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Industrie De Nora S.p.A.
Italy | Industrial Machinery and Equipment

Initiation of Coverage | 6th February 2025

HOLD

Current Price:	6.95
Target Price:	7.00
Upside:	0.72%
Dividend Yield:	1.43%
Total Shareholder Return:	2.15%

Exchange:	Italian Stock Exchange
Market:	Euronext Milan
Ticker:	DNR.MI

Market Data

Market Capitalization:	€1.40B
Shares Outstanding:	202M

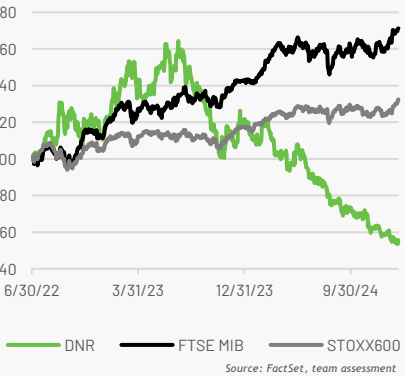
Shareholders Structure

Federico De Nora S.p.A.	53.33%
Voting Rights	63.95%
Free Float	22.13%
Asset Company 10 S.r.l.	21.59%
Treasury Shares	1.48%
Management	1.47%

Stock Performance

1 Month:	-10.67%
6 Months:	-32.59%
1 Year:	-50.46%

De Nora's Performance - Exhibit 1



52-week High	€16.17
52-week Low	€6.86
Avg. Daily Volume (52w)	200.14K
Daily standard deviation	2.30%

Key Financials

	FY24E	FY25E	FY26E
Revenues (€M)	867	902	954
EBITDAm (%)	17.28	17.58	18.03
Leverage Ratio	-0.31	-0.38	-0.39



Investment Summary

ELECTR-HOLD-LYSIS

We initiate our coverage on De Nora with a **HOLD recommendation** and a year-end target price of **€7.00/share**, implying a 0.72% upside from the 6 February 2025 closing price (€6.95/share). With a **century-long history**, De Nora **pioneered titanium-coated electrodes** for the **Chlor-Alkali process** (DSA®) and established itself as a **leader in this niche**. Over time, through **partnerships** and **small acquisitions**, the Company has **expanded into other segments** of the Electrochemical Market, including electronics, mining, water treatment and more recently **green hydrogen** via its joint venture with **thyssenkrupp nucera**. With this partnership, De Nora **aimed to become a front-runner** in the **Energy Transition** of the **hard-to-abate industries**, leveraging its expertise in Electrochemical solutions. However, the **reality has been far more challenging** than expected, as the **high CapEx requirements** for green hydrogen production, coupled with the **lack of institutional support**, have hindered market development. Our **target price**, **reflects** the century-long **leadership and solid profitability** in the **Electrode Technologies**, partially offset by: i) the **suboptimal competitive positioning** in **water treatment** and **Energy Transition**; ii) the **slower-than-expected** growth of the **green hydrogen market**, in line with the widespread market skepticism about green hydrogen and the Company's persistent failure to meet the announced guidance (*Exhibit 1*).

BUSINESS: AT THE CROSSROAD OF TRADITION AND INNOVATION

Founded in 1923 by Oronzio De Nora, De Nora is an Italian-based Company, with a €1.4B Market Cap and €856.4M in Revenues in FY23E, operating in the **Electrochemical Industry** across 3 business segments: Electrode Technologies, Water Technologies, and Energy Transition; its operations are primarily **rooted in traditional industrial sectors**, supporting high-tech industries indirectly through electroplating and electrowinning processes. The Group adopts a **"glocal" strategy**, fostering close collaboration between its **global manufacturing operations** and **local partners**, enabling significant transportation cost savings by selling products directly from its manufacturing sites in 7 countries. De Nora holds a **dominant position in Electrode Technologies**, benefiting from strong **entry barriers** including **advanced technology**, **patents**, **high initial investment costs**, and established **customer relationships**. However, the **maturity of this niche** presents challenges for future growth. Over time, the Company has successfully expanded its business through **targeted acquisitions** to enhance its product portfolio and expertise in **Water Technologies** and has forged **key partnerships** with companies like **SNAM** and **thyssenkrupp nucera** to develop infrastructure and technologies for Green hydrogen production in the **Energy Transition** segment, including the recently announced Gigafactory, set to become Italy's largest electrolyzer production hub.

INDUSTRY: BATTLING ANTS AND WHALES

The thriving Global Electrochemical Market, roughly worth €10.8B in FY23, showcased a solid growth at a 15.22% CAGR in FY20-23. To analyze its future trajectory, **we create our own Industry Proprietary Model, partitioning the market into three segments**. Key growth drivers include: i) **population growth**, which impacts urbanization and the demand for clean water; ii) **evolution of the Electric Vehicles industry**; iii) **policies supporting green hydrogen** market development. These factors are expected to drive an 11.47% CAGR in FY24E-35E, with green hydrogen as the main contributor. Within the **Electrode Technologies Industry**, De Nora is a **leader in three niche markets**, targeting insoluble and corrosion-resistant electrodes for Chlor-Alkali, Electronics and Electrowinning of nickel and cobalt. In the highly competitive **Water Technologies Industry**, particularly in Disinfection & Filtration, the **presence of industry giants remains a constant challenge**. Lastly, in the **Energy Transition Industry**, De Nora struggles to capitalize on the industry's high growth potential (albeit lower than previously anticipated) due to its **limited customer base and the development of alternative technologies**.

FINANCIALS: STUCK IN THE SLOW H2 LANE

After achieving an **exceptional 30.67% Revenues CAGR** in FY20-22, driven by the **pass-through mechanism** (which allowed sales price adjustments based on raw materials' increased costs) and **post-pandemic electrodes demand rebound**, De Nora experienced a **Revenues stabilization** in FY23 (0.42% YoY). The **outlook remains favorable** for **Electrode and Water Technologies** - i.e., the traditional segments - but **less promising** than expected for **Energy Transition**. The time required to fully scale the Gigafactory and the slowdowns in the green hydrogen market will drive a short-term **2 p.p. decline in De Nora's EBITDAm** and **negative cash flow** generation from the **Energy Transition segment, limiting potential upsides on the stock's price**. In summary, we expect: i) moderate expansion (5.53% FY24E-35E Revenues CAGR); ii) stable cash flow generation from traditional segments, initially offset by Energy Transition (10.35% FCFF CAGR in FY24E-35E).

VALUATION: THREE STAGES FOR THE FULL PICTURE

Our forecasted **1Y Forward Target Price of €7.00**, with a 0.72% upside, is the result of a **sum-of-the-parts (SOTP) DCF valuation**, supported by Monte Carlo simulation, sensitivity, and tornado analyses. The stages of our DCF reflect De Nora's expected growth phases: 1) **First Stage** (FY26E-30E), characterized by mid-single-digit growth driven by the Gigafactory at full capacity, offset by rising competition in the Water Technologies Industry and low-single-digit growth in Chlor-Alkali; 2) **Second stage** (FY31E-35E), when we expect a **lower but still favorable momentum**; 3) Terminal Stage, with a perpetual growth rate of 2% for traditional segments and 3% for Energy Transition, reflecting **intensifying competition in all the segments** and a **longer growth runaway** in Green Hydrogen. To validate our DCF, we also carry out a Multiple Valuation based on two ratios: EV/SALES and P/SALES.

RISKS: A BUMPY RIDE

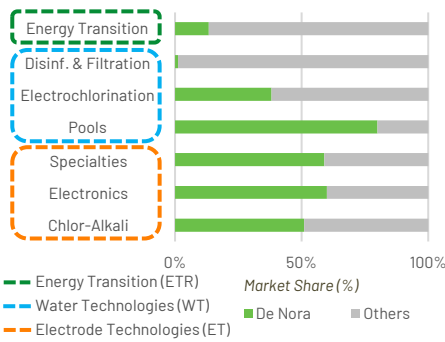
De Nora consistently engages in proactive risk management, diligently monitoring activities to identify and address potential risks. In the near future, the Company will face heightened concerns related to: i) **potential supply chain disruptions**, due to the **Company's high reliance on raw materials**; ii) the **underdevelopment of the Green Hydrogen market**. As of today, only a small share of hydrogen is produced with water electrolysis, which struggles to be cost-competitive with fossil fuels. Moreover, **insufficient regulations** could hinder green hydrogen growth, posing risks to the market's competitiveness. The Company recognizes regulatory and market uncertainties and actively engages in collaborations to support the development of effective policies.

ESG: WORK IN PROGRESS

Through our **ESG proprietary model based on 71 key metrics**, we asses De Nora's behavior and assign a **6.14/10 score (BB)**. Despite its growing focus on ESG, De Nora's policies remain insufficient to stand out. The Company falls behind the industry average in Social (employee turnover, gender diversity) and Governance (% of independent Board members, unequal shareholder rights), highlighting **room for improvement**. Although De Nora is in line with competitors in the Environmental pillar, its lower-than-average Waste Recycling Ratio indicates gaps in circularity.

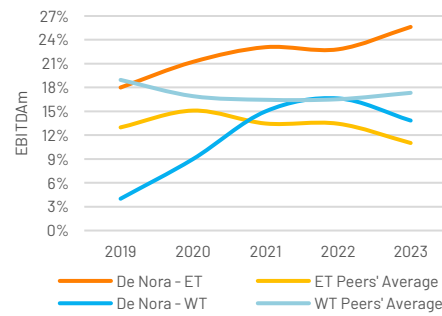
OUR SUMMARY IN CHARTS

A leader in niche Electrode Technologies...

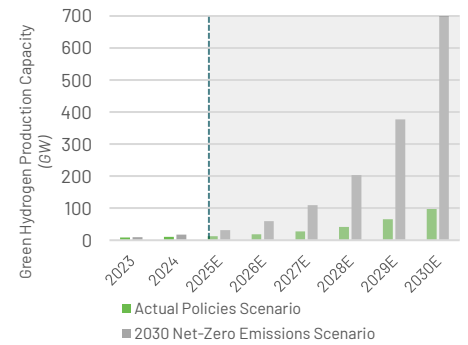


Source: Company data, team assessment

...swimming in a sea full of whales...



...far to cash-in its H2 bet.



Business Description

COMPANY PRESENTATION: THE BENCHMARK IN ELECTROCHEMICAL SOLUTIONS

With a Market Cap of €1.4B and Revenues of €856.4M in FY23, De Nora is recognized as a **reliable innovator** in the **established market of Electrochemical solutions**. Founded in **1923** by Oronzio De Nora, the Company has always focused on Chlor-Alkali technologies and has since evolved into a global leader in catalytic coatings and insoluble electrodes (*Exhibit 2*). Operating productive plants in 7 countries and serving customers in more than 100 nations with its 25 subsidiaries (*Annex 1*), the Company competes in a market dominated by a **few large players**.

Listed on the **Euronext Milan stock exchange** in **2022**, the Company remains controlled by the founding family with a stake of 53.3%, ensuring **stability** and reflecting their continued influence on its governance. In response to the maturity of its traditional segments, De Nora launched the high-growth **Energy Transition** segment in late 2022, focusing on **green hydrogen technologies**. In mid-2024, the construction of the **Gigafactory** in Milan, designed to become **Italy's largest** electrolyzer production hub and one of the largest in Europe, officially started. This project, resulting from a **joint venture** with **Snam**, led to the creation of De Nora Italy Hydrogen Technologies (DNIHT), aiming to position De Nora as a **key player** in the Energy Transition by significantly increasing its **production capacity** for essential components used in green hydrogen production.

MISSION. With over 1,900 employees and 5 R&D centers in Italy, Japan and the US, De Nora's mission is to deliver value through **reliable and innovative solutions for energy storage, water treatment, non-ferrous metal recovery and energy saving by leveraging its advanced electrode technologies** to support multiple critical industries across the globe. As part of its **long-term strategy**, the Company is committed to advance the **Energy Transition** and drive innovation in this sector.

THREE SEGMENTS, ONE ESSENTIAL COMPONENT

Throughout the years, the Group has strengthened its presence in 3 different regions: **EMEIA** (Europe, Middle East, India, Africa), **AMS** (Americas) and **APAC** (Asia and the Pacific), offering specialized solutions in electrochemistry and industrial applications (*Exhibit 3*). While De Nora maintains a diversified portfolio (*Annex 2*), its operations are rooted in **traditional industrial sectors**, with only indirect support for high tech industries through the supply of some materials via electroplating and electrowinning processes. The Company's structure is organized into **3 segments** (*Exhibit 4*), each catering to specific industries with advanced solutions:

i) **Electrode Technologies (ET)** - Leading the Company's performance, it represents De Nora's **largest contributing segment** (54.20% of FY23 Revenues and 16.93% FY20-23 CAGR). It provides a wide range of specialized metallic electrodes (anodes and cathodes), electrolysis components for various applications, such as chlorine and caustic soda production (Chlor-Alkali), electronics manufacturing, lithium battery production and non-ferrous metal refining (e.g. nickel, cobalt).

ii) **Water Technologies (WT)** - This segment (33.86% of FY23 Revenues and 11.52% FY20-23 CAGR) offers a wide range of water treatment technologies, **both for drinking and wastewater management**. It includes electrodes, equipment, disinfection and filtration systems, with key applications in municipal water treatment, industrial water purification processes and residential pools, ensuring clean and sustainable water management.

iii) **Energy Transition (ETR)** - Established in 2022, this segment currently accounts for 11.94% of FY23 Revenues. It relies on electrodes and electrolyzer components to **produce green hydrogen**. It also entails the production of fuel cells to generate electricity from hydrogen or other energy carriers with zero CO2 emissions, and redox flow batteries. While the potential in this sector aligns with global sustainability trends, the **segment is still developing**, relying on investments like the Gigafactory, and being exposed to market uncertainties surrounding the adoption of green hydrogen technologies.

The Company operates exclusively in the **B2B market** addressing the needs of large industrial players in **diverse end-markets**. It also caters to **municipalities and local governments**, particularly for water treatment and disinfection.

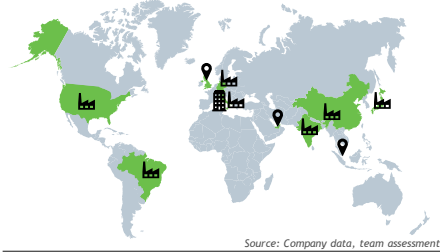
BUSINESS MODEL AND REVENUE DRIVERS

In recent years, De Nora has achieved significant Revenue growth (19.69% FY20-23 CAGR). This performance has been driven by 3 key **Revenue drivers**:

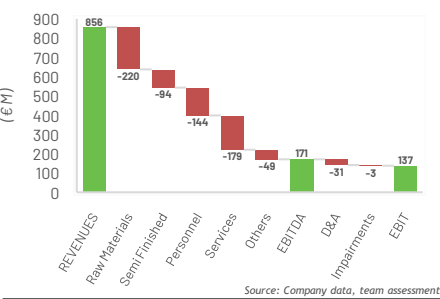
1) **CONSOLIDATED LEADERSHIP IN ELECTRODE TECHNOLOGIES.** De Nora holds a **dominant position** in the mature Electrode Technologies industry, characterized by **high entry barriers** originating from **advanced technology, patents, high initial investment costs** and established **customer relationships**. The Company is a global leader in the production of chlorine and caustic soda, enabled by its advanced electrodes and catalytic coatings. Renowned for their superior energy efficiency, durability, and lower total cost of ownership (TCO), these solutions are the preferred choice for industrial operators. They are critical to the manufacturing of over 60% of chemical products, serving as the foundation for a wide range of industries, including construction, electronics, automotive, and water treatment. De Nora's role in powering essential industrial processes across various sectors underscores their strategic importance to global supply chains. With a **market share exceeding 50%** in the Chlor-Alkali, Electronics, and Specialties (nickel & cobalt electrowinning) business lines, supported by an extensive intellectual property portfolio comprising **2,230 patents** and over **400 pending applications**, De Nora is well-positioned to maintain its leadership. However, the maturity of the market suggests that future growth opportunities will likely be gradual, driven by continuous improvement and focused innovation.

2) **STRATEGIC HORIZONTAL EXPANSION AND DIVERSIFICATION.** The Company has **leveraged its expertise in industrial electrochemical processes** to successfully diversify its activities through horizontal expansion, targeting a **wide range of end-markets**. In the 1970s it entered the Water Treatment Market, and by 2015 it had consolidated its position in the **Water Technologies segment**, offering solutions for industrial wastewater treatment, municipal water disinfection, drinking water purification, Perfluorinated Alkylated Substances (PFAS) removal, residential systems, and commercial applications such as pools and maritime ballast water management. These efforts allowed De Nora to **diversify beyond its traditional electrode business**, with its technologies remaining integral to many water applications. However, the water technologies segment operates in a highly fragmented market characterized by intense competition. To address these challenges, the Company has sought to strengthen its competitive position through **organic growth** and **strategic M&A**, broadening its **product portfolio** and extending its global reach (*Annex 3*). Simultaneously, the Company **has invested** in Energy Transition, advancing technologies for **green hydrogen production** via water electrolysis.

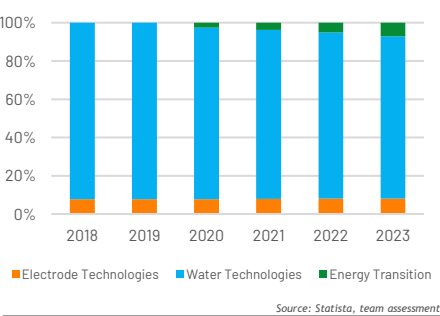
Global Presence – Exhibit 6



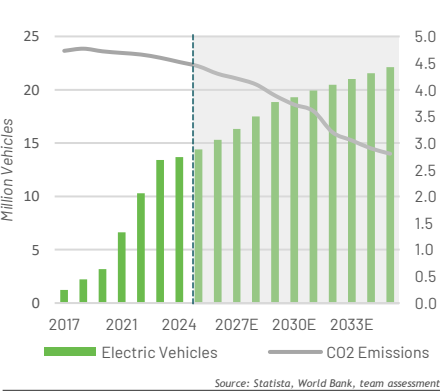
Cost Drivers FY23 – Exhibit 7



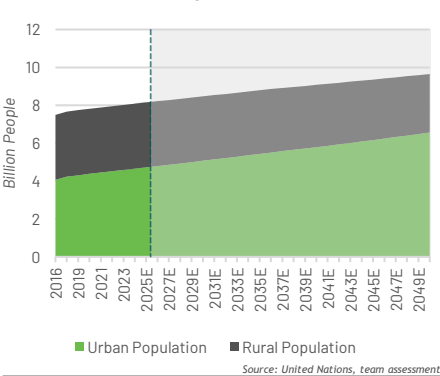
Global Electrochemical Market segmentation – Exhibit 8



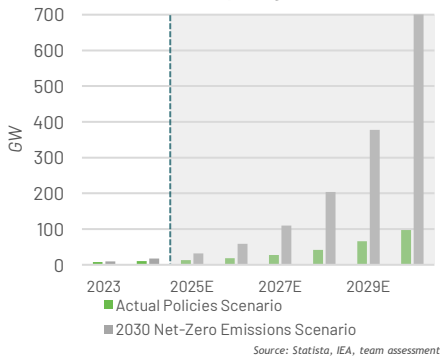
Vehicles and emissions – Exhibit 9



Population Growth by Area – Exhibit 10



Green H2 Production Capacity – Exhibit 11



Nonetheless, while this segment offers **long-term potential**, it remains in its early stages and faces **challenges** related to **technology adoption**, **competition**, and **market uncertainties**. These factors temper the near-term impact of energy transition initiatives on the Company's overall performance.

3) POST SALES SERVICES AS A KEY REVENUE STREAM. Post-sales services are a critical component of De Nora's business model, representing approximately 32% of Total Revenues in FY23 (*Exhibit 5*). This segment encompasses **maintenance, repairs, training** and lifecycle support for its extensive portfolio of electrochemical technologies. These services generate **stable and predictable Revenues streams**, typically beginning a few years after installation and continuing for the **entire lifecycle of the plants**. De Nora's **global presence**, with facilities strategically located across EMEA, AMS and APAC regions (*Exhibit 6*), provides a strong competitive advantage. This widespread network enables **rapid response times**, localized services tailored to regional needs and fosters strong, **long-term relationships** with customers. Furthermore, the complexity of De Nora's products often makes the Company the sole provider for ongoing support, as customers rely on its expertise and deep know-how to ensure optimal performance and longevity of their installations. While post-sales services provide **stable and predictable Revenues streams**, their contribution to overall growth is limited. However, they play a crucial role in sustaining operational volumes and strengthening De Nora's position as a **reliable partner** in critical industrial and infrastructure sectors.

COST DRIVERS

Given the nature of its business, the highest costs for De Nora are related to raw materials, including titanium, nickel, iridium and ruthenium. This high degree of specialization in electrodes production translates into **3 primary costs drivers** (*Exhibit 7*): i) **Raw Materials** (25.7% of FY23 Revenues), ii) **Personnel Expenses** (16.8% of FY23 Revenues) and iii) **Purchase of Semi-Finished/Finished Goods** (10.9% of FY23 Revenues). While the Company is not vertically integrated, it operates at the beginning of the value chain, enabling it to manage raw material costs more effectively and use a **pass-through mechanism** to adjust sales prices in response to cost fluctuations, safeguarding margins.

Industry overview & Competitive positioning

INDUSTRY OVERVIEW: THE GLOBAL ELECTROCHEMICAL MARKET

De Nora operates in the following segments of the **Global Electrochemical Market** (*Exhibit 8*):

- i) **Electrode Technologies Industry**, focused on electrodes and components for industrial electrolysis processes used in Chlor-Alkali production, electronics, energy storage and metal refining.
- ii) **Water Technologies Industry**, focused on advanced water treatment systems for municipal, industrial and leisure applications.
- iii) **Energy Transition Industry**, focused on providing components for green hydrogen production.

