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Juliana da Silva

Equity Research: Redes Energéticas Nacionais, SGPS, S.A.

Universidade do Minho
Escola de Economia e Gestão

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Master's Project
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Professor Doutor Nelson Brandão da Costa Areal

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DIREITOS DE AUTOR E CONDIÇÕES DE UTILIZAÇÃO DO TRABALHO POR TERCEIROS

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Last but not least, to all my family and friends for listening all my worries and helping me to conclude this chapter.

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Resumo

No âmbito do projeto final do mestrado em Finanças da Universidade do Minho, foi realizada uma avaliação da Redes Energéticas Nacionais seguindo as recomendações do Instituto CFA. A seleção desta empresa deve-se ao facto de ser uma empresa nacional que opera num mercado monopolista, altamente regulado e por pertencer ao setor da energia, pois possui uma volatilidade interessante de ser analisada dadas as agravantes vividas atualmente tais como as alterações climáticas e urgente transição energética, como também pela instabilidade politica e económico-financeira mundial.

A Redes Energéticas Nacionais tem uma recomendação de investimento hold, projetando um preço-alvo de 2.79€, com um potencial de subida de 12% face ao preço da ação a 30 de Agosto de 2023, utilizando o Modelo de Fluxo de Caixa Descontado. Este é complementado com uma Avaliação Relativa e com uma Análise de Sensibilidade para enriquecer a análise feita.

Palavras Chave: Avaliação; Modelo de Fluxo de Caixa Descontado; Setor da Energia; REN; Regulação

Abstract

As part of the University of Minho master's in Finance final project, a valuation was performed for Redes Energéticas Nacionais, following the CFA Institute guidelines. This company was selected mainly because it is a national company that operates in a monopoly market, highly regulated and due to the fact that runs the energy sector which has an interesting volatility to analyze because of the aggravating factors faced nowadays such as climate conditions and urgent energy transition, but also due to the global political and economic-financial instability.

Redes Energéticas Nacionais has an investment recommendation to hold, projecting a price target of 2.79€ per share, with a stock price upside potential of 12% from the closing price on August 30th, 2023, using a Discounted Cash Flow Valuation. It is complemented with a relative valuation and with a sensitivity analysis to enrich the analysis.

Keywords: Valuation; Discounted Cash Flow; Energy Sector; REN; Regulation

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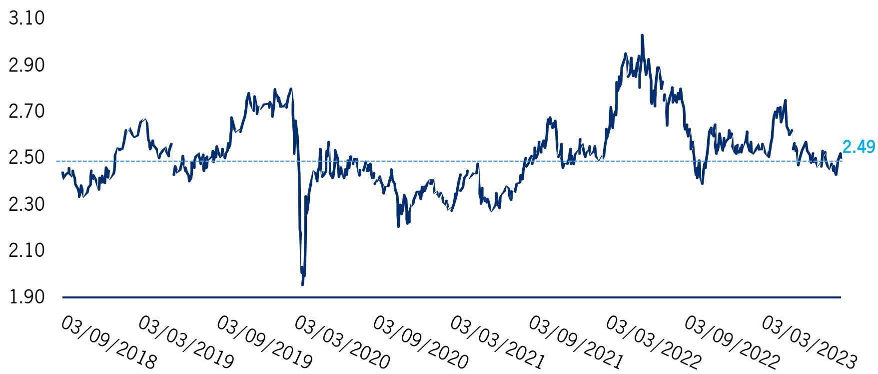
1. Research Snapshot

REN is a publicly traded company based in Portugal which runs a national monopoly in the transportation of electricity in high tension and natural gas high pressure.

HOLD is the recommendation for REN S.G.P.S., S.A. (REN) with a price target of €2.79/share, using a DCF valuation, implying a 12% upside potential from the 30th of August closing price of €2.49/share.

Figure 1: REN's Historical Share Price (2018-2023)



The company is known by the electricity and gas transportation and distribution, operating in a regulated market which follows either the national regulations defined by ERSE and the European regulation by ACER.

This recommendation has two main drivers:

- European Union plan to reduce Russia's fossil fuels energy dependency as an economic and political weapon that costs nearly €100 billion per year for the European taxpayers which is expected to benefit REN with the financing of cross border and national infrastructure.
- Electrification commitment and energy system decarbonization in both Portugal and Chile, reinforcing renewable energy sources use.

Table 1: REN's Market Data

INVESTMENT RECOMMENDATION	
Price Target	**€2.79**
Upside Potential	**12%**
Closing Price (August 30th,2023)	**€2.49**
Stock Exchange	Euronext Lisbon
Ticker (Refinitiv)	RENE.LS
52Wk Price Range (€)	2.36 - 2.76
Shares Outstanding (M)	663.19
Market Cap (€B)	1.61
Recommendation	**HOLD**

Source: Refinitiv Eikon

Figure 2: Strategy Plan

Source: Company data

2. Business Description

Redes Energéticas Nacionais is a portuguese company that operates in two major sectors: electricity, through the transmission of very high voltage (VHV) and overall technical management of the national electricity system and natural gas, by the high-pressure (HP) transmission and the general technical management (GTM) of the national natural gas system guaranteeing the reception, storage and regasification of liquefied natural gas (LNG) and the underground storage. These two activities are subject to economic regulation by Energy Services Regulatory Authority (ERSE) that annually defines tariffs based on demand, costs, revenues and investment.

Its history began in 1947 when CNE – Companhia Nacional de Eletricidade, S.A.R.L. was founded to be responsible for the electricity transmission in Portugal. One year after the Portuguese revolution in 25th of April 1974 and following the nationalizations decreed by the Portuguese Government, it was integrated in Eletricidade de Portugal, S.A. and in 2000 it was separated from the EDP due to a privatization of the EDP Group and the liberalization of the European energy market which had determined their separation. Three years later, Redes Elétricas Nacionais, REN acquired 18.3% of the share capital of Galp Energia becoming also responsible for the transmission of high-pressure gas and was then renamed to REN – Redes Energéticas Nacionais.

REN is the sole electricity and natural gas transmission system operator (TSO) in Portugal with a concession until 2057 for the electricity sector and until 2046 for the natural gas concession but is just the second largest natural gas distribution system operator (DSO), after Floene.

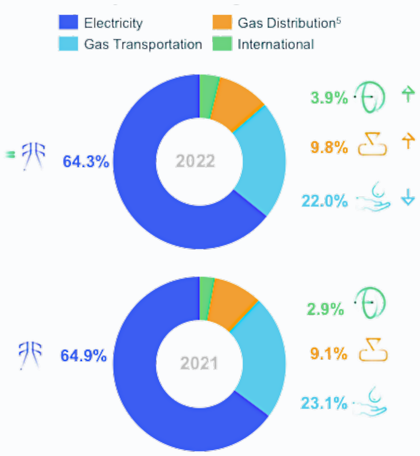
As it's possible to observe in Figure 3, electricity is the leading EBITDA driver accounting for 64.3% of the EBITDA in 2022, as we can see (vs. 64.9% in 2021) followed by the gas transportation with 23.1% (vs. 22% in 2021), gas distribution with 9.8% (vs. 9.1% in 2021) and finally the international gas activities with 3.9% (vs. 2.9% in 2021).

Electricity

The company's mission is to ensure the uninterrupted supply of electricity throughout quality and safety standards, providing a real-time balance between supply and demand always looking to ensure system conditions that make the energy market viable. At 2022, the length of line circuits increased 0.8% compared to the previous year to 9,421km with 70 transformer substations and 17 switching and transition stations and the average interruption time in this period totalized 0.08min. As it's possible to see in Figure 5, the combined availability rate – an indicator defined by ERSE which evaluates the availability of National Electric Transmission Network (RNT) transformers and lines – was during the three last year's higher than the ERSE reference value which confirms the effective coordination, programming of grid outages and reliability of RNT assets.

