,910)	€ (4,227)	€ (4,474)	€ (4,663)	€ (5,244)	€ (5,359)	€ (6,492)	€ (6,872)	€ (7,125)	€ (7,407)	€ (7,731)	€ (8,150)	€ (8,600)
EBIT	€ 2,713	€ 5,439	€ 5,877	€ 5,564	€ 7,343	€ 7,984	€ 6,432	€ 7,341	€ 7,846	€ 8,183	€ 8,550	€ 8,961	€ 9,460	€ 9,992
Interest expense	(1,168)	(1,177)	(1,353)	(1,236)	(1,436)	(2,003)	(1,668)	(1,700)	(1,797)	(1,992)	(2,249)	(2,431)	(2,525)	(2,595)
Other finance expense	(691)	(819)	(810)	(794)	(832)	(1,039)	(859)	(859)	(859)	(859)	(859)	(859)	(859)	(859)
Finance income	922	840	864	1,039	1,265	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204
Finance result	(937)	(1,156)	(1,300)	(991)	(1,003)	(1,838)	(1,322)	(1,355)	(1,451)	(1,646)	(1,904)	(2,085)	(2,179)	(2,250)
Results of companies accounted for using the equity metho	28	(56)	(7)	5	39	(146)	213	8	8	8	8	8	8	8
Results from discontinued operations	(31)	70	158	456	(113)	220	0	0	0	0	0	0	0	0
Profit before tax	€ 1,773	€ 4,297	€ 4,729	€ 5,034	€ 6,266	€ 6,221	€ 5,323	€ 5,994	€ 6,404	€ 6,545	€ 6,654	€ 6,884	€ 7,288	€ 7,751
Corporate income tax	1,397	(959)	(914)	(1,083)	(1,914)	(1,161)	€ (1,089)	€ (1,226)	€ (1,310)	€ (1,339)	€ (1,361)	€ (1,408)	€ (1,491)	€ (1,586)
Minority interests	(366)	(323)	(348)	(341)	(467)	(721)	(561)	(649)	(737)	(797)	(830)	(862)	(895)	(928)
Net profit	€ 2,804	€ 3,014	€ 3,466	€ 3,611	€ 3,885	€ 4,339	€ 3,673	€ 4,119	€ 4,357	€ 4,409	€ 4,463	€ 4,613	€ 4,902	€ 5,237