Such partitioning of the Market requires a detailed analysis of the various Industries to fully discern their specific features.

ELECTRODE TECHNOLOGIES INDUSTRY

The **Electrode Technologies Industry**, currently worth roughly €869.87M, has been growing at a 16.93% CAGR in FY20-23 (*source: Industry Proprietary Model, Statista*). Initially focused on the **Chlor-Alkali process** for **chlorine** and **caustic soda** production through brine electrolysis, these technologies support a **wide range of industrial applications**, including chemical manufacturing, pulp and paper, automotive, and construction. In recent years, electrodes have become integral to **high-growth sectors** such as **Electronics**, driving the production of printed circuit boards (PCBs) and lithium-ion batteries, as well as **metal refining**, where titanium anodes are critical for **nickel and cobalt Electrowinning**, enabling the extraction of pure metals from liquid solutions.

DEMAND DRIVERS. The Electrode Technologies Industry is driven by **three key megatrends**:

- i) **Climate Change.** The need to reduce carbon emissions has accelerated the growth of the **Electric Vehicles (EV)** industry (*Exhibit 9*), which relies on **printed circuit boards (PCBs)** and **lithium-ion batteries** (dependent on nickel and cobalt). EVs are pivotal to the transition toward a sustainable economy and are projected to drive a CAGR of 6.6% in FY25-29 (*source: Industry Proprietary Model, Statista*).
- ii) **Urbanization.** As the global population is expected to reach 9.65B by 2050 (*source: Industry Proprietary Model, The United Nations*), urbanization will drive demand for advanced **infrastructures** and **materials**. **Chlor-alkali products**, such as **PVC** (Polyvinyl Chloride) and **Polycarbonate**, are crucial in this development. PVC, used in construction for pipes, window frames and doors, is expected to grow at 3.8% CAGR FY24-31 (*source: Industry Proprietary Model, Statista*). Polycarbonate's use in the Electronics industry for enclosures further highlights the versatility of Chlor-Alkali-delivered materials.
- iii) **Digitalization and 5G Expansion.** Their proliferation is driving demand for **PCBs**, which heavily **rely on copper plating**. Lead anodes Electrowinning enables cost-effective recovery of copper, though titanium anodes are recently experiencing market penetration (9% of market share in FY23, *source: Company Data*).

WATER TECHNOLOGIES INDUSTRY

The **Water Technologies Industry**, currently worth €9.15B with a CAGR of 13.12% in FY20-23 (*source: Industry Proprietary Model, Statista*), encompasses a wide range of solutions designed for **water treatment, purification and disinfection**. These technologies are crucial at both the **municipal and industrial levels**, for supplying potable and safe water, wastewater treatment, and desalination. In the **private sector**, water technologies are primarily used in the production of salt chlorinators for swimming pools.

DEMAND DRIVERS.

- i) **Clean Water Access.** With **population growth** (*Exhibit 10*) and increasing **water scarcity**, the need for effective water disinfection and filtration solutions has become more critical than ever. Municipal sectors are driving **investments in water treatment infrastructure** to ensure the availability of safe water. In developing regions, **on-site hypochlorite generation** is increasingly preferred over chlorine transportation due to safety and cost concerns. Meanwhile, in developed countries such as the U.S., there is a growing focus on **improving water quality**, with special attention to the **remediation of contaminants**, including Perfluorinated Alkylated Substances (PFAS). The sector investments are expected to grow at a CAGR of 7.1% in FY24-29 (*source: Industry Proprietary Model*).
- ii) **Urbanization.** The shift toward advanced residential infrastructure in wealthier localities is driving demand for **in-ground residential pools**. **Salt electro-chlorinators**, widely used for residential pool maintenance, remain a robust segment even after the extraordinary post-pandemic surge. **The swimming pool market** is expected to grow at a 4.1% CAGR in FY24-32, with regular electrode replacements sustaining demand (*source: Industry Proprietary Model, Statista*).

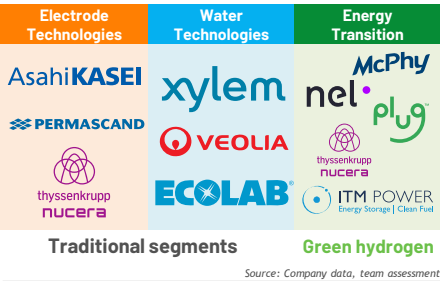
ENERGY TRANSITION INDUSTRY

The **Green Hydrogen Industry**, worth €768M in FY23 with a CAGR of 60.2% in FY20-23, has **benefited from strong growth** driven by **decarbonisation efforts** and **institutional incentives**. However, despite its promise as a clean fuel for **hard-to-abate industries** and a solution for seasonal energy storage, its deployment remains at an **embryonic stage**. This creates both significant **long-term growth opportunities** and **short/medium-term challenges**, warranting a cautious stance in the current market environment.

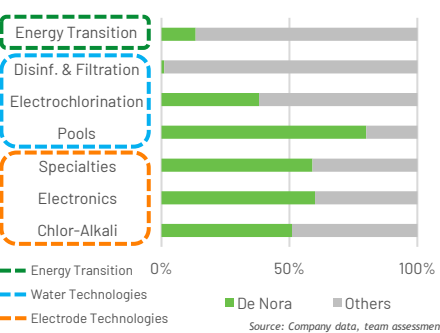
DEMAND DRIVERS.

- i) **Net-zero emission goal.** Green hydrogen is integral to achieving **global net-zero emissions** by **2050**, particularly in decarbonizing heavy industries such as cement, steel, and long-haul transport, where electrification is insufficient. Government policies including the EU's **REPowerEU** and the U.S. **Inflation Reduction Act (IRA)** are key enablers. However, **high production costs** coupled with recent economic challenges (high interest rates, supply chain disruptions, and uncertainties surrounding incentives under the IRA in the USA) have slowed progress. Under current stated policies, green hydrogen demand is projected to grow and reach 100GW by 2030 (*Exhibit 11*), a drastic reduction from the 700 GW Net-Zero Emission 2030 (NZE) forecast in 2022, yet representing a significant tenfold increase from 10 GW in 2024 (*source: Company data, International Energy Agency*).
- ii) **Need for Renewable Energy Storage.** As reliance on renewable energy grows, green hydrogen offers a critical solution for managing intermittency **by storing surplus energy for later use**, contributing to grid stability and energy security.

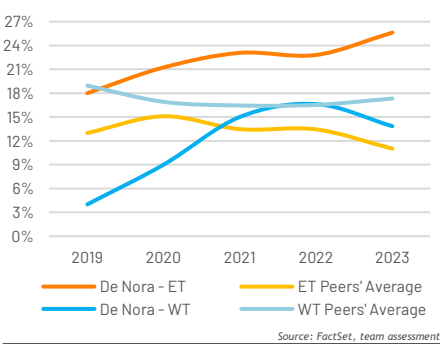
Competitive landscape – Exhibit 12



De Nora's market shares – Exhibit 13



Peers' EBITDA margin dynamics – Exhibit 14

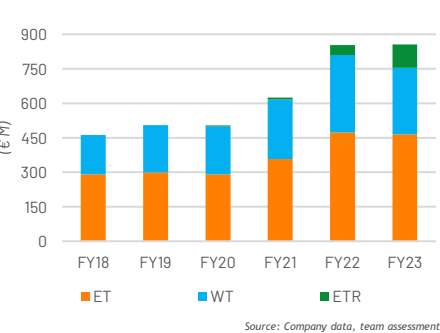


Industry growth by end-markets – Exhibit 15

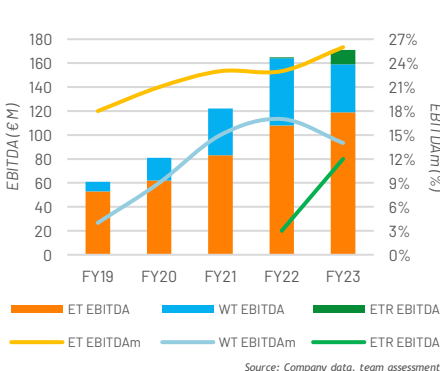
Industry Proprietary Model	CAGR FY20-23	CAGR FY24E-26E	CAGR FY27E-30E	CAGR FY31E-35E
Electrode Technologies	16.9%	3.4%	3.0%	2.2%
Water Technologies	13.1%	7.0%	5.2%	3.4%
Energy Transition	60.2%	35.9%	52.1%	13.7%

Source: Company data, team assessment

Revenues Breakdown – Exhibit 16



EBITDA and EBITDAm evolution – Exhibit 17



COMPETITIVE POSITIONING: COVERED, BUT NOT TIED DOWN

PRODUCT POSITIONING. To assess the competitive environment (*Exhibit 12*) in which De Nora operates we focus on each business segment:

Electrode Technologies. Leveraging extensive manufacturing capabilities and intellectual property, De Nora excels in electrode technologies (*Exhibit 13*), operating across 3 main business lines: **Chlor-Alkali**, **Electronics**, and **Specialties**. In the **mature Chlor-Alkali** market, De Nora leads with a 51% (*source: Company Data*) global market share, driven by its **energy-efficient, durable** electrodes. Positioned early in the value chain, the Company focuses on electrode development and collaborates with **thyssenkrupp nucera** through a joint venture to deliver large-scale electrochemical systems integrating its technology (*Annex 7*). This partnership combines De Nora's advanced expertise with **thyssenkrupp nucera's** industrial capabilities, reinforcing their competitive edge. The market includes **cost-focused** Chinese producers, which offer cheaper but less efficient alternatives, and vertically integrated players like **Asahi Kasei**, which supply both electrolysis systems and ion-exchange membranes. However, De Nora remains the preferred choice for operators, as its superior electrode technology ensures a lower **total cost of ownership** (TCO) over the lifecycle of the systems. In **Electronics**, De Nora holds a **dominant position** within the **niche of electrolytic plating technology**, with a 50-60% share in copper foil and 60-70% in PCBs (*source: Company Data*), significantly outpacing competitors such as **Magneto Special Anodes** (acquired by Evoqua in 2016). While alternative methods such as **electroless plating**, **sputtering**, and **direct metallization** are gaining traction in high-tech applications (including nanotechnology), electrolytic plating remains the most widely used and scalable method for mass industrial production.

In **Specialties**, De Nora's titanium anodes dominate electrowinning applications, achieving a 50-60% market share for nickel and 55-65% for cobalt (*source: Company Data*), outperforming alternatives from competitors like Metso and Chinese producers. While **lead-based** anodes **remain prevalent** in less demanding and price-sensitive markets such as copper electrowinning, De Nora's titanium solutions are the preferred choice within the **niche of high-value metals**, reflecting its leadership in performance-critical applications.

Water Technologies. De Nora **leads the Swimming pools market**, with its electrodes used in approximately 80% of worldwide **salt chlorinator systems** for residential pools (*source: Company Data*). These systems, which use salt to generate chlorine directly within the pool, is not yet the most widely used. Traditional chlorination systems, relying on liquid, solid or gas chlorine, remain more prevalent, particularly in larger-scale applications. Nevertheless, salt chlorinators, where De Nora leads the market, are increasingly adopted in the residential segment.

In **municipal and industrial applications**, De Nora maintains a strong position despite intensified competition following Xylem's 2023 acquisition of Evoqua, which expanded Xylem's market presence and scale. In **Disinfection and Filtration**, larger players like Xylem and Veolia dominate, leveraging their broader product portfolios and greater resources. Additionally, Permascand's expertise in electrode manufacturing adds competitive pressure. Despite these challenges, De Nora's leadership in **Electrochlorination** and its established global presence remain significant strengths that underpin its competitive positioning. This is further supported by its operational efficiency, reflected in its ability to maintain competitive pricing despite the pricing pressure exerted by larger and more diversified competitors.

Energy Transition. De Nora specializes in **Alkaline Water Electrolysis (AWE)**, the most mature and cost-effective technology for green hydrogen production, projected to represent over 50% of the global green hydrogen market by 2030. Through its 25.85% stake in **thyssenkrupp nucera**, De Nora supplies advanced electrodes and cells, which are integrated into **thyssenkrupp nucera's** market-leading AWE systems used in landmark projects like **NEOM**. While AWE remains **dominant** due to its cost and efficiency advantages, technologies like **PEM** (Proton-exchange membrane) and **SOEC** (Solid Oxide Electrolyzer Cell) are expected to **grow at a faster** rate, potentially posing risks in the long term; **thyssenkrupp nucera** is also expanding into SOEC with a pilot plant planned for 2025. Although SOEC uses different materials and components, not produced by De Nora, it is seen as complementary to AWE, and its rise may influence De Nora's strategic role within the joint venture (*Annex 15*). Competitors like **Plug Power** (PEM) and **ITM Power** (PEM), as well as **Permascand** (AWE), pose additional challenges, while emerging technologies could introduce substitution risks in the future. Nevertheless, De Nora's technology, strategic partnerships, and capacity expansion plans, targeting 4.5 GW by 2026 through its Italian Gigafactory, position it to benefit from the rapidly growing green hydrogen market.

FINANCIAL INSIGHTS. In terms of margins, in the **Electrode Technology** segment, De Nora **outperforms its industrial peers** with an EBITDAm of 25.62% in FY23, compared to the industry average of 11.01% (*Exhibit 14*). Notably, De Nora also maintains a significant advantage over vertically integrated players like Asahi Kasei (11.59%), highlighting the efficiency of its focus on upstream components. In the **Water Technology** segment, De Nora **underperforms**, recording an EBITDAm of 13.85% in FY23 compared to the industry average of 17.33%. This disparity is further accentuated when compared to larger and more established players such as Ecolab (19.51%) and Xylem (18.07%), reflecting the challenges posed by De Nora's smaller scale. In the **Energy Transition** segment, **profitability remains constrained** due to **early-stage technology** and **lack of economies of scale**. While De Nora reported an EBITDAm of 11.69% in FY23, outperforming the industry average of -2.72%, the Company's performance in 9M FY24 reflects the ongoing challenges in the segment, with an EBITDAm close to zero.

Our unfolding path of the Industries' future

Based on the drivers mentioned above, we construct an Industry-based Proprietary Model (*Annex 8*) designed to evaluate the future growth dynamics of the **Global Electrochemical Market** (*Exhibit 15*). Our key findings are segmented by time horizon:

- i) In the **short-term (FY24E-26E)**, we project **modest YoY growth** of 1-4% for the ET Industry and **moderate YoY growth** of 6-7% for the WT Industry. The former will be primarily driven by **demand for nickel and cobalt**, and the latter by **policy actions** addressing **PFAS contamination** (5.44% and 7.04% CAGRs in FY24E-26E, respectively). At the same time, we forecast a **substantial**, yet lower than past, medium-term expectations, **growth** in the ETR Industry (35.89% CAGR in FY24E-26E), mainly attributable to early adoption of decarbonization technologies in hard-to-abate sectors.
- ii) In the **medium-term (FY27E-30E)**, we still expect a **stable and modest growth** for the ET Industry (3.07% CAGR in FY27E-30E), with demand for PCBs taking the lead (4.63% CAGR in FY27E-30E). For the WT Industry, we forecast a **slightly lower YoY growth** of 5-6%, primarily due to the normalization of growth trends in the Swimming Pools segment. Conversely, the ETR Industry is expected to achieve even more **robust growth** (52.08% CAGR in FY27E-30E), supported by technological advancements aimed at cost reductions and clearer regulatory incentives, driving broader adoption.
- iii) In the **long-run (FY31E-FY35E)**, we foresee more **subdued growth** for both the ET and WT Industries, primarily due to the eventual saturation of infrastructure upgrades, reduced demand for PCBs and strategic materials in electric vehicles, alongside intensifying competition. Specifically, we forecast a 2.18% CAGR for ET and 3.40% CAGR for WT in FY31E-35E. Finally, the ETR Industry is projected to transition out of its emerging-market phase, stabilizing as **demand for electrode solutions matures** (13.69% CAGR in FY31E-35E).

Financial Analysis

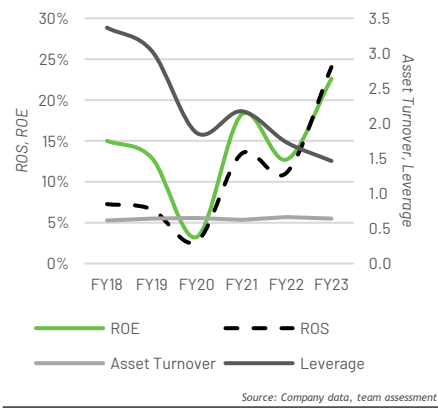
HISTORICAL ANALYSIS

De Nora's moderate **Revenue growth** was **halted by the pandemic** in 2020 (*Exhibit 16*), resulting in a -1.17% FY20 YoY: this was due to a **decline in after-market services** (-8.88% FY20 YoY) which sharply offset a stable electrode demand. However, during the following 4 years, Revenues experienced a **robust rebound effect**, with a strong 19.69% CAGR in FY20-23. This growth was primarily due to the outstanding 30.67% CAGR in FY20-22, fueled by the **pass-through mechanism**, which made sales prices adjust in response to fluctuations of inflated precious metal prices, and the unexpected **surge in demand for electrodes** destined to the Swimming Pools business line and to **thyssenkrupp nucera**. The **maturity** and **saturation** of the Electrode Technologies Industry, combined with the normalization of demand in the pool sector, led to a **correction** of Revenues in 2023 (0.42% FY23 YoY), marking the end of the previously exceptional growth rates.

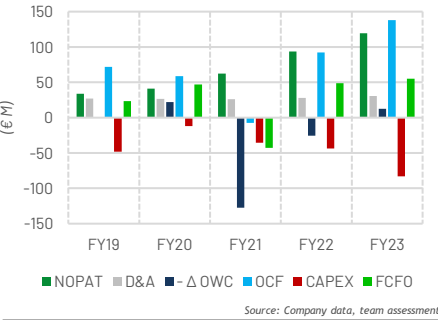
BUSINESS LINES BREAKDOWN.

1. The Electrode Technologies segment achieved solid growth, with a 16.93% CAGR in FY20-23, driven by increasing demand and the **pass-through mechanism** on sales prices powered by inflated precious metal prices.

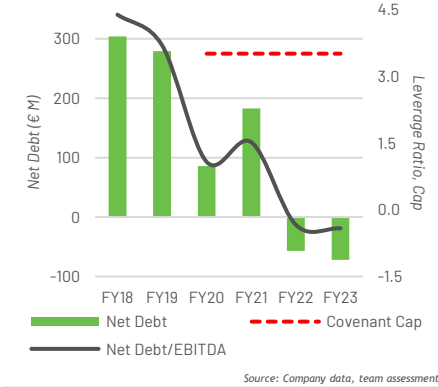
Du Pont Analysis – Exhibit 18



Breakdown of Cash Flow generation – Exhibit 19



Covenant and leverage ratio – Exhibit 20



De Nora's future growth projections – Exhibit 21

CAGR	24E-26E	27E-30E	31E-35E
Electrode Technologies	3.4%	3.1%	2.2%
Chlor-Alkali	2.8%	2.4%	2.1%
Electronics	4.3%	4.6%	2.4%
Specialties	5.4%	4.3%	2.5%
Water Technologies	4.1%	3.6%	2.4%
Pools	6.1%	4.0%	2.5%
Electrochlorination	4.7%	3.6%	2.3%
Disinfection and Filtration	4.0%	3.3%	2.4%
Energy Transition	13.6%	23.6%	9.0%
Total De Nora	4.5%	7.1%	4.3%

Source: Company data, team assessment

Team estimates vs Consensus – Exhibit 22

		FY24E	FY25E	FY26E
Revenues (€ M)	Team Est.	867	902	954
	Consensus	859	899	945
EBITDAm	Team Est.	17.3%	17.6%	18.0%
	Consensus	17.3%	17.9%	18.4%

Source: FactSet, team assessment

i) **Chlor-alkali (€321M in FY23)**: The **cornerstone** of De Nora's business has experienced strong growth in recent years (16.14% CAGR in FY20-23). Despite the challenges of FY22 caused by the Russia-Ukraine war, a **spike in demand for maintenance** of installed electrodes led to a remarkable Revenues increase (34.74% FY22 YoY). Afterwards, the mainly **one-off nature of maintenance projects** resulted in a **significant slowdown** of the growth process (0.55% FY23 YoY). ii) **Electronics (€80M in FY23)**: With a 10.84% CAGR in FY20-23, this business line has experienced favourable growth, though significantly below its peers (22.18% average CAGR in FY20-23). The post-pandemic **rise in noble metal prices** initially boosted this business line (14.59% CAGR in FY20-22), but its impact was later outweighed by a sharp decline in sales volume in China (-9.49% YoY in FY23). iii) **Specialties & New Applications (€63M in FY23)**: Following a significant reduction in Revenues (-33.79% CAGR in FY18-20) due to the **conclusion of a partnership** in FY18 with the Russian company Norilsk Nickel, a **new major order** worth €14M from the same company drove an 82.61% YoY in FY22 (33.08% CAGR in FY20-23).

2. The Water Technologies segment, with a 11.52% CAGR in FY20-23, initially benefited from a surge tied to the **post-pandemic recovery** and then suffered a **negative rebound effect** on the demand.

i) **Swimming Pools (€86M in FY23)**: After a **remarkable 30.87% CAGR in FY18-20**, the business line experienced additional significant growth in FY22 (64.7% FY22 YoY) driven by the increased demand caused by **pandemic-related restrictions** and **increased ruthenium prices**. Subsequently, a **major contraction** occurred (-46.8% FY23 YoY) due to a **destocking** by major clients and a **reduction in the average sales price** (which were indexed to lower ruthenium prices compared to FY22). ii) **Electrochlorination (€91M in FY23)**: In recent years this business line has benefited from more **stringent regulations** and integrated projects for the generation of water and energy in EMEA and United States, leading to a 14.07% CAGR in FY20-23 and a 33.63% FY22 YoY. iii) **Disinfection & Filtration (€101M in FY23)**: In recent years, this business line has showcased **significant variability**. After a 12.04% FY21 YoY driven by **increased ozone generators sales** and **small inorganic growth efforts** (Calgon Carbon and ISIA contributions amounted to 8.64% of the line's Revenues), a contraction of -4.8% FY22 YoY occurred due to a **limited backlog**. However, expansion in the Middle East amid water scarcity challenges drove an outstanding 27.60% FY23 YoY. iv) **Marine Technologies (€12M in FY23)**: contributing to approximately **1.36% of Revenues** in FY23, this business line experienced a 12.94% CAGR in FY20-23. Despite **strong initial growth** (61.67% FY21 YoY), **Revenues stabilized in subsequent fiscal years**, underscoring its **diminishing relevance** within De Nora's business. Following the resolution by the Board of Directors of December 2023, on 16 April 2024 De Nora finalized the **sale of the business** to Optimarin AS.