The electricity sector has two main subsectors of power generation: the renewable sources (such as hydro, wind, solar and biomass) and the non-renewable sources (such natural gas and other thermal). The most significant renewable source is the wind with a 25% share of consumption in 2022 while hydropower utilization of only 12%. However, 18% of the power generation in 2022 derived from its import balance which for the third consecutive year registered a deficit. In Figure 4, it's shown how the electricity segment has contributed to

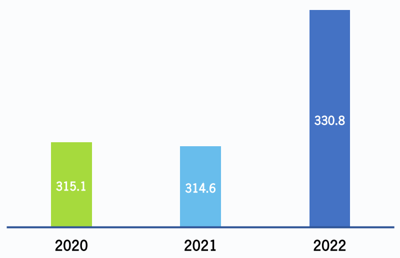
Figure 3: EBITDA contribution by business segment



5 refers to Portgás

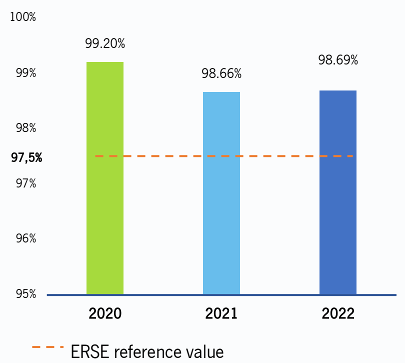
Source: Company data

Figure 4: Electricty EBITDA contribution in the past three years (€M)



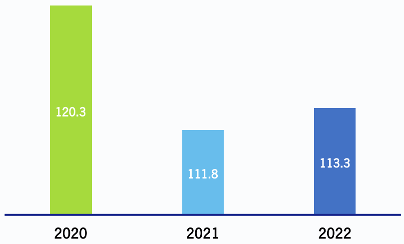
Source: Company data

Figure 5: Combined availability rate in the past three years



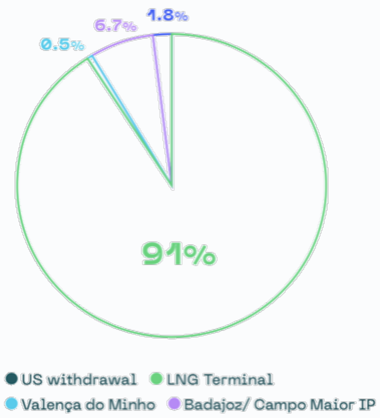
Source: Company data

Figure 6: Gas transportation EBITDA contribution in the past three years (€M)



Source: Company data

Figure 7: Intakes into the transmission system (%)



Source: Company data

EBITDA in the last three years and we can see that 2022 was where it reached its biggest impact.

The revenue allowed from the General System Management (GSM) and Transmission of Electrical Power (TEP) business is received by applying two regulated tariffs: the tariff for the General Use System (TUGS) and the tariff for the Use of the Transmission Network (TURT). The regulatory period underway started in 2022 and ends in 2025.

Natural Gas

All the gas used in Portugal is provided from third countries through the two custody transfer stations with Spain (one in Campo Maior and another in Valença) by the high-pressure gas pipelines, or by sea in the form of Liquified Natural Gas (LNG) which is the principal intake for the company (Figure 7). REN Gasodutos is the entity in charge for the transmission and delivery to the distributors or high-pressure end-users. The length of the high-pressure natural gas transmission network counts at the moment with 1,375km and in 2022 the total amount of Liquified Natural Gas (LNG) unloaded by ship at Sines LNG Terminal was 145,000m^3. As we can verify in Figure 6, the gas transportation contribution to EBITDA decreased 7M€ from 2020 to 2022.

The gas infrastructure value chain integrates:

- **Planning** their network development based on the evolution of the Portuguese National Gas System and consumption forecasts and deliver it to the competent authorities;
- **Investment** in the infrastructures, transmission network, LNG terminal and underground storage to respond to the consumption growth and gas expansion in the mainland territory, guaranteeing the supply security;
- **Operation** of all the equipment and systems in order to guarantee high safety and service quality standards efficiently;
- **Management of the system** to keep the balance between supply and demand and promoting the efficient management of the high-pressure gas network.

The transmission, storage and distribution activities are regulated by ERSE and the four-year regulatory period stipulated ends in 2023.

Other business:

Electrogas was partially acquired (42.5% stake) by REN in 2017 as an achievement of one of its goals defined in the strategic plan for the period of 2015-2018 to execute an international investment project. This company owns and operates a natural gas transmission system located in Chile and its attractiveness derives on the economic indicators, legal security and the growth potential of the energy sector.

Transemel's acquisition represents the second investment in the Chilean market and it's aligned with REN's strategic plan based on a conservative growth strategy. The company was fully acquired in 2019 and has an investment plan to be implemented in 2023 to expand its asset base with the extension of the Calama substation (one of the five sustations in which Transemel operates).

Enondas – Energia das Ondas. S.A. a company wholly owned by REN was in 2010 awarded by the Portuguese State for 45 years public concession of the generation of wave energy in a pilot zone (ZP) that covers an area of approximately 320km^2 located in S. Pedro de

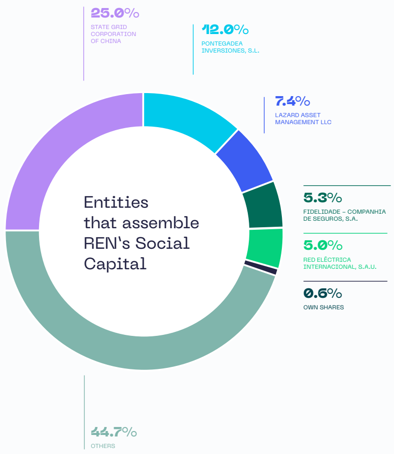
Moel. This contract includes authorization to build infrastructures required to connect to the public power grid.

RENTELECOM is the connection of REN to information and communication technologies market and works mainly with fiber optics lease, data transmission services, data center services, maintenance services, projects and consulting services. It counts with 8,106km of optical fiber and 2,875m² datacenters with a strong supporting IT infrastructures.

In total, REN Group is composed by twelve subsidiaries.

Shareholders structure

Figure 8: Shareholders' Structure



Source: Company data

REN detains a share capital of 667,191,262 shares with a face value of 1.00€ each. These are ordinary shares not representing any special rights to their holders and are freely tradable on the regulated market, Euronext Lisbon with ISIN code PTRELOAM0008.

Currently, no entity, including the entities that play in the same sector in Portugal or abroad, can have direct or indirect holdings greater than 25% of REN share capital. This condition was introduced further to the transposition of European community directives applicable to the electricity and gas sectors to promote competition in the market and guarantee that the operators to transmission infrastructures have the same access. The largest shareholder of REN is State Grid of China with 25% of REN's shares capital, as it's possible to see in Figure 8. In the second position is Pontegadea Inversiones S.L. holding 12% of the voting rights in REN, since July 2021 when Mazoon B.V transferred its shares. Only 0,6% of the shares are held internally.

Company strategy

The 2022 company moto is "t*ren*sition" showing their commitment to the energy transition and to develop a social responsible future and positively impacting the community and their stakeholders. The three pillars defined (Figure 2) for these years were:

- **High environmental, social and corporate governance standards commitments** such as achieve carbon neutrality by 2040, increase the weighting of ESG in manager performance metrics as of 2022 (+5p.p.) and ensure that 100% of new bonds issued will be green bonds;
- **Growth in investment** driven by the electrification of the economy with an increase in REN's Capex by 27% vs. the annual average of the 2018-2020 strategic phase, the decarbonization of natural gas networks always compromised with excellence in quality of service with an average of 0.08min of interruption in electricity supply and 100% combined availability rate in gas transmission;
- **Solid financials and sustainable shareholder return** achieved by the maintenance of credit metrics coherent with an Investment Grade credit rating from the three major rating agencies and a new dividend distribution policy with biannual payments.

Figure 9: Gender-Equality Index 2023

Source: Bloomberg

3. Environmental, Social and Governance (ESG)

Environmental

Regarding the REN's commitments with the environment it has two main medium-long term targets: reduce the emissions of CO_2 in 50% until 2030 (vs. 2019) and achieve carbon neutrality by 2040. The second is on track and the first is already on the 37% reduction. They were awarded the Global Standard by OGMP 2.0 (Oil and Gas Methane Partnerships)

Table 2: ESG rating

Rating	Scale	
S&P GLOBAL	0 - 100	62
CDP	D - A	B
SUSTAINALYTICS	100 - 0	18.3
MSCI	CCC - AAA	AAA
ISS ESG	D - A	B

Source: Company data

Table 3: REN ESG comparison with its peers

Company	Sustainalytics ESG rating
Red Eléctrica	10.42
Enagás SA	14.8
National Grid plc	22.2
Terna SpA	9.3
Snam SpA	14.3
REN SGPS SA	**18.3**

Source: Morningstar Sustainalytics

Figure 10: Board composition

Source: Company data

for their commitment to reduce methane emissions, implemented nature-based solutions and reforestation with native species and their fleet electrification increased to 34% in 2022 vs. 28% in 2021.

Social

In 2023, REN was included for the third consecutive year on the Bloomberg Gender Equality index (GEI) which is an index (Figure 9) that enables companies to disclose their active gender equality according to five pillars: leadership and talent pipeline, equal pay and gender pay parity, inclusive culture, anti-sexual harassment policies and external brand. One important commitment stablished by the company is to have one third of the senior management positions held by women by 2030. Currently, the share of women in management positions is 28.8%.

In Table 2, we can see from the rating attributed by the five agencies that the company has a low risk profile regarding its ESG but it's not the best scored in the industry according Morningstar Sustainalytics (Table 3) that ranks 696 companies and among the five peers chosen in this report we see that it is on the forth place in the rank.

