

Betolar Plc

Half-Year Financial Review

1 January–30 June 2024



Betolar Plc Half-Year Financial Review, 1 January–30 June 2024 (unaudited)

Betolar Plc Half-Year Financial Review 1–6/2024: A shift in focus to mining and metals industry is starting to pay off

April–June 2024 in brief

- Net sales amounted to EUR 208 (88) thousand
- EBITDA amounted to EUR -1,691 (-3,062) thousand
- Cash and cash equivalents and short-term fund investments at the end of the period amounted to EUR 9,982 (18,514) thousand
- Order intake amounted to EUR 120 (90) thousand
- The number of new NRE projects was 3 (1)
- The number of new pilot customers was 1 (13)
- The average number of employees was 51 (63)

January–June 2024 in brief

- Net sales amounted to EUR 276 (131) thousand
- Gross margin amounted to EUR 217 (36) thousand
- EBITDA amounted to EUR -3,649 (-6,186) thousand
- Operating profit (loss) was EUR -4,664 (-7,075) thousand
- Profit for the financial period amounted to EUR -4,534 (-7,031) thousand
- Earnings per share were EUR -0.23 (-0.36)
- Cash and cash equivalents and short-term fund investments at the end of the period amounted to EUR 9,982 (18,514) thousand
- Order intake amounted to EUR 495 (138) thousand
- The number of new NRE projects was 5 (1)
- The number of new pilot customers was 2 (18)
- The average number of employees was 51 (64)

Main events during the period

- Betolar was granted a patent concerning a method for treating road or foundation base layer, that allows it to reduce the life cycle costs of roads
- Betolar was granted a patent for a liquid chemical dosing device
- Betolar won several innovation awards for the circular economy and hollow-core slabs
- On 14 February 2024, Betolar updated its medium and long-term business and financial targets
- The Annual General Meeting was held on 27 March 2024
- In April 2024, Betolar initiated change negotiations intended to change the organisational structure, introduce new business models and ways of working and reduce fixed costs. As a result of the change negotiations, 13 positions will be terminated in Finland. Non-recurring expenses of EUR 541 thousand were incurred in connection with change negotiations and management changes.
- Changes in Betolar's Management Team:
 - The Board of Directors appointed Tuija Kalpala, Chief Operating Officer, as Betolar's new CEO and President to accelerate the company's commercial development. She took up her new position on 22 April 2024. Following the merger of sales and operations functions, Ville Voipio, Chief Commercial

- Officer stepped down from the Management Team and took up new responsibilities for Betolar's construction business and marketing
- The company reached a mutual agreement with Antti Uski, Chief Human Resources Officer, and Jarno Poskela, Chief Technology Officer, that they will leave their positions in the company. Both continued in the company's Management Team until 13 June 2024 and were employed by Betolar until the end of July
- Mikko Wirkkala was appointed as the Chief Financial Officer (CFO), and he will take up his position no later than 3 September 2024. Riikka Ylikoski, the company's CFO, continued in her position until mid-July, after which she will move to another employer
- General Counsel Soila Söderström was invited to join the Management Team as of 29 May 2024. She is responsible for the company's legal affairs, human resources, communications and sustainability

Main events after the period

- Betolar was granted a patent in Finland enabling the large-scale use of side streams in road, soil and ground construction.
- Betolar and Norge Mineraler signed a memorandum of understanding to develop sustainable mining solutions in Norway.
- Betolar acquired MetalCirc's patent regarding treatment of waste combustion ashes
- Betolar was granted a patent in Finland for CEM III/B accelerator solution

Betolar's consolidated financial statements for the period that ended 30 June 2024 have been prepared in accordance with the International Financial Reporting Standards (IFRS) and International Committee (IFRIC) in force on 30 June 2024.

The figures in parenthesis in this report refer to the comparison period, i.e. the same period in 2023, unless stated otherwise. The figures for the comparison period are based on the audited annual financial statements, and all figures are in accordance with IFRS.

President and CEO Tuija Kalpala

We made good progress in the second quarter in the side streams, mining and metals customer segments. Our net sales and order value increased compared to the previous year, especially thanks to our mining customers. During the period, our focus on high-volume mining customers has been reflected in an increase in the number of NRE projects and a corresponding decrease in the number of pilot clients on the construction side. The strategic refocusing and subsequent structural changes and measures adopted as a result are reflected in a decrease in our cost base compared to the comparative period. This supports the commercialisation of our solutions, Betolar's profitable growth, and the strengthening of our financial position.