3. The Energy Transition segment achieved **exceptional growth**, starting from its foundation in FY20 and reaching **€102M in FY23**. This significant increase was **primarily driven** by the **execution of projects in Germany** acquired through **thyssenkrupp nucera**. However, the **outlook remains concerning**, as delays in receiving institutional subsidies and the transition from the **planning phase to the execution phase** for more ambitious projects are becoming increasingly frequent (as of 31 December 2023 only 10% of the projects have been approved).

PROFITABILITY AND CASH ANALYSIS

PROFITABILITY. De Nora has historically reported a **solid EBITDAm** (18.79% average in FY20-23), with a pronounced heterogeneity across the Business Segments (*Exhibit 17*): i) **Electrode Technologies** showed solid growth, rising from 21.50% in FY20 to a peak of 25.62% in FY23; ii) **Water Technologies** reached its peak at 16.63% in FY22, followed by a drop to 13.84% in FY23; iii) **Energy Transition** experienced a sharp increase, from 2.83% in FY22 to 11.69% in FY23. In turn **EPS spiked from €0.47 in FY22 to €1.15 in FY23**, far outpacing the growth in Revenues and EBITDAm. The underlying reason lies in an **extraordinary Financial Income in FY23**, stemming from the exercise of a **"greenshoe option"**, through which De Nora sold 1.34 million shares for a value of €17 million, and a **dilution gain** of €116 million resulting from **thyssenkrupp nucera's** listing and the issuance of new shares on the market. This led to a corresponding **increase in ROE** from 12.71% in FY22 to 22.62% in FY23 and in **ROS** from 11.10% in FY22 to 24.04% in FY23 (*Exhibit 18*).

CASH FLOW ANALYSIS. The analysis of **Operating Working Capital dynamics** shows that: i) **Days Sales Outstanding (DSO)** increased from 77 days in FY20 to 99 in FY21 and then declined to 76 in FY23; ii) **Days Payments Outstanding (DPO)** increased from 111 days in FY20 to 136 in FY21 and slightly decreased to 130 in FY23; iii) **Days Inventory Outstanding (DIO)** increased from 193 days in FY20 to 288 in FY21 and then declined to 256 in FY23. As a result, the Operating Working Capital **suddenly increased**, primarily due to a **massive purchase of raw materials** at inflated prices and the resulting **inventory build-up** (100.58% FY21 YoY). In turn, this caused a **stark decrease in De Nora's Free Cash Flows from Operations** (-182.00% FY21 YoY), which then began to recover and **peaked at €55M in FY23** (*Exhibit 19*). **Free Cash Flows to Firm** supported **small inorganic growth efforts**, such as the acquisition of 100% of the share capital of Shotec GmbH for €2M in FY23, and the **shares buyback program** announced in November 2023 (completed on 14 April 2024 for a total amount of €43M out of a maximum authorized amount of €45M). The **CapEx to Sales ratio** has nearly **doubled** over the past 4 years (from 5.09% in FY20 to 10.38% in FY23) due to **investments in plant and machinery** aimed at technological renewal and planned capacity expansion in Italy (with the Gigafactory project), Germany, China, the United States, Brazil, and Japan.

CAPITAL STRUCTURE ANALYSIS. The **book Debt-to-Equity (D/E) Ratio** experienced an **impressive shrinkage**, dropping from **160% in FY18 to 16% in FY23**. This was primarily due to: 1) **Net Equity growing** at a CAGR of 32.40% in FY18-23, driven by an increase in **Retained Earnings** (27.99% CAGR in FY18-FY23) and the €197M in **IPO proceeds** from FY22; 2) The **cancellation** and conversion to Equity of a **€140M Financial Liability** following the sale by Blackstone Group of its Equity share in FY20. This liability was previously **recorded against the Company's obligation to redeem the class B shares** if Blackstone Group would have opted to exercise their withdrawal right. The remaining **financial liabilities** were **set to expire in FY22**. However, given the Group's financial needs, De Nora opted to prematurely close existing pool loans on 5 May 2022 and refinance them with a new 5-year bullet loan. The refinancing provided **€180M and \$90M lines** featuring interest rates tied to **3 or 6-month Euribor** (Euro portion) and **SOFR** (USD portion), with an initial spread of 1.15% for the Euro portion and 1.40% for the USD portion, adjustable semi-annually based on a **Leverage Ratio** (Consolidated Net Debt/Consolidated EBITDA), which also serves as a **financial covenant** with a cap of 3.5x. Notably, De Nora's Leverage Ratio decreased from 4.38x in FY18 to -0.42x in FY23 (*Exhibit 20*). As of 30 September 2024, the remaining available credit lines stood at €80M and \$35M (more than 75% of all Financial Liabilities), reflecting the Company's **strategic focus** on maintaining a **capital structure predominantly based on equity**, ensuring financial stability and reducing reliance on debt.

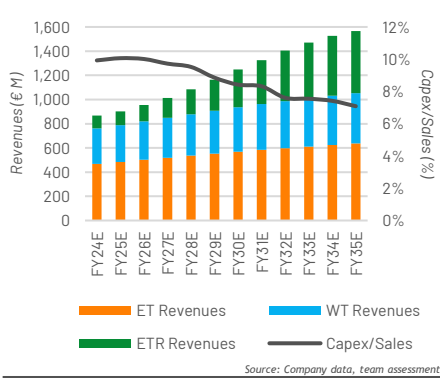
FUTURE ANALYSIS

In the following section, we forecast **De Nora's future** evolution using a **top-down approach**. We begin by examining the projected trajectory of the **Global Electrochemical Market** through our Industry Proprietary Model, which provides demand forecasts for the three key Business Segments. Then, we **integrate the industry projections** with De Nora's **competitive positioning, guidance credibility** and **expansion strategy** to evaluate the Company's anticipated performance, including expected Revenues by business line, profitability, and financial position.

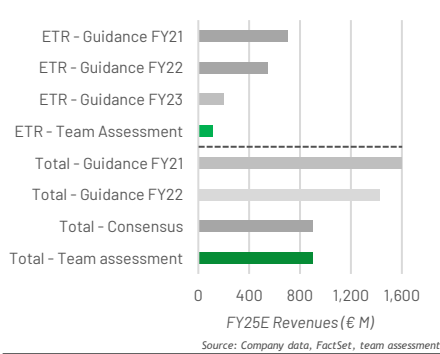
Shaping Tomorrow: De Nora's Journey Across Time Horizons

Our projections rely on the **Company's capability to capitalize on growth opportunities** and its resilience in overcoming challenges. We maintain an optimistic outlook for the future, viewing the current scenario as a chance to explore new avenues of growth. However, some reservations remain regarding the Company's capacity to fully leverage the favorable external conditions, stemming from: i) De Nora's **suboptimal positioning** compared to its competitors in the **Disinfection & Filtration** line and the **Energy Transition** segment; ii) A **credibility issue** within the **Energy Transition business segment**, since, to date, the much-celebrated expectations created by the Company since FY21 for the short-medium term have not been met, with ongoing downward revisions; iii) A **conservative approach towards large scale inorganic growth**, with a preference for maintaining its market share in niche segments. In this regard, the Company allocated 1.86% of its FY23 Revenues to R&D expenditures (in line with other players in the Global Electrochemical Market), primarily directed toward the **Energy Transition segment**.

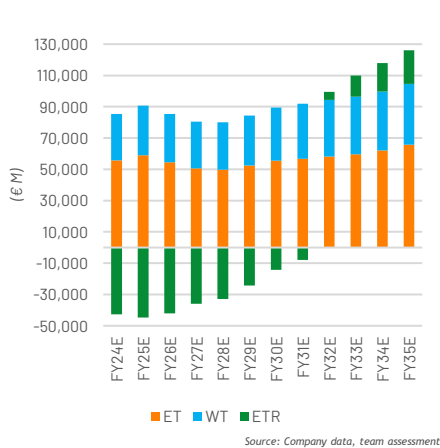
Expected Revenues by segment – Exhibit 23



Guidance vs Team Assessment – Exhibit 24



Free Cash Flows breakdown by segment – Exhibit 25

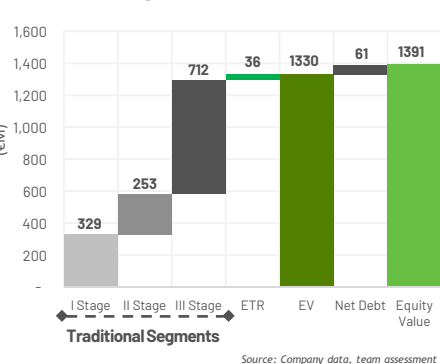


DCF stages data – Exhibit 26

	FIRST STAGE	SECOND STAGE	TERMINAL VALUE
Years	2026E-2030E	2030E-2035E	>2035E
TRADITIONAL SEGMENTS			
Sales CAGR	3.4%	2.4%	2.0%
Average EBITDAm	20.3%	20.4%	20.2%
% on EV	24.7%	19.0%	53.6%
ENERGY TRANSITION			
Sales CAGR	23.2%	10.5%	3.0%
Average EBITDAm	11.9%	19.0%	19.9%
% on EV	-8.7%	1.5%	9.9%

Source: Company data, team assessment

SOTP-DCF bridge – Exhibit 27



Source: Company data, team assessment

Building upon this comprehensive assessment, we delve into a detailed examination of the key factors shaping future growth. To project De Nora's performance, we begin by estimating its Revenues (*Exhibit 21-22*), taking into account both current and expected industry trends across all Business Segments, as well as its positioning within the Business Lines:

1) Electrode Technologies (54.13% of FY24E Revenues) is set to remain the **frontrunner of the top-line** but is also expected to cede part of its share to Energy Transition (*Exhibit 23*). In the **short term**, we anticipate the segment to **resume its growth** (3.42% CAGR in FY24E-26E), driven by **demand for nickel and cobalt** which will revitalize the Specialties business line (5.44% CAGR in FY24E-26E). In the **medium term**, we expect a **slightly lower growth** (3.07% CAGR in FY27E-30E) as the **destocking phase for PCBs and semiconductors concludes**, leading to growth in the Electronics line (4.63% CAGR in FY27E-30E), offset by the **slower expansion** of the traditional **Chlor-Alkali line** (2.38% CAGR in FY27E-30E). In the **long term**, **growth rates** are **projected to progressively decrease** (2.20% CAGR in FY31E-35E) due to the diminishing relevance of trend drivers.

2) Water Technologies (33.77% of FY24E Revenues) is expected to **progressively reduce its contribution to the top-line**. After an **initial period of moderate growth** (4.11% CAGR in FY24E-26E), driven by a new **extraordinary demand** for premium in-ground **pools** (6.12% CAGR in FY24E-26E), we anticipate **slower growth in the medium-term** (3.62% CAGR in FY27E-30E), diverging from the industry average (5.24% CAGR in FY27E-30E). This gap is largely due to the **intense competition** in the Disinfection and Filtration line. While major players adopt large-scale acquisition strategies to strengthen their product portfolios, global presence, and create significant synergies, **De Nora focuses on smaller acquisitions**. These acquisitions help expand its offerings but fall short of generating meaningful synergies. **Long-term growth rates** (2.42% CAGR FY31E-35E) strongly confirm the **declining trend**, with De Nora operating in two increasingly saturated niche lines and one broader line where it has lost positioning.

3) Energy Transition (12.10% of FY24E Revenues) is set to have an **increasing impact on the top-line growth**. Our **short-term** projections indicate a **double-digit growth** (13.61% CAGR in FY24E-26E), albeit conservative compared to the Company's guidance. **Projects** that experienced delays in the second half of FY23 are **expected to partially resume**, and sales of small-scale electrolyzers will begin to gain traction. The **most intense growth** phase is anticipated in the **medium-term** (23.61% CAGR in FY27E-30E), driven by **full-scale production of the Gigafactory** and a more active **institutional support** for the Green Hydrogen market. However, our **outlook remains highly cautious** compared to industry trends for several reasons. Firstly, nearly all Revenues in this segment originate from the Toll Manufacturing Agreement with *thyssenkrupp nucera*, which is currently based on the supply of electrodes for AWE technology. Secondly, *thyssenkrupp nucera's* investments in alternative technologies like SOEC suggest a **potential future divergence** from De Nora's current strategic focus. The reliance to a single customer contrasts with more diversified competitors, which benefit from a broader customer base. Additionally, **past delays** in large-scale projects and **technical challenges** related to scaling on-site hydrogen generation systems have **negatively impacted the credibility** of growth projections. In the **long term**, instead, **growth** is expected to turn **single-digit** (9.00% CAGR in FY31E-35E), as **intensified competition** is coupled with the full development of **alternative technologies** (such as PEM, SOEC and AEM).

Guidance: Aiming High, Landing Low

Over the past few years, De Nora has **consistently failed to align its ambitious guidance with actual performance**, casting serious doubts on its credibility. In FY21, the Company forecasted total Revenues of €1.5/1.7B by FY25, with the Energy Transition segment contributing €650/750M. By FY22, these **projections were revised downward** to €1.35/1.5B in total Revenues and €500/600M for Energy Transition. In FY23, the Company maintained its total Revenues guidance but projected a 40% CAGR for Energy Transition in FY23-26E, which implied a **reduction in the guidance** to approximately €280 million by FY26E (a figure also confirmed in Q2_24). However, by Q3_24 **De Nora acknowledged that market uncertainties and regulatory delays were significantly hindering investment decisions**, further delaying the conversion of its pipeline into orders. At the end of FY24E, the numbers revealed a stark reality (*Exhibit 24*): total expected Revenues stand at €867 million, requiring a YoY growth of +73% to +96% to meet FY2021 guidance, or +55% to +73% for FY22-23 targets. Energy Transition expected Revenues, at just €105 million, would need a YoY growth of +376/+471% to achieve FY22 forecasts or a 63.30% CAGR in FY24E-26E to meet even the Q2_24 guidance. Despite repeated downward revisions, **De Nora's projections remain overly optimistic**, undermining trust in its strategic planning for the critical Energy Transition segment.

MARGINS. In FY24E, we expect **EBITDAm to decline** compared to the levels previously achieved by the Company (from 19.97% in FY23 to 17.28% in FY24E), primarily attributable to the Energy Transition segment's performance (from 11.69% in FY23 to -1.88% in FY24E), as a result of i) **costs related** to the development of the **Italian Gigafactory** and ii) the **early stage of production** capacity. In the near term, we foresee a **gradual recovery in margins**, returning to pre-FY23 levels only once the **Gigafactory reaches full operational capacity** by FY26E. In the long term, we expect pronounced stability around a 20% EBITDAm, driven by the increasing **contribution to the top-line of the Energy Transition** segment combined with the consolidation of the Company's **leadership position in its other niches**, which will continue to underpin its profitability and market strength.

CASH-FLOWS. De Nora is expected to generate **positive and stable Free Cash Flows from Operations** in its **traditional segments**. However, in FY24E-31E significant investments in production capacity of Electrodes for Green Hydrogen (50% of CapEx in FY24-35), coupled with slower-than-anticipated growth, are projected to result in **negative cash flows** in the **Energy Transition** segment (*Exhibit 25*). These are expected to **gradually improve and turn positive** in FY32E. Overall, De Nora's Free Cash Flows from Operations are projected to grow at a 10.35% CAGR in FY24E-35E. In turn, Free Cash Flows to Firm are not anticipated to support inorganic growth initiatives. For equity holders, **Free Cash Flows to Equity** are expected to grow at a **slightly slower pace**, with an 8.32% CAGR over the same period, reaching a peak of €109M in FY35E. This strong cash flow generation underpins the **potential for future dividend distributions**, with an average Pay-Out Ratio estimated at 25% for FY24E-35E. Finally, the **CapEx to Sales** ratio is expected to remain stable at approximately 10% during FY24-26, **front-loaded** by the announced €290M investments related to the **Gigafactory** project and **capacity expansion**. Following this period, the ratio is expected to gradually decline, reaching approximately 7% by FY35E.

CAPITAL STRUCTURE. Looking forward, we expect the Company's **book Debt-to-Equity (D/E) Ratio** to remain **stable** at approximately 17%. This will be driven by the Company's ongoing commitment to a **low-leverage policy**, which aims to preserve **financial flexibility** and protect De Nora from potential risks associated with the uncertainties surrounding the Energy Transition sector.

Valuation

VALUATION METHODS

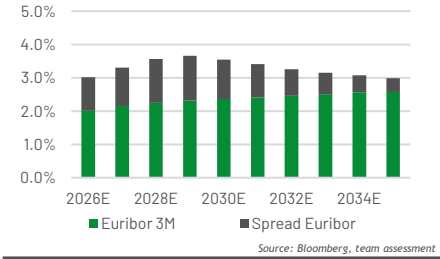
We issue a **HOLD recommendation on De Nora, with a 1Y Forward forecasted target price of €7.00** corresponding to a **0.72% upside** on 6 February 2024 closing price. Our valuation process is based on a **sum-of-the-parts (SOTP) Discounted Cash Flow (DCF) to Firm model** in which traditional segments (**Electrode Technologies** and **Water Technologies**) are disentangled from the **Energy Transition** segment (*Exhibit 26*). We believe that the **DCF method is the most appropriate approach to value De Nora**, given the Company's specific business model and the absence of appropriate comparables. To reinforce our investment recommendation, **we also perform complementary market-based Multiple Valuations**. Additionally, to assess the robustness of our target price in response to shocks in key business variables, we conduct the following analyses: Monte Carlo simulation, Sensitivity, and Tornado.

DISCOUNTED CASH FLOW MODEL

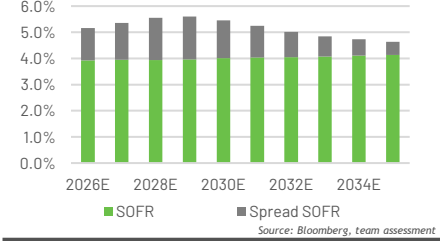
We use a **3-stage SOTP-DCF** approach (*Exhibit 27, Tables 1 and 2*) to discount the future expected **Free Cash Flows to Firm**, estimated for each **segment** in accordance with the hypotheses outlined in the "Future Analysis" section.

i) The **first stage** spans from FY26E to FY30E, during which De Nora's top line is **primarily expected to be driven by the Electrode Technologies (ET) segment**. This momentum reflects the easing of **semiconductor destocking** and sustained demand for nickel and cobalt. Meanwhile, **Water Technologies (WT)** is expected to deliver **moderate expansion**, though it remains below industry averages due to intense competition and De Nora's conservative acquisition strategy.

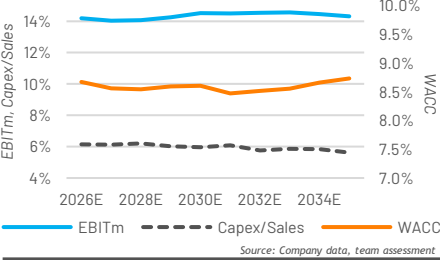
Forecasted Cost of Debt (€) – Exhibit 28



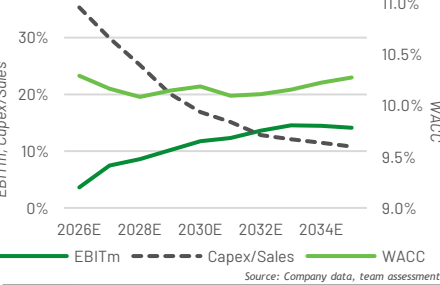
Forecasted Cost of Debt (\$) – Exhibit 29



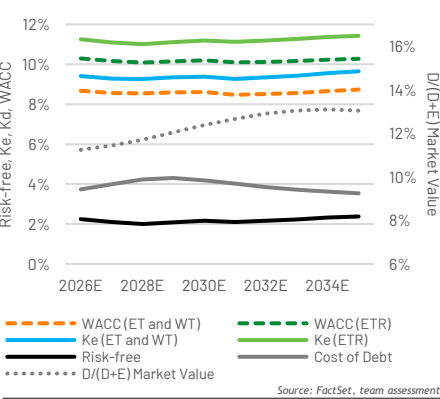
DCF Assumptions(Electrode Technologies and Water Technologies) – Exhibit 30



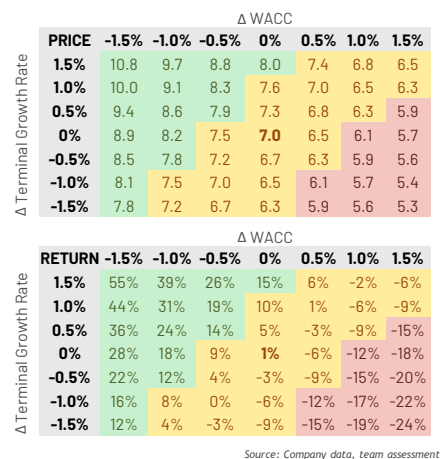
DCF Assumptions(Energy Transition) – Exhibit 31



WACCs composition – Exhibit 32



Sensitivity analysis – Exhibit 33



The **Energy Transition (ETR) segment**, instead, is expected to enter in its most **dynamic phase**, thanks to the Gigafactory running at full capacity and stronger institutional support for green hydrogen.

ii) The **second stage** covers the years FY31E to FY35E, marking De Nora's progression to a more **mature phase**: over this period, **ET is expected to settle into a steadier but slower rate of expansion**, reflecting the diminishing impact of market drivers. **WT** is expected to continue walking down a tapering path, constrained by **intensifying competition** and the **saturation of its niche segments**, thereby further reducing its share of De Nora's overall Revenues. Finally, **Energy Transition** is expected to face a more complex landscape as the green hydrogen market becomes **increasingly competitive**, requiring De Nora to navigate both the proliferation of alternative technologies and a shifting regulatory environment.

iii) The **third stage** applies **differentiated perpetuity growth rates** to De Nora's business segments. We adopt a constant **2%** long-term growth rate for the **traditional segments ET and WT**, consistent with our forecasted steady-state scenario for the Electrochemical Market and indicative of **stable renewal cycles** in De Nora's core segments. By contrast, we apply a **3%** long-term growth rate to the **Energy Transition** business, capturing **green hydrogen's long-term potential** and the intensifying yet structurally balanced competition in this **emerging market**.