Corporate Governance

REN's corporate governance follows an Anglo Saxon model where the General Shareholders' Meeting is responsible to appoint and dismiss the Board of Directors (BoD) as well as the Chairman and Vice-Chairman of the BoD. The Auditee Committee and the Statutory Auditor act as supervision bodies being the auditee committee exclusively composed by non-executive auditors (including the Chairman). REN's external auditor is Ernst & Young Audit & Associados – SROC, S.A. which was first hired in 2018 by REN Auditee Committee suggestion.

The Board of Directors, including the Audit Committee, is composed by 14 members, of whom 11 are non-executive members appointed for the 2021-2023 term of office (Figure 10).

Rodrigo Costa is the Chairman of the BoD and CEO of REN since 2015 when he left the non-executive Board Member position of NOS SGPS where he stayed for 2 years. Besides being founder and General Manager of Microsoft Portugal 1990-2000, his professional path was marked for many leader positions among some technologic and telecommunications groups with international experience in driving growth and managing small, medium and large teams across almost every continent. Apart from the professional activities, he also served in Coimbra University Boards, Porto Business School and several technology public task forces.

Gonçalo Morais is the Chief Financial Officer of REN since 2012 and owns a degree in Economy from Universidade de Lisboa which was just the first of his degrees. Previously, he worked at ZON SGPS for three years where he went deep in his knowledge on the telecommunications industry that was first achieved in Jazztel, S.A.U.. João Faria Conceição is the Chief Operational Officer of REN and member of the BoD since 2009. He holds a degree in Aerospace Engineering and a master degree in Aerodinamics and has worked as a consultant in Boston Consulting Group and supported the Ministry of Economy and Innovation in the area of Energy from 2007 to 2009.

The important increase of the sustainability role in REN's operations was evident when in 2021 the Board of Directors created the Sustainable Committee with the mission of supporting and advising the BoD on the integration of sustainability principles and to fully respect standards of excellence. In 2022, they held 3 meetings.

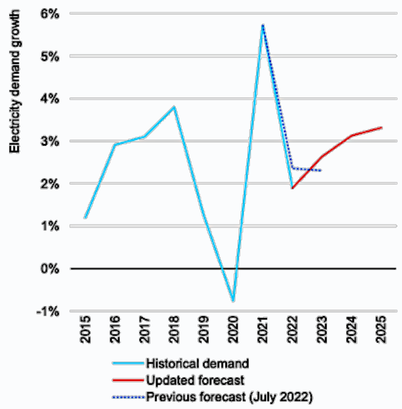
The remuneration of the executive directors contains a fixed and a variable component. The last seeks to remunerate both short-term performance and medium/long term performance, separately. These are determined based on predefined objectives based on KPIs and ESG indicators.

In 2022, the commitment of ensure that 100% of the new bonds issued were green bonds was completely achieved.

4. Industry Overview and Competitive Positioning

Electricity demand

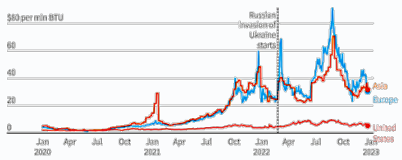
Figure 11: Year-on-year relative global change in electricity demand 2015-2025



Source: IEA

Despite the global energy crisis triggered by Russia's invasion of Ukraine, world electricity demand remained resilient in 2022, rose by almost 2% compared with the 2.4% average growth rate seen over the period 2015-2019 (Figure 11). The main drivers were the electrification of the transport and heating sectors which continued to accelerate globally, with record numbers of electric vehicles and heat pumps sold in 2022. Nevertheless, the electricity demand in the European Union fell 3.5% in 2022 with spiking electricity prices, decease in demand for electricity-intensive industries, energy saving actions and a mild winter as the main causes to the decline. The IEA expectation is for the EU demand to grow by 1.4% on average in 2023-2025 and 3% globally, with more than 70% of this increase to come from China, India and southeast Asia and mostly covered by low-emissions sources. Fortune Business foresees a CAGR of 3.9% until 2030 for the global electricity transmission and distribution market based on two driving factors: the urbanization and population growth which requires the development of infrastructures and the expansion of new transmission and distribution lines, and the increased attention on reliability and energy security by governments that are investing on the update of their electricity infrastructure to face power outages and cyberattacks threats, mainly through smart grid technologies.

Figure 12: Natural Gas price surge worldwide



Source: Reuters

In Portugal the electricity consumption recovered in 2022 from the effects of the pandemic to 2019 levels (50.3 TWh). Regarding the sources, wind farms have not seen any changes but the photovoltaic installations continued to grow in 2022, totaling close to 500 MW.

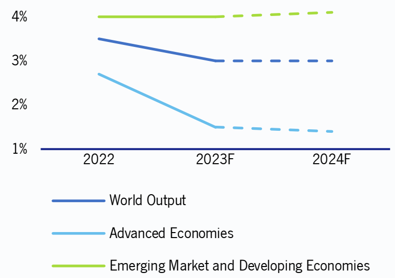
Electricity supply

A historic drought in Europe and the winter storms in the United States in 2022, emphasize the importance to increase the flexibility of the power system and augment security of electricity supply to better deal with weather-related contingencies. The relatively higher increase in natural gas and LNG prices after the Russia's invasion of Ukraine, encouraged the fuel switching in the world to coal for use in power generation with a coal-fired generation rise of 1.5% in 2022. However, it is assumed as an exception and the forecast is for this generation to plateau in 2023-2025. According to IEA outlook for 2023 to 2025, renewable power generation is set to increase more than all other sources aggregated, with an annualized growth of over 9%.

In appendix 1, we can see Reuters forecast for the long-term power energy price evolution of 11 European countries in which Portugal is included. It's possible to conclude that the overall prices will rise but most significantly in Poland and Czechoslovakia and with a much smaller impact in Portugal.

Gas demand

Figure 13: World Real GDP growth projections



Source: IMF

Global gas consumption fell by 1.5% in 2022 and this reduction in the demand was mainly registered in European (fall estimated in 55 billion cubic meters (bcm) year-on-year during the 2022/23 heating season) and Asian import markets. The huge increase in gas prices supported gas-to-coal exchange dynamics in the power sector and weakened gas use in energy-intensive industries, such as aluminum, fertilizers, and chemicals. Since the natural gas in the United States still costs about a fifth what companies pay in Europe (Figure 12), the Europeans are shifting production to locations with cheaper labor and lower other costs, accelerating the exodus. Also, improved energy efficiency measures and the continuous deployment of renewables contracted gas demand in a structural manner. The expectation is for the global gas demand to remain flat throughout the current year with higher demand in Asia Pacific (APAC) and the Middle East offsetting the expected drops in Europe and North America. The higher demand in the two regions aforementioned are justified by the expected recovery in economic activity and potential higher gas use in industry from China, with a gas demand increase forecast of 6% in 2023 and by 2% on the Middle East mainly driven by Iran and Saudi Arabia.

Gas supply

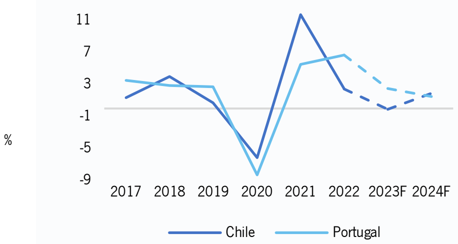
In 2022, the fossil fuel prices boost following Russia's invasion of Ukraine intensified the supply situation, especially for gas. Flexible US LNG played a crucial role in alleviating the gap in Russian piped gas supply, registering a rise of 70% in 2022 (vs. 2021) of LNG inflows into the European Union. Nevertheless, gas supply is expected to remain tight in 2023 since the anticipated 4.5% increase in LNG supply won't be sufficient to compensate the predictable drop in Russia's piped gas supplies to the European Union.

Macroeconomic outlook

After an estimated global GDP growth of 3.5% in 2022 (Figure 13), it is projected to fall in the following two years to 3% mainly due to the continuous increase in central bank policy rates to fight inflation. The interest rates are expected to be raised by the Federal Reserve and Bank of England – to a peak of about 5.6% in the case of the Federal Reserve and of 5.75% in the case of the Bank of England, according Reuters poll – before reducing them in 2024. The global world inflation is projected to fall by 1.9% in 2023 and by 3.5% in 2024, from 8.7% in 2022 but it is highly sensitive to shocks such as the pandemic and war in Ukraine that are unpredictable.

Portuguese Economic outlook

Figure 14: Portuguese and Chilean real GDP growth projections



Source: World Bank & OECD

Portugal was significantly impacted by the Covid-19 pandemic and in 2020 the GDP dropped by 8.4% (Figure 14), reaching the largest annual decline since 1936. The government was forced to take several measures including the implementation of the Recovery and Resilience Plan (RRP), fiscal support measures and increasing activity in trading partners. Economic growth recovered in the first half of 2022 mostly supported by the foreign tourism visits increase (in particular from North America) and with the exports of services surpassing pre-pandemic levels, representing one of the main components contributing to GDP growth that according to the Bank of Portugal projections was of 6.8% in 2022 (vs. 5.5% in 2021), double the average in the eurozone. However, as a result of the huge increase in the commodity prices and interest rates, the investment has contracted and according to OECD, the real GDP growth is expected to decrease to 2.5% in 2023 and 1.5% in 2024 mainly due to the continuous increase in inflation.