The international demand for our expertise and technology is reflected in development and partnership agreements with partners such as Outokumpu and Norge Mineraler, who strive for more sustainable mining. We provide the mining and metals industry with innovative solutions that help them move towards zero-waste and low-carbon operations, and projects in various countries to ensure self-sufficiency in battery minerals and other critical precious metals are expanding our market.

In concrete construction applications, we continued to work with our customers. Our newly developed low-carbon hollow-core slabs have received approval from the Finnish Concrete Association for the use of activator chemicals in concrete mixtures. This approval enables the hollow-core slab to be CE-marked, allowing it to be used in construction like conventional hollow-core slabs. Although the demand for concrete construction is currently low, we are ready to offer researched and tested low-carbon concrete products to the market as it recovers.

Betolar's innovative solutions received significant recognition early this year. In April Geoprime hollow-core slabs won first prize at the prestigious Building Materials Industry Innovation Award in Paris, France. In May, we received the 2024 Terry Treanor Innovation Award from the International Prestressed Hollowcore Association (IPHA) for developing the world's lowest emission hollow-core slabs, and Betolar's Belgian customer Tubobel Group won the Sustainability Award at Techni-Mat for its cementless Geoprime concrete pipes. Finally, Betolar was honoured by the Finnish Chemical Society with the 2024 Circular Economy Innovation Award for a business idea in the chemical sector that benefits both the environment and the economy.

Our research, development and innovation activities are strengthening our commercial position and our ability to create new value, especially in the exploitation of high-volume industrial side streams. In the first half of the year, we focused on the research and development of materials and mining applications. In our innovation activities, we made progress in the recovery of precious metals and the development of technologies for permanent carbon sequestration. We also obtained several new patents this past spring.

In June, we completed our change negotiations, which resulted in a new operating model and a structurally leaner organisation. The new operating model strengthens our customer focus and project management. The changes will enable us to strategically refocus our activities in a changed market and demand environment, to strategically allocate resources and to ensure our ability to finance future growth phases.

I would like to thank everyone involved in the Betolar journey so far for your valuable contributions to promoting the circular economy. Together with our professionals, customers and partners, we have developed Betolar into a more impactful and solutions-oriented company that helps our customers achieve their sustainability goals.

Key Figures

(EUR thousand, unless otherwise specified)	4–6 2024	4–6 2023	1–6 2024	1–6 2023	1–12 2023 ⁴
Financial indicators					
Net sales	208	88	276	131	515
Gross margin ¹			217	36	340
EBITDA ^{1,2}	-1,691	-3,062	-3,649	-6,186	-11,181
Operating profit (loss)			-4,664	-7,075	-13,260
Earnings before interest and taxes			-4,569	-7,051	-13,177
Profit (loss) for the financial period			-4,534	-7,031	-13,153
Earnings per share, basic and diluted, EUR ^{1,3}			-0.23	-0.36	-0.67
Cash and cash equivalents and short- term fund investments (at the end of the period) ^{1,2}	9,982	18,514	9,982	18,514	14,315
Operational indicators					
Order intake (EUR thousand) ^{1,2}	120	90	495	138	607
Number of new NRE projects ^{1,2}	3	1	5	1	9
Number of pilot customers ^{1,2}	1	13	2	18	24
Personnel (average number during the financial period)	51	63	51	64	60

- 1) Betolar uses certain indicators (gross margin, EBITDA, earnings per share, cash and cash equivalents and short-term fund investments, order intake, number of new NRE projects and number of pilot customers) as half-yearly indicators of operational profitability and business performance. The definitions and calculation formulas of these indicators can be found in the appendix to the report.
- 2) Betolar uses certain indicators (EBITDA, cash and cash equivalents and short-term fund investments, order intake, number of new NRE projects and number of pilot customers) as quarterly indicators of operational profitability and business performance. The definitions and calculation formulas of these indicators can be found in the appendix to the report.
- 3) The number of shares used in the calculation of earnings per share is all follows 30 June 2024: 19,606,882, 30 June 2023: 19,551,590, 1– 6/2024: 19,606,882, 1– 6/2023: 19,541,674 and 31 December 2023: 19,606,882.
- 4) The figures for the financial year 2023 have been audited.

