



# CFA Institute

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## CFA Institute Research Challenge

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Industrie De Nora Spa

Italy | Industrial Products and Services

Initiation of Coverage| February 2025

BUY

Current Price: 6.90

Target Price: 9,72

Upside: 40.86%

Exchange: Italian Stock Exchange

Market: Euronext Milan

Ticker: DNR

Market Data

Market Capitalization: €353,307,455

Shares Outstanding: 51,203,979

Shareholders Structure

De Nora family: 53.33%

Asset Company 10 S.r.l., 21.59%

Treasury Shares 1.48%

Management 1.47%

Other institutional and retail investors 22.13%

Stock Performance

1Month: -11.45%

6Months: -33.59%

1Year: -50.82%

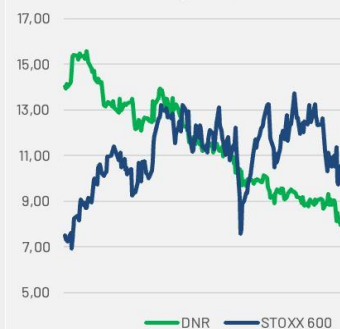
1 Year High € 15.56

1 Year Low: € 6.90

Industrie De Nora Performance –Exhibit 1



One-year price trend



Investment Summary

BUY THE DEEP, POWER THE TIDE

We initiate coverage on De Nora with a **BUY recommendation** and a **target price of €9.72**, representing a 40.86% upside from the last closing price of €6.90 (February 5, 2025). Our valuation is based on a Sum-of-the-Parts (**SOTP**) approach, combining Discounted Cash Flow (**DCF**) analysis for mature business segments and Real Option Valuation for its high-growth hydrogen segment, further validated through relative valuation methods (*Exhibit 2*).

De Nora is a global **leader in electrochemical solutions** with a diversified portfolio serving multiple industries. Historically, the company has dominated the electrode technologies market, a business it has successfully operated for over a century. In 2015, through **M&A activity**, De Nora expanded into Water Technologies, reinforcing its presence in the broader industrial sector. More recently, in 2021, it entered the green hydrogen market, a move that positions the company at the forefront of an emerging high-potential industry.

VALUATION APPROACH: UNLOCKING DE NORA'S TRUE VALUE

In FY 2023, De Nora generated **€856.4 million in revenue**, with **54% coming from Electrode Technologies**, **34% from Water Technologies**, and **12% from Energy Transition**.

Given the maturity and stability of the first two segments, we have valued them using a **two-stage DCF model**, projecting cash flows until 2030E before applying a terminal value through the Gordon Growth Model. However, due to the **uncertainty surrounding the hydrogen market**, we have opted for a **Real Option Valuation** to better reflect the strategic opportunity in this space.

To further validate our assumptions, we conducted Monte Carlo simulations and sensitivity analyses to stress-test the robustness of our valuation.

KEY DRIVERS: WHY DE NORA STANDS OUT

Our investment thesis is driven by **five key factors**.

- De Nora boasts strong profitability, maintaining a historical EBITDA margin of about 20%, with minimal volatility of about 1%, reflecting its **high operational efficiency**.
- Its core business is highly resilient, with the electrode segment operating for over 100 years, serving a diverse customer base across various industries. While **raw material procurement** (particularly titanium, copper, nickel, and precious metals) poses a **potential cost risk**, De Nora's historical EBITDA margin of about 25% in this segment has remained unaffected, as the company can pass on cost increases to customers due to its strong market position.
- The market is currently undervaluing De Nora's **exposure to green hydrogen**, effectively offering investors a free call option on the sector's future growth. With its early presence and strategic investments, De Nora is well-positioned to benefit from an acceleration in hydrogen adoption. Although this segment is the newest, it holds the **greatest potential** to transform the company's market positioning. While De Nora's two more established business lines provide stability and consistent cash flows, the hydrogen segment introduces an element of uncertainty—one that could also be the most rewarding. However, the risk associated with this segment is significantly mitigated by the strength and steady cash flows generated by the company's core businesses, creating a balanced and resilient growth strategy.
- The company's **strategic joint venture with Thyssenkrupp Nucera** further strengthens its positioning in hydrogen technologies and has been directly incorporated into our valuation.
- These fundamental strengths, De Nora benefits from a **highly flexible operational structure**, allowing its machinery and production facilities to be adapted across all three business segments. This provides a natural hedge against potential market fluctuations, ensuring operational stability and efficiency.

Given these drivers, we believe that De Nora represents a strong investment opportunity, with a solid core business, attractive profitability, and strong optionality in the high-growth hydrogen sector.

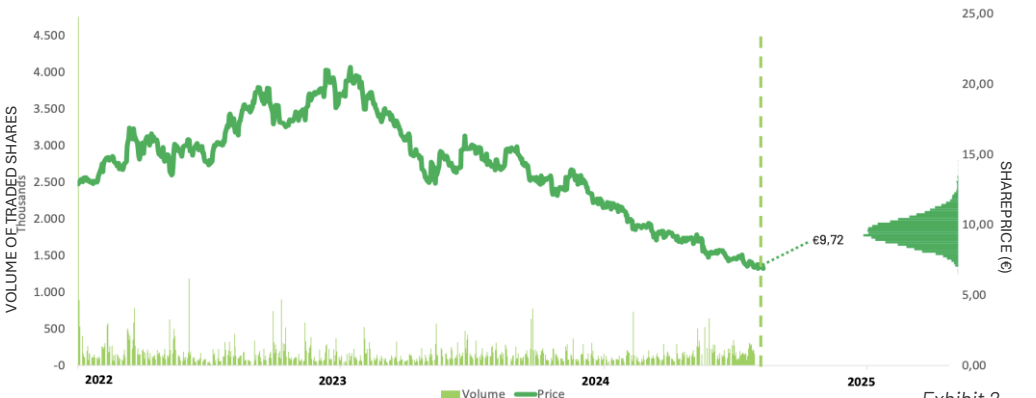


Exhibit 2

COMPANY PRESENTATION: BLAZING A TRAIL FOR THE ENERGY OF TOMORROW

**Founded in 1923** by Oronzio De Nora the company is a global leader in the diversified production of **electrochemical components**. Serving a wide range of end markets, De Nora also plays a pivotal role in the Green Economy, recording a sales for €856 million in FY23 and market capitalization of €353 million as of February 5<sup>th</sup> 2023.

The market debut on **the Italian Stock Exchange** on 30th June 2022 reflects the solid position in the industry and the focus on sustainable growth in a dynamic global market. De Nora operates with **24 companies** in **10 countries** and has **5 advanced R&D centers** in Italy, the United States, and Japan, where it continuously enhances and expands its proprietary technologies (Appendix 1). With more than 280 patent families and over 2,800 territorial extensions, the company's innovations are globally protected. Its extensive network and product portfolio across 100 countries enables De Nora to serve customers worldwide, supported by a dedicated team of over **2,000 employees**.

De Nora is led by **Paolo Dellachà**, the CEO, who oversees the company's strategic direction. **Federico De Nora**, as President, plays an important role in governance and decision-making. In June 2024, **Luca Oglialaro** was appointed Chief Financial Officer (CFO), succeeding Massimiliano Moi. De Nora's ownership structure reveals a blend of **strong family leadership** and **strategic partnerships**. The De Nora family holds a dominant **53.33%** of the company, ensuring continuity and alignment with its long-term vision. The company is also backed by Asset Company 10 S.r.l., which holds **21.59%** of shares, and is entirely controlled by Snam. While management holds a modest **1.48%**, the **23.6%** is held by other institutional and retail investors (Exhibit 4).

ONE EXPERTISE BUT 3 POWER DIMENSIONS

With almost 100 years of experience in electrochemistry, De Nora is a well-diversified producer of electrochemical components employed in a variety of end-markets. De Nora's strength lies in its close relationships with **blue-chip customers**, supported by its extensive global footprint in production, R&D, and aftersales services, ensuring proximity and responsiveness. Growth has been driven by a combination of organic expansion and transformative acquisitions, such as the **tk Nucera joint venture** (Appendix 2) with thyssenkrupp and the Severn Trent water purification asset acquisition in 2015, which enhanced its market reach and service capabilities. 68% of the business segment's revenues, totaling €585.7 million, are generated from new product sales, while 32%, equivalent to €270.8 million, come from after-sales services, highlighting the balanced contribution of innovation and customer retention to overall growth. The revenue distribution highlights that EMEA leads with 36%, followed by APAC at 34%, while the Americas contribute 30%, reflecting a balanced yet slightly higher performance in EMEA and APAC regions. De Nora is organized into three business segments, three divisions integrated into one unified operational center, leveraging shared production facilities, expertise, and manufacturing methods and technologies to drive synergies (Appendix 3).

**ELECTRODE TECHNOLOGIES** accounted for **54% of total revenues**. It's De Nora's historical business and its backbone focused on the production and sale mainly of electrodes used for the production of a. basic chemicals (chlorine, caustic soda and their derivatives), b. printed circuits for the electronics industry and critical components for the manufacture of lithium batteries- catalytic coatings that use noble metals - electrolytic cells for chlorine and caustic soda production, as well as their components and other accessories, and anode structures complete with accessories for the production of non-ferrous metals (nickel, cobalt). The Chlor-alkali line generates 69% of the revenues in this business segment, with Electronics contributing 17% and Specialties and New Applications accounting for the remaining 14%. New Installations represent 58% of total revenues, with Services making up the other 42%. Strong customer relationships and aftersales support drive high margins.

**WATER TECHNOLOGIES** business accounts for **34% of total revenues**, focusing on the design, manufacture, and sale of equipment, systems, and technologies for water treatment providing solutions for swimming pool disinfection, seawater and brine electrochlorination for on-site production of low-concentration sodium hypochlorite, drinking water and wastewater disinfection and filtration, as well as marine water treatment applications. Alongside providing equipment and systems for new installations (74%) the Group offers a range of after-sales services (26% of total revenues). The Water Technologies Business generates its revenues primarily from Disinfection and Filtration at 35%, followed by Electrochlorination at 31%, Swimming Pools at 30%, and Marine Technologies contributing for 4%.

**ENERGY TRANSITION**: around **12% of total revenues**, is the core driver of future growth, it offers electrodes (anodes and cathodes), electrolyzer components, and systems for (i) hydrogen and oxygen production through water electrolysis, (ii) electricity generation from hydrogen or other energy carriers (like methanol or ammonia) in fuel cells without CO2 emissions, and (iii) use in redox flow batteries. De Nora's commitment to green hydrogen is remarkable, as the market is rapidly growing, fueled by the global shift toward sustainable energy solutions and the pressing need to decarbonize.

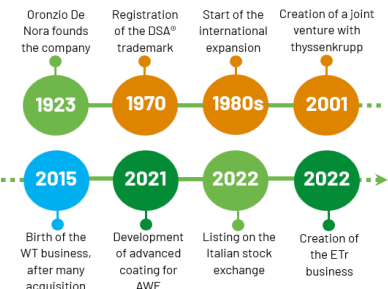
REVENUE DRIVERS: WHAT'S NEXT?

The Group aims to advance innovative electrochemical technologies to address global macroeconomic trends, such as urbanization, rising energy demand and the energy transition, with a focus on green hydrogen production. A key strength of De Nora is that its **machinery and operational plants can easily be adapted and used across its three different business lines**, offering flexibility to meet the specific needs of each sector, while compensating for fluctuations between the lines. **1. Leadership in Electrodes Technology**: De Nora is a global leader in electrode technologies, with strong expertise and a solid intellectual property portfolio (c.260 patent families). The company has secured significant green hydrogen projects, including 1.5 GW of confirmed backlog and 1.3 GW in high-probability pending deals (hot deals). **2.Exposure to Favorable Market Trends**: The company is exposed to solid trends across its different end markets spanning from chemicals to electronics, metals & mining, water purification and filtration and notably green hydrogen. Demographic and social changes (urbanization, growing need for energy, resource scarcity) drive demand for De Nora's solutions in water treatment and fuel cells and position De Nora as an enabler for the Green Hydrogen revolution. **3. Innovative Technological Solutions**: De Nora's deep technological know-how and extensive patent portfolio position it as a key enabler in the green hydrogen revolution, with its electrodes being crucial for alkaline water electrolysis (AWE), a leading technology for clean hydrogen production. A key strength of De Nora is that its machinery and operational plants can easily be adapted and used across its three different business lines, offering flexibility to meet the specific needs of each sector, while compensating for fluctuations between the lines (Annex 4). **4.Strong Financial Position and Growth Strategy**: Despite high capital expenditures, De Nora maintains a solid financial structure, with a planned €100 million investment to expand its capacity. The company's focus on innovation and market expansion ensures sustained growth. The Group has a robust organizational structure that supports fast and consistent growth (Appendix 4).

ABOUT TK NUCERA

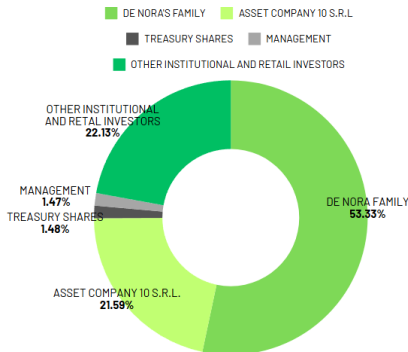
The Group manages a portion of its operations through TK Nucera, a company established through a contract signed in November 2013 with the Thyssenkrupp Group, in which it holds a minority stake of 25.85%. As a result, the Group's influence over TK Nucera's corporate governance structure and activities is limited. Additionally, it is important to note that the Group's development objectives in the Energy Transition sector, as outlined in its strategic plan, are closely linked to the results achieved by TK Nucera. Indeed, this joint venture is integral to our **evaluation**, as excluding it would overlook a critical aspect of the company's potential development within this key segment (Appendix 2 & Inv. Risks).

De Nora's timeline- Exhibit 3



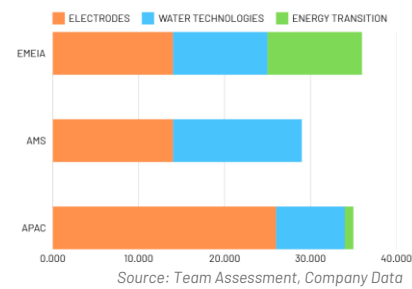
Source: Team Assessment, Company Data

Ownership structure- Exhibit 4



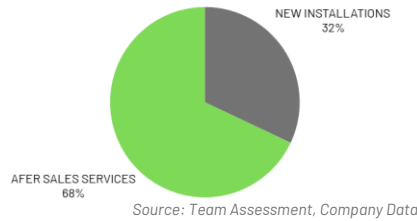
Source: Team Assessment, Company Data

Revenue % distribution by region and business- Exhibit 5



Source: Team Assessment, Company Data

Revenues breakdown – Exhibit 6



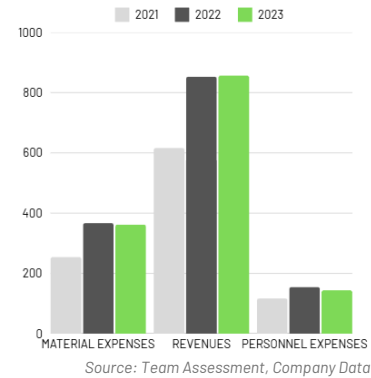
Source: Team Assessment, Company Data

Business Performance Over Time in €mln - Exhibit 7

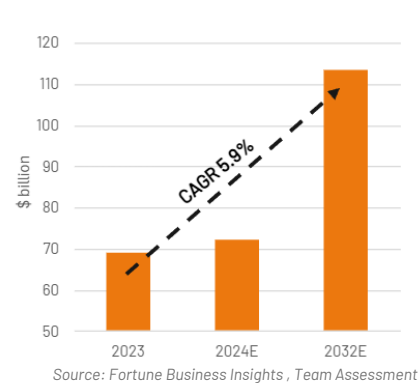
|     | 2021  | 2022  | 2023  | 2024E |
|-----|-------|-------|-------|-------|
|     | 348.8 | 473.4 | 464.2 | 464.2 |
|     | 257.6 | 336.7 | 289.9 | 294.4 |
|     | 9.3   | 42.6  | 102.2 | 104.1 |
| TOT | 615.9 | 852.8 | 856.4 | 862.8 |

Source: Team Assessment, Company Data

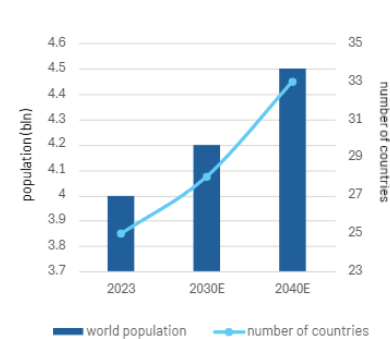
Cost impact on revenue in €mln- Exhibit 8



Printed Circuits Board Market Size- Exhibit 9

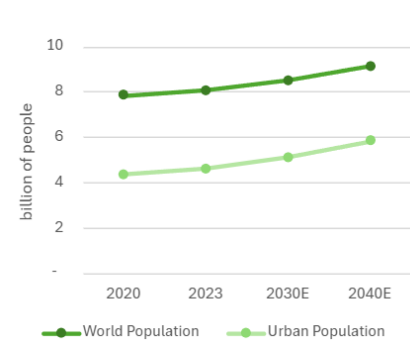


Population and number of countries facing high water stressed- Exhibit 10



Source: Fortune Business Insights , Team Assessment

Population growth -Exhibit 11



Source: World Bank, Team Assessment

Green hydrogen Technologies -Exhibit 12

| Development phase | AWE          | PEM         | SOEC     |
|-------------------|--------------|-------------|----------|
|                   | Consolidated | Expansion   | Emerging |
| Cost              | Low          | High        | High     |
| Flexibility       | Low          | High        | -        |
| Efficiency        | Low          | Medium-high | High     |

Source: Company data, Team Assessment

## COST DRIVERS

The main cost drivers for the Group are linked to the procurement of **raw materials**, particularly titanium, copper nickel and precious metals. Due to the limited number of suppliers concentrated in specific regions and the restricted global supply, the Group faces challenges in negotiating favorable terms. This dependence on scarce materials, combined with geopolitical risks and market fluctuations, can impact costs. Additionally, production delays, supply chain disruptions and regulatory measures such as export bans or sanctions may further influence material costs and availability. As of December 31, 2023, the Group employed 2,010 **staff**, marking an increase of 81 employees compared to the previous year. This growth, primarily in the Manufacturing area within the Electrode Technologies segment, underscores the company's commitment to supporting its operations (Exhibit 8).

## Industry Overview and Competitive Positioning

### INDUSTRY OVERVIEW: POWERING THE CHANGE WITH ELECTRODES

De Nora operates in the electrochemical industry producing electrodes for 3 different segments: Electrode Technologies, Water Technologies and Energy transition. For a detailed overview, they need to be analyzed separately (Appendix 5).

**ELECTRODES TECHNOLOGIES** This sector involves the production of electrodes used in many activities, such as the production of chemical products or printed circuits for the electronics industry. For detailed analysis, several specific segments must be examined.

- **Chlor-Alkali**: Electrodes can be produced for the chlor-alkali process with the electrolysis. The global chlor-alkali equipment market recorded an estimated revenue of \$811.8 million in 2022, with an estimated CAGR of 3.5% for 2023-2030 (source: Fortune Business Insights). This is a relatively mature segment, mainly characterized by periodic maintenance activities and replacement of electrodes in existing plants. The growth of this segment is linked to the increasing demand for chlor-alkali products, a key chemical element used in many industries and manufacturing processes. The size of the chlor-alkali market was estimated to be around \$54.9 billion in 2023, and it is expected to register a CAGR of 6.5% for 2024-2032 (source: SNS Insider). The main growth drivers are: (i) acceleration of the replacement process for first-generation membrane electrolyzers; (ii) increase in chlorine and caustic soda production; (iii) rise in average selling prices; (iv) migration towards membrane technology.

- **Electronics**: In the electronics industry, electrodes are produced for the manufacture of printed circuit boards (PCBs). This electrode market is expected to grow with an estimated CAGR of 7.5% (source: company data, team evaluation). The PCBs industry recorded an estimated revenue of \$69.7 billion in 2023 and is expected to grow at a CAGR of 5.9% for 2024-2032 (source: Fortune Business Insights). The growth of this market will be driven by the increasing demand for consumer electronics and innovations in the automotive sector (for example, higher PCB content in electric vehicles compared to traditional ones; the rise of advanced driver-assistance systems, etc.).

- **Specialties and New Applications**: electrowinning is a process that uses electrodeposition to remove residual impurities from non-ferrous metals following solvent extraction, enabling the production of high-purity, high-quality metals essential for various industrial applications. This market is expected to grow at a CAGR of 8.70% between 2024 and 2029, reflecting strong demand dynamics thanks to these factors: (i) **expansion in Copper Electrolytic Refining** - due to increased adoption, (ii) **Service Demand** - Ongoing maintenance and support for existing plants and (iii) **Price Increases** - rising costs of (iii) **noble metals** used in catalytic coatings are driving higher electrode prices.