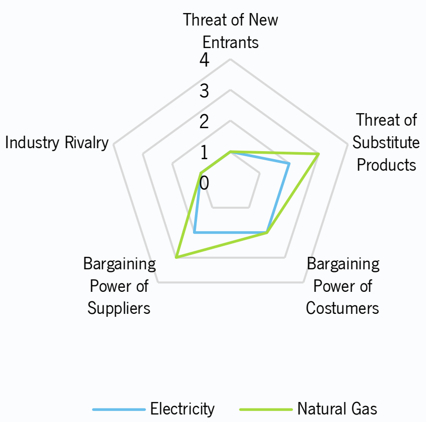
Chilean Outlook

Chilean's real growth GDP in 2022 was 2.44% but OECD expects it will drop by 0.1% in 2023 and increase by 1.9% in 2024 (Figure 14) mainly because of the household consumption contraction after the abandonment of pandemic-related support and tighter financial conditions. The government granted subsidies to the vulnerable people, froze public transportation tariffs and implanted some measures to alleviate fossil fuel and electricity prices in order to mitigate the impact of the increase in energy prices resulted by the ongoing Russia's war against Ukraine. The economic rebound in 2024 is predicted assuming stronger external demand, mainly from China (Chilean's main trading partner).

Porter's 5 Forces Analysis

Electricity

Figure 15: Porter's Five Forces



Source: Author's Analysis

Threat of New Entrants: INSIGNIFICANT

In the electric industry, a firm usually owns a monopoly in the market because of the economies of scale that are a barrier for other firms to entry. The high fixed investment necessary to entry and the regulations associated, discourage other firms from entering in the market.

Threat of substitute products: LOW

Electricity itself doesn't have substitutes and that's why we can say that its demand is inelastic. However, the energy sources are various, we can obtain it either by renewable energy or fossil fuels. The only threat existent regarding the products is related with generation since the consumers can consume their own energy through solar panels, for example.

Bargaining Power of Costumers: LOW

Since there's no substitutes to electrical power and since REN is the single Transmission System Operator in Portugal, the bargaining power of costumers is very low since they have no other provider.

Bargaining Power of Suppliers: LOW

In this type of industry the suppliers are construction companies responsible to build transformers and transmitters infrastructures. They can impact the REN's efficiency targets related to operational expenditures as defined by ERSE.

Industry Rivalry: INSIGNIFICANT

Generation and supply to consumers tend to be competitive markets, while transmission and distribution tend to be natural monopolies which means that there's no rivalry for REN and the prices are defined under regulators' conditions.

Natural Gas

Threat of New Entrants: LOW

Similarly to the electricity market, there's high barriers to entry in Natural Gas market since it is highly regulated, with exclusively concession contracts. Besides that, it requires huge investments to enter in the market and its revenues are subject to heavy regulation.

Threat of Substitute Products: MODERATE

Existing studies state that natural gas helps prevent greenhouse gas emissions in the short term, while unintended long term effects might also hinder the transition into renewables. The main use of NG is to generate electricity and in this field the major threat to NG are the renewable sources. For now, REN is focused in the moisture of natural gas with hydrogen and to certify their distribution line until 20%.

Bargaining Power of Costumers: LOW

The power of costumers is very low since the allowed revenues are supervised by the regulator. However, in the long run, if demand for NG decreases, tariffs and rates of remuneration are amended for the change resulting in a reduction of the regulated revenues.

Bargaining Power of Suppliers: MODERATE

Since the used gas in Portugal is provided by third countries, REN is exposed to the economic and political environment of the suppliers

Industry Rivalry: INSIGNIFICANT

The competition within the NG transportation industry is insignificant since the concessions of public service are approved by resolution of ministers for long-term periods, barring other firms to compete. The operator's investment plan are subject to conditions defined under the PDIRD-GN 5-Year plan. NG distribution competitors are five but are not a threat to REN since they operate by regions.

SWOT Analysis

Figure 16: SWOT Analysis

Strengths	**Weaknesses**
• Hedging operations; • Service quality; • Monopoly.	• Regulatory framework limiting revenues and costs; • Transition costs.
Threats	**Opportunities**
• Technology and information security; • Economic and political environment; • Extreme climate events.	• Climate opportunities for electricity and gas; • International expansion.

Source: Author's Analysis

Table 3: REN and Peers Market Capitalization

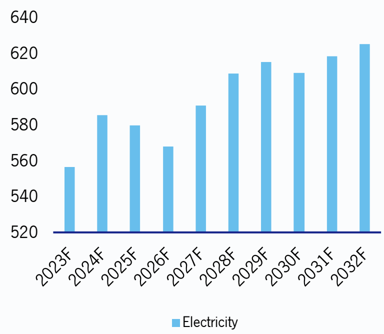
Company	Market Cap ($b)
Red Eléctrica	8.8
Enagás SA	4.46
National Grid plc	45.84
Terna SpA	16.71
Snam SpA	17.26
REN SGPS SA	**1.8**

Source: Refinitiv Eikon

Figure 17: Past Revenues (€M)

Source: Company data

Figure 18: Electricity Revenues Forecasted (€M)



Source: Author's Analysis

Peers Overview

According to Fortune Business Insights, the global electricity transmission and distribution market size was valued at $317.89 billion in 2022 and is expected to grow from $329.47 billion in 2023 to $429.43 billion by 2030, at a Compound Annual Growth Rate (CAGR) of 3.9%. The global gas pipeline infrastructure market size was valued at $2,570 billion in 2023 and according to yahoo finance is expected to reach $2,674 billion in 2023 and grow at a CAGR of 3.7% until 2027 with a forecast market size of $3,092 billion.

- **Red Eléctrica –** Is the first company in the world exclusively involved in the electricity system operation and transport and is the sole TSO in Spain. It has a electricity line of 45,000km length and is regulated by both European and national regulations;
- **Enagás S.A. –** The company is certified by the European Commission as an independent TSO since 2012. This certification guarantees the independence of the Spanish gas transmission network from gas producers and shippers;
- **National Grid plc–** The UK based company that operates in the electricity is also the TSO of its country and it's regulated by Ofgem which is responsible to set price controls;
- **Terna S.p.A . –** Italian based company is the TSO in Italy and manages 74,910km high-voltage lines.
- **Snam S.p.A. –** Similarly to the previous companies, it is the TSO for the gas industry in Spain

5. Valuation

REN's revenues have been oscillating in the last five years, reaching a CAGR of 2.51% in this period. The revenues were mainly driven by the electricity segment that registered a CAGR of 3.24% while the gas segment slightly decreased 0.06% CAGR mostly impacted for the main gas activity of the company, its transmission.

Revenues assumptions

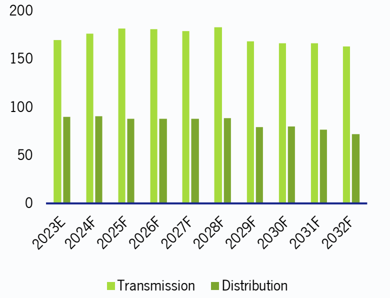
Electricity

Besides being the main the firm main revenues driver, electricity was projected to increase only 1.17% CAGR between 2023-2032F (Figure 18) and it will be marked first for a decrease in revenues from 2024 until 2026 due to the fossil fuels increase to answer the urgent energy needs after the Ukraine vs. Russia's war and predictable revenues limitations by regulatory authorities to assist costumers' weaknesses. After that, the revenues are expected to grow since Portugal is committed to achieve carbon neutrality by 2050 but the company is focused to achieve it 10 years earlier and the plan to conquer it involves some measures such as the electrification of the fleet.

Natural Gas

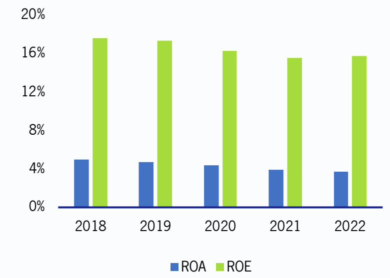
Natural gas revenues are projected to decline 0.99% CAGR (Figure 19) in the forecasted period mainly driven by the distribution segment. Following the expected additional investment estimated in 10bilion euros until 2030 through the REPowerEU program to ensure access to sufficient quantities of LNG and gas via pipelines from alternative suppliers to Russia, strengthening the connection of Iberian Peninsula LNG terminals to the EU grid is one of the focus that will benefit this segment of the company. However, in

Figure 19: Forecasted Revenues of Natural Gas (€M)



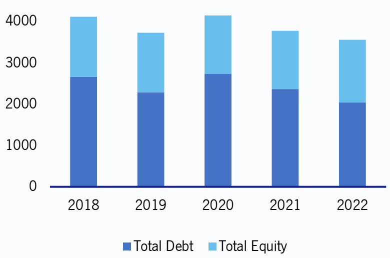
Source: Author's Analysis

Figure 20: ROE & ROA



Source: Author's Analysis

Figure 21: Shareholders' Equity and Debt



Source: Company's Data

the long run it is expected to decline with more restrictive measures to fossil fuel energy to achieve the goal of Net Zero Emissions by 2050.