Business environment and market review

The demand for low-carbon solutions is expected to remain favourable, particularly in the mining and metals industries. The green transition in societies will increase the growth of mining players globally. Ensuring regional access to critical metals, for example in Europe, has also spurred new mining projects. Existing and new mining projects need more environmentally-friendly solutions for their operations: for the treatment, recovery and commercialisation of high-volume side streams.

The global market for geopolymers-based material solutions has good growth prospects in the medium and long term. Depending on the source, the estimated average annual growth rate is 20-30% until 2030, which would mean a multiplication of the target market for the different applications of Betolar materials technology by the end of the decade. For Betolar, growth will be supported by increasing demand from mining and construction applications and the increasing use of alternative binders based on industrial side streams.

One of the key drivers for accelerating the uptake of low-carbon, geopolymers-based cement solutions in Europe is the reform of traditional cement standards. Betolar is working with partner companies, such as the Alliance for Low-Carbon Cement & Concrete (ALCCC), to accelerate the transition to performance-based standards. Similar upgrading of standards has already been promoted in North America and the United Kingdom. Existing cement and concrete standards limit the raw materials used and their content in cement and concrete mixes. This prevents the large-scale market entry of low-carbon and circular raw materials, especially in construction solutions for the building sector.

The current uncertain global market situation is, however, reflected, in the production volumes and costs of industry players. Ongoing cost saving programmes will affect new investments and their timing, which may delay the realisation of some customer projects in Betolar's sales pipeline.

Prices of raw materials and competing alternatives

The value and competitiveness of a Geoprime solution is determined by the availability and prices of raw materials, such as activator chemicals and the prices of competing solutions. In Europe, the pricing of key chemicals used in the Geoprime solution has decreased from the beginning of 2023 and remained stable during this year. The market is expected to remain stable in the short term, with supply and demand in balance. As industrial demand recovers in 2025, prices may face upward pressure.

The company expects cement prices to remain moderately high in Europe and even continue to rise slightly in the longer term. This will support the introduction of alternative and low-cement solutions in the market. The pricing of one key alternative binder raw material, the ground granulated blast furnace slag (GGBFS), is however expected to follow the price development of cement. Currently, the market price of GGBFS is somewhat lower than the price of cement in Europe.

Competitive environment for concrete products

The competitive landscape for Betolar's materials technology and productised applications consists of three main categories and their players: traditional Portland cement, low-carbon blended cement and alternative binders such as alkali-activated geopolymers.

The first category is traditional Portland cement. It is still preferred in many applications because it meets local and international standards. The production of Portland cement is, however, highly energy- and emissions intensive, and consumes a large amount of virgin raw materials such as limestone. There is also growing interest in carbon capture and carbon storage solutions in the cement production process to reduce CO₂ emissions. These technologies are still expensive and are not widely adopted in cement clinker production. An alternative, faster way to reduce emissions is to capture CO₂ and permanently sequester it in concrete. This is a technological direction that Betolar is also exploring in its applications.

Second category is producers of low-carbon cement mixtures, such as Betolar. In low-carbon cementitious blends, part of the cement clinker is replaced by ground granulated blast furnace slag (GGBFS), mainly as a by-product of the steel industry. The challenge for cementitious mixtures is, however, that clinker can only be replaced by GGBFS up to a certain point. An increase in the slag content impairs the performance properties of fresh concrete, such as bonding and strength development. Cement companies such as Ecocem and Cemex offer these solutions in accordance with cement standards. They are also developing their own mix designs to further reduce clinker content.

Third category is alternative binders, which can significantly reduce CO₂ emissions and reduce the use of virgin resources by replacing cement clinker entirely with industrial side streams. Betolar's competitors include Hoffmann Green Cement, Wagners and Cemvision. Betolar differentiates itself from its competitors with its business model and its focus on the use and commodification of several non-commodified side streams that can be sourced locally for end-use. Betolar also has a strong IPR strategy and continues to develop its AI platform to advance as a pioneer in sustainable materials.

Business development 1– 6/2024

During the first half of the year, Betolar focused on three business areas: mining and metals, industrial side streams and concrete solutions for construction. Orders received were particularly concentrated in the mining and metals industry and in industrial side streams.