**WATER TECHNOLOGIES** The Water Technologies industry involves water and wastewater treatment systems, both municipal and industrial. It offers water and wastewater disinfection and filtration systems for municipal, industrial water disinfection systems, swimming pool chlorination systems, and many other technologies. In 2023, it has recorded revenues of \$323.3 billion and it has been growing at 4.7% CAGR in 2021-2023. It is expected that this growth will continue in the future, with a **projected CAGR of 7.5%** for the period **2023-2032**. (source: Fortune Business Insight, team evaluation). Among water disinfection and filtration systems, there are also electrochlorination systems, which involve the process of producing hypochlorite by passing an electric current through saltwater. Revenues in 2023 for this market amounted to \$435.6 million, and the estimated CAGR for 2024-2029 is 4.67% (source: Global Market Monitor).

**Demand drivers**: There are many different key factors that guide the demand growth for these technologies. The growth in demand for municipal disinfection and filtration systems is primarily driven by **growth of population** (Exhibit 11), and urbanization (which have increased water needs), water scarcity in many regions, climate change, and stricter regulations regarding contaminants (such as microplastics, etc.), including **PFAS** (perfluoroalkyl and polyfluoroalkyl substances). The revenues for this market in 2023 are 1.9 billion and the estimated CAGR for 2024-2029 is 7.1% (source: Research&Markets). Then, the growth of the industrial chlorination market is mainly attributed to growth of industrialization and the need for disinfection systems (require water with specific chemical and physical properties).

**ENERGY TRANSITION** The energy transition is pivotal for reducing global greenhouse gas emissions and achieving climate goals outlined in the Pqaris Agreement (COP21) and Net Zero Emissions strategies. Green hydrogen is produced through electrolysis powered by renewable energy sources. This method splits water into hydrogen and oxygen, with the "green" label highlighting its reliance on renewable resources. Green hydrogen plays a critical role in decarbonizing industrial sectors that are hard to electrify, often referred to as "hard-to-abate" industries. Its production primarily involves two established electrolysis technologies: **a. Alkaline Water Electrolysis (AWE)**, a cost-effective and proven technology suitable for large-scale applications but less adaptable to the variability of renewable energy sources **b. Proton Exchange Membrane (PEM)**, a more flexible technology capable of handling renewable energy fluctuations, though currently more expensive due to the use of materials like platinum and titanium. Emerging technologies, such as **Solid Oxide Electrolysis (SOEC)** and **microbial electrolysis**, still in the research phase, are also under development. Despite challenges such as **high production costs**, **infrastructure requirements**, and **dependence on a stable supply of renewable energy**, green hydrogen is advancing due to increased public and private investments, technological progress, and economies of scale.

**Demand drivers**: (global-energy-perspective)

**Growing Global Energy Demand**: Global energy demand is expected to increase by 11% to 18% by 2050, driven by a more complex geopolitical landscape and the emergence of new demand sources. Hydrogen demand is expected to grow 2-4 times by 2050, led by rising needs in existing and new sectors requiring green hydrogen for decarbonization, which could make up 50-70% of total demand.

**Climate Goals**: Renewable hydrogen plays a crucial role in limiting global temperature rise, ensuring it stays below 2°C by 2050, in line with the long-term targets set by the Paris Agreement for climate neutrality.

**Zero Emissions**: Green hydrogen does not produce greenhouse gas emissions during its production or use, making it a key contributor to reducing CO2 emissions and promoting a cleaner environment.

**Renewable Energy**: Green hydrogen is produced using renewable energy sources, which are sustainable and non-depletable, unlike fossil fuels. Renewables currently provide 32% of global power and are projected to reach 65-80% by 2050, driven by falling costs (source: global-energy-perspective).

**Versatility**: Green hydrogen can be applied across various sectors, including transportation, energy, and industry, making it a flexible solution for the clean energy transition.



Competitive Landscape- Exhibit 13

ELECTRODE TECHNOLOGIES



WATER TECHNOLOGIES

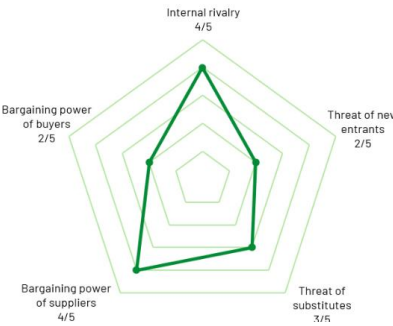


ENERGY TRANSITION



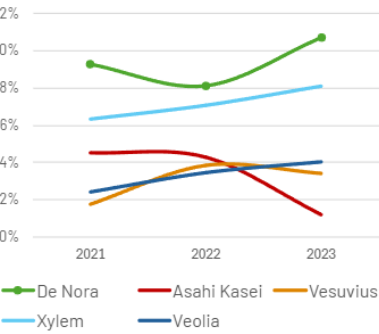
Source: Team Assessment, Company Data

Porter's Forces - Exhibit 14



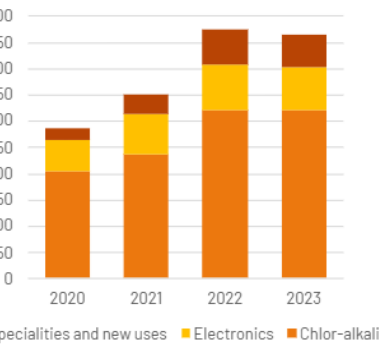
Source: Team Assessment, Company Data

Peer's EBITDAm- Exhibit 15



Source: Team Assessment, Company Data

Electrodes segment revenue- Exhibit 16



Source: Team Assessment, Company Data

COMPETITIVE POSITIONING: LEADING THE ELECTRODE RACE

De Nora stands out as a highly specialized and vertically integrated player, with a production structure heavily focused on electrode manufacturing. These electrodes, however, serve a wide range of end markets, making the company uniquely positioned in its industry. Notably, there are no comparable competitors of similar scale. For this reason, we consider it appropriate to analyze each business segment individually to thoroughly evaluate its competitive positioning.

**ELECTRODE TECHNOLOGIES** De Nora's competitive advantage in the Electrode Technologies segment is underpinned by its cutting-edge technologies, an evolving and innovative product portfolio, and robust global operational capabilities. The company positions itself as the clear market leader in this niche, leveraging its expertise to maintain a dominant industry presence. De Nora demonstrates its leadership across three key business areas: **Chlor-Alkali, Electronics, and Electrowinning**, where it holds significant market shares. In the chlor-alkali sector, De Nora commands approximately **50% of the global electrodes market share**, far surpassing its competitors. This dominance is supported by strategic partnerships, such as the collaboration with **thyssenkrupp Nucera**, and long-standing relationships with **major licensors and world-class chemical producers**, giving the company a distinct competitive advantage over rivals like *Permascand*, *Asahi Kasei*, *Bluestar*, *Ineos*, and *Jiangsu Ancan*. In the electronics sector, De Nora holds a **50-60% market share** in copper foil and printed circuit board (PCB) applications, achieving a significantly stronger presence than competitors like *Magneto* and *Miracle*. This leadership is attributed to its **superior technology** and ability to serve diverse end markets in the electronics industry. In the electrowinning segment, particularly for nickel and cobalt applications, De Nora achieves a **market share of 50-65%** in titanium anodes. Its **state-of-the-art titanium anode technology** positions the company as a leader, while ongoing product testing for the copper market demonstrates its ambition to further expand its presence in this area. Competitors such as *Permascand*, *Magneto*, and *Fenggang Titanium* remain significantly smaller and less innovative. In contrast, most of De Nora's competitors operate on a smaller scale with a predominantly local approach, lacking the global reach and vertical integration that define De Nora's business model. Beyond these small-scale operators, there are a limited number of captive, specialized producers functioning as divisions of large corporations. However, these producers tend to focus exclusively on internal, captive markets and show little interest in pursuing non-captive business opportunities, resulting in limited competition for De Nora in its target markets.

**WATER TECHNOLOGIES** De Nora holds a **distinct competitive edge** in the **water treatment** and **electrochlorination** markets, positioning itself as a global leader in these industries. With a significant share of electrochlorination systems worldwide utilizing its proprietary electrode technology, De Nora has established itself as the **benchmark for performance and reliability** in this niche. Its technological superiority and ability to adapt solutions to diverse market needs consistently differentiate it from competitors. The competitive landscape reveals a fragmented market where De Nora's closest challengers, such as **Evoqua (Magneto Special Anodes)**, **NMT**, and **AIS Water**, primarily operate at a regional level or focus on specific applications. Unlike these players, De Nora's global reach and vertical integration allow it to dominate not only in industrial electrochlorination but also across broader water treatment solutions. Furthermore, many of its multinational competitors, such as **Xylem**, **ProMinent**, **Veolia/Suez**, and **Evoqua**, lack a dedicated focus on electrochemical technologies, which remains De Nora's core strength. This lack of specialization among rivals positions De Nora as the **undisputed leader in industrial applications**, supported by its deep expertise, innovative product portfolio, and strategic customer relationships. De Nora's leadership is further bolstered by its ability to integrate its water treatment solutions into a wide range of applications, enhancing its **cross-selling capabilities** and solidifying its presence across key markets. Unlike smaller, niche competitors or large, diversified players with limited specialization, De Nora's technological leadership and strong brand recognition set it apart as the **preferred choice in high-value markets**. De Nora's **dominance in the electrochlorination market**, coupled with its strategic positioning in the broader water treatment industry, ensures a sustainable competitive advantage. Its focus on innovation, strong customer relationships, and global operational capabilities makes it well-positioned to capitalize on growth opportunities, reaffirming its appeal as a compelling investment opportunity.

**ENERGY TRANSITION** De Nora occupies a critical position in the green hydrogen market as a leading supplier of advanced components for electrolyzers, with a focus on **alkaline water electrolysis (AWE)** technologies and ongoing development of **proton exchange membrane (PEM)** technologies. In **2023**, the global installed electrolyser capacity reached **1.4 GW**, with projections indicating a rise to **5 GW in 2024**. De Nora contributed **1 GW** of green hydrogen technologies in **2023** and is expected to deliver **1.1 GW** in **2024**, securing an estimated **22% market share**. The competitive landscape includes major players such as **Cummins**, **Siemens Energy**, **John Cockerill**, **NEL** and **Sunfire**, which lead in manufacturing electrolyzers, while De Nora distinguishes itself as a critical supplier of advanced components to these manufacturers. Its high-performance electrodes are recognized for their **efficiency, durability, and adaptability**, making them essential for multiple electrolyser technologies. De Nora's **vertical integration** ensures cost efficiencies and strict quality control, providing a competitive edge over smaller regional players and less specialized global competitors. Beyond its component specialization, De Nora is strategically expanding into the integrated electrolyser market with the construction of a **Gigafactory** and the planned launch of its proprietary **Dragonfly electrolyser**. This initiative positions the company to directly compete with established manufacturers while reinforcing its role as a pivotal enabler of the **energy transition** and solidifying its leadership in the green hydrogen value chain (Appendix 5, Appendix 6).

Financial Analysis

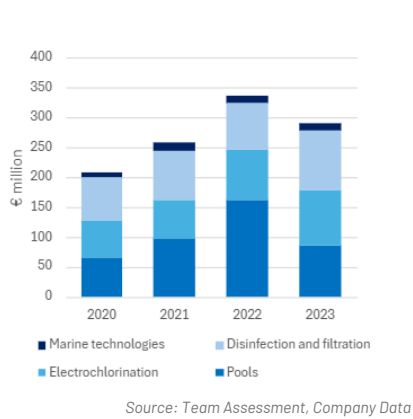
HISTORICAL ANALYSIS

BUSINESS LINES ACTIVITIES

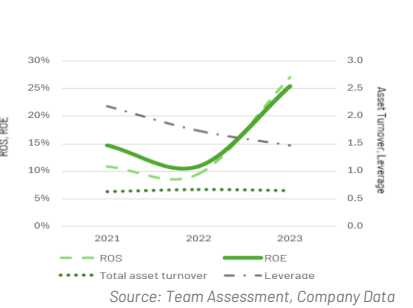
The **Electrode Technologies** business accounted for 54% of FY23 revenues and recorded a 12.8% FY20-23 CAGR. However, revenues of this business decreased by 1.9% compared to FY22.

- a. Chlor-alkali** (€321 million in FY23): In recent years, this segment has shown sustained growth (11.9% FY20-23 CAGR), particularly in FY20-FY21, driven by increased sales of membranes and higher prices of noble metals.
- b. Electronics** (€80 million in FY23): Despite recording a FY20-23 CAGR of 8.02%, revenues decreased by 9.5% in FY23 compared to FY22, due to a slowdown in demand in the Asian printed circuit market, which is experiencing a rebound effect following the intense growth during the COVID-19 pandemic.
- c. Specialities and new uses** (€63 million in FY23): This segment recorded significant growth in recent years (28.5% FY20-23 CAGR), especially in FY22, thanks primarily to increased revenues from the Electrowinning line. However, in of "Omnipure" electrolytic systems for water treatment, primarily due to new installations in North America (Exhibit 16).

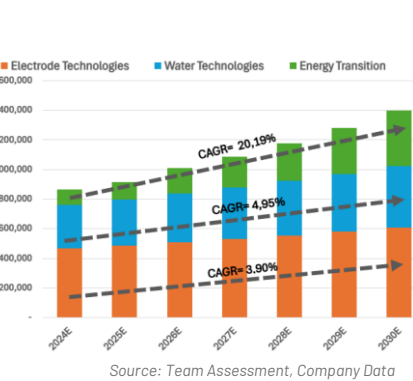
Water Technologies revenues- Exhibit 18



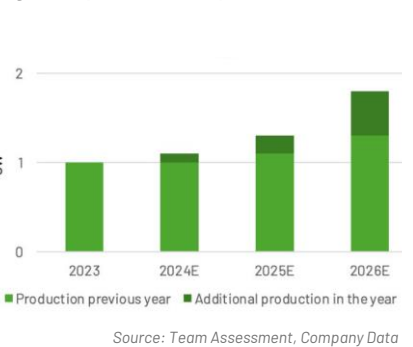
DuPont Analysis- Exhibit 19



Forecasted revenues- Exhibit 20



Gigawatt production expected - Exhibit 21



De Nora's EBITDAm - Exhibit 22

| EBITDA MARGIN            | FY 21  | FY 22  | FY 23  | AVG    |
|--------------------------|--------|--------|--------|--------|
| Total EBITDA adj. margin | 20,60% | 22,40% | 20,00% | 21,00% |
| Energy Transition        | 0,00%  | 5,60%  | 11,80% | 5,80%  |
| Water Technologies       | 15,70% | 19,50% | 14,30% | 16,50% |
| Electrode Technologies   | 24,00% | 25,90% | 25,30% | 25,07% |

Source: Team Assessment, Company Data

**d. Marine technologies** (€12 million in FY23): This segment recorded a FY20-23 CAGR of 9.5%, with revenues remaining stable. Also for this reason, in 2024 De Nora decided to exit this business because it was deemed non-strategic. The **Water Technologies** business accounted for 34% of revenues in FY23, with a FY20-23 CAGR of 8.5%, but revenues decreased by 13.9% compared to 2022, mainly due to a decline in revenues from the Pools business line. Due to its exposure to this business, revenues dropped significantly in America.

**a. Pools** (€86 million in FY23): After the strong FY20-22 CAGR of 35.3% (driven by high market demand, particularly in 2022, still linked to the Staycation effect related to COVID-19 pandemic restrictions, as well as higher selling prices), revenues recorded a 46.8% decrease in FY23. This is attributable to both destocking by key customers following the normalization of market demand tied to the return to pre-pandemic consumption patterns, and lower average selling prices compared to 2022.

**b. Electrochlorination** (€91 million in FY23): This segment recorded sustained growth in recent years (10.38% FY20-23 CAGR), mainly driven by increased sales in the seawater electrochlorination (SWEC) business line, new installations of OSHG systems (on-site hypochlorite generation) in the US and Asian markets, and increased sales of "Omnipure" electrolytic systems for water treatment, primarily due to new installations in North America.

**c. Disinfection and filtration** (€100 million in FY23): This segment also showed sustained growth in recent years (8% FY20-23 CAGR), particularly in 2023, with a 27.6% revenue increase, mainly due to: higher revenues from ozone technology systems, driven by major projects involving the installation of ozone generators; increased revenues from the "Deep Bed Filtration" systems line, particularly in the EMEA region and Saudi Arabia.

**d. Marine technologies** (€12 million in FY23): This segment recorded a FY20-23 CAGR of 9.5%, with revenues remaining stable. Also for this reason, in 2024 De Nora decided to exit this business because it was deemed non-strategic. The **Energy Transition** business accounted for 12% of FY23 revenues, recording an impressive FY22-23 CAGR of 54.8% (it was separated from the ET business in 2022). The enormous revenue growth in this business, almost exclusively in EMEA, is primarily due to major projects in Germany acquired through tk nucera.

MARGINS & PROFITABILITY

In recent years, De Nora has maintained a solid EBITDA margin, consistently around 20% from FY21 to FY23, with EBITDA growing at a 10.4% CAGR over the same period. An even more remarkable improvement was seen in ROE, which surged from 14.64% in FY21 to 25.38% in FY23. This growth was primarily driven by an increase in ROS, fueled by a rise in net profit following the IPO of a company in which De Nora holds shares. A deeper insight into this trend can be gained through the DuPont analysis (Exhibit 19).

CAPITAL STRUCTURE

Between 2021 and 2023, De Nora significantly strengthened its financial structure, reducing reliance on debt and improving capital solidity. The Debt-to-Asset ratio dropped from 0.265 in FY21 to 0.108 in FY23, highlighting a greater ability to finance assets with internal resources. Likewise, the Debt-to-Equity ratio improved, falling from 0.576 in FY21 to 0.158 in FY23, while financial leverage also declined, signaling a shift toward a more sustainable funding strategy. Reinforcing this trend, long-term financial liabilities were nearly halved, decreasing from €268 million in FY22 to €134 million in FY23. This debt reduction policy has strengthened the company's financial stability while mitigating financial risk.

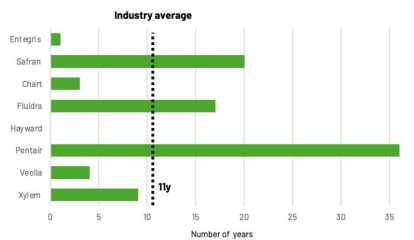
FUTURE ANALYSIS: THE ROAD AHEAD UNWRAPPED THROUGH DATA

We have projected De Nora's revenue from 2024E to 2030E across all business segments, benchmarking the company's guidance against multiple external sources (Exhibit 20). Each sub-segment within the business lines has been carefully analyzed, incorporating industry trends and potential sector developments. Revenue growth estimates for **1. Electrode Technologies** valuation begins in 2025E, as the company indicates that 2024 sales will remain stable year-over-year due to production stoppages caused by supplier issues. We project the following CAGR (2025E-2030E): **Chlorine-Soda at 2.8%**, **Electronic Specialties at 7.5%**, and **Specialties and New Uses at 8.7%**. Consequently, revenue in this division is expected to rise from €464.2 million in 2023 to €606.6 million by 2030E. **2. In Water Technologies, Waterpool** is projected to grow at a **CAGR of 5.9%** (2024E-2030E), **Electrochlorination at 5.4%**, and **Disinfection & Filtration at 6.0%**, while Marine Technologies will be discontinued as disclosed by the company. Based on these assumptions, the Water Technologies segment's revenue is projected to grow from €289.9 million in 2023 to €412.8 million in 2030. All the computed CAGR are the result of Company's disclosure and specific industries research (Research&Markets, Statista). **3. The Energy Transition** segment represents the most significant opportunity for De Nora's future growth. This segment has been estimated in two periods, with the first covering 2024-2026 based on the company's disclosed electrode production capacity in gigawatts (GW) and the second relying on growth assumptions derived from various reports on the green hydrogen market post-2026. For 2024, revenues will align with 2023 levels, with an expected production capacity of 1-1.1 GW, consistent with the 785MW produced in the first nine months of 2024. For 2025, the company disclosed that revenues will be fully covered by its existing backlog. If no additional orders are secured, the estimated production capacity will be 1.3 GW, aligning with the current backlog of 1.5 GW. For 2026, we assume fulfillment of the 1.3 GW pipeline along with an additional 0.5 GW from the new Gigafactory, which will become operational in 2026, reaching full capacity of 2 GW by 2030 (Exhibit 21). From 2027 to 2030, revenue in this segment is expected to grow at a **CAGR of 22%**, reaching €377.3 million by 2030, up from €102.2 million in 2023. De Nora's total revenue is projected to grow from €856.4 million in 2023 to €1,396.7 million by 2030E. Notably, the company is expected to surpass the €1 billion revenue milestone by 2026E, reaching €1,006.2 million. These projections underscore De Nora's strong growth potential, particularly within the Energy Transition segment, which is poised to be a game-changer for the company. With robust backlog coverage, strategic capacity expansions, and increasing demand in the green hydrogen sector, De Nora is well-positioned to capitalize on emerging opportunities in the coming years (Appendix 9).