International and Others

As previously explained the two segments studied above are the ones that most affect REN's revenues, which is always focused in the domestic business. However, as Transemel secured two new projects in 2022 it's expected an increase in the international revenues in the coming years as well as in the technologic department of the company aligned to its goal to deliver higher quality service with a cumulative CAGR of 2.86% for this two segments in the forecasted period (Appendix 9).

Discounted Cash Flow Valuation

The Discounted Cash Flow Valuation (DCF) was used to compute REN's Price Target assuming a moderated growth rate in the forecasted period of 2023E-2032F. This method yielded a PT of 2.79€/share for 2023YE, representing a 12% upside potential over a current price of 2.49€/share.

Cost of Capital Assumptions

One common approach to estimate the cost of equity is to use the Capital Pricing Asset Model (CAPM). To compute it we need to calculate first the risk-free rate. The risk free rate used is the 10-year maturity yield of Germany T-bonds at the 30th of August, resulting in an estimated risk-free rate of 2.55%.

The leveraged beta of 0.34 was computed using the industry average approach and the five peers are the same chosen previously, assuming that the current capital structure is the optical capital structure since the company purpose in relation to capital management is to safeguard the continuity of the group, to meet their objectives and maintain an optimal capital structure in order to reduce the cost of capital (Appendix 3). The Group tax rate is 31.5% which corresponds to the sum of the Corporate Income Tax Rate of 21%, increased by a municipal surcharge up the maximum of 1.5% over the taxable profit, 3% of taxable profit between 1,500 thousand Euros and 7,500 thousand Euros and 9% for taxable profits in excess of 35,000 thousand Euros. However, the tax rate used is 28% which corresponds to the effective tax rate paid in 2022 (Appendix 13) . Finally, the Equity Risk Premium for Portugal, according to Damodaran is 7.89%, obtained as a sum of the base premium for mature equity market, 5% and the country risk premium 2.89% and using all these information, the final cost of equity is 5.27%.

REN is at the "investment grade" in all of the rating agencies with a BBB note in both Fitch and S&Ps and Baa2 at Moody's. The credit rating of these three agencies are based on the solid domestic business profile of its monopoly energy network activities, transparent and stable regulatory framework under which its tariffs are set by ERSE and its diversification across electricity and gas as well as transmission and distribution. According to Damodaran, one approach to estimate the cost of debt can be looking up the rating of the firm and estimating a default spread based upon that, which regarding the table provided on his website would result in a default spread of 2% associated to a BBB rated bond. The cost of debt used is then the risk free rate of 2.55% added by the default spread, ending up with 4.55%.

The WACC of 4.12% was obtained assuming a D/(D+E) of 0.57 (Figure 21) calculated using both Equity and Debt market prices.

Long-term sustainable growth rate

According to Damodaran the soundest way to incorporate growth into value is to make it endogenous. The growth rate that I used is based on the growth rate in net income considering that REN has a reinvestment rate of 65.03% and a return on assets of 2.64%. This results in a sustainable growth rate of 1.72% (Appendix 12).

6. Financial Analysis

Overall, REN's financial ratios indicate that the company has an inconstant path of revenues growth, with a CAGR of 2.51% (Appendix 8) in the five-years period considered (2018-2022) and variable liquidity ratios. The profitability ratios also suggest a bad management of company's assets besides its strong capacity to manage debt that the leverage ratios indicate.

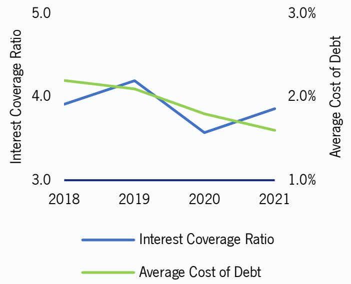
Profitability

REN's Return On Assets (ROA) decreased moderately in the last five years (Figure 20), resulting in a total reduction of 1.27% (from 4.95% in 2018 to 3.69% in 2022). This resulted mainly due to the assets increase and inconstant net income evolution which suggest a possible bad management of company's resources. The evolution of its Gross Margin (Appendix 2) seems to confirm the previous statement since it decreased from 85.7% in 2018 to 74.2% in 2021, with a recovery of 4.5% in 2022. Similarly, the Return On Equity (ROE) also decreased by 2.04% between 2018 and 2021 and recovered 16% in 2022 to 15.68%. The profitability ratios recovery registered last year is justified mainly by the decrease in Operating Expenses.

Leverage

In 2022, the Debt-to-Equity ratio was the lowest of the last five years, reaching 1.35 which is 0.6 lower from the highest value registered in 2020 (Figure 21). It shows that the company has almost as much debt as equity, being aggressive to finance its growth with debt, which is common for companies in the energy industry. Since the company is in the investment grade for the three major rating agencies we can conclude that it's in good conditions to manage its capital structure. We can also see from the interest coverage ratio (Figure 22), always close to 4 (from 2018 to 2021), that the firm has a great capacity to pay interest on outstanding debt.

Figure 22: Interest Coverage ratio vs. Average Cost of Debt

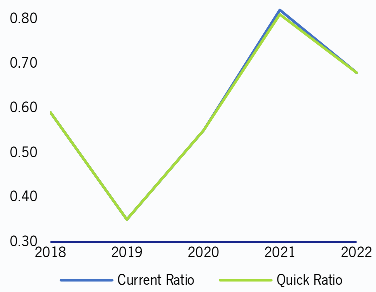


Source: Author's Analysis

Liquidity

We can see in Figure 23 that REN's current assets have increased significantly between 2019 and 2021 when compared to its current liabilities from 0.35 to 0.82, but in 2022 its Current Ratio decreased to 0.62 which suggest some difficulty to have the capital on hand to meet its short-term obligations if they were all due at once. The Quick Ratio has equal values to the latest ratio almost all the period considered, except in 2021.

Figure 23: Current Ratio & Quick Ratio



Source: Author's Analysis

Relative Valuation

Using a more simple approach, the relative valuation method was implemented through the Forward EV/EBITDA multiple assuming debt increase and cash and cash equivalents decrease. This model generated a PT of 6.90€ for 2023E. For the peers' information, the Refinitiv data was used.

Figure 24: Relative Valuation

€	EV/EBITDA
Red Eléctrica	8.3
Enagás SA	9.0
National Grid plc	11.6
Terna SpA	11.8
Snam SpA	12.6
REN SGPS SA	**6.9**

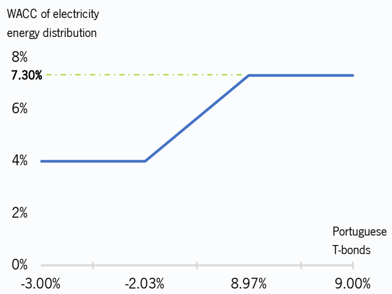
Source: Author's Analysis

7. Investment Risks

Regulatory risk

REN's revenues and costs are capped by the limits imposed by ERSE (Figure 25) for a regulatory period of four years (previously three years) which struggle the company ability to create value. It is exposed to changes to the regulatory model and parameters, although it has been minimized by the extension of the period to plus 1 year.

Figure 25: Indexation methodology of electricity energy distribution



Source: ERSE, Banco de Portugal, Refinitiv Eikon

Political Risk

The rate of the extraordinary contribution on the energy sector (ESEC) is 85% and its impact in earnings in 2023 was 28M€.

Market Risk

Energy markets are quite volatile and the fluctuations in energy prices, supply and demand can negatively impact REN's revenues and profitability, depending on the caps and floors mechanisms defined by the regulatory entity.

Operational Risk

Occurrence of generalized incident, serious work accidents if non-compliance with safety and operational procedures for equipment , infrastructure maintenance, delay in the execution of investment plans or of execution plans by the respective authority or responsible entities and non-entry into operation of assets within planned deadlines due to economic and financial conditions.

Financial Risk

REN's high debt levels can make the company more vulnerable to interest rates increase which can impact its stability and profitability.