Mining and metals industry

In the mining and metals industry, the main application areas for Betolar's solutions are curing paste filling, shotcrete, stabilisation of tailings and recovery of precious metals and the improvement of the recovery rate of side streams related to this.

Betolar's mining and metals business grew in the second quarter due to non-recurring engineering (NRE) projects and development projects. Betolar launched a new NRE project to recover and utilise fine material from tunnel drilling and started selling metal separation technology solutions to large companies.

The company was active in acquiring new customers, and a Memorandum of Understanding was signed with Norge Mineraler AS in early July. This agreement will provide solutions for the construction of the new Eigersund mine project and the treatment of mining side streams. The aim is to use Betolar's sustainable solutions and technologies in Norge Mineraler's operations and to explore the use of side streams in geopolymer-based concrete or in similar products. In June, Norge Mineraler received the mining permits it had applied for to extract magnetite and ilmenite-bearing norite rock in the Eigersund area. The Eigersund mining project is part of a larger project in southern Norway, which is estimated to be one of the largest reserves of critical and strategic raw materials such as vanadium, phosphate and titanium in the world.

In addition, Betolar started a low-carbon shotcrete development project with Outokumpu Oyj, with the aim of developing a CEM III-compliant concrete and later a fully cementless alternative. Outokumpu is aiming for carbon neutrality at the Kemi chrome mine, and these sustainable material solutions are key to achieving this goal.

In the mining and metals industry, projects are large and typically of long duration. Despite the significant need and demand for greener and more sustainable solutions, the introduction of new technologies is a long-term process. Mining operators are constantly striving to improve the sustainability and profitability of their operations, creating a demand for new innovations. NRE projects aim to identify the usability, processing potential and commercialisation of the side streams of the customers. As the consultative NRE projects progress, the aim is to be part of the value chain and commercialise the side stream or material solution developed together with the customer.

Betolar has developed a flexible and collaborative business model that enables a step-by-step approach. The company offers low-threshold solutions such as feasibility and viability assessment for sustainable mining, side stream recovery and commercialisation, and separation of precious metals. In the mining sector, solution development is driven by environmental factors, economic benefits, and technical and physical performance requirements and standards.

Industrial side streams

Betolar continued to develop its industrial side streams business and focused on building its international sourcing and logistics expertise. The aim is to strengthen Betolar's position in the side stream value chain and to explore commercial, operational and economic options to operate in the international side stream trade. During the period, Betolar started a small-scale, low-risk and controlled GGBFS trading business. Early in the year, Betolar successfully sourced and delivered to individual customers the side streams required for the Geoprime application developed for them. The identification, development and commercialisation of industrial production side streams will create new opportunities to exploit Betolar's constantly evolving materials technology in various industries, particularly in mining and construction.

The second part of Betolar's side stream business focuses on creating commercial processing and recovery opportunities for previously unused industrial side streams. At the beginning of the year, the company launched an AI-based commercial side stream analysis service which also saw an increase in customer numbers in the second quarter of the year. The service allows industrial companies to commission a mapping of the potential for utilisation of the side stream material generated by their operators. In the second quarter, the side stream analysis service and the data models at its core were extended to cover not only the construction sector but also the most common applications in the mining sector. Betolar's database of industrial side streams, which has expanded over the years, strengthens the potential for Geoprime material technology applications in a wide range of industries.

Concrete solutions for construction

In concrete products, Betolar continued deliveries to existing customers for new production projects in Europe and Asia. Although the demand for concrete construction is currently low due to the market situation, Betolar is ready to offer researched and tested low-carbon concrete products to the market as construction recovers. During the period, our focus on high-volume mining customers has been reflected in an increase in the number of NRE projects and a corresponding decrease in the number of pilot clients on the construction side.

The low-carbon hollow-core slabs developed by Betolar in a Consolis Parma customer project received EN-standard approval in the spring, including approval from the Finnish Concrete Association for the use of activator chemicals as concrete admixtures. Together, these will enable CE marking in Finland for a new type of low-carbon hollow-core slabs that can be used in the same way as conventional hollow-core slabs.