**PROFITABILITY:** Regarding the company's profitability, particularly its EBITDA margin, we conducted a historical analysis of the company's profitability over the past three years (Exhibit), examining both the overall company margin and segment-specific margins. The historical EBITDA margin for the total company averages approximately 21% with a standard deviation of 1.02% (Exhibit 22). In the Electrode Technologies segment, given the company's century-long experience in this business, **profitability** has remained stable at **around 25%**, and we see no reason for a deviation in this margin during the forecast period from 2024E to 2030E. For the Water Technologies segment, the historical average **EBITDA margin is approximately 16.50%**, below the selected peers' average of 19.76%. However, as this segment has only been part of the company's portfolio since 2015, we believe there is potential for margin expansion to align with peers. Industry peers have taken an average of 11 years to achieve a 19% EBITDAm, whereas De Nora has been operating in this sector only since 2015 (Exhibit 23). That's why we have assumed an average EBITDAm of approximately 19% for the 2024E-2030E period.

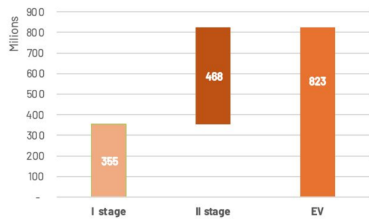
The Energy Transition segment presents a more complex challenge in terms of profitability assessment, with a **historical average EBITDA margin of 4.9%** and a standard deviation of 9.4%. Peer comparison does not provide meaningful insights, as peers exhibit an average margin of -1.49% with a standard deviation of 205%. Due to these factors, we have adopted an alternative approach to evaluating this business segment by utilizing a **real option valuation methodology**.

### Number of years to achieve an EBITDA of 19%– Exhibit 23



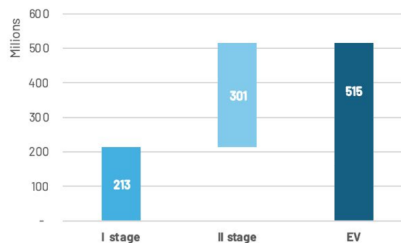
Source: Team Assessment, Company Data

### Enterprise Value Electrodes– Exhibit 24



Source: Team Assessment, Company Data

### Enterprise Value Electrodes– Exhibit 24



Source: Team Assessment, Company Data

### Wacc computation: Exhibit 25

|                   |              |
|-------------------|--------------|
| Tax rate          | 24%          |
| Cost of debt      | 4.0%         |
| Cost of equity    | 12.8%        |
| D/E Ratio         | 0.19         |
| Portion of debt   | 16%          |
| Portion of equity | 84%          |
| Growht rate       | 2.6%         |
| <b>WACC</b>       | <b>11.3%</b> |

Source: Team Assessment, Company Data

### FREE CASH FLOW: Exhibit 26

**CAPITAL STRUCTURE:** De Nora maintains a solid financial position with a net financial position of €54.6 million. We had the opportunity to speak with management twice, and in both instances, there was no clear indication of a target capital structure. From these discussions, it appears that a potential increase in leverage would only be considered in the event of an acquisition, as no plans were mentioned regarding raising debt for increased investment.

Consequently, in our base scenario, we have slightly increased the current debt-to-equity (D/E) ratio to 0.19 (instead of 0.17), given the lack of further guidance from management. Another factor suggesting that the company intends to maintain this capital structure and keep debt levels low is the composition of its shareholding. The founding family holds 53.3% of the company's shares from our discussions we have interpreted the company's conservative leverage policy as a preference of the main shareholder.

### HISTORICAL M&A: DE NORA'S WINNING FORMULA

With a dynamic growth strategy based on 2 transformational acquisitions and 7 strategic add-ons, De Nora has built a solid and innovative business. This flexible M&A approach has enabled the company to expand into new markets, broaden its technological expertise, and strengthen its position as an industry leader.

**2005-2011:** Initial acquisitions, including Eltech Systems Corporation (US), Permелac Electrodes Ltd, and Chlorine Engineers Group (JP), to enhance leadership in the chlor-alkali sector.

**2015:** Formation of the ThyssenKrupp Uhde Chlorine Engineers joint venture (now ThyssenKrupp Nucera), specializing in electrolyzers for hydrogen production.

**2018-2019:** Expansion into water purification technologies with the acquisition of Seven Trent Water Purification (UK/US), Ozono Elettronica Internazionale (IT), and Water Star.

**2021:** Strengthening its portfolio in advanced water treatment and environmental technologies through the acquisition of MIOX, Neptune, Calgon Carbon UV (US), ISIA (IT), and Azul Energy (JP).

**2023:** De Nora acquired Shotec to enhance electrode coating technology and reduce precious metal use for more competitive and sustainable electrochemical processes (*Appendix 11*).

## Valuation

### VALUATION METHODS

We issue a **BUY recommendation** on **Industrie De Nora**, setting a **target price of €9,72**, which implies an **upside of 41 %** from the closing price as of **February 5, 2025**. Our valuation approach relies on a **Sum-of-the-Parts (SOTP) methodology**, breaking down the company's value across its different business segments.

For the Electrode Technologies and Water Technologies divisions, we believe that a **DCF approach is the most appropriate** given the nature of De Nora's business model and the lack of directly comparable peers operating the same verticals. The company's unique position makes traditional market-based valuation methods less reliable in fully capturing in intrinsic value. However, when assessing the Energy Transition segment, we opted for a **real options valuation**, as we consider a traditional DCF approach inadequate to reflect the **high uncertainty of the sector** and the company's distinctive role in the Green Hydrogen value chain. Unlike more mature industries, where cash flow projections are relatively predictable, the evolving nature of the hydrogen market makes it challenging to assign a precise value without considering optionality and flexibility. To further support our investment thesis, we conducted a **multiples-based analysis** using both the Revenue, EBITDA, EBIT ratio and the Enterprise Value/EBITDA (**EV/EBITDA**) metric, the Enterprise Value/EBIT (**EV/EBIT**) metric, the Enterprise Value/REVENUE (**EV/REVENUE**) metric. Additionally, to assess the **resilience of our target price under different market conditions**, we performed **Monte Carlo simulations** to incorporate probabilistic outcomes, a **sensitivity analysis** to test the impact of key financial variables, and a **scenario analysis** to evaluate potential macroeconomic and industry-specific developments.

### DISCOUNTED CASH FLOW MODEL

Our valuation of Industrie De Nora is based on a two-stage Discounted Cash Flow (**DCF**) Sum-of-the-Parts (**SOTP**) model, which discounts the company's expected future free cash flows to the firm (**FCFF**) in accordance with the assumptions outlined in the "Future Analysis" section.

**i)The first stage**, covering the period from **2024E to 2030E**, assumes that growth will be primarily **organic**, driven by strong demand across its key business segments. In the Electrode Technologies (*Exhibit24*) division, expansion is fueled by the increasing need for electrodes used in Printed Circuit Boards and anodes for the electrolytic refining of nickel and cobalt. Additionally, De Nora is preparing to enter the copper electrolytic refining market, which represents approximately **90% of the total electrolytic refining industry**, opening significant opportunities for long-term expansion. In the Water Technologies segment (*Exhibit 25*), growth is expected to be supported by rising demand for municipal disinfection and filtration systems, a trend directly tied to population growth, urbanization, and increasing global water scarcity. Climate change, along with **stricter environmental regulations** targeting contaminants such as **PFAS**, is expected to further accelerate the need for advanced water treatment solutions, reinforcing De Nora's position in this expanding market.

**ii)The second stage** of our valuation applies a **perpetuity growth method**, assuming a **long-term growth rate of 2.6%**, aligned with projected **30 years risk free rate** (*Appendix 12*). This reflects a conservative approach to capturing the company's ability to generate sustainable cash flows beyond the forecast period.

| ELECTRODE TECHNOLOGIES    |          | 2024E          | 2025E    | 2026E    | 2027E    | 2028E    | 2029E    | 2030E    |
|---------------------------|----------|----------------|----------|----------|----------|----------|----------|----------|
| EBITDA                    | 96.006   | 116.817        | 123.395  | 118.717  | 125.996  | 136.463  | 138.508  | 140.475  |
| Ammortization             | - 5.779  | (4.813)        | (4.805)  | (4.592)  | (4.492)  | (4.381)  | (4.257)  | (4.122)  |
| Depreciation              | - 10.817 | (14.905)       | (18.095) | (20.303) | (22.750) | (24.944) | (26.867) | (27.717) |
| EBIT                      | 79.409   | 97.099         | 100.496  | 93.822   | 98.754   | 107.138  | 107.384  | 108.636  |
| Less taxes                | - 19.058 | (23.304)       | (24.119) | (22.517) | (23.701) | (25.713) | (25.772) | (26.073) |
| NOPAT                     | 60.351   | 73.795         | 76.377   | 71.305   | 75.053   | 81.425   | 81.612   | 82.564   |
| Less Inc in NWC           | 70.548   | 1.432          | 12.561   | 4.902    | 7.581    | 6.187    | 4.718    | 3.707    |
| Less Capex                | -46.046  | (28.739)       | (30.664) | (32.590) | (34.517) | (36.443) | (33.399) | (34.785) |
| Plus Dep&Amort            | 16.596   | 19.719         | 22.899   | 24.894   | 27.242   | 29.324   | 31.124   | 31.839   |
| Free Cash Flow            | 101.449  | 66.206         | 81.173   | 68.511   | 75.359   | 80.493   | 84.054   | 83.325   |
| Discounted Free Cash Flow |          | 59.508         | 65.578   | 49.748   | 49.184   | 47.220   | 44.320   | 39.490   |
|                           |          | Terminal Value |          |          |          |          |          | 468.021  |

| WATER TECHNOLOGIES |          | 2024E   | 2025E    | 2026E    | 2027E    | 2028E    | 2029E    | 2030E    |
|--------------------|----------|---------|----------|----------|----------|----------|----------|----------|
| EBITDA             | 59.968   | 50.065  | 49.358   | 68.116   | 71.398   | 72.780   | 74.200   | 75.641   |
| Ammortization      | - 3.610  | (3.053) | (3.088)  | (2.988)  | (2.959)  | (2.919)  | (2.867)  | (2.805)  |
| Depreciation       | - 6.757  | (9.454) | (11.629) | (13.212) | (14.984) | (16.618) | (18.095) | (18.861) |
| EBIT               | 49.601   | 37.557  | 34.642   | 51.916   | 53.455   | 53.244   | 53.239   | 53.975   |
| Less taxes         | - 11.904 | (9.014) | (8.314)  | (12.460) | (12.829) | (12.779) | (12.777) | (12.954) |
| NOPAT              | 37.697   | 28.543  | 26.328   | 39.456   | 40.626   | 40.465   | 40.461   | 41.021   |
| Less Inc in NWC    | 44.066   | 908     | 8.073    | 3.190    | 4.993    | 4.122    | 3.177    | 2.523    |
| Less Capex         | -28.762  | (9.580) | (10.221) | (10.863) | (11.506) | (12.148) | (11.133) | (11.595) |
| Plus Dep&Amort     | 10.367   | 12.507  | 14.716   | 16.201   | 17.942   | 19.536   | 20.962   | 21.666   |

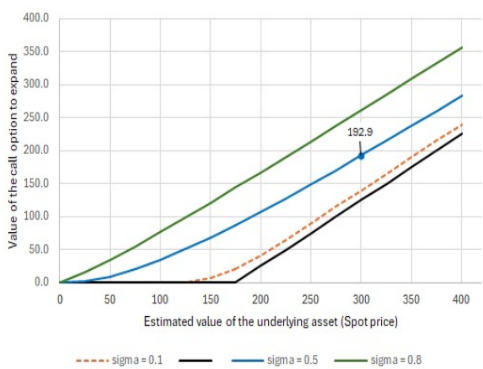


Peers marginality – Exhibit27

| GREEN HYDROGEN INDUSTRY |             |           |
|-------------------------|-------------|-----------|
| Companies               | EBITDA<br>m | EBIT<br>m |
| McPhy                   | -252%       | -267%     |
| Green Hydrogen System   | -636%       | -825%     |
| Hydrogen Pro            | -6%         | -10%      |
| Siemens Energy          | -2%         | -6%       |
| Cummins                 | 13%         | 10%       |
| ITM                     | -185%       | -221%     |
| NEL                     | -16%        | -33%      |
| Plug Power              | -109%       | -117%     |
| AVERAGE                 | -149%       | -184%     |

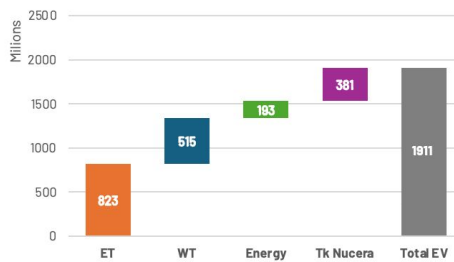
Source: Team Assessment,

Real Option Valuation– Exhibit 28



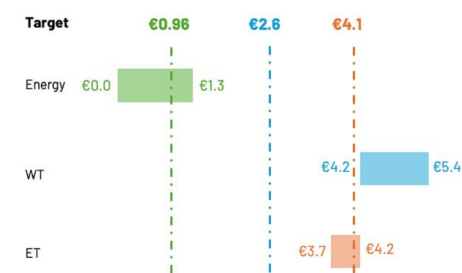
Source: Team Assessment,

Real Option Valuation– Exhibit 29



Source: Team Assessment, Company Data

Multiple Analysis– Exhibit 30



Source: Team Assessment, Company Data

WACC

The Weighted Average Cost of Capital (WACC) used in our DCF Sum-of-the-Parts valuation is based on a set of carefully defined assumptions to reflect the company's financial structure and risk profile.

i) For the **risk-free rate**, we selected the 10-year German Bund yield, as it appropriately represents the economic environment of De Nora's home market. This provides a stable benchmark for discounting future cash flows while aligning with the company's geographic exposure.

ii) The **financial leverage** is expected to increase from 13.65% in FY23A to 16.17% in FY30E, reflecting a measured shift in the company's capital structure as it pursues growth initiatives.

iii) The **cost of debt** was determined using company-provided data, incorporating a three-month SOFR rate for debt denominated in U.S. dollars and a three-month EURIBOR rate for euro-denominated debt. To these base rates, we added a spread linked to the company's Net Financial Position (NPF) to Consolidated EBITDA ratio, as defined by existing covenants. This spread was estimated through two approaches: using the range provided by De Nora (0.8% – 1.1%) and analyzing market-implied yields for corporate bonds with a similar credit rating in the energy, electrochemistry, and industrial components sectors (Appendix 14).

iiii) The **cost of equity** was calculated using a Multi-Factor Model, built through a multiple linear regression of De Nora's excess returns since its IPO. This model incorporates two key risk factors: the Market Beta, derived from the excess returns of the STOXX Europe 600; the Size Beta, measured through the excess returns of the STOXX Europe Small 200 relative to the STOXX Europe 600 lead us to a WACC of 11.3% (Appendix 13, Exhibit 25).

REAL OPTION VALUATION

For the **green hydrogen** production technology segment, we have opted for a **real option valuation** approach rather than the traditional discounted cash flow (DCF) model. The rationale behind this choice lies in the high uncertainty and potential variability of the market. **The hydrogen industry is still in its infancy**, with an unpredictable trajectory that could either lead to exponential growth or fail to materialize as expected. Given this uncertainty, a DCF model would provide an inaccurate valuation, as it assumes predictable and stable cash flow projections, which are unrealistic for a sector with such high volatility. A key limitation of the DCF methodology is its inability to capture the strategic value of the option to expand in a potentially fast-growing market. When using the segment margin for 2023, which stands at 11.8%—the highest ever recorded by the company, to the forecasting scenario, the segment's projected cash flow turns negative, implying a net negative contribution to the enterprise value (EV). Even trying to use peer's EBITDAm is useless as the Exhibit 27 shows. However, this conclusion is clearly flawed: a business segment with the potential to become a key pillar of the energy transition cannot be realistically assigned a zero valuation simply because current projections do not yield positive cash flows. Instead, investing in green hydrogen technology should be viewed as **an option on the future** of the industry. If the sector takes off, De Nora will be well-positioned to capitalize on its growth; if it does not, the company's downside is limited to its initial investment, much like an option premium. By applying a real option valuation approach, which better captures the asymmetry of potential outcomes and the strategic value of market entry, we estimate **the EV for this segment at €193 million** (see Exhibit 28). This valuation reflects the significant upside potential inherent in an emerging, high-growth industry (Appendix 15).

AND...REACHING A SHARE PRICE

Using a **Sum-of-the-Parts (SOTP)** valuation approach, we arrived at three distinct Enterprise Values (EVs), each corresponding to the company's three business segments. The Enterprise Value for Electrode Technologies amounts to €823,1 million, for Water Technologies €514.6 million, and for Energy Transition €193 million. Summing all three, we reach a **total Enterprise Value for De Nora of €1,530.6 million**.

To this EV, we added 25.85% of the EV of the joint venture (JV) with tk Nucera, given that De Nora holds this stake in the company. Since tk Nucera is a JV established for hydrogen production, we applied the same multiple used to evaluate De Nora's Energy Transition segment—in particular, the EV/Revenue 2027E multiple of 1.33x. This results in an additional EV of €380,8 million, bringing De Nora's **total Enterprise Value to €1,911.4 million**.

Adding the net financial position, which in this case is positive at €54.6 million, and subtracting the minority interest of €5.7 million, we arrive at an Equity Value of €1,960.2. Dividing this by the number of shares, which stands at 201,685,174, we derive a **share price of €9.72** (Exhibit 29).

Multiple Valuation Analysis

To cross-check our valuation and assess how the market might price De Nora, we conducted a **multiple-based valuation**, applying **EV/EBITDA, EV/EBIT, and EV/Revenue for 2027E**. This approach involved selecting **peer companies for each business segment**, identifying the most comparable firms through a **similarity score** to ensure alignment with De Nora's business model and industry dynamics. For the Electrode Technologies segment, we identified eight peers, which resulted in an EV/Revenue multiple of 1.41x, an EV/EBITDA of 6.44x, and an EV/EBIT of 8.35x. Applying these multiples, the implied share price for this segment ranges between €3.7 and €4.2, which aligns with the valuation obtained through our DCF analysis, reinforcing the robustness of our estimates. In the Water Technologies segment, the selected eight peers exhibited an average EV/Revenue multiple of 3.11x, an EV/EBITDA of 12.43x, and an EV/EBIT of 15.58x, leading to a share price range between €4.2 and €5.4. While this result slightly deviates from the DCF-derived valuation, the discrepancy is marginal. We maintain that DCF provides a more accurate and reliable estimate, as it better captures the company's future cash flow potential and long-term strategic positioning. For the Energy Transition segment, we identified six comparable companies, with an EV/Revenue multiple of 1.15x. Given the volatility and early-stage nature of this market, we relied on median values for EV/EBITDA 1.80x and EV/EBIT 3.00x. This resulted in a share price range between €0.01 and €1.3. However, rather than relying on traditional valuation multiples, we believe that the real option valuation approach, as previously discussed, provides a more comprehensive and realistic estimate of this segment's value. Through this method, we estimated an enterprise value of €193 million, significantly higher than what standard multiples might suggest (Appendix 16, Exhibit 30).