8. Sensitivity Analysis

The sensitivity analysis performed allows to perceive the Price Target sensitivity to both cost of capital (WACC) and long-term growth rate (g). In Table 4, we can see the assumptions made for the five different possible recommendations designed. REN is expected to grow slowly and we can see that an increase relatively to the WACC rate set of 4.12%, an increase(decrease) of 5bps could lead to a decrease(increase) of €0.06-€0.08/share on PT and regarding the long-term sustainable growth rate, set for 1.72%, an increase(decrease) of 5bps can lead to an increase(decrease) of €0.07-0.05/share on PT.

Table 4: Investment Recommendation and Upside Potential

Recommendation	Upside Potential
Strong buy	> 30%
Buy	>15% & <=30%
Hold	>5% & <=15%
Reduce	>=-5% & <=5%
Sell	<-5%

Source: Author's Analysis

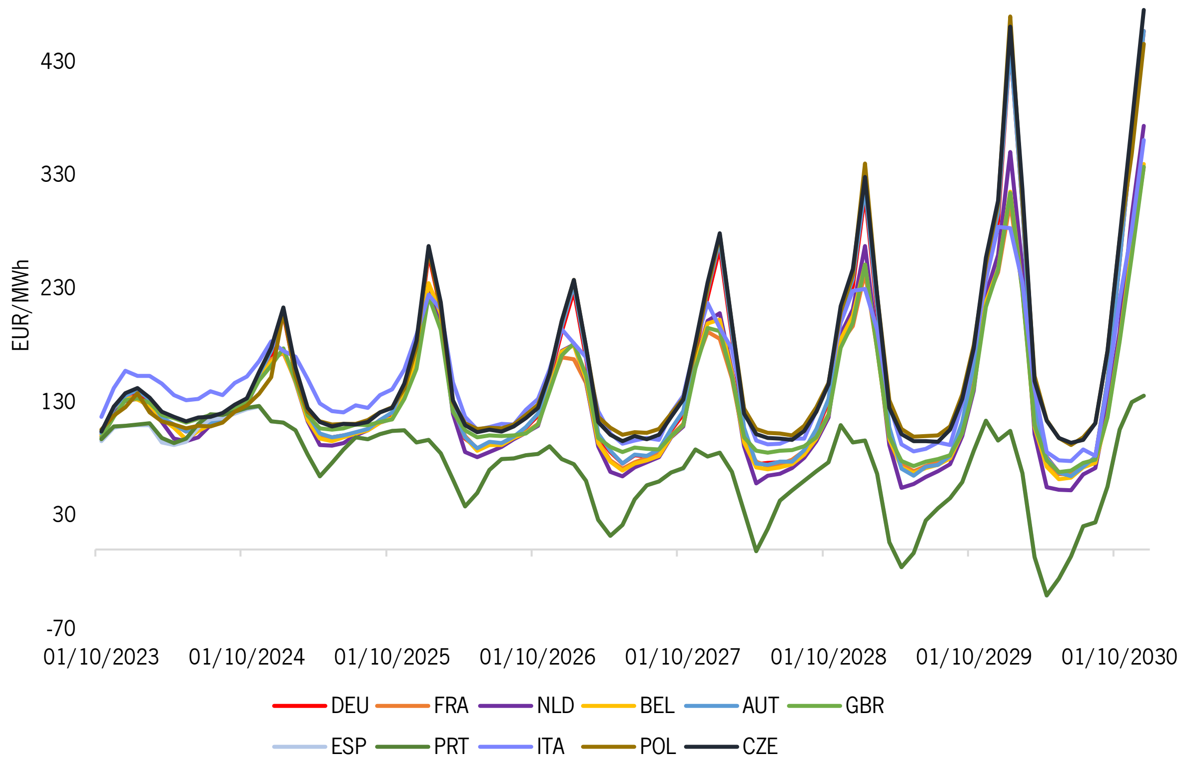
Table 5: Sensitivity Analysis

Cost of Capital (WACC) \ Long-term growth rate (g)	1.52%	1.57%	1.62%	1.67%	**1.72%**	1.77%	1.82%	1.87%	1.92%
3.92%	€2.87	€2.93	€2.99	€3.06	€3.12	€3.19	€3.27	€3.34	€3.42
3.97%	€2.80	€2.85	€2.91	€2.97	€3.03	€3.10	€3.17	€3.25	€3.32
4.02%	€2.73	€2.78	€2.84	€2.90	€2.95	€3.02	€3.09	€3.16	€3.23
4.07%	€2.66	€2.71	€2.76	€2.82	€2.87	€2.94	€3.00	€3.07	€3.14
4.12%	€2.59	€2.64	€2.69	€2.74	**€2.79**	€2.86	€2.92	€2.98	€3.04
4.17%	€2.53	€2.58	€2.63	€2.68	€2.73	€2.79	€2.84	€2.90	€2.97
4.22%	€2.47	€2.52	€2.56	€2.61	€2.66	€2.71	€2.77	€2.83	€2.89
4.27%	€2.41	€2.46	€2.50	€2.55	€2.59	€2.65	€2.70	€2.75	€2.81
4.32%	€2.36	€2.40	€2.44	€2.48	€2.53	€2.58	€2.63	€2.68	€2.74
4.37%	€2.30	€2.34	€2.38	€2.42	€2.47	€2.52	€2.56	€2.61	€2.67

Source: Author's Analysis

Appendices

Appendix 1 - Long Term Monthly Forecast Scenario Average (Base Case)



Source: Reuters, 2023

Appendix 2 - Profitability Ratios

Profitability	**2018**	**2019**	**2020**	**2021**	**2022**
EBITDA Margin	67.73%	61.78%	61.99%	54.97%	59.21%
EBIT Margin	35.38%	31.84%	30.19%	26.11%	28.92%
Gross Margin - Refinitiv	85.70%	79.00%	81.20%	74.20%	78.70%
Net Profit Margin	15.92%	15.11%	14.40%	11.59%	13.58%
Effective Tax Rate	29.30%	27.70%	24.60%	29.50%	28.00%
ROA	4.95%	4.72%	4.36%	3.92%	3.69%
ROE	17.57%	17.33%	16.27%	15.53%	15.68%
Leverage					
Debt-to-Equity	1.81	1.58	1.95	1.68	1.35
Debt-to-EBITDA	5.39	4.70	5.83	5.13	4.19
Liquidity					
Current Ratio	0.59	0.35	0.55	0.82	0.68
Quick Ratio	0.59	0.35	0.55	0.81	0.68

Source: Company's data & Refinitiv Eikon, 2023

Appendix 3 - Leveraged beta computation

Refinitive Eikon data	RED ELECTRICA	ENAGAS	NATIONAL GRID	SNAM SPA	TERNA SPA	MEDIAN	AVERAGE	TOTAL
Beta 5 Year Monthly	0.36	0.61	0.38	0.46	0.39	0.39	0.43	
Debt	6 238.85	4 836.40	45 465.00	13 680.00	10 770.00			
Equity	4 894.28	3 202.30	23 833.00	7 468.00	6 142.00			
Gearing	0.56	0.60	0.66	0.65	0.64		0.62	
D/E	1.27	1.51	1.91	1.83	1.75			
Market cap (€M)	9 280.03	5 103.43	48 305.60	17 915.03	17 038.64			97 642.73
%market cap	9.5%	5.2%	49.5%	18.3%	17.4%			
Tax rate	21.70%	28.50%	25.60%	36.00%	28.80%			
Beta unlevered	0.18	0.29	0.16	0.21	0.17	0.18	0.18	
REN Optimal Capital Structure								1.35
Beta levered							**0.34**	

Source: Refinitiv Eikon and Author's Analysis

Appendix 4 - Capital Structure

	2018	2019	2020	2021	2022
Total Debt (€M)	2 653.10	2 286.00	2 741.90	2 362.00	2 043.70
Total Equity (€M)	1 463.84	1 446.14	1 407.70	1 409.83	1 517.53
Total Shares (M)	667.19	667.19	667.19	667.19	667.19
D/E	1.81	1.58	1.95	1.68	1.35
E/(D+E)	0.36	0.39	0.34	0.37	0.43
D/(D+E)	0.64	0.61	0.66	0.63	0.57
Risk-free rate					2.55%
Equity risk premium					7.89%
Share price (€)	2.43	2.72	2.37	2.55	2.52
Cost of Equity					5.27%
Cost of Debt					4.55%
WACC					**4.12%**

Source: Refinitiv Eikon and Author's Analysis

Appendix 5 - Regulatory Methodology

Variable	Methodology 2020-2023
Tax Rate	**31.50%** IRC Tax of 21% + Municipal surcharge 1.5% + State surcharge of 9%
Risk-free Rate	**0.06%** 5-years average of historical returns on the 10-Year treasury bonds, of the Euro Zone countries with AAA rating
Gearing	Theoric value of **50%** considering real values and european regulators' defined values
Debt risk premium	**3.25%** Benchmark spread for companies with similar rating and average cost of debt
Market Risk Premium	Value **between 3.95% and 5.10%** considering the amounts taken by european regulators, the spread between the S&P 500 returns and EUA 10-Year T-bills and the spread of each country risk
Cost of Equity	**2.78%**
Cost of Debt	**3.31%** = 0.06% + 3.25%