Appendix 18: Pro-forma Balance sheet, base scenario

€ millions	2017	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
NON-CURRENT ASSETS	€ 96,344	€ 98,968	€ 108,055	€ 106,177	€ 117,948	€ 127,640	€ 132,005	€ 143,099	€ 154,222	€ 158,556	€ 163,558	€ 169,396	€ 175,552	€ 182,674
Intangible assets	21,148	21,000	20,368	18,222	19,909	20,118	20,653	21,050	21,398	21,249	21,100	20,955	20,771	20,581
Property, plant and equipment	64,506	66,538	73,414	74,054	82,550	89,004	92,743	103,315	113,966	118,325	123,351	129,209	135,425	142,612
Investments accounted by equity method	1,791	1,710	1,957	1,145	1,058	857	948	1,073	1,197	1,322	1,447	1,571	1,696	1,820
Other non-current financial assets	2,678	2,754	3,105	2,947	4,020	5,989	5,989	5,989	5,989	5,989	5,989	5,989	5,989	5,989
Other non-current assets	839	1,480	3,517	3,827	4,493	5,351	5,351	5,351	5,351	5,351	5,351	5,351	5,351	5,351
Deferred tax assets	5,382	5,486	5,695	5,982	5,918	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320	6,320
CURRENT ASSETS	€ 12,721	€ 12,674	€ 13,152	€ 14,372	€ 19,428	€ 21,210	€ 22,802	€ 23,062	€ 23,829	€ 24,339	€ 25,192	€ 26,308	€ 27,687	€ 29,377
Nuclear fuel	332	273	306	260	267	259	294	440	459	472	487	505	532	560
Inventories	1,870	2,174	2,542	2,443	2,639	2,159	2,723	3,779	3,945	4,055	4,183	4,340	4,566	4,810
Trade and other receivables	6,721	6,855	7,499	7,664	10,956	11,220	12,214	11,271	11,853	12,241	12,681	13,200	13,902	14,658
Other current financial assets	601	572	693	578	1,533	2,964	2,964	2,964	2,964	2,964	2,964	2,964	2,964	2,964
Cash and cash equivalents	3,197	2,801	2,113	3,427	4,033	4,608	4,608	4,608	4,608	4,608	4,878	5,298	5,724	6,385
TOTAL ASSETS	€ 109,066	€ 111,642	€ 121,207	€ 120,549	€ 137,376	€ 148,850	€ 154,807	€ 166,162	€ 178,051	€ 182,896	€ 188,751	€ 195,704	€ 203,239	€ 212,051
EQUITY	€ 41,849	€ 43,416	€ 46,982	€ 46,537	€ 55,534	€ 59,411	€ 65,360	€ 74,057	€ 83,597	€ 88,199	€ 92,707	€ 97,599	€ 102,805	€ 108,511
Group shareholders' equity	34,625	36,021	37,465	34,731	39,887	42,416	46,666	53,507	61,055	64,810	68,522	72,606	76,993	81,867
Share capital	4,738	4,798	4,772	4,763	4,775	4,772	4,763	4,763	4,763	4,763	4,763	4,763	4,763	4,763
Others	27,083	28,209	29,227	26,357	31,227	33,306	38,231	44,626	51,936	55,639	59,296	63,231	67,328	71,867
Net profit of the period	2,804	3,014	3,466	3,611	3,885	4,339	€ 3,673	€ 4,119	€ 4,357	€ 4,409	€ 4,463	€ 4,613	€ 4,902	€ 5,237