Over the past year, Betolar's innovative solutions have received significant recognition both in Finland and internationally. In April, Betolar's Geoprime hollow-core slabs won first prize at the prestigious Building Materials Industry Innovation Award in Paris, France. In May, Betolar received the 2024 Terry Treanor Innovation Award from the International Prestressed Hollowcore Association (IPHA) for developing the world's lowest emission hollow-core slabs. In addition, Betolar's Belgian customer Tubobel Group won a sustainability award at Techni-Mat for its cementless Geoprime concrete pipes. The Finnish Chemical Society also honoured Betolar with the 2024 Circular Economy Innovation Award for an innovative circular economy business idea that benefits the environment and economy of the chemical sector.

Financial Review 1– 6/2024

Net sales and result

April – June 2024

The Group's net sales in April–June 2024 amounted to EUR 208 thousand (4–6/2023: EUR 88 thousand). Approximately 15% of the net sales for the reporting period consisted of licence and chemical sales associated with the Geoprime concept. The larger part of net sales came from fees related to payments from customer pilot and product development.

EBITDA totalled EUR -1,691 thousand (EUR -3,062 thousand). Cash and cash equivalents and short-term fund investments amounted on 30 June 2024 to EUR 9,982 thousand (30 June 2023: 18,514 thousand).

January – June 2024

The Group's net sales in January–June 2024 increased compared to the comparison period and amounted to EUR 276 thousand (1–6/2023: EUR 131 thousand). Approximately 72% of the net sales for the period came from payments related to customer pilots and NRE projects. The introduction of piloting fees commits the customer to future productions. Approximately 28% of net sales for the reporting period consisted of licence and chemical sales associated with the Geoprime concept. Other operating income for the period was EUR 507 thousand (EUR 46 thousand), consisting mostly of operating grants.

Geographically, net sales were distributed as follows: EMEA (Europe, Middle East, Africa) 79% (94%), APAC (Asia and the Pacific) 21% (6 %) and AMER (Americas) 0% (0%).

The gross margin in January–June 2024 increased compared to the comparison period and amounted to EUR 217 thousand (1–6/2023: EUR 36 thousand), while EBITDA totalled EUR -3,649 thousand (EUR -6,186 thousand). The negative EBITDA decreased from the comparison period due to reduced expenditures.

Personnel expenses were EUR 2,909 thousand (EUR 3,474 thousand). Depreciation and amortisation amounted to EUR 1,015 thousand (EUR 899 thousand) and other operating expenses were EUR 1,464 thousand (EUR 2,795 thousand). The cost level in the reported period was EUR 1,932 thousand lower than in the corresponding period of the previous year. The cost level decreased from the comparison period because of the cost structure and strategic structural and operating model changes launched by Betolar in September 2023. In January–June 2024, non-recurring expenses of EUR 541 thousand were incurred in connection with change negotiations and management changes. The Group's operating result for January–June 2024 was EUR -4,664 thousand (EUR -7,075) thousand.

Net financial income and expenses amounted to EUR 95 thousand (EUR 24 thousand). Earnings before taxes and interest were EUR -4,569 thousand (EUR -7,051 thousand). The result for the financial period was EUR -4,534 thousand (EUR -7,031 thousand).

Financial position and cash flows

Betolar's balance sheet total at the end of the reporting period stood at EUR 16,928 thousand (30 June 2023: 25,187 thousand). Equity amounted to EUR 9,227 thousand (EUR 19,647 thousand). The equity ratio at the end of the reporting period was 55 (78) per cent.

At the end of the reporting period, the Group's net debt was EUR -4,726 thousand (EUR -16,006 thousand)- and the gearing ratio was -51 (-81) per cent.

Cash flow from operating activities in January–June 2024 was EUR -3,679 (1–6/2023: EUR -6,423 thousand). Net cash flow from operating activities was affected by a decrease in personnel costs and other operating expenses.

Cash flow from investing activities was EUR 4,625 thousand (EUR 6,959 thousand), comprising the company's tangible and intangible assets.

Cash flow from financing activities amounted to EUR -148 thousand (EUR -146 thousand). Cash flow from financing activities includes repayments of lease liabilities in the amount of EUR -146 thousand.

Betolar's short-term fund investments at the end of the period totalled EUR 8,240 thousand (30 June 2023: EUR 16,956 thousand). Cash and cash equivalents at the end of the period were EUR 1,742 thousand (EUR 1,558 thousand) and the change in cash and cash equivalents was EUR 184 thousand (EUR 391 thousand). Total cash and cash equivalents and short-term fund investments were EUR 9,982 thousand (EUR 18,514 thousand).