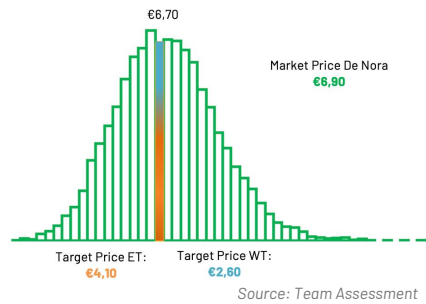


Sensitivity Analysis- Exhibit 31

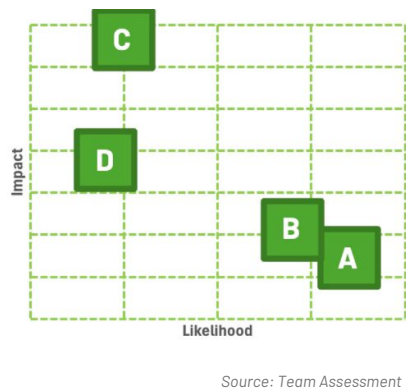
|      | 9,0% | 10,0% | 11,3% | 12,0% | 13,0% |
|------|------|-------|-------|-------|-------|
| 1,0% | 1560 | 1382  | 1208  | 1123  | 1026  |
| 2,0% | 1706 | 1490  | 1284  | 1186  | 1076  |
| 2,6% | 1816 | 1568  | 1338  | 1231  | 1111  |
| 3,0% | 1901 | 1628  | 1378  | 1263  | 1136  |
| 4,0% | 2173 | 1812  | 1499  | 1360  | 1209  |

Source: Team Assessment, Company Data

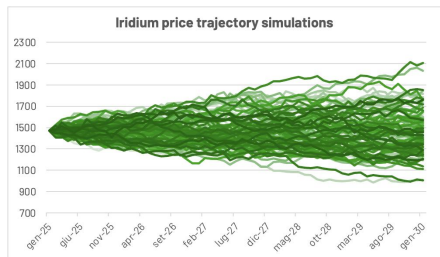
Montecarlo Simulation -Exhibit 32



Risk Matrix -Exhibit 33



Iridium Random Walk- Exhibit 34



Source: Team Assessment, Investing.com

Robustness Analysis

To reinforce the reliability of our valuation, we conducted a series of robustness tests, including sensitivity analysis and Monte Carlo simulations, to assess how changes in key assumptions impact De Nora's estimated enterprise value (EV). In the sensitivity analysis, we examined the effect of variations in the company's Weighted Average Cost of Capital (WACC) and growth rate on EV. This analysis was performed separately for Electrode Technologies and Water Technologies, followed by an aggregated evaluation combining both segments. Given that the Energy Transition segment was valued using a real option methodology, a **sensitivity analysis** was deemed unnecessary, as the traditional DCF approach does not apply in this case. To further test the resilience of our valuation, we conducted a **Monte Carlo analysis**, selecting revenue and profitability as the key drivers most likely to influence the company's valuation. We modeled these variables using normal distributions, running 10,000 iterations to generate a probabilistic distribution of potential share price outcomes. Revenue was drawn from a normal distribution with a **mean of 9.6%** and a **standard deviation of 2.1%**, while profitability followed a mean of 21% with a standard deviation of 1.02%. These values were determined based on historical company performance and the methodology used to estimate the compound annual growth rate (CAGR) for revenue projections. As with the sensitivity analysis, the Monte Carlo simulation was applied exclusively to the business segments evaluated through DCF. When attempting to apply the same approach to the Energy Transition segment, the resulting distribution exhibited extreme volatility, with an Enterprise Value range exceeding €73 trillion. This level of variability rendered the results unreliable and ultimately unusable, reinforcing our view that real option valuation remains the most appropriate methodology for assessing this segment.

Investments Risks

Risk is an unavoidable element of De Nora's business landscape. This section explores the primary market and operational risks that could influence the company's performance, highlighting factors that may challenge our investment thesis (Exhibit X). Our assessment gauges each risk in terms of its likelihood and potential financial impact (Exhibit Y), with a particular focus on how these factors could affect our target price under a Worst-Case Scenario (WCS). Further analysis can be found in Annex Z.

**SUPPLY CHAIN RISK (A):** The Group operates in markets characterized by **complex production processes and reliance on illiquid raw material markets**. Many of the company's products require specialized raw materials, sourced from a limited number of suppliers worldwide, with **noble metals** playing a critical role. For example, a significant portion of the Group's raw material costs is linked to titanium, nickel, and noble metals, which are extracted in limited quantities and concentrated in specific geographic areas. The **restricted global supply of these materials**, combined with the **geographic concentration of suppliers**, limits the Group's negotiation power and requires commitments to minimum purchase volumes under short-term contracts. Any disruptions, such as planning issues, supplier delays, or difficulties in sourcing raw materials, could result in increased costs, particularly when **alternative materials are not readily available**. Additionally, geopolitical risks, including the ongoing conflict between Russia and Ukraine, further exacerbate the situation. Potential sanctions, export bans, or import restrictions could disrupt the supply of noble metals and negatively impact the Group's operations. Recent market trends, including rising raw material prices and delays in sourcing electronic components, have already highlighted the vulnerabilities in the supply chain, leading to increased procurement costs and operational challenges.

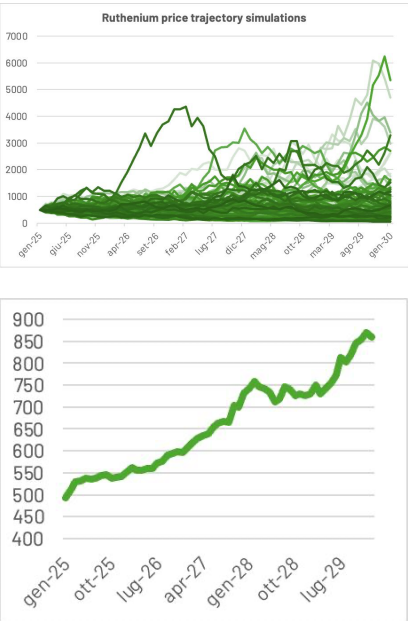
**MITIGATION:** To address these risks, the Group has implemented several measures to ensure supply chain stability and manage cost pressures. It has increased inventory levels of critical materials such as titanium, iridium, and ruthenium, providing a buffer against potential supply disruptions. This strategy also accounts for recent price volatility, enabling the Group to stabilize its procurement costs. Additionally, the Group actively engages in diversifying its supplier base to reduce reliance on specific regions, particularly those impacted by geopolitical tensions. By securing long-term relationships with multiple suppliers and committing to strategic material purchases, the Group aims to mitigate the impact of shortages or delays. Furthermore, the company continuously monitors market trends and adjusts its sourcing strategies to align with the evolving economic and political landscape, thereby safeguarding its operations and ensuring the continuity of its production processes.

**STOCK LIQUIDITY RISK :** The company's stock faces a significant liquidity risk, primarily due to its low trading volume and restricted free float, with only 51 million shares available for trading out of a total of 201 million issued shares. This limited supply in the market constrains investor participation, leading to a thin order book and amplifying the stock's sensitivity to price fluctuations. Our analysis highlights that the turnover ratio is **consistently below industry benchmarks**, indicating reduced trading activity, while the Amihud Illiquidity Ratio further confirms the stock's heightened price sensitivity even to small changes in trading volume. The low free float not only exacerbates these challenges but also limits the stock's eligibility for inclusion in major indices, thereby reducing its visibility and attractiveness to institutional investors, a critical driver of liquidity.

The restricted supply of shares in the market creates higher bid-ask spreads, discouraging active trading and increasing transaction costs for investors. Moreover, it restricts the formation of a stable, liquid market, where even moderate trading volumes can lead to **significant price swings**, deterring further investor interest and compounding the liquidity issue. These dynamics highlight the intricate link between free float availability and market liquidity, where the company's constrained float serves as a structural bottleneck to deeper, more efficient trading.

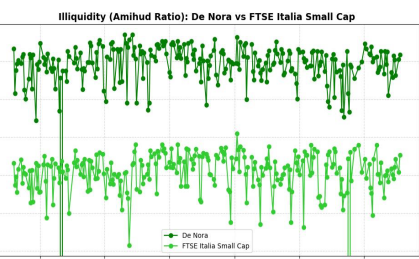
**MITIGATION:** the company could implement measures aimed at enhancing its free float and increasing market engagement. Strategies such as secondary offerings to release additional shares into the market or targeting long-term institutional investors could help stabilize trading volumes. Additionally, the company's efforts to improve investor communication and transparency, coupled with strategic alignment to meet liquidity thresholds for index inclusion, could significantly reduce the adverse impacts of its restricted free float. These actions, along with active monitoring of market dynamics, would not only bolster the company's liquidity but also enhance its valuation by fostering greater investor confidence and participation.

Ruthenium Random Walk- Exhibit 35



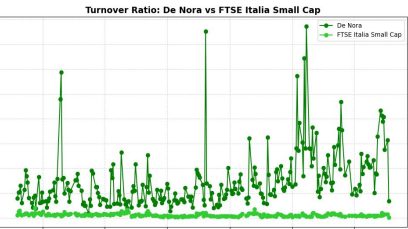
Source: Team Assessment, Investing.com

Illiquidity Ratio- Exhibit 36



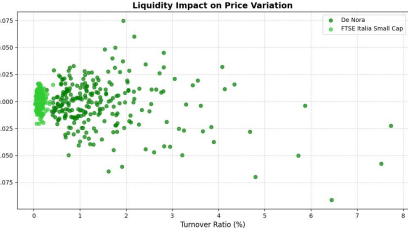
Source: Team Assessment, Refinitiv

Turnover Ratio- Exhibit 37



Source: Team Assessment, Refinitiv

Liquidity Impact- Exhibit 38



Source: Team Assessment, Refinitiv

**REGULATORY RISK(B):** The green hydrogen sector continues to be **heavily dependent on clear and supportive regulatory frameworks**, yet significant challenges persist. Strict definitions of green hydrogen, particularly in regions like the EU, have slowed market penetration and delayed the achievement of ambitious goals such as REPowerEU’s target of producing 10 million tons of green hydrogen annually by 2030. These regulations, combined with delays in permitting processes for hydrogen production facilities, create additional barriers for developers seeking to invest in new capacity. Inflation further exacerbates this issue by driving up the costs associated with renewable energy installations and hydrogen production plants, which are already capital-intensive. Despite these challenges, a growing number of large-scale projects are being announced, with an increasing concentration in regions that offer favorable conditions such as low-cost renewable energy, strong financial backing from technological partners, and direct end-user demand. However, the risk persists that these regulatory and economic hurdles will delay the growth of the hydrogen market and prevent it from scaling at the pace initially projected.

**MITIGATION:** De Nora is mitigating regulatory risks through **strategic partnerships** and **global positioning**. Its collaboration with tk nucera enables it to participate in large-scale projects that have already passed the **Final Investment Decision (FID)** stage, ensuring reliability and market credibility. Additionally, the company has strategically developed its production capacity across Asia, the Middle East, Europe, and the Americas to respond quickly to demand in key markets. To strengthen its position further, De Nora should expand its efforts in **policy advocacy** by engaging with regulators to streamline permitting processes and promote balanced definitions of green hydrogen. Additionally, **collaborating with universities and research centers** can help the company influence the regulatory landscape while ensuring compliance with emerging standards. With flexibility and leveraging its partnerships, De Nora can reduce its exposure to regulatory uncertainty .

**TECHNOLOGICAL COMPETITION RISK(C):** The green hydrogen market remains exposed to growing competition from both established technologies and emerging innovations. While De Nora is currently a leading supplier of components for advanced alkaline electrolyzers, alternative technologies such as solid oxide electrolysis (SOEC) and blue hydrogen (produced from natural gas with carbon capture) pose significant challenges. Blue hydrogen benefits from **lower production costs and established infrastructure**, making it a strong competitor in regions where natural gas is abundant and carbon capture is incentivized. Additionally, technological advancements from new entrants in the hydrogen value chain could create solutions that outperform De Nora’s offerings in terms of cost, scalability, or efficiency. De Nora also faces the risk of new competitors entering the market, particularly energy companies, industrial gas suppliers, and chemical firms with strong financial backing. These players, often operating through partnerships or consortia, could develop proprietary technologies that directly compete with De Nora’s advanced water electrolysis (AWE) solutions. Although current competitive intelligence suggests that De Nora’s leadership in high-performance electrode production is still secure, the potential for disruptive technologies remains significant.

**MITIGATION:** De Nora actively mitigates technological risks through sustained investments in research and development (R&D), supported by its global network of five R&D laboratories. These efforts focus on improving the efficiency, durability, and scalability of its existing technologies, while exploring diversification into emerging solutions such as SOEC. The company’s strong protection of intellectual property, through continuous patent filings and strict confidentiality measures, further strengthens its competitive position. Moreover, De Nora’s collaboration with tk nucera ensures access to high-quality projects and enhances its ability to adapt to market needs. The company is also exploring targeted acquisitions of competitors to consolidate its market leadership and reduce the threat of new entrants. By collaborating with universities and research institutions, De Nora can accelerate innovation and stay ahead of technological advancements in the hydrogen sector.

**RISK OF THE TK NUCERA JOINT VENTURE (D):** De Nora conducts a significant portion of its business through tk nucera, a joint venture established in 2015 with thyssenkrupp, in which De Nora holds a minority stake. tk nucera is not only the **primary customer** for De Nora’s Electrode Technologies segment, accounting for 27% of the segment’s revenues and 16% of total company revenues in 2021, but also a key strategic partner in executing De Nora’s long-term growth plans, particularly in the energy transition and green hydrogen markets. The joint venture’s ability to establish itself as a leading provider of large-scale hydrogen production plants is directly linked to De Nora’s ability to expand its market presence and achieve its strategic goals in this sector. The commercial relationship between the two companies is governed by the Toll Manufacturing Agreement (TMA), which outlines their reciprocal operational and commercial commitments. Under this agreement, tk nucera purchases critical components and services from De Nora, including the construction and assembly of cells for various tk nucera technologies, activated anode and cathode electrodes, as well as recoating, retrofitting, and repair services. In return, De Nora **is restricted from producing or supplying certain products based on tk nucera’s intellectual property to third parties**, except in cases permitted by existing licensing agreements. The TMA also grants De Nora exclusivity for specific quantities for the duration of the agreement, providing some level of security but also exposing the company to risks should this agreement not be renewed or terminated under German law provisions. Additionally, the governance structure of tk nucera is outlined in a shareholders’ agreement, which was originally signed in 2013 and later revised in 2022. The new agreement is set to remain in effect until November 4, 2038, with automatic five-year renewals unless either party gives notice of termination. Given De Nora’s minority stake, its ability to influence tk nucera’s strategic and operational decisions is limited. If tk nucera were to make **decisions that are not aligned** with De Nora’s best interests, this could lead to negative financial and operational impacts for De Nora.

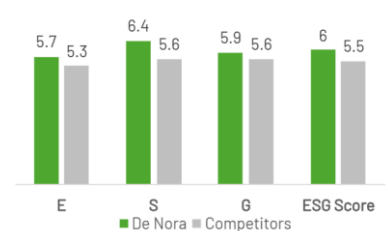
**MITIGATION:** De Nora actively mitigates this risk through a strong focus on technological leadership and continuous innovation to ensure its products remain essential to tk nucera’s operations. By developing cutting-edge electrode solutions that meet tk nucera’s evolving needs, De Nora strengthens its strategic positioning within the joint venture. Additionally, while the TMA imposes certain exclusivity clauses, it does not prevent De Nora from working with other third parties, including those operating in the green hydrogen sector. This flexibility allows De Nora to diversify its customer base and reduce its dependence on tk nucera. Furthermore, tk nucera’s financial contribution to De Nora extends beyond direct sales, as it represents a key driver of the company’s long-term energy transition strategy. However, tk nucera’s profitability and dividend distribution practices remain an area of potential risk. In 2021, tk nucera did not distribute dividends, and if similar patterns continue due to reduced profitability, De Nora’s financial position could be impacted. To further strengthen its resilience, De Nora should continue expanding its partnerships beyond tk nucera, investing in new **collaborations with energy players, technology providers, and industrial customers** to ensure that its leadership in green hydrogen technologies is not solely dependent on the joint venture. By leveraging its **global presence and extensive R&D capabilities**, De Nora can **maintain strategic flexibility** and **mitigate risks associated with its minority position in tk nucera**, securing long-term stability and growth.

Exhibit 39

| Combined ESG Score<br>[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

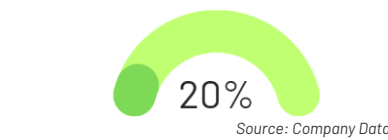
Final score: Exhibit 40



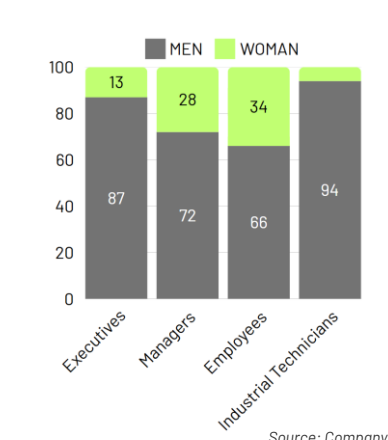
Achived SDG goals: Exhibit 41



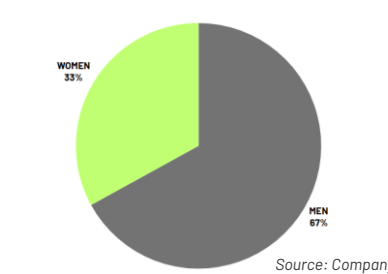
Total women workforce: Exhibit 42



Gender diversity by catyegory in %: Exhibit 43



Board of directors composition in %: Exhibit 44



ESG Analysis

Sustainability is now a strategic imperative. Companies must balance economic growth with environmental stewardship, social responsibility, and ethical governance. De Nora's ESG strategy embodies this vision, aligning with 10 of the 17 UN Sustainable Development Goals (SDGs) as assessed by Refinitiv, demonstrating a strong commitment to sustainable progress and responsible practices. The priorities of the Group's ESG strategy can be grouped into four pillars (Exhibit 42).

**Green Innovation** Promote sustainable technological innovation by integrating circular design and LCA principles, contributing to the development of low-impact solutions and positioning as a leader in the sector. **Climate Action and Circular Economy** Reduce the carbon footprint through clean technologies, fostering a circular economy and sustainable processes to combat climate change. **People** Ensure employee well-being and mental health through inclusive initiatives, psychological support, and growth opportunities, while promoting diversity and equality.

**Engagement with Local Communities** Strengthen partnerships with institutions and local communities through STEM projects and charitable initiatives, supporting sustainable development and community welfare.

To assess the Company's adherence to ESG principles, we conduct a detailed evaluation based on 61 key metrics—22 for Environmental, 22 for Social, and 17 for Governance (Appendix 20). These indicators are grouped into thematic categories and graded according to DE NORA's standing relative to industry peers. The **final ESG score (B)** is calculated as a weighted average of these ratings, with the numerical results translated into letter grades using Refinitiv's methodology (Exhibit 39).

ENVIRONMENTAL (SCORE B -WEIGHT 34.18%)

De Nora is committed to enhancing its Environmental pillar by adopting circular design, LCA principles, sustainability scorecards, and optimizing noble metal use. While the company has made progress with self-generated renewable electricity and reduced reliance on certain fossil fuels, increased diesel and natural gas usage highlight challenges in transitioning to a fully sustainable energy profile. In 2023, **renewable electricity** accounted for only **3.2%** of total purchased electricity, indicating the need for accelerated progress to meet ESG targets of 40% by 2026 and 100% by 2030 of the Sustainability plan. De Nora's CO<sub>2</sub> emissions per million in revenue are below the industry average, reflecting good performance, but further improvements are possible. The 50% emissions reduction target exceeds many competitors, but achieving it will require greater adoption of renewable energy and low-impact technologies. Additionally, the percentage of **recycled materials** in 2023 is very low, at only **2.9%**, underscoring the need to improve reuse and recycling practices. There is also a lack of detailed information on metals and other key materials related to recycling, despite these representing significant volumes.

The company excels in water efficiency, with consumption significantly below the industry average, and demonstrates leadership in clean energy product innovation. However, the waste **recycling rate (41.82%)** remains below the competitor average (64.17%), presenting an opportunity for targeted improvements.

SOCIAL (SCORE BB -WEIGHT 37.34%)

De Nora is committed to social well-being through initiatives that enhance safety, inclusion, and employee engagement while acknowledging areas for improvement. The company stands out with **27.9% female representation in managerial roles**, above the industry average, yet overall **female employment** remains low at **20%**, highlighting the need to strengthen inclusion policies. Male predominance persists across all job categories, with men comprising 80% of the workforce in FY23, and the greatest disparities observed among **industrial technicians (94% male) and executives (87% male)** (Exhibit 43).

However, De Nora does not currently have a formalized policy ensuring equal pay for equal work between men and women. The absence of such a policy may create perceptions of discrimination and negatively impact employee morale and retention, particularly for women. To address these challenges, De Nora's ESG plan includes initiatives to engage **over 40% of female students in STEM programs** to foster greater diversity by 2026. Additionally, **62% of new hires in FY23** were in the **30-50 age group**, ensuring stability, while employees under 30 (26%) faced high turnover, emphasizing the need for stronger retention strategies. The over 50 age group remains a minority (12%), suggesting an opportunity for greater intergenerational diversity. Beyond workforce inclusion, De Nora actively supports local economies, with **63.88% of total spending directed to local suppliers**, fostering employment and reducing inequalities. The company also invests in **education and research** through the **Oronzio and Niccolò De Nora Foundation**, which advances electrochemical research via scholarships, awards, and university collaborations.

De Nora's social commitment is also reflected in donations of \$235.5 per million in revenue, which, while below the industry average, provide a foundation for expanding community support. Through **corruption prevention due diligence and strong policies for customer health and safety**, the company continues to reinforce its commitment to social sustainability and stakeholder responsibility.

GOVERNANCE (SCOREBB-WEIGHT24.48%)

De Nora's governance structure reflects commitment to effective management practices, with the Board of Directors consisting of **12 members**, 8 male (67%) and 4 female (33%), exceeding the industry average for board gender diversity (33.36%). Additionally, **100% of board members possess ESG-related competencies**, equipping them to oversee the organization's impact on the economy, environment, and society effectively. there is a lack of clarity on the specific indicators used to assess executive performance. The Board of Directors defines executive pay policies, but there is limited disclosure on the specific performance criteria for variable compensation (Appendix 19).