Source: ERSE

Appendix 6 - Consolidated Balance Sheet

Property, plant and equipment	0.56	125.65	127.12	119.55	127.82
Intangible assets	4192.62	4214.92	4130.56	4123.07	4077.47
Goodwill	3.88	5.97	5.37	4.76	4.51
Investments in associates and joint ventures	167.84	172.28	158.84	169.28	180.77
Investments in equity instruments at fair value through other comprehensive income	162.55	155.68	150.85	162.72	145.72
Derivative financial instruments	21.01	27.23	25.68	19.35	80.56
Other financial assets	0.05	0.07	0.10	0.14	0.18
Trade and other receivables	50.25	114.51	45.51	37.03	55.67
Deferred tax assets	92.50	93.67	92.58	96.67	69.80
	4691.25	**4909.96**	**4736.61**	**4732.57**	**4742.50**
Current assets					
Inventories	2.10	3.92	2.45	8.54	5.13
Trade and other receivables	427.13	353.73	448.10	448.17	327.76
Current income tax recoverable	35.37	14.92	0.00	0.00	10.67
Derivative financial instruments	0.00	1.73	0.00	0.47	0.24
Cash and cash equivalents	35.74	21.04	61.50	398.76	365.29
	500.33	**395.34**	**512.05**	**855.95**	**1709.10**
TOTAL ASSETS	**5191.57**	**5305.31**	**5248.66**	**5588.52**	**6451.60**
EQUITY					
Shareholders' equity:					
Share capital	667.19	667.19	667.19	667.19	667.19
Own shares	-10.73	-10.73	-10.73	-10.73	-10.73
Share premium	116.81	116.81	116.81	116.81	116.81
Reserves	326.91	316.68	289.89	311.99	396.06
Retained earnings	253.51	242.85	240.85	232.98	241.99
Other changes in equity	-5.56	-5.56	-5.56	-5.56	-5.56
Net profit for the period	115.71	118.90	109.25	97.15	111.77
TOTAL EQUITY	**1463.84**	**1446.14**	**1407.70**	**1409.83**	**1517.53**
LIABILITIES					
Non-current liabilities					
Borrowings	2274.94	2112.30	2260.88	2390.85	1695.36
Liability for retirement benefits and others	98.29	103.31	100.51	94.11	64.94
Derivative financial instruments	12.95	24.85	29.21	23.11	73.46
Provisions	8.85	8.42	8.51	8.87	10.58
Trade and other payables	367.74	340.63	371.89	507.61	450.30
Deferred tax liabilities	113.64	141.77	144.97	107.57	115.06
	2876.42	**2731.27**	**2915.96**	**3132.12**	**2409.70**
Current liabilities					
Borrowings	431.40	757.16	562.56	375.22	638.94
Trade and other payables	419.92	370.73	353.80	644.70	885.42
Income tax payable	0.00	0.00	8.64	26.64	0.00
	851.32	**1127.89**	**925.00**	**1046.57**	**2524.36**
TOTAL LIABILITIES	**3727.74**	**3859.16**	**3840.96**	**4178.69**	**4934.06**
TOTAL EQUITY AND LIABILITIES	**5191.57**	**5305.31**	**5248.66**	**5588.52**	**6451.60**

Source: Company Data

Appendix 7 - Consolidated Cash Flow Statement

Thousand Euros	2018	2019	2020	2021	2022
Cash flow from operating activities:					
Cash receipts from customers	2665.90	2425.09	1838.09	2784.89	3214.16
Cash paid to suppliers	-2082.33	-1909.37	-1323.31	-1873.43	-2394.77
Cash paid to employees	-73.23	-74.30	-78.82	-75.74	-76.22
Income tax received/paid	-114.35	-16.89	-11.46	-74.25	-77.97
Other receipts / (payments) relating to operating activities	-0.58	-80.37	-48.24	-61.43	-51.73
Net cash flows from operating activities (1)	**395.41**	**344.17**	**376.26**	**700.04**	**613.47**
Cash flow from investing activities:					
Receipts related to:					
Investments in associates	0.00	0.29	0.22	0.20	0.39
Investment grants	6.78	7.18	34.75	28.53	83.89
Dividends	12.81	13.97	15.11	13.22	21.55
Payments related to:					
Equity instruments through other comprehensive income	-0.05	0.00	0.00	-0.02	0.00
Property, plant and equipment	-0.16	-5.28	-13.99	-4.84	-6.27
Intangible assets	-144.01	-170.57	-156.63	-196.76	-201.57
Net cash flow used in investing activities (2)	**-120.46**	**-316.72**	**-120.54**	**-159.67**	**-102.01**
Cash flow from financing activities:					
Receipts related to:					
Borrowings	2398.00	5088.55	2426.00	2035.00	1165.00
Payments related to:					
Borrowings	-2519.43	-4956.40	-2472.65	-2081.31	-1523.31
Interests and other similar expense	-65.69	-59.71	-53.17	-39.73	-40.55
Leasings	0.00	0.00	-1.77	-2.07	-2.16
Interests of Leasings	0.00	0.00	-0.03	-0.03	-0.03
Dividends	-113.43	-113.43	-113.43	-113.43	-144.60
Net cash from / (used in) financing activities (3)	**-300.54**	**-40.98**	**-215.04**	**-201.56**	**-545.64**
Net (decrease) / increase in cash and cash equivalents (1)+(2)+(3)	-25.59	-13.54	40.68	338.81	-34.18
Effect of exchange rates	-0.10	-0.19	-0.03	-1.22	0.72
Cash and cash equivalents at the beginning of the year	60.45	34.10	20.52	61.17	398.76
Cash and cash equivalents at the end of the period	34.10	20.52	61.17	398.76	365.29
Detail of cash and cash equivalents					
Cash	0.00	0.00	0.00	0.00	0.00
Bank overdrafts	-1.64	-0.52	-0.33	0.00	0.00
Bank deposits	35.74	21.04	61.50	398.76	365.29
The transitional gas price stabilization regime - Decree-Law 84-D/2022	0.00	0.00	0.00	0.00	0.00

Source: Company Data

Appendix 8 - Forecasted Income Statement

	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F
Total Revenues	**726.9**	**787.0**	**758.5**	**838.4**	**823.0**	**856.31**	**897.12**	**895.02**	**881.80**	**903.97**	**924.67**	**907.42**	**904.44**	**911.27**	**905.82**
Cost of Revenue, Total	103.80	165.50	142.80	216.50	176.00	173.57	181.85	181.42	194.00	198.87	203.43	199.63	189.93	227.82	190.22
% of revenues	14.28%	21.03%	18.83%	25.82%	21.39%	20.27%	20.27%	20.27%	22.00%	22.00%	22.00%	22.00%	21.00%	25.00%	21.00%
Gross Profit	**623.10**	**621.50**	**615.67**	**621.88**	**647.00**	**682.74**	**715.27**	**713.60**	**687.80**	**705.09**	**721.25**	**707.79**	**714.51**	**683.45**	**715.60**
Selling/General/Admin. Expenses, Total	115.2	116.5	125.6	144.7	145.1	145.57	152.51	152.15	152.55	156.39	159.97	158.80	158.28	159.47	158.52
% of revenues	15.85%	14.80%	16.56%	17.26%	17.63%	17.00%	17.00%	17.00%	17.30%	17.30%	17.30%	17.50%	17.50%	17.50%	17.50%
Depreciation/Amortization	235.1	235.6	241.2	241.9	249.3	256.89	260.34	270.30	272.48	276.61	277.40	281.30	282.19	282.95	288.96
% of revenues	32.34%	29.94%	31.80%	28.85%	30.29%	30.00%	29.02%	30.20%	30.90%	30.60%	30.00%	31.00%	31.20%	31.05%	31.90%
Other Operating Expenses, Total	14.9	17.9	20.2	17	13.1	18.84	19.74	19.69	19.58	22.60	20.53	20.14	20.08	20.23	20.11
% of revenues	2.05%	2.27%	2.66%	2.03%	1.59%	2.20%	2.20%	2.20%	2.22%	2.50%	2.22%	2.22%	2.22%	2.22%	2.22%
Unusual Expense (Income)	-0.70	-0.90	0.3	0.6	-1.50	-0.51	-0.54	-0.54	-0.18	-0.18	-0.18	-0.18	-0.18	-0.18	-0.18
% of revenues	-0.10%	-0.11%	0.04%	0.07%	-0.18%	-0.06%	-0.06%	-0.06%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%
EBIT	**257.20**	**250.60**	**229.00**	**218.90**	**238.00**	**260.92**	**282.14**	**270.92**	**243.02**	**249.31**	**263.16**	**247.36**	**253.79**	**220.62**	**247.83**
Depreciation and amortization	235.1	235.6	241.2	241.9	249.3	256.89	260.34	270.30	272.48	276.61	277.40	281.30	282.19	282.95	288.96
EBITDA	**492.3**	**486.2**	**470.2**	**460.8**	**487.3**	**517.8**	**542.5**	**541.2**	**515.5**	**525.9**	**540.6**	**528.7**	**536.0**	**503.6**	**536.8**
Financial Expense	-57.8	-52.5	-46.8	-42.6	-44	-53.95	-56.52	-56.39	-57.32	-58.76	-60.10	-63.52	-63.31	-63.79	-9.06
% of revenues	-7.95%	-6.67%	-6.17%	-5.08%	-5.35%	-6.30%	-6.30%	-6.30%	-6.50%	-6.50%	-6.50%	-7.00%	-7.00%	-7.00%	-1.00%
EBT	**199.40**	**198.10**	**182.20**	**176.30**	**194.00**	**206.97**	**225.63**	**214.54**	**185.71**	**190.56**	**203.06**	**183.84**	**190.48**	**156.83**	**238.77**