The company has taken active measures to secure the financial conditions to implement its strategy, which was updated in 2023. In 2023, Betolar adjusted its cost structure, resulting in expected cost savings of approximately EUR 5,000 thousand by the end of September 2024. In the reporting period, Betolar continued the 2023 savings measures, beginning change negotiations in April and reducing the size of the Management Team. The change negotiations resulted in a reduction of 13 employees which will not jeopardise Betolar's ability to meet its contractual commitments, ensure customer satisfaction or develop its business in line with its strategy.

Betolar has received for public business financing for research and development. Business Finland granted Betolar EUR 2,700 thousand for a research and development project on alternative side streams during FY 2023. In August 2024, Business Finland approved Betolar's updated project plan, with the main changes being that the closing date of the project was extended to 2026, and the original research project build around the SSM slag has been replaced by the Cintem co-innovation project focusing on the mining industry. This grant will be drawn down as the research project progresses during 2024, 2025 and 2026. In addition, EUR 2,500 thousand out of the EUR 7,500 thousand loan from the Finnish Climate Fund remains undrawn. The loan drawdown is linked to development targets, some of which the company already met in 2023, and the loan will be drawn down further in 2024. In addition, Finnpartnership awarded the company a grant of EUR 370 thousand to pilot the prefabrication of hollow-core slabs in Malaysia during the period.

Investments

Investments in tangible and intangible assets during January–June 2024 totalled EUR 720 thousand (1–6/2023: EUR 2,161 thousand). Investments consisted almost exclusively of capitalisation of development expenditure. Investments accounted for 16 (33) per cent of total operating expenses.

Research and Development 1–6/2024

Research and development activities provide customers with solutions to process industrial side streams for construction and other purposes, while significantly reducing the use of cement. In the first half of the year, Betolar focused its R&D activities on developing product applications for its customers in the mining industry. The development of a low-carbon shotcrete solution and paste filling technology continued. For paste filling, the required strength and long-term durability properties offered 40–80 % lower carbon dioxide emissions, depending on the side stream used. In addition, during the first half of the year, Betolar focused on the development of low-carbon hollow-core slabs for existing customer projects.

Betolar's innovation activities aim to produce completely new solutions that generate long-term business potential. During first six months of the year, Betolar has significantly strengthened its technology portfolio in the side stream, mining and metals customer segments by developing new technologies for value fraction recovery processes. This method enables, for example, the purification of tailings of harmful substances and made usable, for example, as a high-quality binder like cement or blast furnace slag, that do not require significant additional energy, which makes the solution cost-effective and low emission. The process involves the addition of suitable side streams to the melted slag to separate metals and achieve the correct binder composition, while reducing oxide metals through certain methods. Betolar has succeeded in laboratory-scale separation of valuable metals such as Cr, Fe, Ni, V, Mn, some of which are critical and/or strategic elements, both in producing binders as described above, and in reducing the amount of slag that ends up as waste. The next objective of the development work is to carry out larger scale experimental phases before moving to industrial scale. Betolar is currently in commercial discussions with several different industry players on issues described above and major engineering companies have been engaged to support the process. After the reporting period, Betolar acquired a patent from Metalcirk Ltd for a method for neutralizing waste combustion ashes and recycling the valuable materials contained in the ashes. The patent complements the technology developed by Betolar, strengthens the scope of its patents in pipeline and reinforces its ability to separate hazardous substances. In addition, the development of technologies for the permanent disposal of carbon dioxide continued. This technology could be used in the future for high volume side streams, for example by converting carbon dioxide into a form where it is permanently bound into the material.

During the reporting period, Betolar was granted two new patents. In March, a European patent was granted for the treatment of road or foundation base layer with an activator in a mobile machine. In June, Betolar was granted a patent in Finland for a liquid dosing device. After the reporting period, in July, Betolar was granted a patent in Finland enabling the large-scale use of side streams in road, soil and foundation construction. In addition, the company was granted a patent for an accelerator solution for CEM III/B mix cement that accelerates the initial strength development of low-carbon concrete, enabling it to achieve the speed of a conventional mould cycle. Betolar's patent portfolio consists of ten granted patents or patent families, in addition to which the company has a significant number of inventions in the process of patent approval to support the needs of the mining and metals industry.