In terms of age distribution, **92% of board members are over 50 years old**, providing a wealth of experience, while **8% are between 30 and 50 years**, fostering intergenerational balance. Moreover, certain governance areas require improvement to align with best practices. **Audit committee independence**, currently at 66.7%, is below the industry average of 87.3%, potentially limiting the impartial oversight of financial and operational processes. Increasing independence to 100% would strengthen transparency and accountability. Another area for improvement is the **proportion of independent board members**, currently at 46.7%, compared to an industry average of 69.7%. Independent directors are vital for unbiased governance and conflict mitigation. Enhancing their representation would improve decision-making and align governance practices with industry standards. The **average board tenure** at De Nora is 3.02 years, significantly lower than the industry average of 6.36 years, suggesting potential instability or frequent turnover. Extending board tenure would promote stability and enable more consistent long-term strategic planning. Lastly, **board member compensation**, is significantly below the industry average a competitive compensation is essential to attract and retain top-tier talent. Aligning compensation with industry benchmarks would help De Nora secure highly qualified directors. In summary, while De Nora demonstrates strengths such as a high proportion of ESG-competent board members and solid gender diversity, there is still...room for improvement!

Our advices to the company? SMALL TWEAKS, BIG IMPACT!

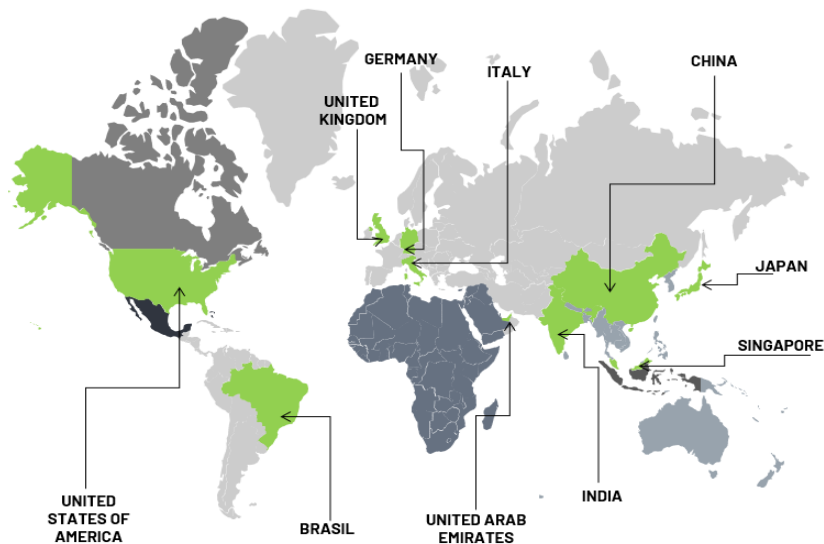
**Women in Leadership:** The More, The Merrier: Greater female representation in executive roles would optimize leadership balance, drive strategic innovation, and enhance governance effectiveness.

**Compensation:** Pay Like You Mean It! Below-market board compensation could mean missing out on top talent. Competitive pay = top-tier governance.

**More Independent Directors,** Decisions Need Debate allowed: De Nora lags the 69.75% industry standard. More independent minds = sharper decisions, fewer conflicts.



## Appendix 1: Organization & Location



Source: Company data, Team assessment

### AMS (NORTH AND LATIN AMERICAS)

#### UNITED STATES OF AMERICA

De Nora Tech - Concord & Mentor  
De Nora Water Technologies - Philadelphia  
De Nora Water Technologies - Pittsburgh  
De Nora Water Technologies - Houston  
De Nora Neptune

#### BRASIL

De Nora Do Brasil

### EMEIA + INDIA

#### ITALY

De Nora Italy  
De Nora Water Technologies Italy

#### GERMANY

De Nora Deutschland  
Shotec

#### UNITED KINGDOM

De Nora Water Technologies UK

#### UNITED ARAB EMIRATES

De Nora Water Technologies - Abu Dhabi  
De Nora Water Technologies FZE - Dubai

#### INDIA

De Nora India Limited

### 5 R&D CENTRES

- The **"US R&D"** unit (Cleveland Area) - Ohio, is mainly focused on the development of enabling technologies for Energy Transition.
- The **"Water Technologies Innovation Center"**, located in Albuquerque, New Mexico, is the research unit specialized in Water Technologies segment products.
- The **"R&D Japan"** unit is located in Fujisawa (Tokyo area) and Okayama and operates a small satellite unit at De Nora Elettrodi (Suzhou) Co., Ltd. China. This team works for both DSE® and IEM (Ionic Exchange Membrane) electrode products.
- The **"R&D Italy"** unit is located primarily in the Industrie De Nora headquarters in Milan and, in part, at De Nora Italy Hydrogen Technologies S.r.l.

### APAC (ASIA AND SOUTH PACIFIC)

#### CHINA

De Nora Elettrodi Suzhou  
De Nora China Jinan  
De Nora Water Technologies Shanghai

#### SINGAPORE

De Nora Italy Singapore Branch  
De Nora Water Technologies Singapore Branch

#### JAPAN

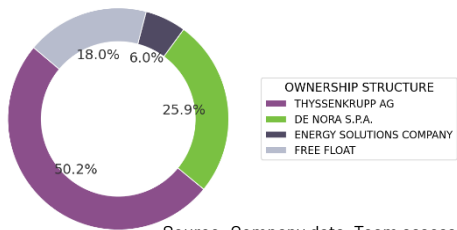
De Nora Permelec Ltd Fujisawa  
De Nora Permelec Ltd Okayama  
De Nora Permelec Ltd Yokohama (Head Office)

## Appendix 2: tk Nucera JV, Paving the Way for Tomorrow's Energy



De Nora holds a **25.85%** stake in Thyssenkrupp Nucera, a long-established leader in CA electrolysis technology. Thyssenkrupp Nucera has been a key player in industrial-scale electrolysis for decades. On July 7, 2023, Thyssenkrupp Nucera shares began trading on the Frankfurt Stock Exchange, with a total of 30,262,250 shares placed at EUR 20 each. The largest shareholders are Thyssenkrupp (50.19%), De Nora (25.85%), and Energy Solutions Company (6%). Thyssenkrupp Nucera also **supplies materials** to De Nora for the contract manufacturing of CA electrolysis bipolar elements and half shells, strengthening their collaboration in advancing clean energy solutions.

### OWNERSHIP STRUCTURE OF tk Nucera (source: Financial Year Report)



Source: Company data, Team assessment

**thyssenkrupp nucera** brings over 60 years of expertise in electrolysis technologies, focusing on **chlor-alkali (CA)** and **alkaline water electrolysis (AWE)**. The company offers end-to-end solutions, including technology development, licensing, plant design, and lifecycle support, providing innovative and high-performance systems for industrial electrolysis. **thyssenkrupp nucera** aims to serve all key hydrogen markets by 2030. Already a leading player in Europe, the company is expanding into North America, with plans to enter additional markets such as the Middle East, India, and Australia, which are viewed as strategic growth regions.

## Appendix 3: De Nora's Value Chain

To analyze the various phases of De Nora's production process, through which value is created, it is necessary to separate the Water Technologies business from the other two, because the stages follow a different sequence.

### ELECTRODES AND ENERGY TRANSITION BUSINESSES



**1. SUPPLY CHAIN AND PLANNING:** This phase concerns procurement, planning, and the management of production scheduling. The production of the products offered by De Nora requires the use of raw materials such as titanium, nickel, and other called 'noble metals' (including iridium and ruthenium), whose procurement involves various risks, such as their availability, delivery delays, and volatile prices. For this reason, De Nora adopts several strategies:

- **Procurement policies:** The purchasing strategy is divided into (a) purchases through contracts, which regulate various aspects of supply in terms of both price and delivery methods; (b) forward purchases, which fix the price for deliveries on certain future date pre-established at the time of the order (usually purchase orders issued against medium/long-term contracts signed with end customers); and (c) spot purchases used for titanium and noble metals.

- **Supplier diversification:** To avoid delays in the supply of raw materials, De Nora, in addition to relying on certain trusted suppliers, seeks to diversify its suppliers of key materials.

- **Warehouse management policies:** During periods of difficulty (e.g., the Covid-19 pandemic), to avoid supply delays and the consequent price increases impacting production, De Nora increases purchases of strategic materials, raises inventory levels, and redistributes surpluses among the various companies in the group.

**2. PRODUCTION:** This phase includes design activities, mechanical processing, and assembly operations, all carried out according to planning and in compliance with standards. The risks associated with these activities (e.g., production interruptions due to events out of De Nora's control, non-compliance with regulations, the

revocation of permits and authorizations) are managed through qualification policies for various plants to ensure they can produce in accordance with quality standards and internal controls for the periodic verification of legal compliance and the permits required to carry out operations.

**3. LOGISTICS:** Logistics operations include transportation, receipt and acceptance of goods, handling and storage of materials and management of import and export transactions and related documentation. The responsible functions ensure that material flows align with production needs and comply with current customs rules and regulations, adopting a warehouse management logic based on maintaining inventory levels compatible with the supply lead times of various raw materials.

**4. MARKETING AND SALES:** Marketing and sales activities follow a decentralized model across territories, focusing on the development and implementation of sales and operational marketing plans. Operational marketing and sales processes are supported by the Strategic Marketing and Communication, Product Management, Business Development, and Research & Development departments, to identify new market opportunities.

**5. SERVICES:** The services provided include the leasing of electrodes to end customers and after-sales services, such as technical assistance during the installation and commissioning phases of installed products, performance monitoring, and identification of potential improvement areas.

WATER TECHNOLOGIES BUSINESS



- 1. SALES ACTIVITIES:** The sales department identifies business opportunities, conducts feasibility studies and technical analyses to determine solutions that meet customer needs, and is responsible for conceptual design and cost estimation. This leads to technical proposals and the negotiation phase, defining contract duration, performance and durability guarantees, payment terms, and ultimately the signing of the corresponding purchase order. Contracts signed by De Nora include **contracts with representatives and/or agents**, which foresee that partners receive a commission based on sales generated for the Group, and **distribution contracts**, which allow partners to purchase products from the Group at a discounted price and resell them to end customers.
- 2. PROCUREMENT:** Suppliers are selected based on criteria such as price, delivery times, quality, and reliability for each specific order. Consequently, there is no over-reliance on external suppliers. All electrodes required for production are provided internally by the Electrode Technologies business. Potential risks associated with these activities (e.g., unavailability of raw materials and other strategic components at affordable prices) are managed through the adoption and adherence to procurement policies and diversification of its suppliers.
- 3. PRODUCTION:** This phase includes project management and engineering activities. The project management department oversees coordination and operational activities to ensure project execution according to contractual requirements, within budget, on schedule, and in line with objectives agreed upon with customers. Risks, such as failing to meet deadlines and budgets, are managed through the adoption of guidelines and project management and monitoring activities. The engineering division is responsible for the detailed design of plants and systems according to project technical specifications, purchase specifications for equipment and materials, equipment sizing, and compliance with regulations. Risks related to these activities (e.g., non-compliance with technical specifications, quality standards, and customer requirements) are managed by adhering to strict engineering standards. Construction and assembly activities are subsequently carried out internally or outsourced to third companies.
- 4. DELIVERY AND INSTALLATION:** De Nora provides supervision during assembly and assistance during the commissioning phase of supplied systems and plants, remaining involved throughout the process until the completion of verifications and the issuance of the acceptance certificate, demonstrating the performance guaranteed by the contract. Risks associated with these activities, such as customer rejection of the supply due to suboptimal product performance, are managed through quality control activities and employee training for those tasked with providing technical support at customer.
- 5. AFTER-SALES SERVICES:** Maintaining the value of installed products over time is achieved through periodic maintenance programs, technological improvements, or the replacement and upgrading of equipment and spare parts.

Appendix 4: Zooming in on the Goals

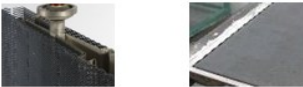
**Electrode Technologies:** De Nora prioritizes optimizing the use and recovery of precious metals to improve cost efficiency, expanding manufacturing capacity to meet growing demand, and strengthening relationships with customers and partners. Additionally, the development of aftermarket services and the introduction of sustainable, innovative electrode solutions further reinforce its commitment to delivering long-term value while driving growth through cutting-edge technology.

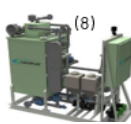
**Water technologies:** De Nora aims to preserve its leading position in the Pool electrode market by continuing to focus on the quality of its services and customer relationships. Regarding the water treatment systems business, the Group plans to concentrate its growth efforts on key strategic markets (municipal and industrial) through an optimized technology portfolio. Additionally, it seeks to capitalize on new business opportunities arising from the emergence of new contaminants and supported by stricter regulatory frameworks for the treatment and reuse of potable and wastewater. Moreover, De Nora wants to improve differentiation through product enhancements and cost reduction.

**Energy transition:** the Group aims to establish itself as a leader in the hydrogen production market, leveraging its extensive technological offerings, consolidated expertise in electrode manufacturing, and long-standing partnerships with leading industry players such as TK Nucera. Supported by its robust production capacity and a strong order backlog for green hydrogen solutions, which amounts to 0.3 GW delivered in FY2022 compared to 1.0 GW delivered in FY2023 with €102m revenue (+140% YoY). The Group is positioning itself to capitalize on the significant growth potential of this sector. A key initiative in this strategy is the joint venture between Industrie De Nora and Snam (Snam S.p.A., a global leader in energy infrastructure, became a minority shareholder in January 2021 by acquiring 37.47% of the company's share capital). Together, they plan to create Italy's largest electrolyzer production hub, the Gigafactory, which will be located in Cernusco sul Naviglio (Milan). The project aims for a capacity of 2 gigawatts by 2030, with a €100 million investment. This aligns with the Group's broader plans for scalable and strategic investments to enhance its technological capabilities and market presence. The Group is also committed to advancing critical components for hydrogen generation, including electrodes and catalysts for alkaline electrolysis and alternative technologies such as PEM and AEM. Additionally, it plans to invest further in the development and commercialization of electrolyzers and integrated systems designed to lower the levelized cost of hydrogen (LCOH). The Group's growth through strategic acquisitions, and key partnerships (such as the tk nucera joint venture), is further strengthened by solid client relationships and an operational presence in major global markets.

Appendix 5: Products Portfolio

Source: Company data, Team assessment

| ET                               | BRANDS                   | PRODUCTS                                                                                                                                                                                 | APPLICATIONS                                                                                                                                                                              |
|----------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chlor-Alkali                     | DSA®<br>NRG®             | Electrodes (anodes and cathodes)<br>Catalytic coating<br>Diaphragm Cells<br>Membrane Technologies<br> | Electrodes to produce chlorine and caustic soda                                                                                                                                           |
| Electronics                      | DSA®                     | Electrode (anodes)<br>                                                                                | 1) Anodes to produce:<br>-Electrodeposited Copper Foil<br>-Printed Circuit Boards (PCB)<br>-Lithium Batteries<br>2) Anodes for surface finishing, chromium plating and electrogalvanizing |
| Specialties and New Applications | DSA®<br>LIDA®<br>ELGARD® | MMO Anodes (Mixed Metal Oxide)<br>                                                                    | 1) Refining of non-ferrous metals by electrowinning<br>2) Anti-corrosion protection of steel-reinforced concrete and steel structures                                                     |

| WT                   | BRANDS                                               | PRODUCTS                                                                                                                                                                                                                                                                                                                                                                                                        | APPLICATIONS                                                                                                                                                                                                                               |
|----------------------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pools Technologies   | DSA®                                                 | Electrodes for pool chlorinators (1)                                                                                                                                                                                                                                                                                           | Saltwater pool chlorination                                                                                                                                                                                                                |
| Electrochlorination  | SANILEC®<br>ClorTec®<br>SEACLOR®<br>MIOX®<br>CECHLO® | SANILEC® TRP Offshore Seawater Biofouling Control System<br>ClorTec® On-site Hypochlorite Generators (2) <br>SEACLOR® systems<br>CECHLO® On-Site generation system (3) <br>MIOX® (many models)                                              | 1) Municipal Water and Wastewater Treatment<br>2) Water Reuse and Reclamation<br>3) Water treatment for Power Generation<br>4) Water Treatment for the Food & Beverage industry<br>4) Fire Protection Water Treatment for the Offshore Rig |
|                      | Capital Control®<br>MicroChem®                       | Capital Control® Gas Feed System<br>Capital Control® Scrubbers<br>Capital Control® UV water disinfection System (4) <br>Capital Control® Chlorine Dioxide Generators<br>Capital Control® Ozone Generators (5) <br>MicroChem® 450 Controller | 1) Municipal and Industrial Water and Wastewater treatment<br>2) Water Reuse and Reclamation<br>3) Cooling Water Treatment for Power Generation<br>4) Water treatment for the Food & Beverage Industry                                     |
| Filtration Systems   | DE NORA<br>TETRA®<br>SORB™                           | DE NORA TETRA Filter Underdrain (6) <br>DE NORA TETRA Biological Filtration<br>DE NORA TETRA ABF Active Biological Filter<br>SORB™FX Contaminant Removal (PFAS)(7)                                                                          | 1) Municipal Water and Wastewater Treatment<br>2) Water Treatment for the Food & Beverage industry<br>3) Filtration Systems for the Steel production industry<br>4) Water Reuse and Reclamation                                            |
| Marine Technologies* | OMNIPURE™                                            | OMNIPURE 64 G2 (8) <br>OMNIPURE MC/MX                                                                                                                                                                                                                                                                                         | Offshore Wastewater Treatment                                                                                                                                                                                                              |
| ETr                  | BRANDS                                               | PRODUCTS                                                                                                                                                                                                                                                                                                                                                                                                        | APPLICATIONS                                                                                                                                                                                                                               |
|                      | Dragonfly®                                           | Electrolyser                                                                                                                                                                                                                                                                                                                 | Advanced Alkaline Water Electrolysis, which allows the production of green hydrogen on site                                                                                                                                                |
|                      | NRG®<br>DSA®                                         | Electrode for AWE<br>Gas Diffusion Electrodes (GDE)                                                                                                                                                                                                                                                                                                                                                             | H2 Production by Alkaline Water Electrolysis (AWE)                                                                                                                                                                                         |

\*Business line closed in December 2023 because it was considered non-strategic and in 2024 it was sold to Optimarin AS, with the Hyde Marine® and Hyde Guardian® brands

## Industry Overview and Competitive Analysis

### Appendix 6: SWOT Analysis

#### ELECTRODES

#### WATER TECHNOLOGIES

#### ENERGY TRANSITION

##### STRENGTHS

Undisputed industry **leadership**

Leadership in Pools Market (electrochlorination)

Cutting-edge **proprietary technology**

Proprietary technologies, continuous R&D

High revenue **diversification** (many geographic areas, markets and applications)

Distinctive global manufacturing **capacity** (2.5GW)

Strong **knowledge** and know how

Brand **recognition** and solid **reputation**

Solid **partnership** with tk nucera (2.5GW)

**Long-term** customer relationship

Best in class R&D activities

##### WEAKNESSES

High research and development **costs** to maintain the leadership position in some industry

Dependence on the **supply chain** of noble metals

Need for significant **initial investments** to expand production capacity and infrastructure

##### OPPORTUNITIES

Possibility of new **acquisitions** in the next years

**Stricter regulations** regarding contaminants, including PFAS substances

**Growing demand** for solutions for green hydrogen (produced by electrolysis)

**Water scarcity** in many regions, especially in emerging economies

Expansion of the **global hydrogen market** as a key element for the energy transition

##### THREATS

**Regulatory changes** that could impact the use of certain chemicals or technologies, particularly the use of noble metals

Risk related to the **supply chain** especially for noble metals

**High competition** in the hydrogen production, an expanding industry

Industry not exploded with **uncertainty**



Appendix 7: PORTER's forces

| FORCE                         | ELECTRODES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | WATER TECHNOLOGIES                                                                                                                                                                                                        | ENERGY TRANSITION                                                                                                                                                                                                                                                                                                                                                                               | SCORE |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| THREAT OF NEW ENTRANCE        | <b>Strict regulations and standards:</b> Companies that want to enter face many stringent regulations, such as those related to emissions, material usage, etc.<br><b>Incumbent experience:</b> They have been operating in the industry for years and have developed significant know-how and many specialized skills, often protected by patents.<br><b>Stable relationships:</b> The incumbents have established relationships and agreements with suppliers and customers, thus having better access to supply and distribution channels.<br><b>Large financial resources:</b> Operating in this sector requires large investments in specific machinery, plants, and R&D, meaning that companies wishing to enter need to have significant capital available. |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                 | 2/5   |
| THREAT OF SUBSTITUTES         | Electrodes are used in a wide range of products, and it is <b>not possible to replace</b> them while maintaining the same level of efficiency and performance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | There are various technologies and systems for water treatment, but none of them can meet all market demands on their own. Companies in this industry usually have a <b>broad product portfolio</b> .                     | <b>Hydrogen</b> is not the only renewable energy source; furthermore, green hydrogen (hydrogen produced via water electrolysis) competes with other types of hydrogen, particularly grey and blue hydrogen (hydrogen produced using natural gas). However, unlike these, green hydrogen allows for hydrogen production without CO <sub>2</sub> emissions, making it central to decarbonization. | 3/5   |
| BARGAINING POWER OF SUPPLIERS | The production of electrodes requires various metals, including <b>precious metals</b> , and suppliers of these are highly concentrated and large. Since these materials are essential, companies in the sector make agreements and contracts with these suppliers to ensure they have the necessary materials. The power of suppliers is somewhat reduced due to competition among them.                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                 | 4/5   |
| BARGAINING POWER OF BUYERS    | Given the <b>vast range of applications</b> of these products across many different markets, there are <b>many customers</b> willing to purchase, so their bargaining power is relatively low, although the large size of some customers can increase their bargaining power.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                 | 2/5   |
| INTERNAL RIVALRY              | A <b>relatively stable industry</b> , with most companies operating locally in market niches and only a few global competitors. Differentiating and innovating their product portfolios is key to maintaining market position.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | This is a <b>fragmented industry</b> with many multinational companies and regional players. Product differentiation (in terms of efficiency, quality, and performance) is crucial to maintain and increase market share. | The <b>green hydrogen sector</b> is expected to grow rapidly in the future, attracting new players and increasing competition. For this reason, large companies already in the sector are investing heavily to gain market share.                                                                                                                                                               | 4/5   |