SOTP-DCF Valuation. Our sum-of-the-parts DCF model consists of: (i) a DCF to evaluate the Company's **traditional segments** (Exhibit 30, Table 1), leading to a value of €6.81 and (ii) a separate DCF to evaluate the **Energy Transition** segment (Exhibit 31, Table 2), resulting in an additional value of €0.19. By summing these two values, we obtain the (SOTP DCF) 1Y-Forward target price of €7.00.

TRADITIONAL SEGMENTS: ELECTRODE AND WATER TECHNOLOGIES

This 3-stage DCF model evaluates the growth of De Nora's traditional segments (**Electrode Technologies and Water Technologies**), supported by a granular analysis of growth drivers across end-markets. For additional details, see "Future Analysis" section in the Financial Analysis section and [Annex 8](#).

TABLE 1 – DCF (ET and WT)	€M	2026E	2027E	2028E	2029E	2030E	2035E
Revenues		819	849	879	908	936	1,053
Operating Costs		703	730	756	779	800	902
EBIT		116	119	124	129	136	151
Taxes		30	31	32	34	35	39
NOPAT		86	88	92	96	101	112
D&A		47	49	52	53	53	58
Change in the WC		(1)	(8)	(12)	(13)	(12)	(8)
CapEx		(48)	(49)	(52)	(52)	(53)	(56)
Standard FCFO		85	80	80	84	89	105
Acquisitions		-	-	-	-	-	-
Standard FCFF		85	80	80	84	89	105
Present Value		79	68	62	61	59	46

Source: Company data, team assessment

ENERGY TRANSITION

The expected **cash flows** of the **Energy Transition** segment will be **negative in the first stage of the DCF** due to significant investments in production and slower-than-expected growth in green hydrogen commercialization. A **gradual improvement** is expected in the **second stage** as market matures, with cash flows turning positive in 2032E. Consequently, **most of the segment's Enterprise Value stems from the Terminal Value**, highlighting its long-term growth potential in a developing green hydrogen market. For additional details, see "Future Analysis" section in the Financial Analysis section and [Annex 8](#).

TABLE 2 – DCF (ETR)	€M	2026E	2027E	2028E	2029E	2030E	2035E
Revenues		135	165	205	257	311	514
Operating Costs		130	153	187	231	275	441
EBIT		5	12	18	26	37	72
Taxes		1	3	5	7	10	19
NOPAT		4	9	13	19	27	54
D&A		2	5	7	11	14	28
Change in the WC		(0)	(1)	(3)	(4)	(4)	(4)
CapEx		(48)	(49)	(52)	(52)	(53)	(56)
Standard FCFO		(42)	(36)	(34)	(25)	(15)	22
Acquisitions		-	-	-	-	-	-
Standard FCFF		(42)	(36)	(34)	(25)	(15)	22
Present Value		(38)	(30)	(25)	(16)	(9)	8

Source: Company data, team assessment

WACC

To capture the specific business characteristics and risk profile of the **Energy Transition segment** (different from those of **Electrode and Water Technologies**), in the two DCFs we employ two distinct **dynamic WACC** estimates (Exhibit 31, Table 3, 4 and 5).The two WACCs employ the **same risk-free rate, leverage ratio and Cost of Debt**, whereas they differ in the estimated **Cost of Equity**. Our assumptions are the following:

- 1. Risk-free rate:** We rely on the German Bund term structure for the risk-free rate. According to our analysis, this yield curve will follow an upward trajectory, starting at 2.25% in FY26E and reaching 2.38% by FY35E, with a minimum in FY28E.
- 2. Financial Leverage:** D/(D+E) assessed at market values, shifts from 11.24% in FY26E to 13.04% over the long term.
- 3. Cost of Debt:** Calculated as a weighted average of the 3-month Euribor and 3-month SOFR (with weights 2/3 and 1/3 respectively), plus a margin that varies in line with the Group's evolving leverage levels (Exhibits 28 and 29).
- 4. Cost of Equity:** In both DCFs, the Cost of Equity is derived from the CAPM, incorporating a regionally weighted Equity Risk Premium (ERP) (source: [Damodaran](#)), with specific weights aligned to each segment's geographic Revenues distribution ([Annex 13 and 14](#)). Despite sharing the same *overall methodology*, the **two WACCs differ in the systematic risk (Beta)** used to estimate the Cost of Equity:

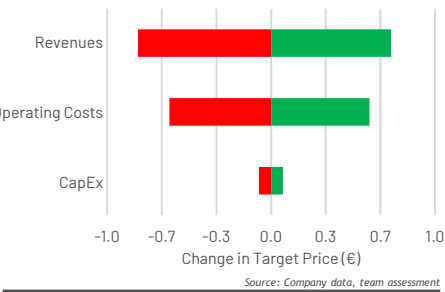
(i) **Beta for traditional segments:** We obtain **Beta** by running a linear regression of De Nora weekly excess returns (since its IPO) against the corresponding STOXX 600 Europe excess returns ([Annex 13](#)).

(ii) **Beta for Energy Transition Segment:** The **Beta** used to evaluate the hydrogen segment is obtained by analysing a group of selected green hydrogen comparables. Specifically, we first unlever the (levered) Beta of each comparable obtained through stock returns regressions. Instead of using an average, we select the highest unlevered Beta to incorporate that De Nora's Revenues in the ETR segment are largely tied to *thyssenkrupp nucera*, thus capturing its unique risk profile. Finally, we relever this Beta to reflect De Nora's capital structure ([Annex 14](#)).

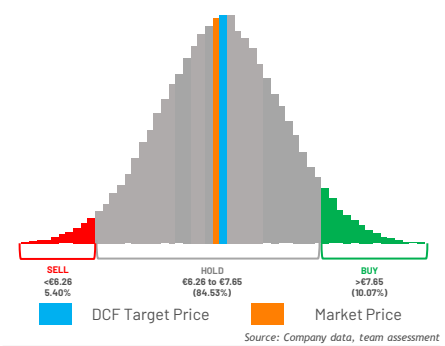
TABLE 3 – WACC COMMON ELEMENTS	2026E	2027E	2028E	2029E	2030E	2035E
Risk-free rate (rf)	2.25%	2.09%	2.00%	2.09%	2.17%	2.38%
Cost of Debt (Rd, Kd)	3.73%	3.99%	4.22%	4.30%	4.18%	3.54%
D/(D+E) Market Value	11.24%	11.43%	11.70%	12.05%	12.38%	13.04%
E/(D+E) Market Value	88.76%	88.57%	88.30%	87.95%	87.62%	86.96%

Source: Bloomberg, team assessment

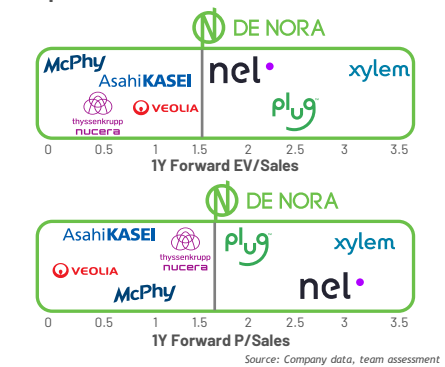
Tornado chart – Exhibit 34



Monte Carlo simulation on DCFs – Exhibit 35



Multiple Valuation – Exhibit 36



Risk Inventory – Exhibit 37

MARKET	
A	Interest rate risk
B	Inflation risk on margins
C	Macroeconomic conditions risk
D	Supply chain market breakdown risk
E	Green hydrogen underdevelopment risk
OPERATIONAL	
F	Employee turnover risk
G	Customer bargaining power risk
H	Competition risk
I	Loss of key figures risk
J	Technological risk
LEGAL	
K	Regulatory and legal risk
L	Reputational risk
FINANCIAL	
M	Liquidity risk
N	Exchange rate risk
O	Credit risk

Source: team assessment

Heat map – Exhibit 38

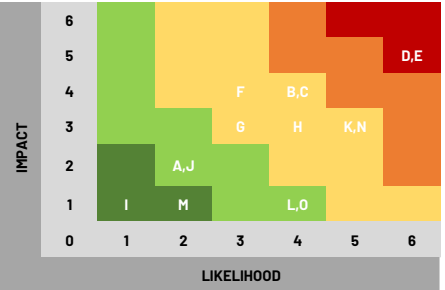


TABLE 4 – WACC(ET and WT)	2026E	2027E	2028E	2029E	2030E	2035E
Cost of Equity (Re, Ke)	9.42%	9.28%	9.28%	9.34%	9.39%	9.65%
Equity Risk Premium (ERP)	6.19%	6.21%	6.27%	6.26%	6.23%	6.28%
Beta	1.16	1.16	1.16	1.16	1.16	1.16
WACC	8.67%	8.56%	8.54%	8.60%	8.61%	8.73%

TABLE 5 – WACC(ETR)	2026E	2027E	2028E	2029E	2030E	2035E
Cost of Equity (Re, Ke)	11.25%	11.10%	11.01%	11.10%	11.19%	11.43%
Equity Risk Premium (ERP)	5.34%	5.34%	5.35%	5.35%	5.35%	5.37%
Beta	1.69	1.69	1.69	1.69	1.69	1.69
WACC	10.29%	10.17%	10.09%	10.15%	10.19%	10.28%

Source: Bloomberg, team assessment

ROBUSTNESS ANALYSIS

SENSITIVITY ANALYSIS. We evaluate the robustness of the DCF 1Y-forward target price **to changes in fundamental variables**. Since the Terminal Value accounts for ca. 63.59 % of the total EV, we perform a sensitivity analysis to highlight the impact of two important factors of our DCF model, perpetual **WACC** and **long-run growth rate (g)**, on the target price. The results show that the HOLD scenario is the most frequent, occurring in 45% of total scenarios, versus 33% BUY and 22% SELL (*Exhibit 33*).

TORNADO CHART. Shows the effect of a 2% persistent shock in **Operating Costs** (raw materials purchases and personnel expenses), Revenues and CapEx on the DCF target price. Our results highlight that **the target price is more sensitive to shocks in Revenues and Operating Costs** and less vulnerable to shocks in CapEx.

MONTE CARLO ANALYSIS. To assess the variability of our DCF 1Y-Forward target price, we carry out a simulation comprising **100.000 scenarios to evaluate the potential impact of quantifiable risks** on our valuation. By incorporating critical parameters as variables, including Revenues, raw materials costs and personnel expenses, we derive a share price distribution with an average of €7.00. The distribution reveals a probability of the share value falling in the interval >-10% (our threshold for a SELL recommendation) and <+10% (our threshold for a BUY recommendation) in 84.53% of the cases. Conversely, the probability of a downside amounts to 5.40%, while that of an upside reaches 10.07%.

MULTIPLE VALUATION

Despite the difficulty in drawing comparisons with other companies due to the **distinctive nature of De Nora's business model**, a Multiple Valuation approach can still provide useful insights into market expectations, serving as a **sanity check** to validate our investment thesis. More precisely, in line with the **Peers Selection**, we first identify comparable companies (*Annex 16*) by scoring them on **qualitative factors** (business model consistency) and **quantitative metrics** (size, profitability, risk and capital structure).

Then, for each comparable, we compute the 1Y Forward Enterprise Value to Sales Ratio (**EV/Sales**) and Price to Sales Ratio (**P/Sales**) (*Exhibit 36*, *Annex 17*). We selected these multiples because companies operating in the green hydrogen market are generally not profitable and report negative EBITDA.

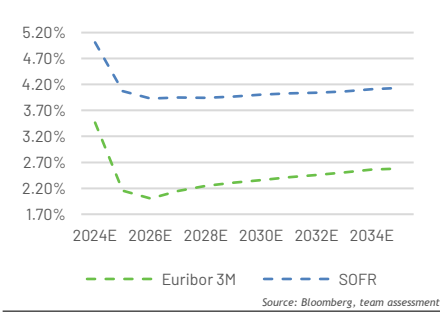
Finally, we compute a weighted average of the comparable multiples, calibrated to the relative importance of each peer's industry **in relation to De Nora's future expected Revenues breakdown**. By applying the resulting multiples of 1.5x and 1.6x respectively to De Nora's 1Y Forward Sales (*Annex 17*), we get a price of €7.09 (+2.01% upside) and €7.24 (+4.17% upside) which **confirms our HOLD recommendation**.

Investment Risks

Risks are an intrinsic part of any business endeavour. The following section outlines uncertainties tied to both market and operations, with the aim of highlighting De Nora's potential risk factors that may influence our investment thesis (*Exhibit 37*). Our assessment relies on the probability and magnitude of each (*Exhibit 38*) risk in relation to the Company's main financial metrics, and consequently, on our target price in the Worst-Case Scenario (WCS). In addition, we provide further insights in *Annex 18*.

RISK (LIKELIHOOD)		VALUATION IMPACT
MARKET	A) INTEREST RATE RISK (LOW): De Nora's entire gross financial debt is exposed to variable interest rates , with the Euro portion tied to the 3-month Euribor and the USD portion linked to the SOFR (<i>Exhibit 39</i>), both supplemented by a variable margin. This margin adjusts semi-annually based on the Group's leverage ratio, defined as the ratio of consolidated net debt to consolidated EBITDA. MITIGATION: Historically, De Nora has always been cautious about using leverage and its net cash position acts as a natural buffer to manage higher financial costs effectively, preserving flexibility to fund future growth without excessive reliance on external debt . Additionally, De Nora has employed interest rate swap contracts to partially convert floating into fixed rates, offering protection against fluctuations in interest rates.	WCS: +150bps Euribor -0.12€ (-1.52%)
	B) INFLATION RISK ON MARGIN (MEDIUM): De Nora faces risk due to reliance on personnel expenses and raw materials like titanium, platinum group metals, nickel and special steels (<i>Exhibit 40</i>), which accounted for 17% and 42% of FY23 Revenues, respectively. Raw material volatility , driven by export restrictions, conflicts and inflation, may increase procurement costs, squeezing margins and impacting financial stability . MITIGATION: The Group mitigates this risk through Central and Global Procurement, sharing resources across business segments to cut costs and maintain a supply continuity. Operating at the early stage of the value chain, De Nora applies a pass-through mechanism to adjust sales prices in response to material cost increases , while carefully managing its pricing strategy to balance cost recovery with the demands of large clients.	WCS: -225bps EBITm -0.28€ (-3.72%)
	C) MACROECONOMIC CONDITIONS RISK (MEDIUM): The Group's performance is closely tied to global economic dynamics and the inherent cyclicity of its key markets, such as Europe, the United States, Latin America, China and Japan. Fluctuations in the business cycle , including regional or global recessions, could directly affect demand for De Nora's products, significantly impacting its earnings and financial stability. MITIGATION: There is no direct hedge against this risk , especially in the Energy Transition segment. However, management mitigates it by (i) diversifying its customer base geographically and (ii) shifting key customer relationships from transactional to strategic , emphasizing long-term collaboration and value creation. These efforts aim to stabilize Revenues during downturns.	WCS: -2% Revenues -0.27€ (-3.71%)
	D) SUPPLY CHAIN MARKET BREAKDOWN RISK (HIGH): Interruptions in the supply of essential components, such as titanium and nickel, could adversely affect De Nora's production . The absence of certified raw materials may require the approval of alternatives. The Company also faces risks related to human rights compliance and environmental integrity within its supply chain. MITIGATION: De Nora mitigates these risks through monitoring, audits and centralized inventory management. Stability is ensured via supplier diversification, long-term contracts and minimum purchase agreements . It also reduces raw material dependency by negotiating with producers and promoting titanium scrap recovery and metal recycling.	WCS: +150bps Raw Material Purchase -0.46€ (-6.08%)

Euribor and SOFR yield curve – Exhibit 39



Commodities price evolution – Exhibit 40

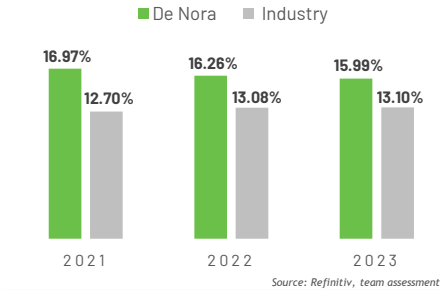


Green Hydrogen collaborations – Exhibit 41

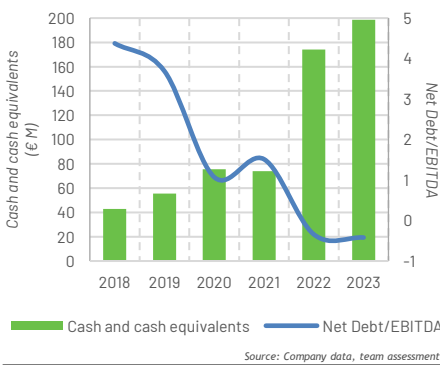
Asahi Kasei	Partnership for the development of small-scale green hydrogen production systems.
Crete-Aegean Hydrogen Valley	Project to create a hydrogen production hub on the island of Crete.
Duferco	Partnership for green hydrogen projects to decarbonize mobility, energy, and logistics in Italy.
HyTecHeat	Project aimed at low-carbon steel production.
X-SEED	Project to develop a supercritical electrolyzer for more efficient and cost-effective green hydrogen production.

Source: Company data

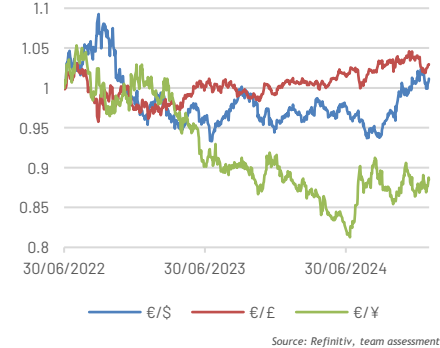
Turnover of employees – Exhibit 42



Cash and leverage – Exhibit 43



Evolution of exchange rates – Exhibit 44



RISK (LIKELIHOOD)

E) GREEN HYDROGEN UNDERDEVELOPMENT RISK (HIGH): The green hydrogen market is still in its **early stages** and its development depends on critical factors, including the expansion of **renewable energy**, the creation of **adequate infrastructure** and continuous **political and industrial support**. Currently, only a small portion of global hydrogen is produced through electrolysis and there is **no guarantee** of near-term economic **competitiveness against fossil fuels**. Competition from technologies such as **blue hydrogen** or **innovative electrolytic solutions** poses an **additional risk**, with potential negative impacts on Revenues and the Group's financial stability.

MITIGATION: While the invasion of Ukraine has increased European interest in green hydrogen to enhance energy resilience and meet EU net-zero targets, this risk remains challenging to mitigate. The **absence of a binding regulatory framework** mandating a minimum level of green hydrogen production **limits** the ability to create a **stable and competitive market**. Nonetheless, De Nora **continues to invest** in technological development and collaborate with public and private entities (*Exhibit 41*) to **promote policies** that support the expansion of renewable energy and the necessary infrastructure for the sector.

F) EMPLOYEE TURNOVER RISK (MEDIUM): De Nora faces **challenges** in retaining highly **qualified personnel**, with a **turnover rate above peers' average** (*Exhibit 42*). This is mainly due to experienced professionals leaving after a certain period, whereas competitors retain them more effectively or primarily lose younger employees seeking early-career opportunities. This suggests De Nora's **retention policies** may be **less effective** than its peers, **impacting productivity, recruitment costs and expertise retention**.

MITIGATION: To address this risk, the Company is implementing targeted initiatives, including **performance-based compensation, continuous training and clear growth paths**. Recognized as an employee-friendly organization (*source: Glassdoor reviews*), it launched the "InCLUDE" program, a three-day training for over 80 executives in Italy to enhance emotional intelligence in management. Resolving turnover is crucial, as retaining talent offsets recruitment costs and preserves internal expertise.

G) CUSTOMER BARGAINING POWER RISK (MEDIUM): De Nora operates in a sector where large industrial players wield strong bargaining power. **Major customers** buying in high volumes may **demand better pricing or extended payment terms**, squeezing margins. Additionally, reliance on a few key clients increases vulnerability to order reductions or strategic shifts.

MITIGATION: De Nora mitigates risk by **diversifying its customer portfolio**, expanding its commercial base to include **medium and smaller-sized operators** to reduce reliance on a few major customers. Furthermore, the Group works to establish long-term partnerships with key customers, shifting **relationships from transactional to strategic** to provide greater **pricing stability and protect profit margins**.

H) COMPETITION RISK (MEDIUM): Although the Company operates in niche markets with limited competitors, the risk of **intensifying competition and the emergence of alternative technologies** that could replace De Nora's solutions pose significant threats. These factors could negatively impact its business activities, growth prospects and financial stability.

MITIGATION: De Nora safeguards its competitiveness through robust **know-how protection, supported by continuous patent and license filings**. Additionally, the Group engages in limited but targeted **acquisitions** (e.g., Permelec Electrode Ltd. acquisition in FY15) to integrate new skills and consolidate its technological advantage. Meanwhile, the Group's **ongoing investments in R&D**, combined with strategic joint ventures, are focused on developing cutting-edge solutions that rival or surpass alternative technologies. Though the Company's strategy remains **centred on enhancing its existing solutions** rather than directly addressing the development of new technologies.