An AI-based side stream analysis service for companies producing side streams was launched early in the year. The side-stream research programme focused on customer projects and new side-stream studies were launched, in particular on tailings for the mining industry. Customer projects aim to find viable alternatives to blast furnace slag (GGBFS) and various ashes from the steel industry. A research project on the use of ash from oil shale combustion in Eesti Energia as a binder was completed early in the year.

Development work on Betolar's AI-based data platform continued and towards the end of the reporting period the focus shifted to helping customers identify the value creation potential of side streams, including their suitability for various mining and metal industry applications and concrete solutions for construction. As data accumulates, the ability to create better understanding and better products continues to grow. The focus of development work will be on data usability, i.e. data quality, availability, and accessibility. The development of several predictive models to

simulate, for example, the performance and long-term durability of end products progressed during the reporting period.

Betolar's own laboratory activities provide the necessary analyses for research and product development. Betolar decided in spring 2024 to close the Espoo laboratory due to low utilisation and for cost savings. Laboratory operations will be made more efficient by centralising key laboratory activities in Kannonkoski.

Sustainability

Betolar has defined and confirmed three key sustainability themes: 1) Accelerating CO₂ emission reductions; 2) Ensuring the sustainability of industrial side streams and activator chemicals; and 3) Ensuring social responsibility in the construction value chain.

These themes are important to stakeholders and financially important to the company and will guide the implementation of sustainability throughout the company. During the reporting period, the focus was on improving the quality and completeness of the calculations and increasing transparency in calculation assumptions.

The carbon dioxide emissions from Betolar's business operations for 2023 were 2,672 tCO₂e (2022: 3,354 tCO₂e). The company managed to reduce both total emissions and emissions intensity in 2023 compared to 2022, largely due to a reduction in the amount of goods and services purchased and an increase in supplier-specific information. Betolar's emission calculation for 2023 was completed in May.

Emissions (scope 1, 2 and 3 categories) were calculated according to the internationally accepted and recommended Greenhouse Gas (GHG) Protocol.

Staff and management

Betolar's change negotiations, which started in April, were concluded in early June. The number of Betolar employees decreased from the comparison period and averaged 51 (64) in January–June 2024. During the reporting period, Betolar shifted its focus to the introduction of new operating models and ways of working to meet the rapidly changing demand for the green transition needs of the side streams, mining and metals industries.

On 30 June 2024, Betolar's Management Team consisted of Tuija Kalpala, CEO, Riikka Ylikoski, Chief Financial Officer and Soila Söderström, General Counsel.

During the reporting period, there were changes in the Management Team. The Board of Directors appointed Chief Operating Officer, Tuija Kalpala as the new President and CEO to accelerate the company's commercial development. Ville Voipio, Chief Commercial Officer, left the Management Team for a new role with responsibility for the construction business area and marketing. Antti Uski, Chief Human Resources Officer, and Jarno Poskela, Chief Technology Officer, agreed together with the company that they leave the Management Team and their employment contracts ended at the end of July. Riikka Ylikoski announced her move to new responsibilities outside Betolar and continued as the company's CFO until mid-July. Mikko Wirkkala was appointed as Betolar's new CFO and member of the Management Team, and will begin in this position no later than 3 September 2024.

Governance

The Annual General Meeting of Betolar Plc was held on 27 March 2024. The resolutions of the Annual General Meeting and the resolutions of the organizational meeting of the Board of Directors were announced in a company release on the same day.

The general corporate governance model and institutions are described on the company's website at <https://www.betolar.com/governance>

Shares

Betolar Plc's shares are listed on First North Growth Market Finland maintained by Nasdaq Helsinki Ltd. At the end of June 2024, Betolar's share capital was EUR 80,000 (80,000). The number of outstanding shares on 30 June 2024 was 19,606,882 (30 June 2023: 19,551,590).

The average number of shares at the first half of 2024 was 19,606,882 (1–6/2023: 19,541,674). At the end of the reporting period, the company and its subsidiaries did not hold any treasury shares.

Option schemes

Betolar's previous share-based incentive and retention plans are described in the Annual Report 2023.

Significant near-term risks and uncertainties

Betolar's most significant risks and business uncertainties are described in more detail in the Report of the Board of Directors in the annual financial statements. The risks and uncertainties specific to the near term are described below.