Minority interests	5,671	5,669	9,516	6,306	7,397	8,745	10,444	12,300	14,292	15,138	15,935	16,743	17,563	18,394
Hybrids	1,553	1,726	-	5,500	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250
NON-CURRENT LIABILITIES	€ 50,911	€ 52,558	€ 55,572	€ 56,378	€ 59,599	€ 64,024	€ 63,936	€ 64,670	€ 66,034	€ 68,154	€ 68,650	€ 69,599	€ 70,732	€ 72,257
Deferred income	1,481	1,478	1,399	1,240	1,261	1,247	1,247	1,247	1,247	1,247	1,247	1,247	1,247	1,247
Facilities transferred / financed by third partie	4,763	4,823	4,987	5,043	5,424	5,673	5,673	5,673	5,673	5,673	5,673	5,673	5,673	5,673
Other provisions	2,953	3,028	3,329	3,518	3,738	2,999	2,999	2,999	2,999	2,999	2,999	2,999	2,999	2,999
Financial debt	32,014	33,312	35,829	36,423	37,094	41,753	41,665	42,399	43,763	45,883	46,379	47,327	48,461	49,986
Of which: interest-bearing	*32,014*	*33,312*	*34,594*	*34,914*	*35,549*	*40,218*	*39,678*	*40,377*	*41,676*	*43,695*	*44,168*	*45,071*	*46,150*	*47,602*
Of which: Other financial liabilities	-	-	*1,235*	*1,510*	*1,545*	*1,534*	*1,987*	*2,022*	*2,087*	*2,188*	*2,212*	*2,257*	*2,311*	*2,383*
Other non-current liabilities	1,141	874	669	547	718	671	671	671	671	671	671	671	671	671
Deferred tax liabilities	8,558	9,043	9,359	9,607	11,363	11,682	11,682	11,682	11,682	11,682	11,682	11,682	11,682	11,682
CURRENT LIABILITIES	€ 16,306	€ 15,668	€ 18,654	€ 17,634	€ 22,242	€ 25,415	€ 25,511	€ 27,435	€ 28,420	€ 26,543	€ 27,393	€ 28,506	€ 29,702	€ 31,284
Other provisions	586	557	635	557	762	881	951	929	973	1,002	1,036	1,076	1,133	1,194
Current Portion of financial debt	7,298	6,634	9,000	7,913	10,269	10,738	9,822	9,995	10,317	10,817	10,934	11,157	11,425	11,784
Of which: interest-bearing	*7,298*	*6,634*	*9,000*	*7,913*	*10,269*	*10,738*	*9,822*	*9,995*	*10,317*	*10,817*	*10,934*	*11,157*	*11,425*	*11,784*
Trade payables	5,308	5,430	5,098	5,137	5,964	5,927	6,993	8,352	8,747	9,010	9,313	9,677	10,185	10,734
Other payables	989	1,039	1,021	1,226	1,205	1,262	1,443	1,708	1,789	1,842	1,904	1,979	2,083	2,195
Other current liabilities	2,126	2,008	2,899	2,801	4,042	6,608	6,301	6,451	6,595	3,872	4,207	4,617	4,877	5,377
TOTAL EQUITY AND LIABILITIES	€ 109,066	€ 111,642	€ 121,207	€ 120,549	€ 137,376	€ 148,850	€ 154,807	€ 166,162	€ 178,051	€ 182,896	€ 188,751	€ 195,704	€ 203,239	€ 212,051