I) LOSS OF KEY FIGURES RISK (LOW): De Nora's governance is defined by the **strong influence of the De Nora family**, which controls 53.33% of shares and 69.95% of voting rights. While this structure ensures a clear strategic direction, it also centralizes decision-making, potentially limiting diversity in perspectives. The departure of key figures, particularly Chairman Federico De Nora or CEO Paolo Dellachà, could **weaken client and supplier confidence, negatively impacting a business model** built on fostering long-term relationships.

MITIGATION: The family's deep commitment to the Group makes a complete **withdrawal unlikely**, while the predominantly non-executive Board of Directors, with experts like Giorgio Metta, provides balanced oversight and ensures **continuity during transitions**. However, the **lack of a formal succession plan** remains a significant gap, but reviews are ongoing with the support of the Appointment and Remuneration Committee to prepare such a plan.

J) TECHNOLOGICAL RISK (LOW): Innovation is crucial in the electrolysis-related sectors. **Emerging technologies**, such as advanced electrode materials or alternative electrolytic processes, pose a direct threat to De Nora's position in this niche. Without continuous innovation, the Group risks losing **its competitive edge**, with potential economic and financial consequences.

MITIGATION: To maintain a competitive edge and address market demands, De Nora adopts a strategic innovation-focused approach. Through **targeted partnerships** (e.g., with Asahi Kasei and Hydrolite), the Company develops new solutions and improves existing products; this mitigation strategy prioritizes anticipating client needs within its niche markets and aligning innovations to meet these demands.

K) REGULATORY AND LEGAL RISK (HIGH): Operating in over 90 countries, De Nora is subject to **stringent regulations** on product safety, quality, export management and environmental requirements, including those related to green hydrogen, a strategic market for the Group, hindered by regulatory delays. Changes in such regulations may necessitate significant adjustments, impacting **compliance costs and operations**.

MITIGATION: De Nora addresses this risk through its Regulatory Affairs department, which continuously monitors regulatory developments. The Group enforces rigorous **compliance policies, ongoing training, specific export procedures and targeted collaborations** to support the regulatory development of green hydrogen.

L) REPUTATIONAL RISK (MEDIUM): De Nora's reputation may suffer if the quality of its products declines, potentially prompting customers to seek **alternatives**. Additionally, reputational damage could result from the **failure to implement its Sustainability Plan**, a central element of its strategy. Falling short of the 2026 and 2030 targets could generate **negative perceptions** among clients, investors and stakeholders, potentially affecting the Company's image.

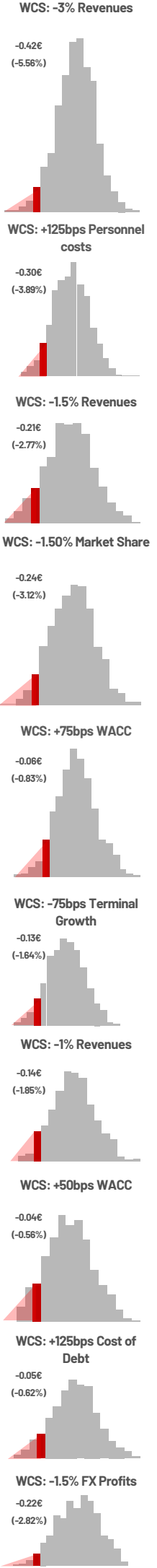
MITIGATION: The risk of declining product quality is **very low**, as De Nora has consistently delivered high-quality products that have earned customer trust and reinforced its market leadership. In contrast, the risk associated with the Sustainability Plan is **mitigated** through a detailed and well-structured approach, with regular **monitor progress and employs rigorous processes** to ensure alignment with its **ESG objectives**.

M) LIQUIDITY RISK (LOW): If financial resources are insufficient to ensure current operations and meet obligations, De Nora may face **difficulties in securing necessary funds**, potentially incurring high costs or reputational impacts.

MITIGATION: De Nora adopts a **conservative financial strategy** with centralized treasury management, strong banking relationships and coordinated financing. It **maintains sufficient liquid reserves** to cover operations and liabilities (*Exhibit 43*), ensuring stability even during financial stress. This approach supports ongoing investments in green hydrogen and electrode manufacturing while providing flexibility to navigate market volatility and economic uncertainties.

N) EXCHANGE RATE RISK (HIGH): De Nora **operates in international markets** and conducts transactions in **multiple currencies**, primarily USD and other non-Eurozone currencies. Arising from potential fluctuations in exchange rates (*Exhibit 44*), this risk carries significant implications, **impacting sales margins** (economic risk), trade payables and receivables. For instance, in FY24, the appreciation of the Euro caused a Revenues loss of approximately €13.5M, highlighting the material impact of currency volatility on the Group's financial performance.

VALUATION IMPACT



ESG grade attribution – Exhibit 45

Combined ESG Score [Min – Max]	Grade
[9.17 – 10]	AAA
[8.34 – 9.16]	AA
[7.51 – 8.33]	A
[6.67 – 7.50]	BBB
[5.84 – 6.66]	BB
[5.01 – 5.83]	B
[4.17 – 5.00]	CCC
[3.34 – 4.16]	CC
[2.51 – 3.33]	C
[0 – 2.50]	D

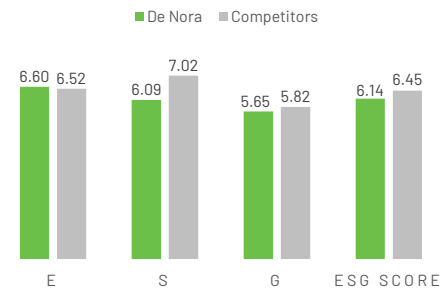
Source: Refinitiv

De Nora’s ESG Score – Exhibit 46

PILLAR	E	S	G	
WEIGHT	34.2%	37.3%	28.5%	100%
SCORE	6.60	6.09	5.65	6.14

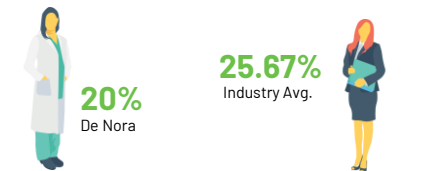
Source: Company data, team assessment

ESG Score Comparison – Exhibit 47



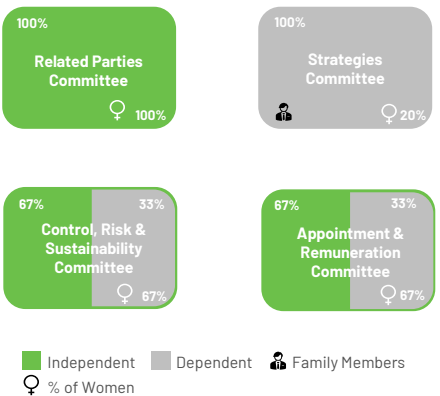
Source: Company data, Refinitiv, team assessment

Women Employees – Exhibit 48



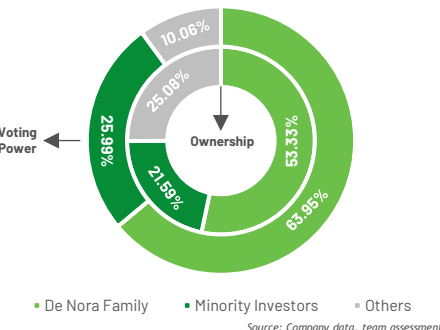
Source: Company data, team assessment

Governance Committees – Exhibit 49



Source: Company data, team assessment

De Nora’s governance – Exhibit 50

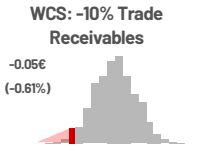


Source: Company data, team assessment

MITIGATION: The Group has **not yet implemented a comprehensive derivative strategy** to hedge exchange rate fluctuations. It uses **hedging contracts** for certain intra-group USD transactions, while **centralized treasury management** monitors exposure and sets policies to balance risks. Additionally, De Nora’s global network of factories allows it to **produce and sell within the same regions**, aligning Revenues and costs in local currencies and naturally mitigating currency risk. We believe that expanding the use of financial derivatives could better protect against exchange rate volatility, especially in uncertain macroeconomic conditions.

O) CREDIT RISK (MEDIUM): De Nora may incur financial losses if a client or financial counterparty fails to fulfil payment obligations. While the risk is contained, **exposure to trade receivables remains significant**, with 45% of receivables overdue by more than 60 days in FY23.

MITIGATION: The Company constantly **monitors client and counterparty solvency**, setting aside specific impairment provisions as needed to cover potential trade receivable losses. Particular attention is given to overdue receivables, which undergo thorough recoverability assessments to ensure a prudent approach to credit risk management.



ESG Risk

De Nora places particular emphasis on climate-related risks, including regulatory and physical aspects. The transition to a low-carbon economy and the increased frequency of extreme weather events (e.g., hurricanes and floods) pose significant challenges. Chronic and acute physical risks are more pronounced in some regions, such as China, Japan, and India, potentially affecting production infrastructure and supply chains. **MITIGATION:** The Group adopts a holistic ESG risk management approach, following Task Force on Climate-related Financial Disclosures (TCFD) guidelines. Facilities integrate local regulatory specifics for energy saving and emissions control, while all production sites develop emergency plans for extreme events. Additionally, De Nora diversifies operational activities across various plants to prevent disruptions.

Environmental, Social & Governance (ESG)

ESG

Integrating **Environmental, Social and Governance (ESG) factors** is now vital for strategic planning as businesses face stricter regulations and rising stakeholder expectations. De Nora asserts that its ESG strategy is embedded in its Industrial Plan, which is grounded in four pillars:

- i) **Green Innovation.** The development of sustainable technologies that are aimed at driving economic growth, managing natural resources responsibly, promoting circularity and harnessing clean energy.
- ii) **Climate Action and Circular economy.** The commitment to sustainably manage the Company’s operations by mitigating its footprint as much as possible through decarbonisation plans and the circular economy.
- iii) **Inclusion, Wellbeing and continuous Development.** The dedication to the growth of its people and the cultivation of an inclusive working environment.
- iv) **Local communities.** The support of local communities through various projects, initiatives and collaborations with non-profit organizations.

To verify the Company’s adherence to ESG principles, we conducted a thorough analysis by evaluating **71 key metrics** (24 for Environmental, 27 for Social and 20 for Governance; *Annex 21*). These indicators are grouped into clusters and each is assigned a grade based on **De Nora’s position relative to industry peers. The final score is derived from a weighted average of these assessments.** The conversion from numerical scores to letter ones is based on Refinitiv (*Exhibits 45, 46*).

ENVIRONMENTAL (SCORE 6.60 – WEIGHT 34.20% – RATING BB)

De Nora, which brands itself as **“Sustainable by DNA”**, offers a **nuanced** sustainability profile. On one hand, the Company **excels in energy efficiency and low emissions**, aided by innovations like green hydrogen and electrowinning, a technology that cuts energy use by around 30% compared to conventional methods. This focus on efficiency is reflected in its **Total Energy Use per Million of Revenues (468)**, **outperforming the peer’s average (1,121.7)** and in its relatively **low CO₂ emissions (40.5 versus 126.6 tonnes)**. Regarding the mobility of the workforce, the gigafactory location further supports sustainability by offering convenient public transport access, helping reduce reliance on personal vehicles. Yet, De Nora still **trails the industry average (19.58%) for renewable energy sourcing**, with only 13% of its energy currently supplied by renewables (supported by 3.1 GWh of installed photovoltaic capacity). Though the Company plans to reach 40% by 2026 and 100% by 2030 (Sustainability Plan 2023–2030), achieving these targets will require significant strides. Its **Waste Recycling Ratio (41.82%) also lags behind the benchmark (62.15%)**, indicating gaps in circularity. Rounding out its approach, De Nora’s commitment to refrain from animal testing distinguishes it ethically, especially as not all peers align with this issue. Overall, however, the Company’s performance suggests a **work-in-progress**: while De Nora demonstrates notable strengths in energy efficiency and low emissions, it must strengthen its renewable adoption and improve waste management practices to truly fulfill their promises.

SOCIAL (SCORE 6.09 – WEIGHT 37.30% – RATING BB)

De Nora showcases a growing dedication to inclusivity and employee well-being, starting with its **improved salary gap** (down from 20% in 2022 to 18% in 2023) now **slightly below the industry average** of 24%. A cornerstone of its engagement strategy is the **“We Are De Nora” (WeDN)** survey, which connects employees with managers in four focal areas: ‘my job,’ ‘my managers,’ ‘my colleagues’ and ‘the company,’ fostering open dialogue and organizational transparency. In terms of **safety**, the Company has made striking progress: its **Total Injury Rate stands at just 2.81 incidents per 1,000 employees, substantially below the peers’ average of 31.11**, reflecting robust protection measures. De Nora also invests in human rights and community outreach by partnering with technical schools and STEM universities, placing it slightly above industry norms in social impact metrics. However, significant **challenges** remain. Although **turnover declined** from 16.26% in 2022 to 15.9% in 2023, it still **surpasses the competitors’ average of 13.1%**. Even more concerning is De Nora’s **worst-in-class record on gender diversity**, with just 20% of its workforce comprising women, lagging behind the 25.67% industry benchmark (*Exhibit 48*). To fully realize its vision of an inclusive and progressive workplace, De Nora must continue driving down turnover and uplifting female representation in its ranks.

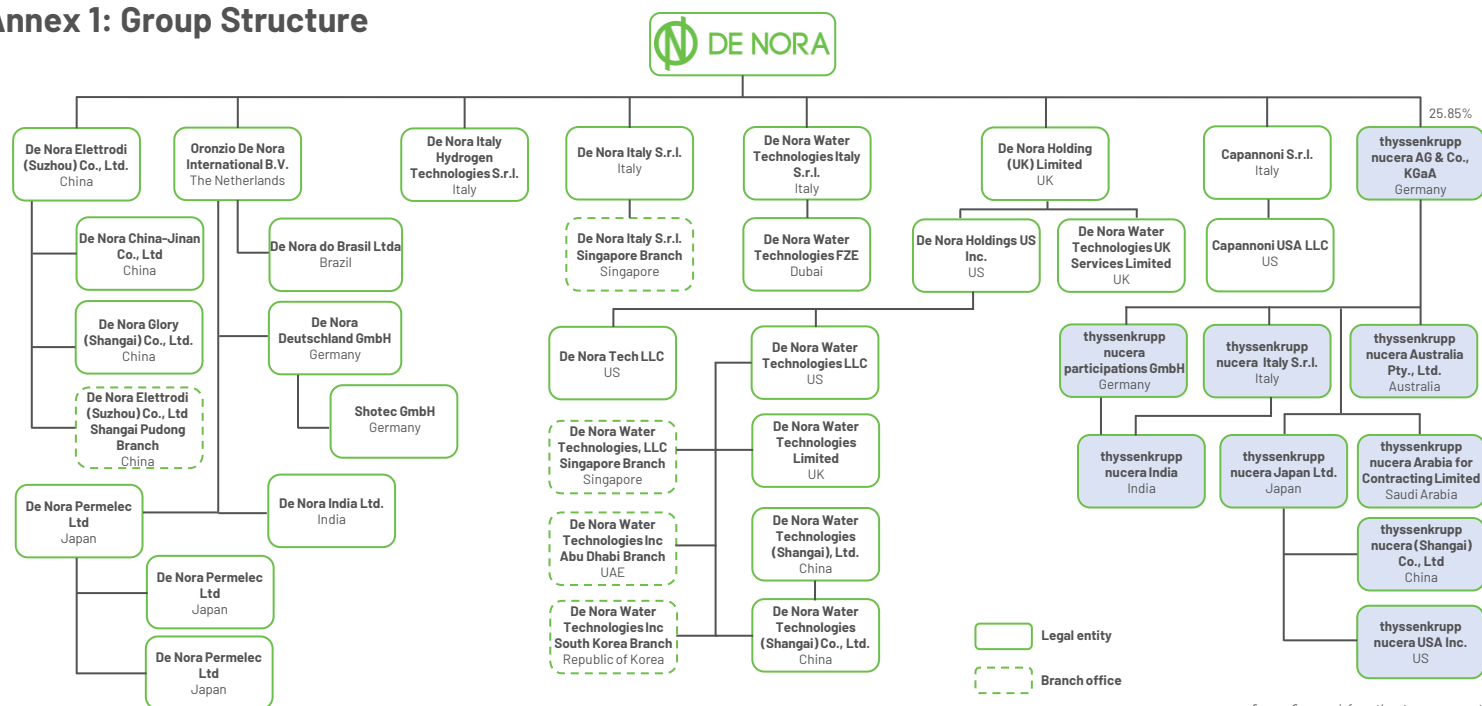
GOVERNANCE (SCORE 5.65 – WEIGHT 28.50% – RATING BB)

De Nora’s governance **blends a longstanding family legacy with professional guidance**. **Chairman Federico De Nora** (the majority shareholder) and **CEO Paolo Dellachà** guide the Group within a structure in which the family **holds 53.33% of shares and 63.95% of voting rights** (*Exhibit 50*), ensuring stability and a clear long-term vision. In addition, the **governance is held together by some committees**, such as the Control, Risk & ESG Committee, the Strategies Committee, Related Party Committee and the Appointment & Remuneration Committee (*Exhibit 49*), which strengthen transparency and robust governance, whereas **the Board’s 33.3% female representation aligns with industry norms**, indicating a modest stride toward inclusivity. Moreover, De Nora’s seems to avoid governance complexities such as CEO duality or a former CEO serving as Chairman. Still, this strong family stake can **raise concerns over Board independence, especially since only half of its 12 members are classified as independent** (below the 68.42% competitor average). Minority shareholders may also be wary of **unequal shareholder rights, while sustainability monitoring remains limited to just 17% of suppliers**. Ultimately, De Nora’s leadership and transparent practices offer a solid foundation, but ensuring greater board independence, broader shareholder protections and expanded supplier assessments will be crucial to fulfilling today’s governance expectations.

BB: BETTER, NOT BEST

As a result of our model, the combined ESG score of De Nora is 6.14 out of 10, corresponding to a rating BB (*Exhibit 47*), which places it slightly below the average of its peers (6.45 out of 10, BB). Despite the progress made during this year, **the Company still faces various challenges in multiple areas, trailing behind its competitors**. To elevate its ESG standing, De Nora could benefit significantly from adhering more closely to global standards such as the Global Compact. Enhancing investments that directly improve ESG metrics or forging strategic partnerships with recognized ESG leaders could further bolster its performance. **Such initiatives would not only reduce environmental impact but also position De Nora as a potential ESG leader in its industry.**

Annex 1: Group Structure



Source: Company information, team assessment

Annex 2: Product Portfolio

The product portfolio under analysis spans a wide range of applications across **distinct yet interconnected sectors**, displaying both versatility and specialization. While each product serves a specific function, its development is guided by consistent **design principles**: i) **adaptability** to diverse operating conditions; ii) **optimization of performance**, often integrating advanced materials or coatings tailored to clients' needs; iii) emphasis on **reducing operational costs** without compromising on durability or efficiency. The **portfolio** further **benefits** from a combination of proprietary innovations and **strategic acquisitions** (for a more detailed analysis see [Annex 3](#)). This approach ensures relevance in both traditional segments, such as Electrode and Water Technologies, and the emerging Energy Transition.

	PRODUCT	FUNCTION	END MARKETS	ACQUIRED
ELECTRODE TECHNOLOGIES	 DSA ® Anodes for Chlorine Evolution	Widely used in brine or seawater electrolysis for electrochemical applications where chlorine evolution serves as the primary anodic reaction.	Constructions, Pulp and Paper, Residential Pools, Metal Electrowinning	✗
	 DT Plating Anodes	Insoluble Anodes compatible with all plating chemicals applied in PCB manufacturing for uniform copper deposition.	Electronics	✗
	 Elgard ® MMO Anodes	The key for cathodic protection (CP) to prevent the corrosion of steel-reinforced concrete structures.	Constructions	✗
	 GreenChrome ™	Dimensionally Stable Anodes used in the electrochemical deposition of chromium onto surfaces to enable oxidation and the release of electrons.	Electronics, Automotive, Constructions	✗
	 Lida ® MMO Anodes	Mixed Metal Oxide Anodes for corrosion prevention of pipelines, storage tanks, dams, water boxes and offshore structures.	Oil and Gas, Water Treatment	✗
WATER TECHNOLOGIES	 Capital Controls ® Gas Feed Systems	Safely and precisely delivers chlorine or other gases for water disinfection or treatment processes.	Municipal Drinking Water, Municipal Wastewater	✓ Calgon Carbon
	 Capital Controls® Ozone Generators	Provides a powerful oxidant with a fast reaction time, no added chemicals and reduced disinfection by-products.	Municipal Drinking Water, Municipal Wastewater	✓ Calgon Carbon
	 CECHLO ™	Generates high strength sodium hypochlorite on-site, using either brine made from delivered salt or seawater.	Industrial Water Treatment, Municipal Wastewater	✗
	 ClorTec ®	Generates low-strength sodium hypochlorite on-site from salt for safe, reliable, and cost-effective water treatment.	Municipal Drinking Water, Municipal Wastewater	✓ Neptune
	 DE NORA TETRA ®	Widely used for filtration of drinking water, pre-treatment of seawater, treatment of wastewater and Industrial applications.	Municipal Drinking Water, Municipal Wastewater	✗
	 MIOX ®	This on-site generator (OSG) produces chlorine-based solutions when sodium chloride brine is passed through an electrolytic cell.	Municipal Drinking Water, Municipal Wastewater	✓ Miox Corporation
	 SORB Contaminant Removal for PFAS	A PFAS contaminant removal system to help solve environmental, regulatory and public health water treatment challenges.	Municipal Drinking Water, Municipal Wastewater	✗
ENERGY TRANSITION	 AWE Electrode Package	Such packages optimize water electrolysis, enhancing hydrogen production efficiency, reducing costs, and ensuring durability under various operating conditions.	Ammonia Production, Steel Production, Petrol Refinery	✗
	 AWE Electrodes	Electrodes that enable water splitting reactions, producing green hydrogen and oxygen through alkaline electrolysis.	Ammonia Production, Steel Production, Petrol Refinery	✗
	 Dragonfly ®	Completely integrated on-site alkaline water electrolysis unit for green hydrogen production.	Ammonia Production, Steel Production, Petrol Refinery	✗

Source: Company information, team assessment

Annex 3: Historical M&A

Recent M&A activity has focused on **small-scale transactions** aimed at acquiring **new products** or technical **know-how**. These strategic bolt-on acquisitions, though modest in size, are designed to **strengthen the Company's portfolio** and enhance its capabilities in key segments.