Appendix 8: PESTEL analysis

Source: Company data, Team assessment

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POLITICAL     | <p><b>Government subsidies:</b> The growth and expansion of the green hydrogen sector strongly depend on government contributions, which are primarily available in Europe (e.g., Horizon Europe). This factor will also influence the performance of De Nora's ETr business, which the company relies on for its growth in the coming years.</p> <p><b>Geopolitical conflicts:</b> The electrode production sector depends on the supply of noble metals, essential for manufacturing. These metals are primarily sourced from geopolitically unstable regions, such as parts of Africa or Russia, which could affect their availability and procurement.</p> <p><b>US government:</b> The new US administration is expected to slow the energy transition and decarbonization efforts, likely leading to an increase in CO<sub>2</sub> emissions and the US withdrawal from the Paris Climate Agreement.</p> <p><b>International Electrotechnical Commission (IEC):</b> Develops global technical standards and regulations governing the design, production, and application of electrodes across various industrial sectors.</p> <p><b>World Health Organization (WHO):</b> Issues the Guidelines for Drinking Water Quality, serving as a global benchmark. These guidelines are used to shape national water quality policies and set limits for physical, chemical, and microbiological contaminants.</p> |
| ECONOMICAL    | <p><b>Currency fluctuations:</b> Companies operating internationally, both as buyers of goods and services and as sellers of products, such as De Nora, are exposed to exchange rate risks due to currency fluctuations affecting commercial transactions.</p> <p><b>Global economic growth:</b> The OECD estimates global GDP growth of 3.2% in 2024 and 2025, accompanied by further inflation reduction, improvements in real incomes, and less restrictive monetary policies in many economies. This will help support demand. However, risks persist due to geopolitical and trade tensions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| SOCIAL        | <p><b>Demographic changes:</b> The World Bank projects a 15% population growth and a 30% increase in the urban population by 2040. This will influence many markets, especially the water treatment sector in which De Nora operates. Population growth will drive higher demand for solutions for municipal water and wastewater treatment.</p> <p><b>Growing industrialization:</b> The increasing demand for water treatment solutions to meet industrial water needs will positively impact De Nora's WT business.</p> <p><b>Environmental awareness:</b> Consumers and businesses are becoming more concerned about environmental issues, including pollution, clean energy sources, the use of highly polluting materials, and the wastage of resources like potable water.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| TECHNOLOGICAL | <p><b>Material innovations:</b> Continuous research on graphene-based electrodes, innovative coatings, and hybrid materials aims to improve electrode performance and durability.</p> <p><b>Emerging technologies:</b> New applications of electrodes, such as electrochemical desalination, and advancements in green hydrogen production technologies using electrodes positively impact the electrode manufacturing sector.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| ENVIRONMENTAL | <p><b>Resource scarcity:</b> The World Resource Institute estimates a 56% gap between water supply and demand by 2030.</p> <p><b>Climate change:</b> Increasing concerns about climate change, particularly regarding water quality and emissions, are driving demand for clean energy solutions and optimizing processes to reduce the use and waste of critical materials like noble metals.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| LEGAL         | <p><b>Patent regulations:</b> Protecting intellectual property is essential for companies developing new technologies. This is particularly critical in the green hydrogen sector, where significant R&amp;D investments make it necessary to safeguard technological discoveries.</p> <p><b>New PFAS regulations:</b> Stringent regulations are in place for PFAS due to their risks to human health and the environment. Several organizations (e.g., European Commission, EPA - Environmental Protection Agency) have introduced reporting and registration requirements for PFAS producers and importers, including details on production volumes, disposal methods, and potential environmental and worker exposures.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Source: Company data, Team assessment

Appendix 9: Income Statement

| Statement Data                                           | 2021      | 2022      | 2023      | 2024E     | 2025E     | 2026E     | 2027E     | 2028E     | 2029E     | 2030E     |
|----------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Revenues                                                 |           |           |           |           |           |           |           |           |           |           |
| Revenue from Business Activities – Total                 | 615.878   | 852.826   | 858.411   | 882.822   | 911.407   | 1,006.224 | 1,085.716 | 1,175.912 | 1,278.785 | 1,396.718 |
| Income from electrode tecnologies segment                | 348.818   | 473.444   | 484.214   | 484.214   | 484.708   | 506.384   | 529.322   | 553.613   | 579.353   | 606.843   |
| Chlorine – Soda                                          | 236.872   | 319.161   | 320.906   | 320.906   | 329.891   | 339.128   | 348.624   | 358.385   | 368.420   | 378.736   |
| Electronic                                               | 75.804    | 88.284    | 79.903    | 79.903    | 85.896    | 92.338    | 99.263    | 106.708   | 114.711   | 123.314   |
| Specialties and new uses                                 | 36.142    | 65.999    | 63.405    | 63.405    | 68.921    | 74.917    | 81.435    | 88.520    | 96.221    | 104.593   |
| Income from water technologies segment                   | 257.667   | 336.719   | 289.982   | 294.448   | 311.499   | 329.540   | 348.628   | 368.825   | 390.194   | 412.804   |
| Waterpool                                                | 98.228    | 161.751   | 86.038    | 91.114    | 96.490    | 102.183   | 108.212   | 114.596   | 121.357   | 128.517   |
| Electrochlorination                                      | 63.313    | 84.607    | 91.410    | 96.346    | 101.549   | 107.032   | 112.812   | 118.904   | 125.325   | 132.092   |
| Disinfection and filtration                              | 83.073    | 79.061    | 100.884   | 106.987   | 113.460   | 120.325   | 127.604   | 135.324   | 143.511   | 152.194   |
| Marine technologies                                      | 13.053    | 11.300    | 11.630    | -         | -         | -         | -         | -         | -         | -         |
| Income from energy transition segment                    | 9.393     | 42.664    | 102.235   | 104.160   | 115.200   | 170.300   | 207.766   | 253.475   | 309.239   | 377.271   |
|                                                          |           |           |           | 0,02      | 0,11      | 0,48      | 0,22      | 0,22      | 0,22      | 0,22      |
| Total                                                    | 615.878   | 852.827   | 858.411   | 882.822   | 911.407   | 1,006.224 | 1,085.716 | 1,175.912 | 1,278.785 | 1,396.718 |
| Operating Expenses                                       |           |           |           |           |           |           |           |           |           |           |
| Material Expenses                                        | (254.254) | (366.937) | (362.087) | (364.078) | (384.580) | (424.588) | (458.132) | (496.191) | (539.599) | (589.363) |
| Personnel costs                                          | (116.742) | (154.657) | (143.982) | (155.027) | (163.756) | (180.792) | (195.075) | (211.281) | (229.765) | (250.954) |
| Selling, General & Administrative Expenses               | (2.800)   | (13.357)  | (10.109)  | (9.207)   | (9.725)   | (10.737)  | (11.585)  | (12.548)  | (13.646)  | (14.904)  |
| Other Operating Expense/(Income)                         | (123.506) | (163.602) | (163.116) | (167.628) | (177.067) | (195.488) | (210.932) | (228.455) | (248.441) | (271.353) |
| Operating Profit                                         |           |           |           |           |           |           |           |           |           |           |
| EBITDA                                                   | 118.576   | 154.274   | 177.117   | 166.882   | 176.279   | 194.618   | 209.993   | 227.438   | 247.335   | 270.145   |
| Non-Operating Expenses                                   |           |           |           |           |           |           |           |           |           |           |
| Amortization                                             | (9.727)   | (9.758)   | (10.662)  | (8.946)   | (9.034)   | (9.124)   | (9.214)   | (9.305)   | (9.397)   | (9.490)   |
| Depreciation                                             | (16.507)  | (18.365)  | (19.956)  | (27.704)  | (34.024)  | (40.343)  | (46.663)  | (52.982)  | (59.302)  | (63.815)  |
| EBIT                                                     | 92.342    | 126.151   | 146.499   | 130.231   | 133.221   | 146.151   | 154.116   | 165.151   | 178.636   | 196.839   |
| Interest Expense                                         | (4.663)   | (6.417)   | (8.733)   | (4.000)   | (4.427)   | (4.915)   | (5.403)   | (5.891)   | (6.379)   | (6.867)   |
| Interest Income                                          | 5.384     | 2.042     | 114.386   | 2.985     | 2.357     | 1.728     | 1.081     | 422       | (253)     | (950)     |
| Sale of Tangible & Intangible Fixed Assets - Gain/(Loss) | (1.802)   | (331)     | (645)     | (1.170)   | (1.236)   | (1.364)   | (1.472)   | (1.594)   | (1.734)   | (1.894)   |
| Equity Earnings/(Loss)                                   | 8.834     | (1.196)   | 5.435     | 5.435     | 5.435     | 5.435     | 5.435     | 5.435     | 5.435     | 5.435     |
| Other Non-Operating Income/(Expense)                     | (1.531)   | 24.000    | (34)      | -         | -         | -         | -         | -         | -         | -         |
| Normalized Pre-tax Profit                                | 98.564    | 144.249   | 256.908   | 133.482   | 135.350   | 146.035   | 153.757   | 163.522   | 175.705   | 192.564   |
| Non-Recurring Income/Expense                             |           |           |           |           |           |           |           |           |           |           |
| Non-Recurring Income/(Expense)                           | (5.011)   | (32.807)  | 8.372     | (7.395)   | (9.082)   | (10.769)  | (12.455)  | (14.142)  | (15.829)  | (17.034)  |
| Pre-Tax Income                                           |           |           |           |           |           |           |           |           |           |           |
| Income before Taxes                                      | 93.553    | 111.442   | 265.280   | 126.087   | 126.268   | 135.266   | 141.302   | 149.380   | 159.876   | 175.530   |
| Taxes                                                    |           |           |           |           |           |           |           |           |           |           |
| Income Taxes                                             | 27.108    | 30.765    | 34.231    | 30.261    | 30.304    | 32.464    | 33.912    | 35.851    | 38.370    | 42.127    |
| Net Income After Tax                                     |           |           |           |           |           |           |           |           |           |           |
| Net Income after Tax                                     | 66.445    | 80.677    | 231.049   | 95.826    | 95.964    | 102.802   | 107.389   | 113.529   | 121.506   | 133.403   |

Appendix 10: Balance Sheet

| Statement Data                                                            | 2021    | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      |
|---------------------------------------------------------------------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Current Assets                                                            |         |           |           |           |           |           |           |           |           |           |
| Cash & Cash Equivalents                                                   | 73.843  | 174.129   | 198.491   | 193.578   | 185.343   | 168.430   | 158.712   | 149.680   | 158.586   | 172.079   |
| Derivative Financial Instruments - Hedging                                | 478     | 159.036   | 14.185    | 14.291    | 15.096    | 16.666    | 17.983    | 19.477    | 21.181    | 23.134    |
| Loans & Receivables                                                       | 189.967 | 161.388   | 190.628   | 207.157   | 218.822   | 241.587   | 260.672   | 282.328   | 307.027   | 335.341   |
| Inventories                                                               | 233.033 | 295.476   | 257.146   | 300.547   | 320.728   | 355.542   | 385.506   | 418.859   | 456.223   | 497.001   |
| Other Current Assets                                                      | 22.037  | 29.135    | 39.767    | 33.471    | 35.356    | 39.034    | 42.118    | 45.617    | 49.608    | 54.183    |
| Total Current Assets                                                      | 519.358 | 819.164   | 700.217   | 749.044   | 775.346   | 821.259   | 864.992   | 915.960   | 992.624   | 1,081.739 |
| Non-Current Assets                                                        |         |           |           |           |           |           |           |           |           |           |
| Investments in Associates, Joint Ventures and Unconsolidated Subsidiaries | 121.785 | 122.664   | 231.511   | 231.511   | 231.511   | 231.511   | 231.511   | 231.511   | 231.511   | 231.511   |
| Receivables                                                               | 10.313  | 9.030     | 7.360     | 10.333    | 10.915    | 12.050    | 13.002    | 14.083    | 15.315    | 16.727    |
| Derivative Financial Instruments - Hedging                                | 5.421   | 4.610     | 3.180     | 5.154     | 5.444     | 6.011     | 6.486     | 7.024     | 7.639     | 8.343     |
| PP&E                                                                      | 167.627 | 184.177   | 254.273   | 312.273   | 370.273   | 428.273   | 486.273   | 544.273   | 585.702   | 627.130   |
| Other Non-Current Assets                                                  | 29.431  | 16.427    | 19.681    | 23.580    | 28.250    | 33.847    | 40.551    | 48.584    | 58.208    | 69.738    |
| Intangible Assets                                                         | 132.805 | 131.552   | 115.787   | 116.932   | 118.088   | 119.256   | 120.435   | 121.626   | 122.829   | 124.043   |
| Total Non-Current Assets                                                  | 467.382 | 468.460   | 631.792   | 699.783   | 764.482   | 830.947   | 898.258   | 967.101   | 1,021.202 | 1,077.493 |
| Total Assets                                                              |         |           |           |           |           |           |           |           |           |           |
| Total Assets                                                              | 986.740 | 1,287.624 | 1,332.009 | 1,448.826 | 1,539.828 | 1,652.206 | 1,763.250 | 1,883.061 | 2,013.827 | 2,159.231 |
| Current Liabilities                                                       |         |           |           |           |           |           |           |           |           |           |
| Trade Accounts & Trade Notes Payable                                      | 61.425  | 80.554    | 106.752   | 92.800    | 99.032    | 109.781   | 119.033   | 129.331   | 140.868   | 153.459   |
| Short-Term Debt & Current Portion of Long-Term Debt                       | 257.774 | 13.655    | 10.199    | 8.974     | 9.964     | 10.953    | 11.943    | 12.932    | 13.922    | 14.912    |
| Derivative Liabilities - Hedging                                          | 1.589   | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| Income Taxes - Payable                                                    | 27.392  | 10.970    | 19.196    | 22.938    | 24.229    | 26.750    | 28.863    | 31.261    | 33.996    | 37.131    |
| Other Current Liabilities                                                 | 120.697 | 132.865   | 113.101   | 139.154   | 146.990   | 162.281   | 175.102   | 189.648   | 206.239   | 225.259   |
| Total Current Liabilities                                                 | 468.877 | 238.044   | 249.248   | 263.866   | 280.214   | 309.766   | 334.941   | 363.173   | 395.026   | 430.762   |
| Non-Current Liabilities                                                   |         |           |           |           |           |           |           |           |           |           |
| Trade Accounts Payable                                                    | 177     | 83        | 86        | 140       | 147       | 163       | 176       | 190       | 207       | 226       |
| Debt - Long-Term                                                          | 3.784   | 287.544   | 133.716   | 150.287   | 166.859   | 183.430   | 200.002   | 216.573   | 233.145   | 249.716   |
| Deferred Tax                                                              | 29.277  | 8.664     | 8.873     | 40.052    | 42.307    | 46.708    | 50.398    | 54.585    | 59.360    | 64.835    |
| Other Non-Current Liabilities                                             | 30.663  | 28.485    | 29.898    | 31.381    | 32.938    | 34.572    | 36.287    | 38.087    | 39.976    | 41.959    |
| Total Non-Current Liabilities                                             | 63.901  | 304.776   | 172.573   | 221.860   | 242.251   | 264.873   | 286.862   | 309.435   | 332.688   | 356.735   |
| Total Liabilities                                                         |         |           |           |           |           |           |           |           |           |           |
| Total Liabilities                                                         | 532.778 | 542.820   | 421.821   | 485.726   | 522.465   | 574.639   | 621.803   | 672.608   | 727.714   | 787.497   |
| Shareholders' Equity                                                      |         |           |           |           |           |           |           |           |           |           |
| Shareholders' Equity                                                      | 450.459 | 741.218   | 904.488   | 958.531   | 1,012.688 | 1,072.475 | 1,136.039 | 1,204.658 | 1,279.845 | 1,364.827 |
| Minority Interest - Equity                                                | 3.503   | 3.586     | 5.700     | 4.570     | 4.675     | 5.093     | 5.408     | 5.795     | 6.268     | 6.907     |
| Total Shareholders' Equity                                                |         |           |           |           |           |           |           |           |           |           |
| Total Shareholders' Equity - including Minority Interest                  | 453.962 | 744.804   | 910.188   | 963.101   | 1,017.362 | 1,077.568 | 1,141.447 | 1,210.453 | 1,286.113 | 1,371.734 |
| Total Liabilities & Shareholders' Equity                                  |         |           |           |           |           |           |           |           |           |           |
| Total Liabilities & Equity                                                | 986.740 | 1,287.624 | 1,332.009 | 1,448.826 | 1,539.828 | 1,652.206 | 1,763.250 | 1,883.061 | 2,013.827 | 2,159.231 |

## Appendix 11: M&A Past Recordings

| YEAR | SEGMENT                | TARGET                                                               | COUNTRY |
|------|------------------------|----------------------------------------------------------------------|---------|
| 2005 | Electrode Technologies | Eltech Systems Corporation                                           | US      |
| 2010 | Electrode Technologies | Permelec (Mitsui)                                                    | JAPAN   |
| 2011 | Electrode Technologies | Chlorine Engineer Group (Mitsui)                                     | JAPAN   |
| 2015 | Electrode Technologies | ThyssenKrupp Uhde Chlorine Engineers JV<br>(now Thyssenkrupp Nucera) | GERMANY |
| 2015 | Water Technoogies      | Seven Trent's Water Purification                                     | UK/US   |
| 2015 | Water Technoogies      | Ozono Elettronica Internazionale (IT)                                | ITALY   |
| 2018 | Electrode Technologies | Water Star                                                           | US      |
| 2019 | Water Technoogies      | MIOX                                                                 | US      |
| 2019 | Water Technoogies      | Neptune                                                              | US      |
| 2021 | Energy Transition      | Azul Energy                                                          | JAPAN   |
| 2021 | Water Technoogies      | ISIA (Grundfos)                                                      | ITALY   |
| 2021 | Water Technoogies      | UV Technologies Division (Calgon Carbon)                             | US      |
| 2023 | Electrode Technologies | Shotec Gmbh                                                          | Germany |

Source: Company data, Team assessment

## Valuation

## Appendix 12: Growth Rate Selection for the Perpetuity Model

In determining the growth rate for the perpetuity model used in the terminal value calculation, we opted for the **30-year yield on AAA-rated European bonds, a nominal rate, equal to 2,6%, consistent with the nominal WACC** applied in our valuation. This decision reflects a conservative yet comprehensive approach to capturing long-term economic fundamentals.

The selected risk-free rate inherently **incorporates both expectations for economic growth and future inflation**, making it a balanced proxy for perpetual growth. By **aligning the growth rate with the nominal risk-free yield**, we ensure consistency with the WACC, providing a coherent framework for discounting cash flows in perpetuity. This methodology reflects stability and realism, avoiding overly optimistic assumptions that could distort equity valuation, and ensures a robust and defensible basis for estimating terminal value, adhering to best practices in financial analysis.

## Appendix 13: Cost of Equity

The cost of equity was calculated using a **two-factor model**, incorporating two of the three factors from the Fama-French framework: the **market factor** and the **size factor**. The decision to use this model instead of the traditional CAPM stems from the need to account for additional risk factors that significantly impact De Nora, particularly the size factor. Given that De Nora is a **small company**, this factor is highly relevant and could not be ignored. Initially, we considered employing the full Fama-French three-factor model, but since the value factor proved to be statistically insignificant, we decided to exclude it.

To determine the beta coefficients, we conducted a multiple regression analysis, where the dependent variable (Y) was the excess return of De Nora's stock over the risk-free rate. The independent variables (X) included:

- **MARKET BETA**: Calculated using the excess return of the STOXX Europe 600 over the risk-free rate as a proxy for the overall market.
- **SIZE BETA**: Computed as the additional risk of being a small-cap company relative to a large-cap. This was determined by subtracting the returns of the STOXX Europe Small 200. from those of the STOXX Europe 600.