Source: Company Data & Author's Analysis

Appendix 9 - Revenues Estimates

	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F
Total Revenues	**726.90**	**787.00**	**758.47**	**838.38**	**823.00**	**856.31**	**897.12**	**895.02**	**881.80**	**903.97**	**924.67**	**907.42**	**904.44**	**911.27**	**905.82**
YoY %		8.27%	-3.62%	10.54%	-1.84%	4.05%	4.77%	-0.23%	-1.48%	2.51%	2.29%	-1.87%	-0.33%	0.75%	-0.60%
Segment															
Electricity	**451.00**	**503.50**	**495.82**	**546.03**	**529.00**	**556.51**	**585.45**	**579.59**	**568.00**	**590.72**	**608.44**	**615.13**	**608.98**	**618.12**	**624.92**
YoY %		11.64%	-1.52%	10.13%	-3.12%	5.20%	5.20%	-1.00%	-2.00%	4.00%	3.00%	1.10%	-1.00%	1.50%	1.10%
Gas	**259.20**	**259.90**	**235.97**	**262.76**	**258.20**	**260.42**	**267.77**	**270.71**	**270.16**	**268.44**	**272.49**	**248.91**	**247.78**	**243.82**	**235.86**
YoY %		0.27%	-9.21%	11.35%	-1.74%	0.86%	2.82%	1.10%	-0.20%	-0.63%	1.51%	-8.65%	-0.45%	-1.60%	-3.26%
Transmission	**171.30**	**175.00**	**158.89**	**180.94**	**168.50**	**170.19**	**176.99**	**182.66**	**181.93**	**180.11**	**183.71**	**169.01**	**167.32**	**166.82**	**163.48**
YoY %		2.16%	-9.21%	13.88%	-6.88%	1.00%	4.00%	3.20%	-0.40%	-1.00%	2.00%	-8.00%	-1.00%	-0.30%	-2.00%
Distribution	**87.90**	**84.90**	**77.08**	**81.82**	**89.70**	**90.24**	**90.78**	**88.06**	**88.23**	**88.34**	**88.78**	**79.90**	**80.46**	**77.00**	**72.38**
YoY %		-3.41%	-9.21%	6.15%	9.63%	0.60%	0.60%	-3.00%	0.20%	0.12%	0.50%	-10.00%	0.70%	-4.30%	-6.00%
International		**13.20**	**10.10**	**12.10**	**13.70**	**15.07**	**17.33**	**17.89**	**14.31**	**14.88**	**16.81**	**15.64**	**17.36**	**18.92**	**17.97**
YoY %			-23.48%	19.80%	13.22%	10.00%	15.00%	3.20%	-20.00%	4.00%	13.00%	-7.00%	11.00%	9.00%	-5.00%
Others	**16.60**	**20.80**	**16.54**	**17.45**	**22.2**	**24.31**	**26.57**	**26.84**	**29.33**	**29.92**	**26.93**	**27.74**	**30.32**	**30.41**	**27.06**
YoY %		25.30%	-20.47%	5.46%	27.25%	9.50%	9.30%	1.00%	9.31%	2.00%	-10.00%	3.00%	9.31%	0.30%	-11.00%

Source: Company Data & Author's Analysis

Appendix 10 - Non-Cash Working Capital Estimates

	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F
Non-Cash WC	-386.73	-753.59	-474.45	-589.38	-1180.56	-728.29	-719.49	-626.52	-828.89	-994.36	-859.95	-408.34	-615.02	-729.01	-534.43
% of sales	-53.20%	-95.76%	-62.55%	-70.30%	-143.45%	-85.05%	-80.20%	-70.00%	-94.00%	-110.00%	-93.00%	-45.00%	-68.00%	-80.00%	-59.00%
Var. Non-Cash WC		-366.87	279.14	-114.93	-591.18	452.26	8.80	92.97	-202.37	-165.47	134.42	451.61	-206.68	-113.99	194.58

Source: Company Data & Author's Analysis

Appendix 11 - Capital Expenditures Estimates

	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F
CapEx	121.90	188.60	173.30	247.10	201.50	255.91	221.59	196.91	158.72	185.31	231.17	222.68	217.07	173.14	210.42
% of sales	16.77%	23.96%	22.85%	29.47%	24.48%	29.88%	24.70%	22.00%	18.00%	20.50%	25.00%	24.54%	24.00%	19.00%	23.23%
Depreciations & Amortizations	235.10	235.60	241.16	241.94	249.30	256.89	260.34	270.30	272.48	276.61	277.40	281.30	282.19	282.95	288.96
YoY %		0.21%	2.36%	0.32%	3.04%	3.05%	1.34%	3.82%	0.81%	1.52%	0.29%	1.41%	0.31%	0.27%	2.12%
% of sales	32.34%	29.94%	31.80%	28.86%	30.29%	30.00%	29.02%	30.20%	30.90%	30.60%	30.00%	31.00%	31.20%	31.05%	31.90%
Net Capex	-113.20	-47.00	-67.86	5.16	-47.80	-0.99	-38.76	-73.39	-113.75	-91.30	-46.23	-58.62	-65.12	-109.81	-78.53

Source: Company Data & Author's Analysis

Appendix 12 - Reinvestment Rate based on Estimates

	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F
Net CapEx	-47.00	-67.86	5.16	-47.80	-0.99	-38.76	-73.39	-113.75	-91.30	-46.23	-58.62	-65.12	-109.81	-78.53
Var. WC	-366.87	279.14	-114.93	-591.18	452.26	8.80	92.97	-202.37	-165.47	134.42	451.61	-206.68	-113.99	194.58
EBIT(1-t)	180.43	164.89	157.60	171.36 €	187.86 €	203.14 €	195.07 €	174.98 €	179.51 €	189.48 €	178.10 €	182.73 €	158.85 €	178.44
Reinvestment rate	**-229.38%**	**128.14%**	**-69.65%**	**-372.89%**	**240.22%**	**-14.74%**	**10.04%**	**-180.67%**	**-143.04%**	**46.54%**	**220.65%**	**-148.75%**	**-140.89%**	**65.03%**

Source: Company Data & Author's Analysis

Appendix 13 - Free Cash Flow to the Firm Computation

M€	Revenues	EBIT	Tax Rate	EBIT (1-t)	Adj. Net CAPEX	Var. Non-Cash WC	FCFF
2023F	€ 856.31	€ 260.92	28.00%	€ 187.86	-€ 47.80	€ 452.26	-€ 216.60
2024F	€ 897.12	€ 282.14	28.00%	€ 203.14	-€ 0.99	€ 8.80	€ 195.33
2025F	€ 895.02	€ 270.92	28.00%	€ 195.07	-€ 38.76	€ 92.97	€ 140.85
2026F	€ 881.80	€ 243.02	28.00%	€ 174.98	-€ 73.39	-€ 202.37	€ 450.74
2027F	€ 903.97	€ 249.31	28.00%	€ 179.51	-€ 113.75	-€ 165.47	€ 458.73
2028F	€ 924.67	€ 263.16	28.00%	€ 189.48	-€ 91.30	€ 134.42	€ 146.36
2029F	€ 907.42	€ 247.36	28.00%	€ 178.10	-€ 58.62	€ 451.61	-€ 214.89
2030F	€ 904.44	€ 253.79	28.00%	€ 182.73	-€ 65.12	-€ 206.68	€ 454.53
2031F	€ 911.27	€ 220.62	28.00%	€ 158.85	-€ 109.81	-€ 113.99	€ 382.65
2032F	€ 905.82	€ 247.83	28.00%	€ 178.44	-€ 78.53	€ 194.58	€ 62.39

Source: Company Data & Author’s Analysis

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