ACQUIRED COMPANY	SEGMENT	ACQUISITION DATE	PLANTS LOCATION	ACQUISITION PRICE (€ M)	STAKE (%)	ACQUISITION RATIONALE	
						PRODUCT PORTFOLIO EXPANSION	KNOW-HOW ACQUISITION
MIOX Corporation	Water Technologies	2019	US	2.50	100	✓	✓
Neptune Enterprises	Water Technologies	2019	US	2.20	80	✓	
Calgon Carbon Corporation	Water Technologies	2021	US	3.79	100	✓	
ISIA S.p.A	Water Technologies	2021	IT	3.60	100		✓
Shotec GmbH	Electrode Technologies	2023	DE	2.12	100		✓

Source: Company Information, team assessment

Annex 4: SWOT Analysis

We implement our **SWOT analysis** assessing De Nora’s internal strengths and weaknesses, as well as the relative opportunities and threats coming from the market. In the following figures we summarize, for each category, the variables used to analyse De Nora’s overall positioning.

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Market leadership In Electrode Technologies	Reliant on regulatory incentives (RED III, PNRR funds, IRA)	Growth potential driven by green hydrogen	Intensifying competition from both emerging technologies and cheaper alternatives from Chinese cost-focused producers
Broad diversification and multiple end-markets presence	Limited size compared to large multinational competitors and clients in disinfection and filtration	Global expansion with opportunities to grow market share in the Middle East	Energy cost volatility (high energy consumption)
		Rising water treatment demand (US regulations)	Delays in subsidies (potential delays projects could impact financial performance)
Post-sales services as a key Revenues stream	Holding leading position in mature markets like Chlor-Alkali limits growth potential	M&A opportunities to expand product portfolio and enter adjacent end-markets, particularly in WT	Concentration of ET and ETR customers (~30% of De Nora’s Revenues made through thyssenkrupp nucera)
"Glocal" structure , which combines international presence with the flexibility of local branches			Execution risks from dependency on large-scale projects like Neom, with potential delays or cancellations

Source: Team assessment

Industry Overview

Annex 5: PESTEL Analysis

To evaluate the business environment in which De Nora operates, we perform the Pestel analysis. By analysing Political, Economic, Social, Technological, Environmental and Legal factors, we can have a broader understanding of the different dynamics driving both the market and De Nora’s business.

POLITICAL	How can geopolitical factors impact the Company?	Regulatory Support for Green Hydrogen: Governments globally are promoting green hydrogen initiatives as part of decarbonization strategies, benefiting De Nora’s Energy Transition segment. However, reliance on public subsidies makes the Company vulnerable to shifting political priorities. Stringent Regulations in Water Treatment: Tightening water treatment standards in key regions, such as the EU and USA, boost demand for De Nora’s solutions.
ECONOMIC	Which economic trends could have an impact on De Nora?	Inflation and material costs: Fluctuations in raw material costs could impact profitability despite De Nora’s ability to pass on costs through pricing strategies. Economic Cycles: Mature segments like Water and Electrode Technologies offer stability but could face cyclic demand, influenced by drivers like urbanization and automotive. Currency devaluation and revaluation: De Nora operates globally, and as a result, its Revenues and costs in foreign currencies may be exposed to fluctuations in exchange rates. This could potentially pose risks for Revenues.
SOCIAL	Which are the emerging social and demographic trends?	Public Awareness of Sustainability: Increasing consumer and corporate focus on sustainable technologies aligns with De Nora’s green hydrogen and water treatment offerings. Increased attention to workplace safety: A growing emphasis on workplace safety is reinforced by the governments’ implementation of stricter laws and regulations. This concerted effort aims to ensure a secure and protected working environment for professionals.
TECHNOLOGICAL	Which technological breakthroughs could affect the market?	Advancements in Electrolysis Efficiency: Innovations that improve the efficiency of alkaline water electrolysis (AWE), could significantly impact the hydrogen market. Reduced operating costs would increase the competitiveness of green hydrogen solutions. Low-Cost Electrode Alternatives: The rise of cheaper electrode technologies from China could increase price competition, challenging De Nora’s competitiveness.
ENVIRONMENTAL	Which ecological aspects influence the business environment?	Carbon Neutrality Goals: Global targets for carbon neutrality by 2050 boost demand for De Nora’s solutions in hydrogen and energy efficient electrodes. Water Resource Management: Increasing water scarcity necessitates efficient treatment and recycling systems, a core market for De Nora.
LEGAL	Which changes in legislation could impact on De Nora?	Patents’ protection: The heightened focus on patent protection and simplified registration procedures across different nations is driving the advancement of R&D as a strategic avenue to secure a competitive advantage. Impact of tariffs and trade agreements: While De Nora has a widespread global presence with local offices, changes in trade regulations or tariffs could still affect their costs in some markets. However, their extensive local operations may help mitigate the impact of such changes.

Source: team assessment

Annex 6: Porter's Five Forces – Industry attractiveness

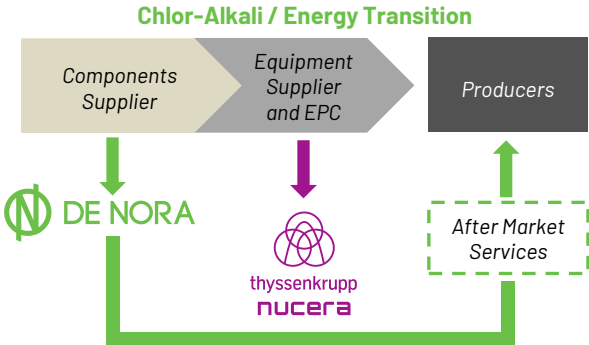
To assess the attractiveness of the Global Electrochemical Market, we delve into a deep examination employing Porter's Five Forces analysis. Scores are assigned mirroring the strength of each force, with lower scores indicating a reduced level of threat. Our conclusion is that the Industry's resilience mitigates concerns posed by potential threats, and the Company stands to benefit from the positive trends within the sector.

Metric		Electrode Technologies		Water Technologies		Energy Transition		De Nora's Score	
Threat of New Entrants	Established expertise and dominant position	The reference sectors are dominated by a few large players. De Nora stands out as a leader in electrode technologies, holding dominant market shares and being the world's largest supplier of electrodes for Chlor-Alkali processes. Leveraging its expertise, De Nora competes with larger players in Water Technologies and is positioned as one of the key suppliers of electrodes for AWE electrolysis in the green hydrogen market.							2/5
	Patents and know-how	Know-how stands as essential, playing a pivotal role in fostering value through applied expertise and specialized skills. Supported by 2,230 patents and over 400 pending applications, alongside 100 years of electrode-focused expertise, De Nora is well positioned to maintain its leadership across its traditional segments and to capitalize on emerging opportunities in green hydrogen technologies.							
	Consolidated relationships with customers	The sector thrives on long-lasting customer relationships. De Nora is a reliable electrochemical solutions provider, with a significant portion of its Revenues stemming from post-sales services.							
	Technological innovation	Introducing advanced technological solutions requires substantial allocations towards R&D investments (1.86% of FY23 Revenues).							
Threat of Substitutes	Price vs performance	The market faces increasing competition from cost-focused Chinese producers. However, De Nora's solutions deliver superior performance and longer durability, ensuring a more favorable total cost of ownership (TCO) over their lifecycle.	Larger competitors benefit from economies of scale, enabling them to achieve lower production costs. However, De Nora's ability to remain competitive on pricing highlights its high operational efficiency.		High costs remain a challenge across the entire industry due to the early-stage nature of the technology. These price pressures are shared by all players, as the focus is on achieving performance advantages and scaling up production to drive future cost reductions.			3/5	
	Number of substitutes	In this sector there are no real substitutes, as De Nora is the leading player for its core applications.	In Water Technologies, the number of competitors is higher, including larger players like Xylem, which recently acquired Evoqua.		De Nora holds a strong position in AWE, but other players operate with alternative technologies such as PEM and SOEC.				
Bargaining Power of Supplier	Number of suppliers	Supplier concentration is relatively low, with no single supplier representing a significant proportion of the total costs for raw materials and services. Additionally, De Nora's expertise in electrode and coating technologies allows it to mitigate reliance on external suppliers by leveraging in-house capabilities for critical components.							2/5
	Supplier reliance	The production processes at De Nora rely on various raw materials, including titanium, nickel, iridium and ruthenium.							
Bargaining Power of Buyers	Type of Buyers	De Nora serves B2B clients, including chemical manufacturers and industries utilizing electrochemical processes. Contracts are often long-term, with aftermarket services such as electrode reactivation, recoating, and maintenance	Clients include both municipal entities and industrial companies involved in water treatment. Products are distributed through direct contracts with EPC contractors, distributors, and leasing agreements for specific technologies.		De Nora's primary customer is <i>thyssenkrupp nucera</i> , with which it has a close partnership through their joint venture. De Nora supplies critical components, which <i>thyssenkrupp nucera</i> uses in its electrolyzer systems.			4/5	
	Concentration	Customer concentration in these segments is moderate. Excluding <i>thyssenkrupp nucera</i> , which accounts for approximately 25% of total Revenues, the top 20 customers contribute around 30% of the group's overall Revenues (<i>source: Company data</i>).				There is a high level of concentration in this segment, as the vast majority of Revenues are derived from the sale of components for AWE to <i>thyssenkrupp nucera</i> .			
	Switching costs	High due to the specialized and customized nature of De Nora's products and services for specific industrial processes. Additionally, the long lifecycle of these products and the extensive aftermarket services create a strong dependency on De Nora's expertise.	Municipal and industrial clients rely on De Nora's established solutions for reliability, and changing suppliers would involve significant costs for redesign, compatibility, and technical adaptation.		Switching costs are also high in the Energy Transition segment due to De Nora's proprietary technologies and its strong position as a supplier of components for hydrogen electrolyzers. The Toll Manufacturing Agreement further ties <i>thyssenkrupp nucera</i> to De Nora for key components.				
Internal Rivalry	Diversity of Competitors	The majority of competitors offers products with similar features, showcasing a limited degree of differentiation. However, some players are actively working on alternative technologies, particularly in Energy Transition, though these are currently more complementary than directly substitutive.							4/5
	Number of competitors	The market is concentrated, with a few global players dominating, thanks to the high barriers to entry and specialized know-how required.	De Nora has widened its product range but competes with big companies such as Xylem (Market Cap of €28B), Veolia (Market Cap of €20B), and Ecolab (Market Cap of €66B).		Competition is increasing, with a growing number of entrants focusing on green hydrogen technologies. However, De Nora's focus on the early part of the value chain provides it with a competitive edge.				

Source: team assessment

Annex 7: Toll Manufacturing Agreement

The **Toll Manufacturing Agreement (TMA)** regulates the **supply of products and services by Industrie De Nora to thyssenkrupp nucera**. The agreement's duration is aligned with the Joint Venture Agreement and the related Shareholders' Agreement, expiring on 4 November 2038, with automatic five-year renewals unless terminated by either party. The TMA imposes **mutual exclusivity obligations**: i) *thyssenkrupp nucera* must **exclusively purchase electrodes** and electrochemical **cells from Industrie De Nora** for its technologies; ii) Industrie De Nora commits to manufacturing and supplying these products exclusively to *thyssenkrupp nucera* (recoating, repair, and retrofitting of cells, are included). **Exclusivity applies** to a defined **percentage of thyssenkrupp nucera's annual demand** ("permanent supply quantities"). Additionally, Industrie De Nora is prohibited from manufacturing or supplying products based on *thyssenkrupp nucera's* intellectual property to third parties, except under pre-existing license agreements. *thyssenkrupp nucera* reserves the right to conduct **comparative analyses** of the products provided by Industrie De Nora against those of **third-party suppliers**. If they demonstrate that third-party products are more competitive, *thyssenkrupp nucera* can notify Industrie De Nora and allow a six-month period to restore it. Should Industrie **De Nora fail to meet this benchmark**, *thyssenkrupp nucera* may **source** the analyzed products **from third parties**.



Source: Company data, team assessment

Annex 8: Industry Proprietary Model

To obtain forecasts about De Nora's future performance and assess the growth profile of the Global Electrochemical Market, we create our **Industry Proprietary Model**. Our model analyses the market from a global perspective along three key segments: (1) **Electrode Technologies Industry**, a mature yet growing market characterized by a wide range of industrial applications; (2) **Water Technologies Industry**, which is actively committed to addressing public health and recreational needs through sustainable solutions ; (3) **Energy Transition Industry**, still in its early stages, driven by the growing need to decarbonize high-carbon-intensive sectors to achieve global net-zero emissions goals. The in-depth analysis of the Global Electrochemical Market enables us to understand the environment in which De Nora will operate in the future, inevitably shaping its economic and financial performance. Our analysis follows a specific approach: starting from a **set of drivers for each end-market**, we meticulously select the **most effective ones capable of capturing both historical trends and future growth prospects**.

Electrode Technologies Industry (€0.88B in FY24E, 2.76% CAGR in FY24E-35E Worldwide):

To estimate the size of the Electrode Technologies industry, we analyze data from diverse sources. The **demand for strategic materials and printed circuit boards (PCBs)** is shaped by evolving industry needs. **Key drivers** include **population growth**, with the subsequent urban migration and demand for efficient infrastructure. The global population is expected to reach 8.8 billion by 2035 and 9.65 billion by 2050 (source: *United Nations*), fueling construction growth and **increasing the need for strategic materials like PVC**, used in pipes, window frames, and doors. PVC accounts for a major share of global chlorine production, making it a **crucial end market in the Chlor-Alkali** sector and for Electrodes used in the process. Valued at \$55.73 billion in 2023, the PVC market is projected to reach \$75.15 billion by 2031, with a 3.8% CAGR. However, **growth** in this sector **is slowed by the maturity of Pulp and Paper**, the **other key end market** for the Chlor-Alkali process, which is expected to grow at only 0.76% CAGR between 2024 and 2031, reaching \$360.25 billion. Additionally, **rising climate concerns** are key drivers of **electric vehicles (EV) adoption** toward net-zero emissions. By 2030, EVs are expected to represent **40% of global vehicle sales** (source: *International Energy Agency*), with sales projected to rise from 13.68 million in 2024 to 18.84 million in 2029, reflecting a 6.6% CAGR. This expansion is **fueling demand for nickel, cobalt, Copper Foil, and PCBs**, critical for lithium battery management, electric motors and vehicle control systems, **directly linked to Plating Anodes and titanium Anodes**. Additionally, demand for Copper Foil and PCBs is being driven by 5G technology, projected to cover 55% of global mobile connections by 2030 (source: *GSMA*). **On the other hand:** i) **copper electrowinning** remains a large market (valued at \$0.18 billion with an estimated 8.9% CAGR between 2024 and 2029), still **relying on Lead Anodes** which are a product **outside De Nora's niche** focus; ii) plating techniques like **Electroless Plating and Sputtering**, primarily used for high-end applications (such as advanced semiconductors), **do not require electrodes**. These alternatives **limit the growth of niche markets** compared to the broader Electrowinning and Electronics sectors

To sum up, we foresee a modest short-term growth, mainly supported by a sustained demand for PCB's and raw materials critical for EV batteries. A slightly lower but stable growth is expected in the medium term, whereas a more subdued growth is expected in the long-term, primarily reflecting the lower institutional investments once the targets set by the net-zero scenario for electric vehicles are reached.

Energy Transition Industry (€0.960B in FY24E, 32.23% CAGR in FY24E-35E Worldwide)

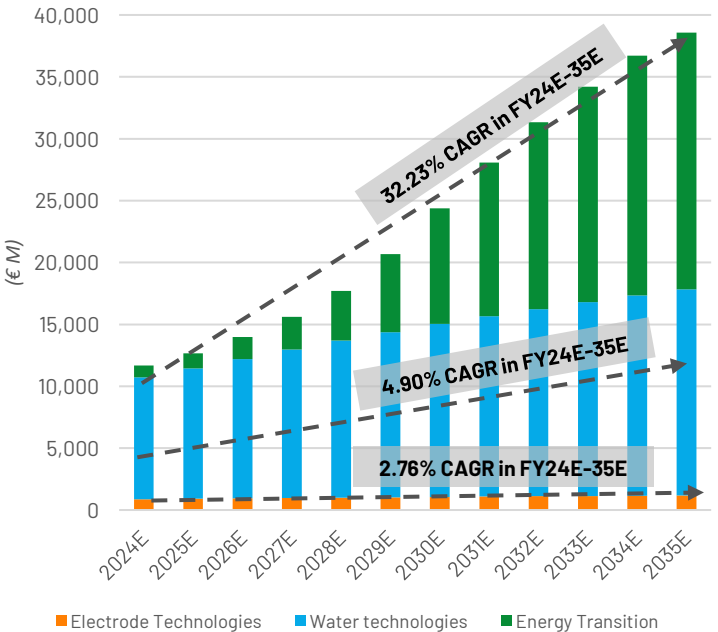
Estimating the size and growth of the green hydrogen market is a complex and constantly evolving challenge. Just three years ago, short-medium term and long-term **forecasts were highly optimistic**, predicting an installed capacity of 700 GW by 2030 and positioning green hydrogen as a key investment for achieving net-zero emissions. However, over time, the electrochemical industry and the market had to confront tangible **obstacles and increasing uncertainties**. Large projects initially aimed at drastically reducing CO₂ emissions, particularly in the steel sector, have faced **numerous delays**. Moreover, the **lack of a clear regulatory framework**, coupled with institutions failing to provide consistent and sufficient support, aggravates the challenge of developing the green hydrogen market, as the **high costs** associated with its production remain a significant barrier to scaling the technology. As a result, **future expectations have been significantly downgraded**. Current estimates project a conversion capacity of just 100 GW by 2030, a drastic reduction from the 700 GW forecast in 2022. Despite this revision, the market could still experience significant growth, increasing from an estimated 10 GW in 2024 to 100 GW by 2030 (source: *Company data, International Energy Agency*), with a compound annual growth rate (CAGR) of nearly 46%. However, while this growth rate is notable, it doesn't alleviate concerns over the risk of further delays, which could further jeopardize green hydrogen's role in the global energy transition.

For this market we foresee a steady and moderate growth in the short term, supported by increasing early adoption of decarbonization technologies in the steel sector. Growth is expected to accelerate in the medium term as technological advancements aimed at cost reduction and clearer regulatory incentives may drive broader adoption. However, beyond 2030, market expansion is likely to slow, reflecting the gradual maturation of infrastructure and a stabilization of demand in established markets.

Water Technologies Industry (€9.84B in FY24E, 4.90% CAGR in FY24E-35E Worldwide):

The key drivers shaping the future growth of the Water Technologies Industry are grounded in clear causal relationships. The demand for **water treatment and filtration systems** is set to address the evolving needs of population. As urban density increases, particularly in countries with warmer climates and wealthier economies, the concept of **domestic comfort** has taken on heightened significance. This shift has been further amplified in the post-pandemic world. Following prolonged lockdowns and travel restrictions, many individuals opted to invest in their homes, seeking ways to enhance both comfort and recreational opportunities. In this context, **in-ground pools** have emerged as an ideal solution for enjoying leisure time without leaving home. With a market expected to grow at a 4.1% CAGR from 2024 to 2032 (source: *Statista*), in-ground swimming pools represent not only a lifestyle upgrade but also a response to the growing demand for accessible, private spaces of relaxation and well-being. On the other hand, as the population increases, **pressure on water resources grows**, along with the need to **provide safe and clean water** to a larger number of people. This necessitates advanced filtration and disinfection systems, especially for western countries and municipalities, to meet the demand of safe water for domestic consumption and to **reduce contamination risks**. In 2024, the Biden administration in the U.S. took decisive action to address **PFAS contamination**. The Environmental Protection Agency (EPA) established the first national legally enforceable standard for PFAS in drinking water, aiming to protect 100 million people, allocating \$1 billion through the Investing in America agenda and \$9 billion from the Bipartisan Infrastructure Law to fund detection and treatment systems (source: *The White House*). Such investments are expected to continue under Trump administration, driving the demand for Disinfection & Filtration systems with an expected CAGR of 6.4% between 2024 and 2029. On the other hand, **Industrial electrochlorination** systems are **unlikely to benefit from these subsidies**, as they are primarily used for industrial applications rather than domestic water treatment. As a result, their market is expected to grow at a slower rate.

Our analysis expects moderate and consistent growth in the short-medium term, driven by increasing global demand for clean water solutions and stricter regulatory requirements to limit contaminants like PFAS. In the long term, growth is projected to become more subdued, reflecting the eventual saturation of infrastructure upgrades in key markets.