Both beta coefficients were found to be highly significant. Next, we computed the risk premiums to be applied.

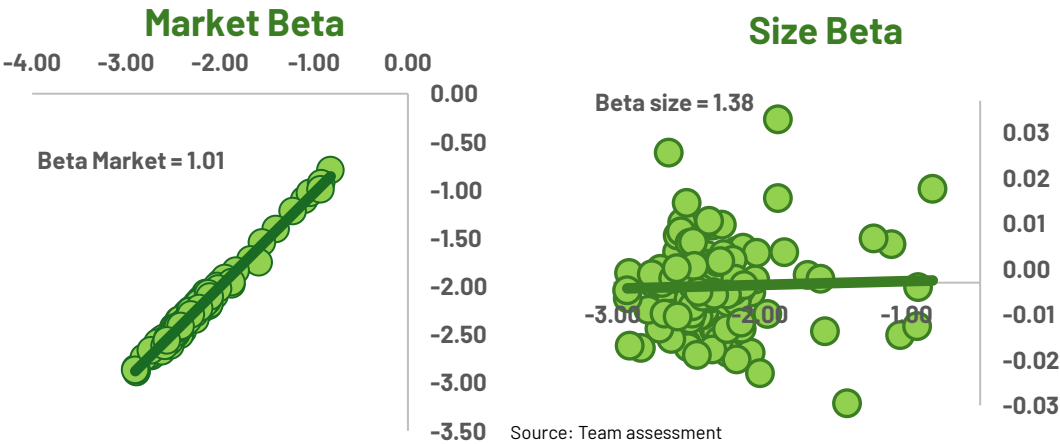
For the equity risk premium (ERP), we opted for a forward-looking approach rather than a historical one. Specifically, we used the implicit equity risk premium for the U.S. market, as provided by Damodaran, which stood at 4.33%. This value was derived using a discount rate approach based on the future expected dividends of the index. However, the Italian equity market carries a higher risk than the U.S. market, necessitating an upward adjustment to the ERP.

To quantify this, we applied a spread calculated as follows:

1. We computed the standard deviation of Italian government bond (BTP) returns over the past 20 years.
2. We calculated the standard deviation of the FTSE MIB index returns over the same period.
3. The ratio of these two standard deviations represents how much riskier the Italian stock market is perceived compared to Italian government bonds. This ratio was found to be 4.1.
4. We then considered the 10-year spread between German bunds and Italian BTPs, which stood at approximately 109 basis points.
5. Multiplying the standard deviation ratio (4.1) by this spread and adding the result to the base ERP (4.33%), we arrived at an adjusted equity risk premium of 8.77%.

For the equity size premium (ESP), we used a historical approach, calculating the difference in returns between the STOXX Europe Small 200 and the STOXX Europe 600 over the past 15 years. This difference reflects the additional return investors have historically required for investing in small-cap stocks versus large-cap stocks, which is 1,1%. As the risk-free rate, we used the 10-year German bund yield, which is 2,36%. With these inputs, with the formula below, we arrived at a cost of equity of 12.8%.

$$CoE = R_f + \beta_{market} (ERP) + \beta_{size} (ESP)$$



## Appendix 14: Cost of Debt

The cost of debt was determined by analyzing De Nora's current borrowing costs, which are regulated by covenants and split between euro-denominated and USD-denominated debt. The interest rates for both portions are calculated as follows:

- For euro-denominated debt, the reference rate is the 3-month Euribor, while for USD-denominated debt, it is the 3-month SOFR.



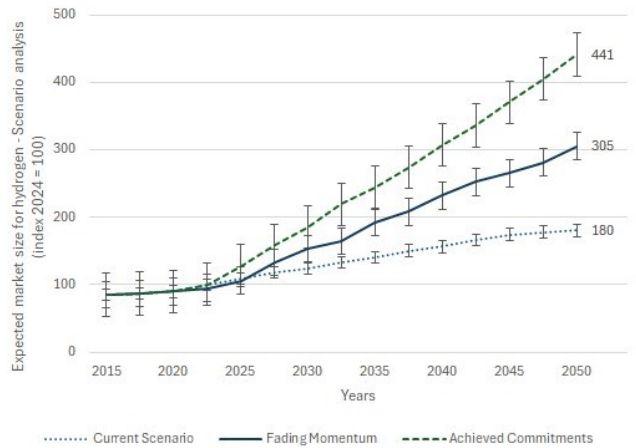
- An additional spread, set by the covenants, is applied to these base rates. The spread ranges between 80 and 110 basis points, depending on De Nora's Net Financial Position/EBITDA ratio.
- Given that De Nora's net financial position is positive, we applied the minimum spread of 80bps.

By weighting these two rates according to De Nora's debt composition—with two-thirds of total debt denominated in euros—we arrived at a cost of debt of 4%. To perform a double-check, we calculated the average yield of 12 European corporate bond indices with a BBB rating, selecting companies operating in sectors similar to De Nora's. A similar analysis was conducted for six U.S. corporate bond indices. The weighted average yield—adjusted for De Nora's debt composition—was 4.4%. However, since De Nora holds a BBB+ rating, we subtracted the spread between BBB and BBB+ corporate bonds, arriving at a value closely aligned with our covenant-based calculation.

## Appendix 15: Real Option Valuation

To develop the real option valuation model and determine the price of De Nora's strategic option to expand into the hydrogen market, we applied a real option evaluation model that exploits the Black-Scholes pricing model of corporate equity. The key variables required for this formula include:

- Time to expiration (T): We set a time horizon of seven years, representing the period within which De Nora can effectively exercise its option in the hydrogen market. This timeframe aligns with the first stage of our DCF model, which concludes in 2030. The formula allows the early exercise of the option to expand as in the standard American-type option pricing models.
  - Strike price (K): The strike price corresponds to the investment De Nora has disclosed for the hydrogen market, which amounts to €174 million.
  - Spot price (S): It represents the potential cash flows De Nora could generate from its hydrogen investments. To estimate this, we need to project how the hydrogen market will evolve by 2030. According to McKinsey's "Hydrogen Insights 2024" report, the market is expected to grow by an average factor of 3.8x across different scenarios. (adjacent exhibit) Given that De Nora has been an early mover in this sector, it is reasonable to assume that the company will maintain its current market share. Consequently, its revenues should also scale proportionally—from the current €102 million to approximately €391 million by 2030. Assuming De Nora sustains an 11% EBITDA margin—in line with its last reported margin in the hydrogen segment for 2023—this would result in annual cash flows of €43 million. Over a 7-year period, this equates to a spot price (S) of €301 million.
  - Volatility (σ): To estimate the volatility of the underlying asset, we calculated the standard deviation of the returns of publicly traded companies operating in the hydrogen sector. For this, we used the Global X Hydrogen ETF as a benchmark, arriving at a standard deviation of 45.8%.
- By applying these parameters to the Black-Scholes model, we arrived at an option value of €193 million, which aligns with our estimated Enterprise Value for De Nora's Energy Transition segment.



Source: Team assessment

## Appendix 16: Multiple Valuation

For the multiples-based valuation, we initially selected 18 companies for Electrode Technologies, 16 for Water Technologies, and 19 for Energy Transition. To ensure data availability, we excluded all non-publicly traded companies, as obtaining comprehensive financial data for them proved challenging. After this first screening, we refined our sample to: **a).8** companies for the Electrode Technologies segment **b).9** companies for Water Technologies **c).8** companies for Energy Transition

To identify the most comparable peers to De Nora, we developed a similarity score, considering the following financial metrics: *Market capitalization*, *Revenue*, *EBITDA margin (EBITDAm)*, *EBIT margin (EBITm)*, *Return on Assets (ROA)*, *Return on Equity (ROE)*, *Net debt to capital ratio*, *Capex-to-sales ratio*, *Price-to-cash flow ratio*

Each variable was standardized and normalized, ensuring comparability across companies. We then calculated the Euclidean distance for each metric, measuring how much each company's value deviated from De Nora's. Weighting these parameters accordingly, we arrived at the following similarity score formula:

$$\text{similarity score} = 0,2 * (\text{revenue} + \text{market cap}) + 0,3 * (\text{EBITDAm} + \text{EBITm} + \text{ROA}) + 0,25 * (\text{net debt to capital}) + 0,25 * \left( \frac{\text{capex}}{\text{sales}} + \text{price to cash flows} \right)$$

Companies with a significantly lower similarity score were discarded, leaving us with a final peer selection of: 8 companies for Electrode Technologies, 8 companies for Water Technologies and 6 companies for Energy Transition. For each of these peer groups, we utilized the 2027E forward multiples of EV/Revenue, EV/EBITDA, and EV/EBIT to derive a valuation range for De Nora.

| Company name            | Country | Listed | Market cap (€) | Revenue (€)    | EBITDA m | EBIT m | ROA  | ROE  | D/E  | Net Debt to Capital | Price to Cash Flow | Capex/ Sales | Score  | Outcome |
|-------------------------|---------|--------|----------------|----------------|----------|--------|------|------|------|---------------------|--------------------|--------------|--------|---------|
| ELECTRODE TECHNOLOGIES  |         |        |                |                |          |        |      |      |      |                     |                    |              |        |         |
| Carlit Co LTD           | Japan   | Yes    | 163.760.000    | 233.620.000    | 13%      | 9%     | 4%   | 7%   | 0,02 | -2%                 | 8,54               | 0,05         | 1,7106 | YES     |
| Osaka Soda Co LTD       | Japan   | Yes    | 1.581.250.000  | 603.950.000    | 18%      | 14%    | 6%   | 8%   | 0,07 | -25%                | 18,68              | 0,06         | 1,5486 | YES     |
| Asahi Kasei Corp        | Japan   | Yes    | 9.491.570.000  | 17.787.340.000 | 14%      | 8%     | 2%   | 4%   | 0,65 | 22%                 | 4,85               | 0,06         | 2,5649 | YES     |
| Umicore                 | Blegium | Yes    | 2.491.387.208  | 25.435.523.000 | 5%       | 3%     | 6%   | 17%  | 1,32 | 19%                 | 14,55              | 0,05         | 2,4265 | YES     |
| Johnson Matthey         | UK      | Yes    | 3.838.490.000  | 14.883.870.000 | 15%      | 11%    | 2%   | 4%   | 0,63 | 23%                 | 6,38               | 0,03         | 2,4120 | YES     |
| Vesuvius                | UK      | Yes    | 1.501.540.000  | 2.219.480.000  | 14%      | 11%    | 8%   | 16%  | 0,42 | 14%                 | 5,20               | 0,05         | 1,9381 | YES     |
| Element Solutions       | US      | Yes    | 5.064.080.000  | 2.158.130.000  | 21%      | 18%    | 2%   | 5%   | 0,87 | 40%                 | 16,66              | 0,03         | 2,2218 | YES     |
| Victrex                 | UK      | Yes    | 1.015.880.000  | 352.750.000    | 36%      | 29%    | 10%  | 12%  | 0,11 | 3%                  | 30,13              | 0,13         | 1,6010 | YES     |
| AVERAGE                 |         |        | 3.143.494.651  | 7.959.332.875  | 17%      | 13%    | 5%   | 9%   | 0,51 | 12%                 | 13,12              | 0,06         |        |         |
| WATER TECHNOLOGIES      |         |        |                |                |          |        |      |      |      |                     |                    |              |        |         |
| Xylem                   | US      | Yes    | 24.955.860.000 | 6.811.450.000  | 21%      | 14%    | 5%   | 8%   | 0,19 | 19%                 | 24,69              | 0,04         | 1,9902 | YES     |
| Veolia                  | France  | Yes    | 19.175.695.428 | 44.736.700.000 | 15%      | 8%     | 2%   | 10%  | 3,37 | 67%                 | 4,84               | 0,07         | 3,5820 | YES     |
| Pentair                 | UK      | Yes    | 10.890.670.000 | 3.796.520.000  | 22%      | 19%    | 10%  | 21%  | 0,47 | 32%                 | 19,48              | 0,02         | 2,1069 | YES     |
| Hayward                 | US      | Yes    | 2.626.330.000  | 917.980.000    | 27%      | 22%    | 6%   | 14%  | 0,71 | 39%                 | 18,62              | 0,03         | 1,8876 | YES     |
| Fluidra                 | Spain   | Yes    | 4.823.133.022  | 2.083.496.000  | 19%      | 11%    | 3%   | 7%   | 0,82 | 42%                 | 8,33               | 0,03         | 2,3251 | YES     |
| Chart                   | US      | Yes    | 5.281.100.000  | 3.100.950.000  | 14%      | 9%     | 2%   | 4%   | 1,31 | 55%                 | 59,61              | 0,04         | 3,0016 | YES     |
| Safran                  | France  | Yes    | 96.279.206.793 | 23.651.000.000 | 19%      | 14%    | 7%   | 31%  | 0,45 | -1%                 | 15,60              | 0,05         | 2,3859 | YES     |
| Entegris                | US      | Yes    | 16.116.012.377 | 3.523.926.000  | 27%      | 16%    | 2%   | 5%   | 1,15 | 52%                 | 28,73              | 0,13         | 2,5646 | YES     |
| AVERAGE                 |         |        | 22.518.500.953 | 11.077.752.750 | 20%      | 14%    | 5%   | 13%  | 1,06 | 38%                 | 16,34              | 0,05         |        |         |
| ENERGY TRANSITION       |         |        |                |                |          |        |      |      |      |                     |                    |              |        |         |
| McPhy                   | France  | Yes    | 40.820.000     | 18.774.000     | -252%    | -267%  | -25% | -43% | 0,07 | -62%                | (1,82)             | 1,31         | 4,1793 | NO      |
| Green Hydrogen System   | Denmark | Yes    | 64.510.000     | 5.640.000      | -636%    | -825%  | -21% | -47% | 1,39 | 34%                 | (3,48)             | 6,65         | 5,1946 | NO      |
| Hydrogen Pro            | Norway  | Yes    | 93.270.000     | 49.860.000     | -6%      | -10%   | -11% | -15% | 0,05 | -30%                | (5,29)             | 0,04         | 2,6937 | YES     |
| Siemens Energy          | Germany | Yes    | 40.450.000.000 | 34.465.000.000 | -2%      | -6%    | 3%   | 15%  | 0,42 | -20%                | 11,31              | 0,04         | 2,5574 | YES     |
| Cummins                 | US      | Yes    | 47.640.000.000 | 31.508.960.000 | 13%      | 10%    | 3%   | 8%   | 0,74 | 40%                 | 8,62               | 0,04         | 2,8402 | YES     |
| ITM                     | UK      | Yes    | 368.090.000    | 19.180.000     | -185%    | -221%  | -7%  | -10% | 0,05 | -78%                | (8,19)             | 0,85         | 3,7415 | NO      |
| NEL                     | Norway  | Yes    | 451.000.000    | 118.430.000    | -16%     | -33%   | -11% | -15% | 0,04 | 0%                  | (16,61)            | 0,00         | 2,5914 | YES     |
| Plug Power              | US      | Yes    | 2.454.590.000  | 824.460.000    | -109%    | -117%  | -26% | -39% | 0,02 | 16%                 | (2,42)             | 0,78         | 3,0242 | YES     |
| AVERAGE                 |         |        | 11.445.285.000 | 8.376.288.000  | -149%    | -184%  | -12% | -18% | 0,35 | -13%                | (2,24)             | 1,21         |        |         |
| Institut De Nora S.P.A. | Italy   | Yes    | 379.421.484    | 856.411.000    | 21%      | 17%    | 6%   | 11%  | 0,16 | -7%                 | 22,56              | 10,33        |        |         |

Source: Team assessment

## Appendix 17: Other risks

- FOREIGN EXCHANGE RISK** As a company with a global presence, **De Nora is exposed to foreign exchange fluctuations**, particularly in relation to the **U.S. dollar and other major currencies**. Given that a significant portion of the Group's revenues and costs are denominated in currencies other than the euro, exchange rate movements can **impact financial performance, profitability, and cash flow stability**. Fluctuations in foreign exchange rates may lead to **gains or losses**, depending on market conditions. In the past, periods of **currency appreciation or depreciation** have influenced the company's financial results, highlighting the potential risks associated with operating in multiple currency zones. Additionally, as part of its broader **market risk exposure**, the company is subject to **interest rate variations and other financial price fluctuations** that can affect future cash flows.

**MITIGATION:** De Nora employs a **comprehensive financial risk management strategy**, utilizing **foreign exchange derivative contracts** to hedge against currency volatility and stabilize financial results. While the company's approach remains strictly **non-speculative**, these instruments play a crucial role in reducing exposure to exchange rate and interest rate fluctuations. Additionally, De Nora **strategically manages its financial liabilities**, ensuring that borrowing costs and currency fluctuations do not introduce excessive volatility in financial performance. The company also maintains a **balanced approach by aligning revenues and expenses in the same currencies where possible**, helping to naturally offset currency fluctuations by distributing cash inflows and outflows proportionally across different currency zones.
- RISK RELATED TO MARKET CYCLICALITY AND MACROECONOMIC CONDITIONS** De Nora operates in industries that are inherently **subject to cyclical demand fluctuations**, making the company vulnerable to changes in global economic conditions. A **slowdown in industrial production, shifts in market demand, or macroeconomic downturns** could negatively impact the company's revenue streams, particularly in its **Electrode Technologies and Water Technologies** segments. Periods of **economic recession** or reduced industrial spending may lead to lower production activity, **delayed investments in infrastructure and technology upgrades**, and decreased demand for De Nora's solutions. In the **Electrode Technologies segment**, market demand is closely tied to the **chlor-alkali industry**, which is highly dependent on global economic conditions. A downturn in industrial spending could lead to **lower utilization rates of production plants, reduced capital investments, and slower adoption of new technologies**. Additionally, evolving consumer preferences and technological shifts may alter demand dynamics, particularly in sectors such as **printed circuit boards (PCBs)**, which are influenced by the **electronics, automotive, and telecommunications industries**. Any **slowdown in 5G infrastructure investments or regulatory changes** could further dampen demand in these markets. Furthermore, fluctuations in **energy prices** may affect the value proposition of De Nora's solutions, as its products are designed to enhance **energy efficiency**—a feature that becomes less relevant in periods of lower energy costs. In the **Water Technologies segment**, demand for **filtration and disinfection systems** is largely driven by **public and private sector investments**, making it susceptible to **government budget cuts, shifts in policy, or economic downturns**. A decline in oil prices could also impact **water treatment investments** in industries such as **oil, gas, and energy**, leading to **delayed or reduced spending on environmental technologies**. Additionally, external factors such as **weather conditions and consumer behavior** influence the adoption of electro-chlorination systems, particularly in the **swimming pool industry**, which may experience fluctuating demand based on seasonal variations. Geopolitical risks, particularly the **Russia-Ukraine conflict**, have further amplified economic uncertainties, contributing to **higher raw material costs, supply chain disruptions, and increased volatility in global energy markets**. These factors could result in **delays in project execution, higher operating costs, and weaker industrial demand** across De Nora's core business segments, ultimately **impacting the company's financial performance**.

**MITIGATION:** To navigate these risks, De Nora maintains a **diversified business model**, operating across multiple industries and geographic regions to **reduce dependency on any single market**. The company actively **monitors macroeconomic trends** and adjusts its strategy accordingly, ensuring a **flexible approach to investment cycles and customer demand fluctuations**. By continuously **enhancing its technological offering and maintaining strong customer relationships**, De Nora aims to **position itself as a resilient industry leader** capable of **adapting to changing market conditions**. Additionally, the company's ability to **optimize cost structures, expand into new markets, and leverage innovation** will be essential in mitigating the impact of economic cycles and sustaining long-term growth.
- ANALYSIS OF STOCK LIQUIDITY RISK FOR DE NORA** Stock liquidity plays a crucial role in determining the attractiveness and stability of a company's shares. For De Nora, liquidity risk was analyzed using two established metrics: the Amihud Ratio and the Turnover Ratio, alongside an examination of how liquidity impacts price volatility. These analyses provide insights into De Nora's trading activity relative to its benchmark, the FTSE Italia Small Cap index.

**ILLIQUIDITY ANALYSIS: AMIHUD RATIO** The Amihud Ratio is a widely used measure of stock illiquidity, assessing the price impact per unit of trading volume. It reflects how much a stock's price changes for every unit traded. A higher Amihud Ratio indicates that even small trades can result in significant price movements, signaling lower liquidity. In contrast, a lower ratio suggests greater price stability and higher liquidity. For De Nora, the Amihud Ratio is consistently higher than that of the FTSE Italia Small Cap, as shown in the graph. This suggests that De Nora's shares are more susceptible to price fluctuations caused by small trading volumes, indicating lower liquidity. Such characteristics make it challenging to execute large transactions without causing significant price changes, potentially deterring institutional investors or those engaging in high-volume trades.