Appendix 19: Pro-forma cash flow statement

€ millions	2017	2018	2019	2020	2021	2022	2023 E	2024 E	2025 E	2026 E	2027 E	2028 E	2029 E	2030 E
Operating activities														
Net Profit	**2,804**	**3,014**	**3,466**	**3,611**	**3,885**	**4,339**	€ 3,673	€ 4,119	€ 4,357	€ 4,409	€ 4,463	€ 4,613	€ 4,902	€ 5,237
Depreciation and amortisation charges and provisions (+)	4,606	3,910	4,227	4,474	4,663	5,244	€ 5,359	€ 6,492	€ 6,872	€ 7,125	€ 7,407	€ 7,731	€ 8,150	€ 8,600
Results of companies accounted for using the equity method (-)	(28)	56	7	(5)	(39)	146	(213)	(8)	(8)	(8)	(8)	(8)	(8)	(8)
Minority interests (+)	366	323	348	341	467	721	561	649	737	797	830	862	895	928
Dividends on companies accounted for using the equity method (	-	-	-	-	49	67	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other adjustments P&L (+)	(2,749)	635	(707)	(120)	324	(3,002)	1,095	1,079	1,156	1,311	1,516	1,660	1,735	1,791
Changes in Net Working Capital (-)	686	(352)	(426)	47	(1,242)	2,928	€ (581)	€ 1,491	€ (103)	€ (2,887)	€ 150	€ 194	€ (25)	€ 193
Funds from operations	**5,685**	**7,586**	**6,915**	**8,347**	**8,106**	**10,443**	9894	13822	13010	10746	14358	15053	15650	16741
Investing activities														
CAPEX	(6,125)	(6,351)	(5,580)	(5,851)	(6,918)	(6,787)	(7,485)	(13,608)	(13,912)	(8,168)	(8,875)	(9,739)	(10,288)	(11,342)
Purchase of fixed assets	*(5,594)*	*(5,237)*	*(5,169)*	*(5,405)*	*(6,327)*	*(6,277)*	*(6,902)*	*(12,548)*	*(12,828)*	*(7,531)*	*(8,183)*	*(8,980)*	*(9,487)*	*(10,459)*
Purchase of intangibles	*(531)*	*(1,114)*	*(411)*	*(446)*	*(591)*	*(510)*	*(583)*	*(1,060)*	*(1,084)*	*(636)*	*(691)*	*(759)*	*(801)*	*(884)*
Sale of fixed assets and intangibles	3	427	542	326	393	258	1,567	1,567	1,567	389	389	389	389	389
Acquisition of subsidiaries	-	-	-	(391)	(536)	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acquisition of associates	(77)	(91)	(205)	(59)	(203)	(65)	122	(117)	(117)	(117)	(117)	(117)	(117)	(117)
Proceeds / (Purchases) for securities and other investments	579	(757)	(1,080)	(1,037)	(1,470)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)	(2,473)
Interest received	610	556	572	688	837	798	798	798	798	798	798	798	798	798
Other investing cash flows	47	375	(1,415)	(61)	(1,276)	(1,584)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cash flow from investing activities	**(4,963)**	**(5,840)**	**(7,167)**	**(6,385)**	**(9,172)**	**(9,854)**	(7,472)	(13,834)	(14,138)	(9,570)	(10,277)	(11,142)	(11,691)	(12,745)
Financing activities														
Net change in Debt	3,217	635	6,118	1,016	4,572	6,662	(1,003)	907	1,686	2,620	613	1,172	1,401	1,885
Issuance of Debt	*13,637*	*13,838*	*18,045*	*13,013*	*12,410*	*15,973*	*2,618*	*4,759*	*4,866*	*17,264*	*18,758*	*20,585*	*21,746*	*23,975*
Repayment of Debt	*(10,420)*	*(13,203)*	*(13,161)*	*(12,271)*	*(7,873)*	*(9,300)*	*(4,074)*	*(3,887)*	*(3,245)*	*(14,745)*	*(18,169)*	*(19,459)*	*(20,400)*	*(22,163)*
Net change in other financial liabilities	-	-	*1,235*	*275*	*35*	*(11)*	*453*	*35*	*65*	*101*	*24*	*45*	*54*	*73*
Interest paid on Debt	(842)	(880)	(820)	(779)	(790)	(1,556)	(1,104)	(1,126)	(1,190)	(1,319)	(1,490)	(1,610)	(1,672)	(1,718)
Net change in Stock	(914)	(1,611)	(1,354)	(3,323)	(2,565)	(3,289)	-	-	-	-	-	-	-	-
Share issuance	*91*	*63*	*50*	*127*	*73*	*91*	-	-	-	-	-	-	-	-
Share repurchase	*(1,005)*	*(1,674)*	*(1,404)*	*(3,450)*	*(2,638)*	*(3,380)*	-	-	-	-	-	-	-	-
Cash dividends paid	(187)	(143)	(330)	(562)	(570)	(890)	(1,453)	(976)	(624)	(2,526)	(2,901)	(2,998)	(3,186)	(3,404)
Dividends paid to Minority interests	(104)	(161)	(179)	(150)	(229)	(419)	(222)	(154)	(105)	(457)	(539)	(561)	(582)	(603)
Transaction with Minority Interests	(68)	132	1,473	206	615	698	1,360	1,360	1,360	506	506	506	506	506
Other Financing Cash Flow	91	24	(5,400)	3,262	521	(1,355)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cash flow from financing activities	**1,193**	**(2,005)**	**(491)**	**(330)**	**1,553**	**(149)**	(2,423)	12	1,127	(1,175)	(3,810)	(3,491)	(3,533)	(3,335)
FX Effects on cash	(151)	(136)	56	(318)	119	135	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Net change in cash	**1,764**	**(396)**	**(688)**	**1,314**	**606**	**575**	-	-	-	-	270	420	426	661
Cash beginning balance	1,433	3,197	2,801	2,113	3,427	4,033	4,608	4,608	4,608	4,608	4,608	4,878	5,298	5,724
Cash ending balance	3,197	2,801	2,113	3,427	4,033	4,608	4,608	4,608	4,608	4,608	4,878	5,298	5,724	6,385
Control Net change in cash + Cash begining = Cash ending	3,197	2,801	2,113	3,427	4,033	4,608								