	(€ M)	FY23	FY24E	FY25E	FY26E	FY27E	FY28E	FY29E	FY30E	FY31E	FY32E	FY33E	FY34E	FY35E
Electrode Technologies		870	879	908	939	970	1,001	1,031	1,060	1,088	1,114	1,139	1,162	1,186
YoY			1.0%	3.3%	3.4%	3.4%	3.2%	3.0%	2.8%	2.6%	2.4%	2.3%	2.1%	2.0%
Chlor-Alkali		629.2	632	651	668	685	702	718	735	751	768	784	800	816
YoY			0.5%	2.9%	2.7%	2.5%	2.5%	2.4%	2.3%	2.2%	2.2%	2.1%	2.0%	2.0%
Electronics		133.2	133	138	145	153	161	169	175	182	186	191	195	200
YoY			0.2%	3.6%	4.9%	5.6%	5.2%	4.6%	4.1%	3.6%	2.9%	2.5%	2.1%	2.1%
Specialties		107.5	113	119	125	132	138	144	150	154	159	163	167	171
YoY			5.0%	5.3%	5.6%	5.3%	4.9%	4.3%	3.7%	3.2%	2.9%	2.7%	2.4%	2.0%
Water technologies		9,155	9,844	10,548	11,264	11,990	12,685	13,348	13,975	14,567	15,121	15,669	16,179	16,653
YoY			7.5%	7.2%	6.8%	6.4%	5.8%	5.2%	4.7%	4.2%	3.8%	3.6%	3.3%	2.9%
Pools		107.6	115	123	130	136	142	147	153	158	163	167	171	174
YoY			7.3%	6.5%	5.8%	4.5%	4.3%	4.1%	3.7%	3.3%	3.0%	2.7%	2.4%	2.0%
Electrochlorination		240.0	252	264	277	289	300	311	321	330	338	347	354	361
YoY			5.1%	4.9%	4.6%	4.4%	3.9%	3.5%	3.2%	2.9%	2.6%	2.5%	2.2%	2.0%
Disinfection & Filtration		8807.1	9,476	10,161	10,858	11,565	12,243	12,889	13,502	14,079	14,621	15,155	15,654	16,117
YoY			7.6%	7.2%	6.9%	6.5%	5.9%	5.3%	4.8%	4.3%	3.9%	3.7%	3.3%	3.0%
Energy Transition		768	960	1,216	1,773	2,658	4,022	6,306	9,349	12,417	15,108	17,400	19,379	20,746
YoY			25.0%	26.7%	45.8%	49.9%	51.3%	56.8%	48.3%	32.8%	21.7%	15.2%	11.4%	7.1%

Annex 9: Balance Sheet

€M	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2035E
Tangible assets	138	161	154	168	184	254	295	334	373	410	447	480	512	649
Intangible assets	74	72	69	70	65	51	55	62	69	76	83	89	95	115
Goodwill	63	67	62	63	67	65	64	64	64	64	64	64	64	64
Equity investments	135	126	112	122	123	232	241	251	266	282	302	324	347	436
Other non-current assets	35	44	46	45	30	30	33	35	37	39	41	44	47	59
Total non-current assets	444	469	443	467	468	632	688	745	808	871	937	1,002	1,065	1,323
Inventories	127	121	116	233	295	257	250	253	256	266	279	293	307	369
Trade and other receivables	107	114	107	169	156	180	193	195	201	211	226	243	260	326
Other current assets	32	27	29	43	193	64	57	59	63	67	71	77	82	103
Cash & cash equivalents	43	56	76	74	174	198	193	212	228	235	244	262	291	565
Total current assets	309	318	327	519	819	700	693	720	748	779	820	874	940	1,364
Total Assets	753	787	770	987	1,288	1,332	1,381	1,465	1,556	1,651	1,757	1,876	2,006	2,686
Total Equity	224	259	413	454	745	910	932	991	1,057	1,122	1,194	1,274	1,363	1,893
Non-current financial Liabilities	340	345	155	4	268	134	144	150	159	169	180	194	207	260
Other non-current Liabilities	56	63	57	60	37	39	39	41	44	46	50	53	57	72
Total non-current Liabilities	396	407	212	64	305	173	183	191	202	215	230	247	264	332
Trade and other payables	100	98	97	154	182	196	206	221	232	244	258	276	293	354
Financial liabilities	17	1	17	259	14	10	16	17	17	19	20	21	23	29
Other current Liabilities	16	21	31	56	42	43	44	45	48	51	55	59	63	79
Total current Liabilities	133	120	145	469	238	249	266	283	297	313	333	356	378	461
Total Equity & Liabilities	753	787	770	987	1,288	1,332	1,381	1,465	1,556	1,651	1,757	1,876	2,006	2,686

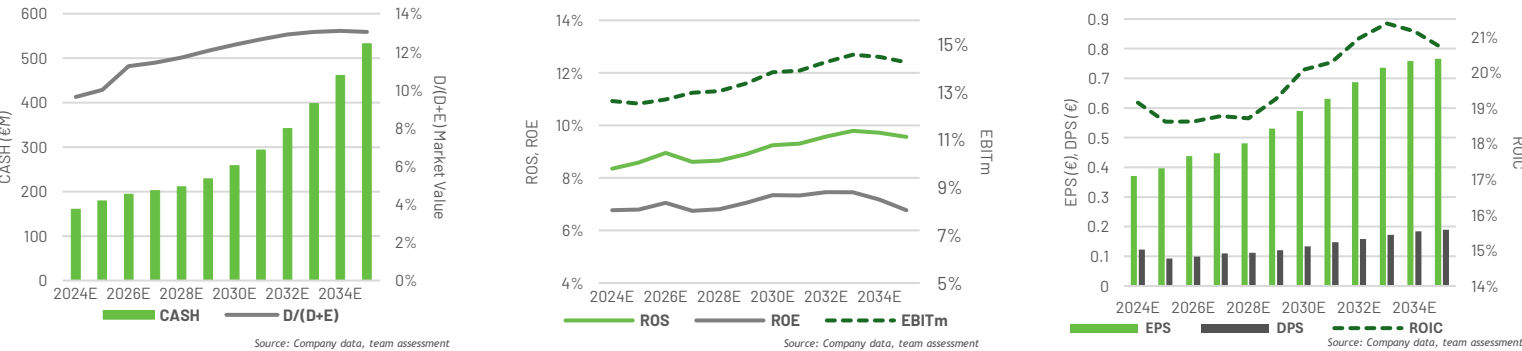
Source: Company data, team assessment

Annex 10: Income Statement

€M	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2035E
Electrode Technologies	291	299	290	358	473	464	469	485	502	519	536	553	568	636
Water Technologies	171	206	205	248	337	290	293	303	317	330	343	355	367	417
Energy Transition	-	-	4	9	43	102	105	114	135	165	205	257	311	514
Total Revenues	462	505	499	616	853	856	867	902	954	1,014	1,084	1,165	1,247	1,567
Raw Materials	(183)	(208)	(216)	(291)	(402)	(361)	(361)	(371)	(391)	(414)	(442)	(474)	(507)	(634)
Personnel expenses	(104)	(109)	(107)	(117)	(155)	(144)	(151)	(159)	(167)	(173)	(182)	(191)	(198)	(248)
Cost for services	(114)	(122)	(99)	(116)	(162)	(179)	(189)	(197)	(209)	(222)	(238)	(255)	(274)	(346)
Other operating (cost)/income	9	9	3	29	31	(1)	(16)	(16)	(16)	(16)	(18)	(20)	(23)	(25)
EBITDA	70	76	81	121	165	171	150	159	172	190	205	224	245	315
EBITDAm	15.1%	15.0%	16.1%	19.7%	19.4%	20.0%	17.3%	17.6%	18.0%	18.7%	18.9%	19.2%	19.7%	20.1%
D&A and other adjustments	(23)	(28)	(25)	(34)	(39)	(34)	(40)	(46)	(51)	(58)	(64)	(68)	(73)	(92)
EBIT	47	48	56	88	126	137	109	113	121	132	141	156	172	223
EBITm	10.2%	9.5%	11.1%	14.2%	14.8%	16.0%	12.6%	12.5%	12.7%	13.0%	13.0%	13.4%	13.8%	14.2%
Finance income	1	9	7	11	2	143	16	19	22	19	21	22	24	30
Finance expenses	(11)	(16)	(19)	(5)	(7)	(15)	(26)	(25)	(25)	(30)	(32)	(35)	(37)	(47)
Profit before tax	37	41	44	94	120	265	100	107	118	120	129	143	159	206
Income taxes	(11)	(12)	(11)	(27)	(31)	(34)	(26)	(28)	(31)	(31)	(34)	(37)	(41)	(54)
Net Income	26	29	33	66	90	231	74	79	87	89	96	106	118	153

Source: Company data, team assessment

Annex 11: Ratio Analysis



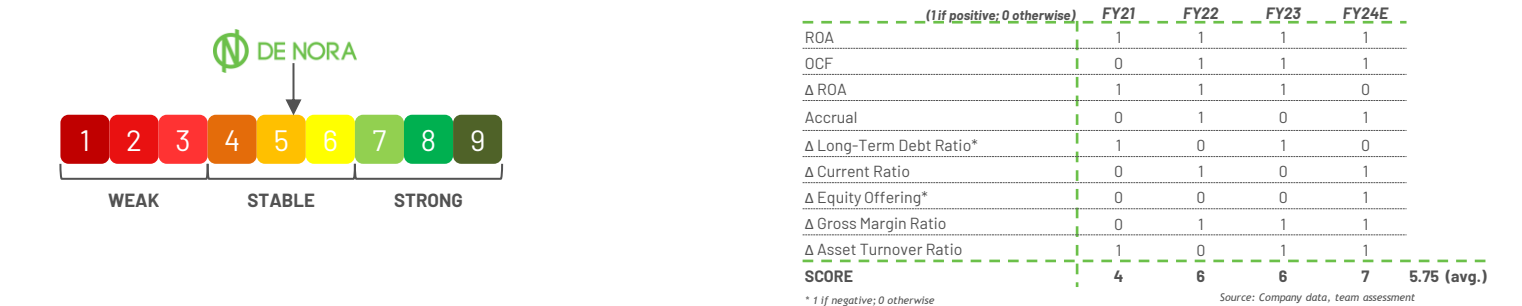
Source: Company data, team assessment

Source: Company data, team assessment

Source: Company data, team assessment

Annex 12: Piotroski F-Score

De Nora's Piotroski **F-Score is 5.75**, indicating moderate financial performance with room for improvement. From FY21 to FY24E, the score increases from 4 to 7, demonstrating progress in generating operating cash flows and **asset use efficiency**. Fluctuations in long-term debt and current liquidity reflect ongoing challenges in financial management. However, significant **improvements in gross margins and asset turnover** highlight a strengthening of De Nora's operational capabilities.



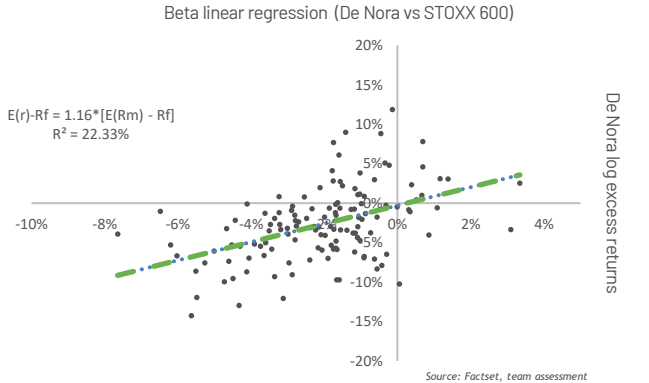
Annex 13: Equity Risk Premium (ERP) and BETA for Traditional Segments

In this annex, we compute the Equity Risk Premium (ERP) and Beta used to evaluate De Nora's traditional segments (**Electrode Technologies** and **Water Technologies**). The Equity Risk Premium (ERP) is calculated using a country-weighted average of market risk premia, taking into account the geographical sales distribution weights of these segments. The marginal contribution from each country, as displayed in the table below, is then aggregated to determine the corresponding Regional ERP.

COST OF EQUITY		2026E	2027E	2028E	2029E	2030E	2035E
ERP	Damodaran (2024E)	6.19%	6.21%	6.27%	6.26%	6.23%	6.28%
Europe	5.3%	26.2%	26.2%	25.7%	25.8%	25.7%	26.7%
North America	4.1%	38.1%	35.8%	34.7%	34.9%	35.6%	33.8%
Asia	8.8%	37.7%	38.1%	39.6%	39.3%	38.7%	39.5%
Beta (vs. STOXX Europe 600)		1.16	1.16	1.16	1.16	1.16	1.16
COST OF EQUITY (Ke, Re)		9.42%	9.28%	9.26%	9.34%	9.39%	9.65%

Source: FactSet, team assessment

The **Beta** used to evaluate **ET** and **WT** is obtained through a linear regression of De Nora's log excess returns on the STOXX Europe 600 Index (SXXP) returns. The Germany Government Bond 10Y serves as the risk-free rate (Rf). We compute log returns on a weekly basis from the IPO to minimize the impact of daily volatility.



Annex 14: Equity Risk Premium (ERP) and BETA for Energy Transition

In this annex, we compute the Equity Risk Premium (ERP) and Beta used to evaluate De Nora's **Energy Transition** segment. The Equity Risk Premium (ERP) is calculated using a country-weighted average of market risk premia, taking into account the geographical sales distribution weights of these segments. The marginal contribution from each country, as displayed in the table below, is then aggregated to determine the corresponding Regional ERP.

COST OF EQUITY		2026E	2027E	2028E	2029E	2030E	2035E
ERP	Damodaran (2024E)	5.34%	5.34%	5.35%	5.35%	5.35%	5.37%
Europe	5.3%	94.1%	94.0%	93.9%	93.8%	93.7%	93.2%
North America	4.1%	2.5%	2.5%	2.5%	2.5%	2.5%	2.6%
Asia	8.8%	3.4%	3.5%	3.6%	3.7%	3.8%	3.4%
Beta		1.69	1.69	1.69	1.69	1.69	1.69
COST OF EQUITY (Ke, Re)		11.25%	11.10%	11.01%	11.10%	11.19%	11.43%

Source: FactSet, team assessment

The **Beta** used to evaluate the **Energy Transition** segment is obtained by analysing a group of selected green hydrogen comparables. Specifically, we first unlever the (levered) Beta of each comparable obtained through stock returns regressions. Instead of using an average, we select the highest unlevered Beta to incorporate that De Nora's Revenues in the ETR segment are largely tied to *thyssenkrupp nucera*, thus capturing its unique risk profile. Finally, we relever this Beta to reflect De Nora's capital structure.

	D/E	Tax rate	Unlevered Beta	Levered Beta
Ballard	1.8%	26.5%	1.54	1.56
Nel ASA	4.2%	22.0%	1.37	1.42
McPhy	5.6%	25.0%	1.08	1.13
Plug Power	33.4%	25.0%	1.55	1.94
ITM Power	4.7%	25.0%	1.53	1.58
thyssenkrupp nucera	1.3%	30.0%	1.43	1.45
De Nora (ETR)	11.82%	26.00%	1.55	1.69

Source: FactSet, team assessment

Annex 15: Green Hydrogen Bull & Bear Scenarios

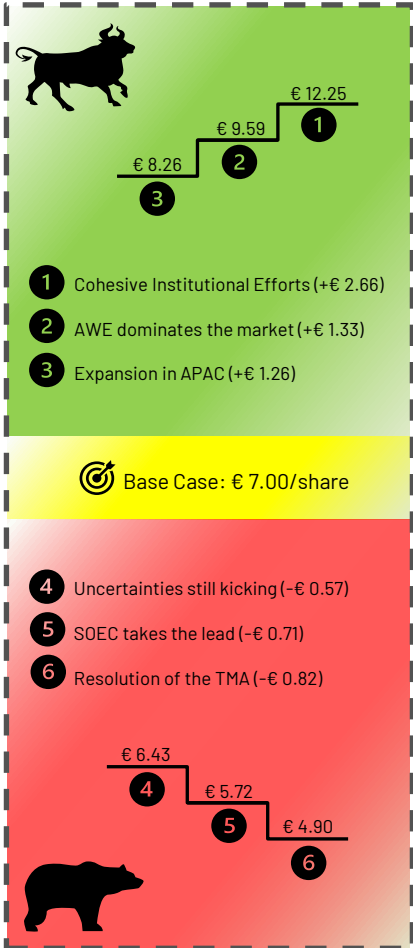
We have assessed De Nora's strategy and positioning in the Energy Transition segment under both bull and bear scenarios. The **best-case** scenario showcases a substantial **upside potential of 75%** compared to the base case. Conversely, the **worst-case** carries a lower impact, with a **downside of 30%** compared to the base case (€ 7.00/share).

Bull case: We consider the following three independent scenarios whose combined effect would lead to a substantial turnaround for De Nora. **If all these favorable conditions materialize simultaneously**, the Company would be able to deliver on the promises made at the time of the IPO, which so far have not been fully realized. As a result, **the stock price could return to IPO levels**, restoring investor confidence and validating the strategic vision originally outlined.

- 1) Cohesive Institutional Efforts.** In a context where EMEA institutions strengthen incentive policies for green hydrogen production, De Nora could be in a privileged position to capitalize on the growing demand. The need to reduce emissions in hard-to-abate sectors would accelerate government support, making the hydrogen market increasingly profitable and resilient. Funding programs and subsidy schemes could reduce production costs, facilitating the adoption of AWE technology and expanding De Nora's order book (Value unlocked: +€2.66).
- 2) AWE dominates the market.** The AWE (Alkaline Water Electrolysis) technology, adopted by De Nora, could establish itself as the most efficient solution among available alternatives, standing out for its reliability, low operating costs and greater scalability compared to PEM (Proton exchange membrane) and SOEC (Solid Oxide Electrolysis Cell). The evolution of technology and improvements in electrochemical performance would strengthen De Nora's position as a leader in the sector (Value unlocked: +€1.33).
- 3) Expansion in APAC.** De Nora might expand its global reach through large-scale strategic partnerships in the Asian market. The increasing demand for green hydrogen in APAC, supported by government policies and an accelerated energy transition, could push the company to form alliances with local and multinational producers. This expansion might enable De Nora to consolidate its presence in emerging markets and benefit from economies of scale, improving margins and competitiveness (Value unlocked: +€1.26).

Bear Case: We consider the following three independent scenarios whose combined effect could be a breaking point for De Nora. The simultaneous lack of stable incentives, the rise of superior competing technology, and the loss of a key partner would severely weaken its strategic position. **In this worst-case scenario, De Nora might have to exit the energy transition business**, marking a point of no return with major implications for its future.

- 4) Uncertainties still kicking.** Incentive policies for green hydrogen could remain erratic, hampered by high production costs and public budget constraints. In the absence of a clear regulatory roadmap and stable funding, large future projects might experience further slowdowns or might be downsized. The green hydrogen market may struggle to take off on a large scale, limiting growth opportunities for De Nora (Value destroyed: -€0.57).
- 5) SOEC takes the lead.** Meanwhile, SOEC technology could gain traction in the market, offering superior efficiency and better integration with existing energy networks. The growing adoption of SOEC by industrial players and institutions would reduce demand for AWE, undermining De Nora's competitive advantage (Value destroyed: -€0.71).
- 6) Resolution of the TMA.** In an uncertain environment, *thyssenkrupp nucera* might manage to find a cheaper large-scale electrode supplier than De Nora. This dynamic could lead to the early termination of the Toll Manufacturing Agreement before 2038, resulting in a significant loss of volumes and Revenues for the Company and slight delays in electrodes supply for Chlor-Alkali, as renegotiation of terms would be required (Value destroyed: -€0.82).



Annex 16: Peers Selection

To conduct our Multiple Valuation for De Nora, we identified the appropriate comparables across the three business segments: **Electro Technologies**, **Water Technologies**, and **Energy Transition**. Our approach utilizes a Proprietary Scoring Model to assess a broad spectrum of listed companies within these industries. This model is structured around **3-weighted dimensions**: (i) **size**, split into Market Capitalization and Revenues, which accounts for 30%; (ii) **financial metrics**, subdivided into margins, returns, risks and cash generation, with a 30% weight; and (iii) **business consistency**, which holds the remaining 40% weight. Each company is then assigned a score which is computed as the **weighted average** of points collected along the three dimensions, according to its **proximity to De Nora’ values**. As a result, by ruling out companies with a low score, we identify 7 comparables with De Nora.

GENERAL		SIZE & GROWTH			MARGINS		RETURNS			RISK & LEVERAGE			CASH GENERATION			COMPARABLE	
Company Name	Country	Market Cap (€)	Revenue (€)	Revenue CAGR FY20-23	EBITDAm	EBITm	ROA	ROE	ROC	D/E	Net Debt to Total Capital	Beta	Price to Cash Flow	WC Turnover	Capex / Sales	SCORE	OUTCOME
De Nora	ITA	1.40B	0.86B	20%	20%	16%	10%	23%	13%	12%	-7%	1.2	53.4	1.9	10%		
ELECTRODE TECHNOLOGIES																	
Asahi Kasei	JP	8.81B	17.79B	3%	12%	5%	1%	3%	5%	53%	22%	0.7	5.2	3.8	6%	0.65	YES
thyssenkrupp nucera	DE	1.13B	0.66B	38%	4%	3%	3%	5%	4%	1%	-101%	1.3	-152.4	1.0	1%	0.7	YES
Metso Corporation	FI	7.74B	5.39B	18%	18%	15%	8%	22%	21%	59%	21%	1.5	25.1	3.8	3%	0.43	NO
WATER TECHNOLOGIES																	
Xylem Inc.	US	28.39B	6.81B	15%	18%	15%	5%	9%	8%	26%	13%	1.0	29.8	4.4	4%	0.66	YES
Ecolab Inc.	US	66.14B	14.17B	9%	20%	14%	6%	18%	13%	109%	47%	0.5	23.6	11.8	5%	0.45	NO
Veolia SA	FR	20.46B	45.35B	20%	14%	6%	1%	11%	7%	368%	57%	0.8	4.6	-20.8	7%	0.59	YES
ENERGY TRANSITION																	
NEL ASA	NO	0.33B	0.12B	45%	-12%	-32%	-11%	-15%	-9%	4%	-48%	1.1	-16.6	0.4	44%	0.57	YES
ITM	UK	0.26B	0.02B	57%	-182%	-228%	-7%	-10%	-13%	5%	-78%	0.4	-8.2	0.1	85%	0.37	NO
Plug Power Inc.	US	2.2B	0.82B	43%	-109%	-117%	-26%	-39%	-24%	33%	16%	1.6	-2.4	1.1	78%	0.56	YES
Ballard Power System	CA	0.46B	0.09B	1%	-146%	-158%	-13%	-14%	-15%	2%	-73%	1.8	-10.4	0.1	40%	0.43	NO
McPhy Energy Sa	FR	0.03B	0.02B	11%	-259%	-274%	-25%	-43%	-44%	-66%	-62%	0.6	-1.3	0.6	131%	0.50	YES

Source: FactSet, team assessment

It is worth mentioning that our Peers Selection process **excludes the following companies**: i) **Metso Corporation**, a leader in the mining and metallurgy sector, which **diverges significantly in core business focus from De Nora**; ii) **Ecolab**, a company significantly larger than De Nora in terms of **market cap**; iii) **ITM**, and iv) **Ballard**, both players in the Energy Transition market, but focused on **PEM technology, which is distinct from the AWE technology adopted by De Nora**.