**TURNOVER RATIO ANALYSIS** The Turnover Ratio, which measures the proportion of shares traded relative to the total free float, provides additional insights into trading activity. A high Turnover Ratio indicates active trading and robust investor participation, whereas a low ratio reflects limited market activity. De Nora's Turnover Ratio is generally lower than the FTSE Italia Small Cap, with occasional spikes. This pattern points to irregular trading activity, with periods of low investor participation. Limited trading frequency further emphasizes the liquidity constraints faced by De Nora, as its shares are not traded as consistently as those of its benchmark.

**IMPACT OF LIQUIDITY ON PRICE VOLATILITY** The relationship between liquidity and price stability was further explored by examining how the Turnover Ratio correlates with percentage price changes. De Nora's price movements display a wider distribution, indicating a higher sensitivity to liquidity conditions. Even at lower turnover levels, significant price variations are observed, underscoring the amplified impact of low liquidity on volatility. In comparison, the FTSE Italia Small Cap demonstrates more stable price behavior, with tighter clustering of price changes, suggesting a more liquid and predictable trading environment. The findings confirm that De Nora's stock is more volatile and less predictable due to its liquidity constraints. Such characteristics may discourage potential investors and increase transaction risks during periods of market stress or low trading activity.

**Strategic Considerations:** Improving liquidity could enhance De Nora's market performance and appeal to a broader investor base. Potential measures include increasing the free float by releasing additional shares and fostering greater investor engagement to encourage more consistent trading activity. Stabilizing the trading environment could mitigate the impact of low liquidity on price volatility, aligning De Nora's performance more closely with its benchmark and reducing risks for investors.

## Appendix 18: Scenario Analysis

This Scenario Analysis explores the potential impact of both adverse and favorable developments on De Nora's valuation, providing a comprehensive view of the risks and opportunities associated with the company's core business segments. Under the **Worst Case Scenario**, the combined effects of supply chain disruptions, regulatory hurdles, technological competition, and uncertainties tied to the tk nucera joint venture result in a **total downside of -€2.59 per share (-26.64%)**, highlighting the vulnerability of De Nora to market volatility and external pressures. Conversely, the **Best Case Scenario** envisions a transformative expansion of the green hydrogen market and strategic execution of inorganic growth in the Water Technologies segment. Together, these drivers lead to an **upside of +€1.84 per share (+18.93%)**, emphasizing De Nora's potential to capitalize on favorable market dynamics and strategic opportunities.

- IMPACT OF SUPPLY CHAIN RISK ON DE NORA'S VALUATION** As previously discussed, De Nora's reliance on a limited number of suppliers for critical raw materials, including titanium, nickel, ruthenium, and iridium, exposes the company to supply chain disruptions and price volatility. Using a Monte Carlo-based Random Walk with Drift model, we simulated future price trends for ruthenium and iridium, estimating an average annual price increase of around 11% for ruthenium and 0.25% for iridium, leading to a cumulative cost increase of approximately 5.63% by 2030. This escalation in raw material costs would translate into a negative impact of -€0.35 per share (-7.4%) on De Nora's valuation. To further assess the implications of this risk, we modeled a scenario in which De Nora adopts a more conservative inventory management strategy to mitigate potential supply disruptions. By extending its Inventories Turnover ratio to 305 days—the same level observed in 2021—the company could create a buffer against procurement risks but at the cost of increased working capital requirements. This would result in an additional negative impact of -€0.08 per share (-1.77%). When combining both effects—the escalation in raw material costs and the extended inventory turnover strategy—the total downside impact on De Nora's valuation amounts to -€0.44 per share, equivalent to a -9.17% decrease.
- IMPACT OF REGULATORY RISK ON DE NORA'S VALUATION** As previously outlined, the growth of the green hydrogen market is highly dependent on regulatory frameworks and government incentives. However, strict definitions of green hydrogen, slow permitting processes, and rising inflation continue to create significant barriers to scaling the industry as expected. The lack of global regulatory alignment adds further uncertainty, with the European Union actively

promoting hydrogen adoption, while the U.S. under Trump's administration is unlikely to follow suit, given his stated opposition to federal support for clean energy initiatives. To quantify the impact of this regulatory uncertainty, we revised downward our market growth estimates, leading to an adjustment in De Nora's planned capital investments in the segment. This directly affected the real option valuation assigned to this business unit, reflecting a scenario where the hydrogen market expands at a slower pace than previously projected. The result of this reassessment indicates a negative impact of -€1.06 per share (-10.85%) on De Nora's valuation. Given that only the EU is currently driving meaningful policy support for hydrogen, and considering the high likelihood of regulatory stagnation in other key markets, we have assigned this risk a medium-to-high probability of materializing. This scenario highlights De Nora's exposure to policy-driven market dynamics, reinforcing the need for geographic diversification in hydrogen investments, active engagement with regulatory bodies, and strategic flexibility to adapt to shifting government policies worldwide.

3. **IMPACT OF TECHNOLOGICAL COMPETITION RISK ON DE NORA'S VALUATION** The green hydrogen market faces increasing competition from alternative production methods, including solid oxide electrolysis (SOEC), blue hydrogen, and potentially nuclear-powered hydrogen. Blue hydrogen, in particular, benefits from lower costs and established infrastructure, posing a competitive threat in regions with abundant natural gas and carbon capture incentives. While De Nora maintains a strong position in advanced alkaline electrolyzers (AWE), the entry of well-funded competitors, including energy companies and industrial gas suppliers, could intensify market pressure. Through strategic partnerships and proprietary technology development, these players may challenge De Nora's leadership in high-performance electrode production over time. To assess the potential impact of this risk, we modeled a scenario in which De Nora gradually phases out its investments in the hydrogen sector due to a loss of competitiveness. While the probability of this event occurring remains low, this is not due to a lack of viable alternatives but rather to the long commercialization timeline required for new technologies to reach scale. Even if nuclear-powered hydrogen or other methods eventually prove more efficient, their adoption would likely be gradual rather than immediate. Under this scenario, we estimate a negative impact of -€0.67 per share (-6.84%) on De Nora's valuation. While the threat of disruptive technology is real, the long commercialization cycle of competing solutions mitigates the immediate risk. However, continued investment in R&D, strategic partnerships, and adaptation to emerging technologies will be essential for De Nora to sustain its competitive advantage in an evolving hydrogen market.

4. **IMPACT OF THE TK NUCERA JOINT VENTURE RISK ON DE NORA'S VALUATION** As previously discussed, tk nucera plays a pivotal role in De Nora's long-term strategy, particularly in the energy transition and green hydrogen markets. However, its strong exposure to the hydrogen sector, combined with regulatory uncertainties and the potential emergence of competing technologies, introduces significant risks to its future profitability. Given that De Nora holds only a minority stake in the joint venture, its ability to influence strategic decisions is limited, leaving the company reliant on tk nucera's ability to adapt to market changes. Despite these risks, the likelihood of tk nucera losing its entire value remains low, primarily due to the backing of thyssenkrupp, a global industrial powerhouse with extensive resources and infrastructure. In the event of adverse market conditions, thyssenkrupp's scale and financial strength would facilitate the reallocation of tk nucera's assets toward a more profitable business model, mitigating potential downside risks. Based on this assessment, we estimate the negative impact of this risk at -€0.38 per share (-3.88%). While the exposure to hydrogen market volatility remains a concern, tk nucera's strong industrial backing provides a safeguard against a worst-case scenario, reducing the probability of a severe long-term financial impact on De Nora. However, continuous monitoring of tk nucera's strategic direction and potential shifts in the hydrogen landscape will be crucial to ensuring that De Nora remains well-positioned to navigate potential disruptions.



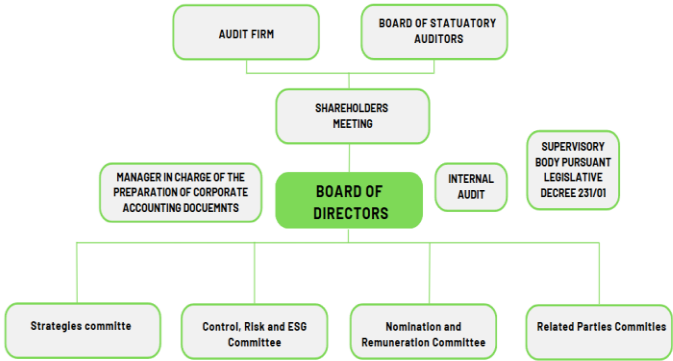
#### BEST CASE SCENARIO ANALYSIS

In the best-case scenario, the green hydrogen market experiences unprecedented growth, achieving all currently projected targets and expanding by 4.5 times its current size. This explosive development is driven by advancements across the entire hydrogen value chain, fostering rapid adoption and scaling globally. De Nora capitalizes on this growth by maintaining its market share and profitability in the hydrogen segment, demonstrating its ability to adapt and thrive in a booming market. Under these conditions, the hydrogen segment achieves an **annual revenue growth rate of 23.5% through 2030**, substantially exceeding the expectations of the base case scenario. Additionally, given De Nora's historical reliance on inorganic growth to expand its Water Technologies segment, we have incorporated an assumption that the company executes a strategic **mergers and acquisitions (M&A) transaction** during this period. While the management has expressed readiness to seize acquisition opportunities without providing specific details, this assumption reflects their stated intent and aligns with De Nora's established growth strategy. The acquisition is modeled as targeting a private competitor in the Water Technologies sector, which would strengthen the company's market position, diversify its product portfolio, and enhance synergies within the segment. The combined impact of explosive hydrogen market growth and a successful M&A transaction in the Water Technologies segment results in a **target price increase of €1.84**, representing an **upside of 18.93% compared to the base case scenario**. This scenario underscores De Nora's potential to deliver exceptional returns under optimal market and strategic conditions, positioning it as a key player in both the green hydrogen and water treatment markets.

## ESG Analysis

### Appendix 19: Governance

De Nora's governance is built on a structured system of rules, processes, and responsibilities aimed at ensuring effective and transparent management. At the center of this structure is the **Board of Directors**, responsible for strategic oversight, risk management, and the integration of ESG principles. The Board of Directors is supported by key committees, including the Control, Risk and ESG Committee and the Nomination and Remuneration Committee, responsible for overseeing risk management and remuneration policies, respectively. Supervisory bodies such as the Supervisory Body and the Board of Statutory Auditors play a crucial role in ensuring compliance and transparency. Additionally, governance is strengthened by the contributions of the Audit Firm and Internal Audit, which provide oversight of financial and operational activities.



#### BOARD OF DIRECTORS

The Board consists of **12 members**, with **33% women** and **46.67% independent members**. While gender diversity is a positive element, the level of independence falls short of the industry average (**69.75%**), highlighting an area for improvement. The average tenure is **3.02 years**, significantly below the industry average of **6.36 years**, suggesting the need for greater stability. The mix of independent and non-independent members provides balance, but increasing independence could enhance transparency and impartiality in decision-making.

|                               |                                           |
|-------------------------------|-------------------------------------------|
| <b>Federico De Nora</b>       | <b>Chairman</b>                           |
| <b>Paolo Dellachà</b>         | <b>CEO</b>                                |
| <b>Stefano Venier</b>         | <i>Non-executive Director</i>             |
| <b>Alessandro Garrone</b>     | <i>Independent non executive Director</i> |
| <b>Maria Giovanna Calloni</b> | <i>Independent non-executive Director</i> |
| <b>Mario Cesari</b>           | <i>Non-executive Director</i>             |
| <b>Michelangelo Mantero</b>   | <i>Non-executive Director</i>             |
| <b>Elisabetta Oliveri</b>     | <i>Independent non-executive Director</i> |
| <b>Giovanni Toffoli</b>       | <i>Non-executive Director</i>             |
| <b>Paola Bonandrini</b>       | <i>Non-executive Director</i>             |
| <b>Giorgio Metta</b>          | <i>Independent non-executive Director</i> |
| <b>Anna Chiara Svelto</b>     | <i>Independent non-executive Director</i> |

De Nora's governance and ESG strategy integrate sustainability into its operations through a structured framework. The **Control, Risk, and ESG Committee (CCRESG)** supports the Board in governance, risk management, and sustainability oversight. The **Sustainability Plan 2026-2030**, integrated into the Industrial Plan, focuses on sustainable technologies, resource management, clean energy, inclusivity, community support, and ethical governance. The **ESG Steering Committee**, reporting to the CEO, monitors sustainability KPIs and drives improvement initiatives, while the **ESG Accelerator Lab**, led by the Head of Investor Relations and ESG, manages projects, aligns processes, and benchmarks best practices. **Focal Points** in each plant and function connect local operations with the ESG Lab to ensure consistent implementation. This structure reflects De Nora's commitment to sustainability and governance.



Appendix 20: ESG Metric

ENVIRONMENTAL

| BUCKET                             | METRIC                                      | DE NORA   | COMPETITORS<br>average (Max-Min) | SCORE  |        |
|------------------------------------|---------------------------------------------|-----------|----------------------------------|--------|--------|
|                                    |                                             |           |                                  | METRIC | BUCKET |
| RESOURCE USE<br>7.60%              | Resource Reduction Policy                   | TRUE      | 100% T                           | 6.0/10 | 4.7/10 |
|                                    | Policy Water Efficiency                     | TRUE      | 100% T                           | 6.0/10 |        |
|                                    | Policy Energy Efficiency                    | FALSE     | 92% T – 8% F                     | 0.3/10 |        |
|                                    | Policy Sustainable Packaging                | TRUE      | 17% T – 83% F                    | 9.3/10 |        |
|                                    | Policy Environmental Supply Chain           | TRUE      | 100% T                           | 6.0/10 |        |
|                                    | Resource Reduction Targets                  | FALSE     | 75% T – 25% F                    | 1.0/10 |        |
|                                    | Targets Water Efficiency                    | FALSE     | 58% T – 42% F                    | 1.7/10 |        |
|                                    | Targets Energy Efficiency                   | FALSE     | 50% T – 50% F                    | 2.0/10 |        |
|                                    | Total Energy Use / Million in Revenue \$    | 424.06    | 598.26 (2,435.18 – 173.35)       | 7.0/10 |        |
|                                    | Renewable Energy Use Ratio                  | 3.24%     | 11.83% (18.66% – 0.13%)          | 1.7/10 |        |
| EMISSIONS<br>8.50%                 | Total Water Use / Million in Revenue \$     | 225.36    | 21,427.49 (220,562 – 40.34)      | 8.0/10 | 4.6/10 |
|                                    | Policy Resource Efficiency                  | TRUE      | 58% T – 42% F                    | 7.7/10 |        |
|                                    | Policy Emissions                            | FALSE     | 92% T – 8% F                     | 0.3/10 |        |
|                                    | Targets Emissions                           | TRUE      | 83% T – 17% F                    | 6.7/10 |        |
|                                    | Emissions Reduction Target Percentage       | 50%       | 37.40% (100% – 3%)               | 5.0/10 |        |
|                                    | Total CO2 Emissions / Million in Revenue \$ | 41.88     | 77.23 (407.6 – 16.74)            | 1.0/10 |        |
|                                    | Total Waste / Million in Revenue \$         | 7.61      | 25.80 (149.03 – 2.96)            | 8.0/10 |        |
| ENVIRONMENTAL<br>INNOVATION<br>18% | Waste Recycled to Total Waste               | 41.82%    | 64.17% (99.80% – 18.51%)         | 4.2/10 | 7.8/10 |
|                                    | ISO 14000 or EMS                            | ISO 14000 | 84% ISO – 8% no – 8% both        | 6.7/10 |        |
|                                    | Renewable/Clean Energy Products             | TRUE      | 58% T – 42% F                    | 7.7/10 |        |
|                                    | Water Technologies                          | TRUE      | 50% T – 50% F                    | 8.0/10 |        |
|                                    | Life Cycle Analysis                         | TRUE      | 58% T – 42% F                    | 7.7/10 |        |

SOCIAL

| BUCKET                           | METRIC                              | DE NORA | COMPETITORS<br>average (Max-Min) | SCORE  |        |
|----------------------------------|-------------------------------------|---------|----------------------------------|--------|--------|
|                                  |                                     |         |                                  | METRIC | BUCKET |
| WORKFORCE<br>7.80%               | Health & Safety Policy              | TRUE    | 100% T                           | 6.0/10 | 6.7/10 |
|                                  | Policy Employee Health & Safety     | TRUE    | 100% T                           | 6.0/10 |        |
|                                  | Policy Supply Chain Health & Safety | TRUE    | 100% T                           | 6.0/10 |        |
|                                  | Policy Career Development           | TRUE    | 92% T – 8% F                     | 6.3/10 |        |
|                                  | Women Employees                     | 20%     | 24.22% (31% – 15%)               | 6.5/10 |        |
|                                  | Women Managers                      | 27.91%  | 24.39% (31% – 5.40%)             | 9.0/10 |        |
|                                  | Total Injury Rate Employees         | 2.81    | 6.94 (14.08 – 0.71)              | 9.0/10 |        |
|                                  | Accidents Total                     | 12      | 107.25 (411 – 11)                | 9.0/10 |        |
|                                  | Average Training Hours              | 9       | 30.43 (45.72 – 16.71)            | 2.0/10 |        |
|                                  | Supplier ESG training               | TRUE    | 58% T – 42% F                    | 7.7/10 |        |
| HUMAN RIGHTS<br>11.4%            | Human Rights Policy                 | TRUE    | 100% T                           | 6.0/10 | 6.0/10 |
|                                  | Policy Human Rights                 | TRUE    | 92% T – 8% F                     | 6.3/10 |        |
|                                  | Equal Pay for Equal Work            | FALSE   | 67% T – 33% F                    | 1.3/10 |        |
|                                  | Policy Minimum Wage                 | TRUE    | 58% T – 42% F                    | 7.7/10 |        |
|                                  | Policy Working Hours                | TRUE    | 33% T – 67% F                    | 8.7/10 |        |
| COMMUNITY<br>9.5%                | Donations / Million in Revenue      | 235.52  | 318.37 (851.32 – 32.96)          | 2.8/10 | 6.0/10 |
|                                  | Crisis Management Systems           | TRUE    | 75% T – 25% F                    | 7.0/10 |        |
|                                  | Corruption Due Diligence            | TRUE    | 42% T – 58% F                    | 8.3/10 |        |
| PRODUCT<br>RESPOSABILITY<br>9.5% | Policy Customer Health & Safety     | TRUE    | 50% T – 50% F                    | 8.0/10 | 6.7/10 |
|                                  | Policy Data Privacy                 | TRUE    | 100% T                           | 6.0/10 |        |
|                                  | Policy Cyber Security               | TRUE    | 92% T – 8% F                     | 6.3/10 |        |
|                                  | ISO 9000                            | TRUE    | 92% T – 8% F                     | 6.3/10 |        |

GOVERNANCE

| BUCKET               | METRIC                                        | DE NORA   | COMPETITORS<br>average (Max-Min) | SCORE  |        |
|----------------------|-----------------------------------------------|-----------|----------------------------------|--------|--------|
|                      |                                               |           |                                  | METRIC | BUCKET |
| MANAGEMENT<br>19%    | Compensation Board Committee                  | FALSE     | 100% T                           | 0.0/10 | 4.7/10 |
|                      | Policy Board Diversity                        | TRUE      | 100% T                           | 6.0/10 |        |
|                      | Policy Executive Compensation ESG Performance | TRUE      | 92% T – 8% F                     | 6.3/10 |        |
|                      | Audit Committee Independence                  | 66.67%    | 87.32% (100% – 50%)              | 6.7/10 |        |
|                      | Number of Board Meetings                      | 10        | 9.5 (15 – 5)                     | 6.7/10 |        |
|                      | Board Size                                    | 13        | 10 (16 – 6)                      | 8.1/10 |        |
|                      | Board Gender Diversity, Percent               | 30.77%    | 33.36% (50% – 12.5%)             | 6.2/10 |        |
|                      | Average Board Tenure                          | 3.02 Yrs  | 6.36 Yrs (10.35 – 2-72)          | 2.9/10 |        |
|                      | Independent Board Members                     | 46.67%    | 69.75% ( )                       | 5.1/10 |        |
|                      | Sustainability Compensation Incentives        | FALSE     | 92% T – 8% F                     | 0.3/10 |        |
|                      | Board Member Compensation, \$                 | 1,117,395 | 1,695,757                        | 3.5/10 |        |
| SHAREHOLDERS<br>5.7% | Shareholder Rights Policy                     | TRUE      | 100% T                           | 6.0/10 | 7.7/10 |
|                      | Different Voting Right Share                  | TRUE      | 17% T – 83% F                    | 9.3/10 |        |
| CSR STRATEGY<br>3.8% | CSR Sustainability Reporting                  | TRUE      | 100% T                           | 6.0/10 | 5.2/10 |
|                      | GRI Report Guidelines                         | TRUE      | 100% T                           | 6.0/10 |        |
|                      | Number of SDG                                 | 10        | 8.92 ( )                         | 6.3/10 |        |
|                      | Policy Tax Transparency                       | FALSE     | 33% T – 67% F                    | 2.7/10 |        |