Appendix 20: Valuation summary, recap

	Equity Value (€m)		Share value	Weight
APV central scenario	€	78,960	€ 12.43	80.0%
Median Enterprise Value multiples	€	57,788	€ 9.10	10.0%
Median Equity Value multiples	€	71,567	€ 11.27	10.0%
Target Equity Value	**€**	**76,104**		
Current Equity Value (16/02/2024)	€	68,392		
Final Target Price			**€ 11.98**	
Share price (16/02/2024)			€ 10.77	
Upside (Downside)			**11.27%**	

Appendix 21: Recommendation attributation table

Recommendation attribution table

Upside (downside)		Reco.
>= to:	And < to:	
20%		Strong Buy
10%	20%	Buy
-10%	10%	Hold
-20%	-10%	Sell
	-20%	Strong sell

Appendix 22: Analysts' mean target price for Iberdrola

ANALYSTS TARGET PRICE
We dropped the lines either with non-disclosed institutions or non-disclosed TP

Institution	Current reco.		TP	Upside (downside)
ANALISIS BANCO SABADELL	1–BUY	€	12.61	17.08%
SOCIETE GENERALE	**3–HOLD**	**€**	**11.60**	**7.71%**
ALANTRA EQUITIES	1–STRONG BUY	€	13.89	28.97%
MIRABAUD SECURITIES	2–BUY	€	12.25	13.74%
HSBC	**2–BUY**	**€**	**12.19**	**13.18%**
BNP PARIBAS EXANE	**2–OUTPERFORM**	**€**	**13.37**	**24.14%**
DZ BANK	3–HOLD	€	10.80	0.28%
BANCO SANTANDER	**3–NEUTRAL**	**€**	**11.49**	**6.69%**
BERENBERG	**3–HOLD**	**€**	**11.80**	**9.56%**
ODDO BHF	2–BUY	€	13.21	22.66%
LANDESBANK BADEN-WUERTTEMBEI	3–HOLD	€	10.91	1.30%
Mean	**Buy**	**€**	**12.19**	**13.21%**

6. References

https://www.investopedia.com/investing/top-alternative-energy-companies/

https://sustainablefuturenews.com/net-zero/top-10-largest-renewable-energy-companies/

https://www.scottishpower.com/news/pages/100percent_green_generation_for_scottish power_with_sale_of_remaining_gas_plant.aspx#:~:text=100%25%20Green%20Generation%20for%20ScottishPower%20with%20Sale%20of%20Remaining%20Gas%20Plant,-16%2F10%2F2018&text=ScottishPower%20has%20become%20the%20first,Drax%20for%20%C2%A3702%20million.

Investopedia, Top 10 largest renewable energy companies.

https://finance.yahoo.com/news/legal-decision-avangrid-pnm-merger-190100963.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAANU_bGWZhTzyCa7yUwOKUVZe0b0cK-nasLSF1PMOgWPnYYpzuVUq2He_ady_f6NzfVISdH-xKZNouZxRya3eZL387lLU

Iberdrola website

Iberdrola financial publications (integrated and sustainability reports)

Internatioal Energy Agency publications

IRENA publications

Damodaran. (2023a). Debt to capital & debt to equity ratios, with key drivers – Western Europe. Retrieved May 2023, from

https://pages.stern.nyu.edu/~adamodar/pc/datasets/dbtfundEurope.xls

Damodaran. (2023b). Ratings, Interest Coverage Ratios and Default Spread. Retrieved May 2023, from

https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ratings.html

Deloitte. (2022). 2023 renewable energy industry outlook. Retrieved December 2022, from

https://www.deloitte.com/global/en/Industries/power-utilities-renewables/analysis/renewable-energy-industry-outlook.html

Eurostat. (2023). Shedding light on energy – 2023 edition. Retrieved April 2023, from

https://ec.europa.eu/eurostat/web/interactive-publications/energy-2023

Global Wind Energy Council publications

Our World In Data

Enerdata publications, World Energy Statistics 2022

International Monetary Fund database

World Bank database

Refinitiv Eikon