Annex 17: Relative valuation

Despite the challenges in evaluating a unique company like De Nora, we use a **Multiple Valuation** approach to confirm our recommendation. We first create a basket of comparables by assigning a weight to each peer, depending on the score obtained in the Proprietary Scoring Model discussed above and the relative importance of the peer's industry with respect to De Nora's Revenues breakdown. Then, we compute the **1-year-forward EV/SALES and P/SALES** for each comparable and evaluate the basket's weighted average of these multiples. By applying them to De Nora's 1-year forward Revenues and book value of equity, we obtain a final target price of €7.09 (upside: +2.01%), €7.24 (upside: +4.17%), which further supports our **HOLD** recommendation.

PROPRIETARY SCORING MECHANISM					MULTIPLES		
Company Name	SIZE	BUSINESS CONSISTENCY	QUANTITATIVE METRICS	WEIGHT	Company Name	1Y Forward EV/Sales	1Y Forward P/Sales
De Nora SpA					De Nora SpA	1.5	1.6
ELECTRODE TECHNOLOGIES					ELECTRODE TECHNOLOGIES		
Asahi Kasei	○○○	●●○	●○○	19.37%	Asahi Kasei	0.8	0.5
tk nucera	●●●	●●○	●○○	24.70%	thyssenkrupp nucera	0.5	1.3
SUM				44.07%	Weighted Average	0.7	1.0
WATER TECHNOLOGIES					WATER TECHNOLOGIES		
Xylem Inc.	○○○	●●○	●●○	19.01%	Xylem Inc.	3.5	3.3
Veolia SA	○○○	●○○	●○○	14.50%	Veolia SA	1	0.4
SUM				33.51%	Weighted Average	2.5	2.1
ENERGY TRANSITION					ENERGY TRANSITION		
NEL ASA	●○○	●○○	○○○	8.01%	NEL ASA	1.6	2.9
Plug Power Inc.	●●○	●○○	○○○	8.49%	Plug Power Inc.	2.5	1.9
McPhy Energy Sa	○○○	○○○	○○○	5.92%	Mcphy Energy Sa	0.3	1.2
SUM				22.42%	Weighted Average	1.6	2.1

1Y Forward Peers Average EV/Sales 1.5

1Y Forward De Nora Sales	0.90 B
1Y Forward Enterprise Value	1.35 B
Net Debt	60.57 M
Equity Value	1.41 B
N. Shares	199 M
Target Price	7.09
Current Price	6.95
Upside/Downside	2.01%

DE NORA

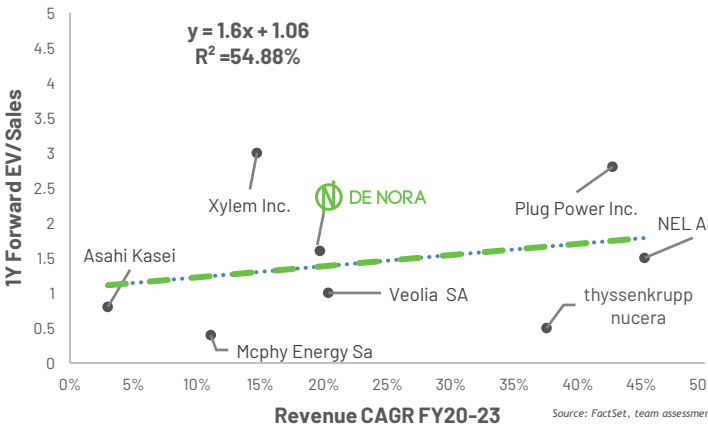
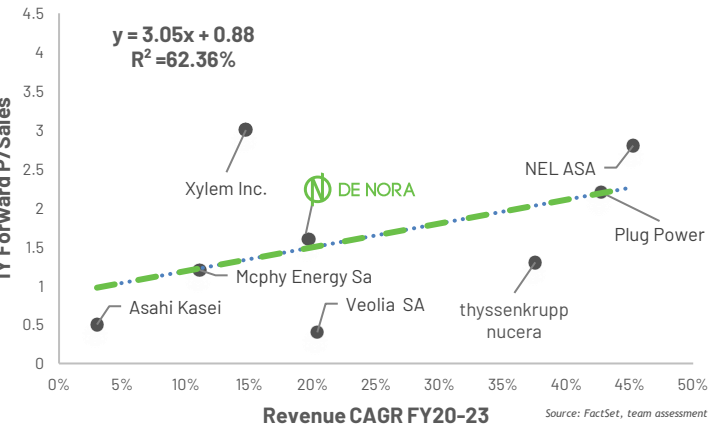
1Y Forward Peers Average P/Sales 1.6

1Y Forward De Nora Sales	0.90 B
Target Price	7.24
Current Price	6.95
Upside/Downside	4.17%

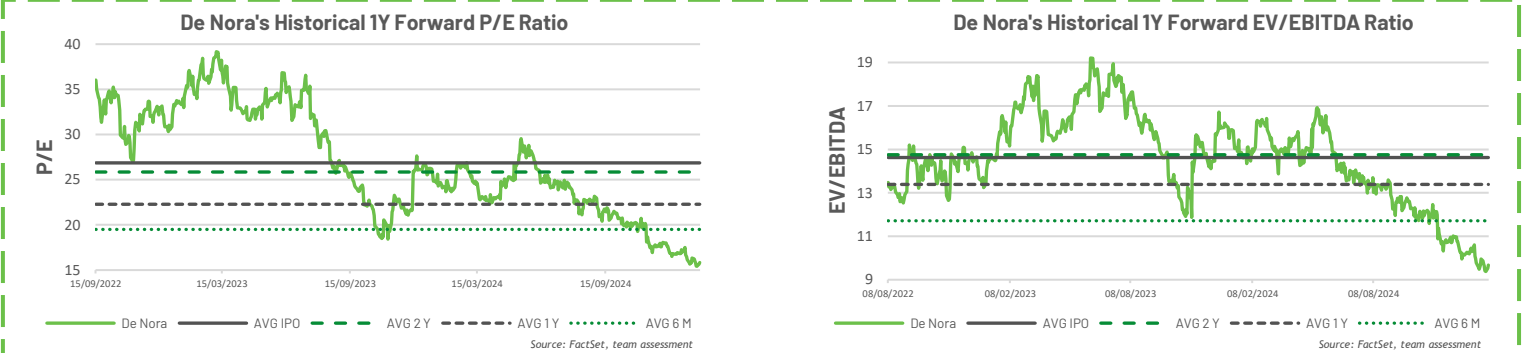
DE NORA

Source: FactSet, team assessment

Moreover, to assess the predictive goodness of the model, we regress the 1Y forward **P/Sales** and **EV/Sales** on the peers' FY20-23 Revenue CAGR. We find a **strong relationship** between the variables, with an R² coefficient of 62.36% and 54.88% respectively. Finally, we back this valuation with a **historical analysis** of De Nora's 1-year Forward P/Sales ratio.



HINT:



To have a deepen understanding of De Nora’s multiple dynamics, we analyse the historical time series of two 1Y forward multiples: **EV/EBITDA** and **P/E**. From the data, we notice a downward trend, indicating a structural shift that has pushed both multiples to historical lows. Consequently, when pricing De Nora through historical ratios, it is wise to be cautious when relying on figures from periods marked by heightened enthusiasm for green hydrogen, as those older multiples incorporate excessive optimism and therefore do not accurately reflect current market conditions. Hence, to determine the fair value more precisely, it is advisable to rely on more recent multiples, which better capture the present market context.

Investment Risks

Annex 18: Additional Risks

In addition to the risks analysed in the related section, we also consider some other relevant risks and the mitigation strategies adopted to face them.

COUNTRY RISK (MEDIUM): The global footprint of the Company exposes it to local economic and political challenges, trade restrictions, and regulatory impacts on cash flow and exchange rates. Growth disparities across regions could also affect the Group’s strategic plans.

MITIGATION: The Group’s global presence reduces the impact of localized disruptions. However, major challenges in key growth regions, including Europe, China, and the United States, remain a significant risk to its future performance.

INTELLECTUAL PROPERTY RIGHTS AND INDUSTRIAL SECRETS RISK (MEDIUM): The Company faces potential challenges in safeguarding its intellectual property, trade secrets, and technological expertise. Failure to protect these assets could erode its competitive position and affect market share.

MITIGATION: De Nora adopts a proactive approach by **securing patents** and trademarks globally, with a particular focus on core technologies. While these efforts mitigate risks, challenges persist due to jurisdictional disparities in legal frameworks and **potential delays in approvals**. As of the most recent updates, the Group holds several active patents across strategic markets, and **its R&D investment underscores its commitment to innovation**.

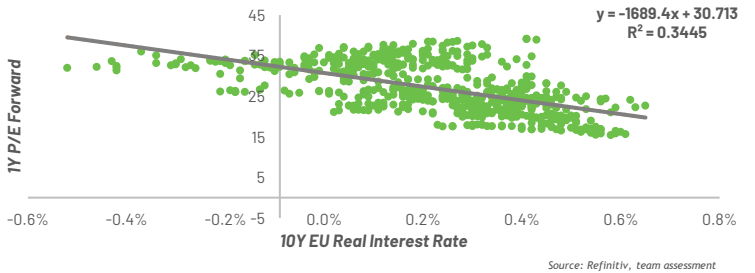
COMMERCIAL RISK (MEDIUM): The Group faces potential disruptions in maintaining consistent product distribution or achieving targeted sales volumes due to the possible termination of agreements with distributors or operational inefficiencies among retail partners. Such breakdowns in key commercial relationships could significantly impact De Nora’s business resilience.

MITIGATION: De Nora mitigates this risk by fostering **durable collaborations** with partners and enhancing customer loyalty through service quality. The Company integrates **safeguard measures**, including performance standards and minimum volume commitments, yet complete elimination of the risk from non-compliance by distributors remains challenging.

Annex 19: Investor’s Risks

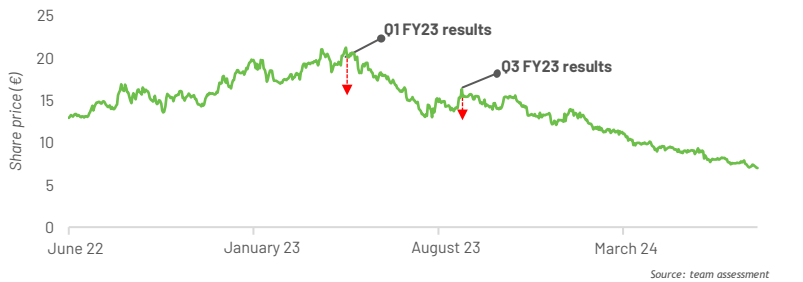
REAL INTEREST RATE RISK

A change in Real Interest Rates can strongly affect De Nora’s valuation through a reduction of the present value of future expected cashflows and a higher WACC. The regression on the right shows the historical effect on De Nora’s P/E ratio of the change in Real Interest Rates.



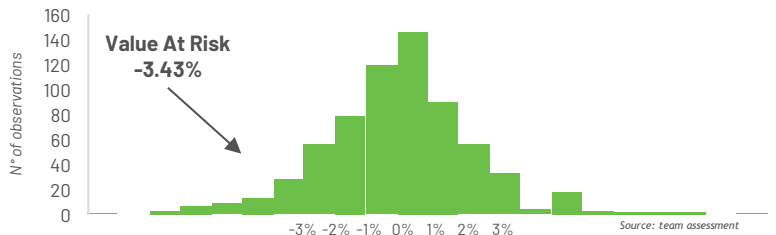
REVISED OUTLOOK (DOWNSIDE) RISK

De Nora’s stock price has been negatively affected by the Company’s recurrent pattern of announcing targets for its results, failing to meet them, and subsequently revising them downward. Indeed, the largest daily drops usually corresponded to quarterly results. Even though the underperformance is not directly tied to extraordinary external factors, the repeated downward revisions of financial targets are interpreted by the market as a lack of credibility and strategic clarity. The frequent occurrence of price drops caused the stock to attain a negative annual return of -19.85% (since the IPO until today).



TAIL RISK

Since the IPO, De Nora’s share price has experienced an average annual standard deviation of 55.49%. The average VaR computed at 95% confidence interval using daily returns is -3.43%.



Annex 20: Stock Liquidity risk

De Nora’s stock faces potential liquidity risks primarily because only about **25%** of the ordinary **shares are actively traded on the market**, while the majority remains with controlling shareholders through non-listed multiple-voting shares. This limited availability of shares can result in lower trading volumes and potentially lead to greater **price volatility**. Additionally, the share **buyback program**, initiated on November 8, 2023, with the goal of enhancing shareholder value, further reduces the number of shares available on the market, increasing liquidity risk. At the end of the buyback on April 12, 2024, the Company had purchased **3 million of its own shares**, equivalent to **1.478% of the Company’s share capital**.

DATE	SHARES BOUGHT	% SHARE CAPITAL	PERIOD RETURN
9/11/23 - 31/12/23	1,158,505	0.574%	11.99%
1/1/24 - 29/2/24	1,154,125	0.571%	0.00%
1/3/24 -12/4/24	687,370	0.333%	-3.08%
TOTAL	3,000,000	1.478%	-4.39%

Source: Company Information ,team assessment

Environmental, Social & Governance (ESG)

Annex 21: ESG

Score method – Our methodology takes a **bottom-up approach**, wherein we first assign a grade to each metric and then calculate the weighted average at both bucket and pillar levels. We compare De Nora's performance with a panel of **comparable firms, identifying the best and worst-in-class players to deeply understand De Nora's relative performance**. The Peers Selection process is based on i) value of margins and key ratios, ii) geographical presence. Our data is taken from Refinitiv and sustainability reports, used to fill missing data. We use a quantitative model with **71 key metrics** (24 Environmental – 27 Social – 20 Governance).

ENVIRONMENTAL (WEIGHT: 34.20% – SCORE: 6.60)							
BUCKET (weight)	METRIC	De Nora	Previous	COMPETITORS Average [Min – Max]	Previous	SCORE	
						METRIC	BUCKET
RESOURCE USE (4.80%)	Resource Reduction Policy	✓	Unchanged	100% ✓	Unchanged	6/10	6.21/10
	Policy Water Efficiency	✓	Unchanged	17% ✗ - 83% ✓	Unchanged	6.5/10	
	Policy Energy Efficiency	✗	Unchanged	33% ✗ - 67% ✓	Unchanged	4.5/10	
	Policy Sustainable Packaging	✓	Unchanged	67% ✗ - 33% ✓	Unchanged	7/10	
	Policy Environmental Supply Chain	✓	Unchanged	100% ✓	Unchanged	6/10	
	Environment Management Team	✗	Unchanged	17% ✗ - 83% ✓	Unchanged	4/10	
	Environment Management Training	✓	Unchanged	17% ✗ - 83% ✓	Unchanged	6.5/10	
	Total Energy Use/Million in Revenue	468	462	\$1,121.72 [10.76 – 2,435.18]	\$1,147.05 [12.94 – 2,570.30]	8/10	
	Renewable Energy Use	✓	Unchanged	100% ✓	Unchanged	6/10	
	Green Buildings	✗	Unchanged	100% ✓	33% ✗ - 67% ✓	6/10	
	Total Water Use / Million in Revenue	225.36	58.60	4,239.84 [40.34 – 11,932.39]	\$287.97 [39.31 – 1,170.98]	8/10	
	Environmental Supply Chain Management	✓	Unchanged	100% ✓	Unchanged	6/10	
EMISSIONS (6.00%)	Policy Emissions	✗	Unchanged	17% ✗ - 83% ✓	Unchanged	4/10	6.10/10
	Target Emissions	✓	Unchanged	100% ✓	Unchanged	6/10	
	Total CO2 Emissions /Million in Revenue \$	\$40.50	\$39.33	\$126.59 [9.86 – 407.60]	\$147.66 [15.41 – 470.63]	8/10	
	Total Waste / Million in Revenue \$	\$7.61	\$6.37	\$47.30 [5.29 – 149.03]	\$40.86 [4.50 – 158.93]	8/10	
	Total Hazardous Waste / Million in Revenue \$	\$4.46	\$3.12	\$7.81 [0.02 – 27.89]	\$7.31 [0.02 – 26.71]	7/10	
	Waste Reduction Initiatives	✓	Unchanged	17% ✗ - 83% ✓	Unchanged	6.5/10	
	Waste Recycling Ratio	41.82%	38.56%	62.15% [22.39 – 99.14]	78.03% [37.54 – 99.69]	4/10	
	e-Waste Reduction	✗	Unchanged	71% ✗ - 29% ✓	Unchanged	5/10	
	ISO 14000 or EMS	ISO 14000	Unchanged	83% ISO14000 – 17% Both	Unchanged	6/10	
	Environmental Partnerships	✓	Unchanged	33% ✗ - 67% ✓	Unchanged	6.5/10	
INNOVATION (6.00%)	Environmental Products	✓	Unchanged	100% ✓	Unchanged	6/10	7.00/10
	Animal Testing	✗	Unchanged	64% ✗ - 36% ✓	Unchanged	8/10	

SOCIAL (WEIGHT: 37.30% – SCORE: 6.09)							
BUCKET (weight)	METRIC	De Nora	Previous	COMPETITORS Average [Min – Max]	Previous	SCORE	
						METRIC	BUCKET
WORKFORCE (7.60%)	Health & Safety Policy	✓	Unchanged	100% ✓	Unchanged	6/10	5.85/10
	Policy Employee Health & Safety	✓	Unchanged	100% ✓	Unchanged	6/10	
	Policy Supply Chain Health & Safety	✓	Unchanged	100% ✓	Unchanged	6/10	
	Health & Safety Training	✓	Unchanged	100% ✓	Unchanged	6/10	
	Salary Gap	18	20	24 [5 – 36]	52.5 [4 – 131]	7/10	
	Net Employment Creation (%)	4.20%	12%	9.25% [-3.49 – 29.21]	28.32% [2.89 – 104.76]	4.5/10	
	Turnover of Employees (%)	15.99%	16.26%	13.10% [2.04 – 57.00]	13.08% [0.72 – 20.00]	5.5/10	
	Women Employees (%)	20%	19.40%	25.67% [22.40 – 29.10%]	35.89% [23.00 – 52.73]	5.5/10	
	Total Injury Rate	2.81	3.30	31.11 [2.70 – 105.85]	19.70 [3.20 – 66.04]	8/10	
	Average Training Hours	9	15	24.60 [16.71 – 29.00]	24.88 [14.00 – 38.40]	4/10	
HUMAN RIGHTS (11.40%)	Human Rights Policy	✓	Unchanged	100% ✓	Unchanged	6/10	6.17/10
	Policy Freedom of Association	✓	Unchanged	17% ✗ - 83% ✓	Unchanged	6.5/10	
	Policy Child Labor	✓	Unchanged	100% ✓	Unchanged	6/10	
	Policy Human Rights	✓	Unchanged	100% ✓	Unchanged	6/10	
	Fundamental Human Rights ILO UN	✓	Unchanged	17% ✗ - 83% ✓	Unchanged	6.5/10	
	Human Rights Contractor	✓	Unchanged	100% ✓	Unchanged	6/10	
COMMUNITY (9.50%)	Policy Fair Competition	✓	Unchanged	17% ✗ - 83% ✓	Unchanged	6.5/10	6.1/10
	Policy Bribery and Corruption	✓	Unchanged	100% ✓	Unchanged	6/10	
	Policy Business Ethics	✓	Unchanged	100% ✓	Unchanged	6/10	
	Improvement Tools Business Ethics	✓	Unchanged	100% ✓	Unchanged	6/10	
	Whistleblower Protection	✓	Unchanged	100% ✓	Unchanged	6/10	
PRODUCT RESPONSIBILITY (8.90%)	Policy Customer Health & Safety	✓	Unchanged	17% ✗ - 83% ✓	Unchanged	6.5/10	6.17/10
	Policy Data Privacy	✓	Unchanged	100% ✓	Unchanged	6/10	
	Policy Cyber Security	✓	Unchanged	100% ✓	Unchanged	6/10	
	ISO 9000	✓	Unchanged	17% ✗ - 83% ✓	33% ✗ - 67% ✓	6.5/10	
	Armaments	✗	Unchanged	100% ✓	Unchanged	6/10	
	Oil and Gas Producer	✗	Unchanged	100% ✓	Unchanged	6/10	

Source: Company information, Refinitiv, team assessment

Source: FactSet, Company information, team assessment

The figure consists of four donut charts, each representing a different group of executives. The legend indicates that green represents Fixed compensation, grey represents Short-Term Incentive (STI), and light green represents Long-Term Incentive (LTI).

Executive Group	Fixed (%)	STI (%)	LTI (%)
CHAIRMAN	100%	0%	0%
CEO	42%	20%	38%
KEY EXECUTIVES	60%	20%	20%
NON-EXECUTIVE DIRECTORS	100%	0%	0%