Economic cycles and uncertainty, especially in the construction sector, affect the demand for Betolar's products and services. Inflation and interest rates have weakened the global economic outlook, posing a risk to Betolar's growth strategy. Geopolitical risks and the unstable global environment may affect Betolar's markets and expose the company to business risk. However, the uncertainty of the business environment is not expected to have a significant impact on the implementation of plans and programmes related to the green transition of societies, companies and financial markets. Betolar seeks to predict and mitigate strategic risks by taking advantage of emerging trends and opportunities. The global geographical diversification of the target market is also a strategic choice.

Betolar is an early-stage technology company with solutions focused on industrial production side streams and mining business needs. Solution development starts with consulting and piloting, based on the customer's needs. Projects progressing to continuous commercial production may require significant investments. Betolar will ensure that the customer is aware of the potential need for investment in production facilities when starting a project. The transition from successful piloting to continuous commercial production may fail because of the customer's reluctance to bring the solution into production due to financial, technical or strategic grounds. Betolar manages the risk of commercialisation of the technology and approach it develops by constantly seeking cheaper, alternative materials and by complementing its offering with the expertise of its external partners.

Betolar also aims to offer alternative, non-commercialised industrial side streams and their recovery technologies for use alongside or instead of blast furnace slag. The main risk associated with industrial side streams and other alternative materials is that they are not defined in existing construction standards and therefore need to be further processed or find a non-construction use. Betolar is working to influence construction standards and to actively seek other uses for non-standard materials. However, it is possible that the development of the regulatory environment will be neutral from Betolar's point of view or that the regulatory environment will develop in a direction that is unfavourable to Betolar's solutions and the associated value chain.

Betolar manages the compliance risk of its solution-based materials, such as industrial side streams, construction products and materials, by actively and proactively managing the product development process. Each pilot or deployment project will start with a survey of local regulations, standards, and other local requirements, guidelines and practices for the intended Geoprime end product and its manufacture. Compliance definition, production, and reporting will be ensured in stages as the product development process progresses. Separately, Betolar will implement the necessary testing programs to ensure long-term durability as early as possible.

The commercial, financial, and technical success of Betolar's Geoprime solution will require the commercial, financial and technical success of the projects to ensure widespread adoption and viability. Clear phasing of deployment and continuous customer support will substantially reduce the risk of failure in deployment projects. Betolar's internal governance model supports and strengthens project management, risk management, and monitoring.

The increasing digitalisation of operations and the rise of professional cybercrime have increased the security risk associated with business continuity and the protection of critical information. Studies and improvements related to information security and data protection are a constant priority for Betolar. The reliability, integrity, timeliness and security of the data the company uses are essential to their business. Transactions in company information systems are monitored around the clock and anomalous events are immediately raised as alerts.

Betolar's risk management objective in terms of liquidity risk is to secure a sufficient amount of liquid assets for financing operations and repaying maturing loans. The company aims to continuously assess and monitor the amount of financing required for business operations to achieve the above-mentioned goal. Cash flow from operating activities and liquid assets (financial securities and cash equivalents), together with any new debt or equity financing, are the main source of funding for future payments. To mitigate the increasing expenditures, the company has taken active measures to secure the financial conditions to implement its strategy, which was updated in 2023. In 2023, Betolar adjusted its cost structure, resulting in expected cost savings of approximately EUR 5,000 thousand by the end of September 2024. In the reporting period, Betolar continued the 2023 savings measures, beginning change negotiations in April and reducing the size of the Management Team. The change negotiations resulted in a reduction of 13 employees. Betolar also has both loan and grant funding that has not yet been drawdown, and that can be raised when targets are met.

Financial reporting

Betolar will publish its next Business Review for Q3 on Friday 1 November 2024.

Betolar's financial reports are available on the company's website at www.betolar.com/investors.

Betolar Plc Financial Statements 1–6/2024

CONSOLIDATED INCOME STATEMENT

EUR thousand	1–6/2024 (IFRS)	1–6/2023 (IFRS)	1–12/2023 (IFRS)
NET SALES	276	131	515
Other operating income	507	46	201
Materials and services	-59	-95	-175
Personnel expenses	-2,909	-3,474	-6,836
Depreciation, amortisation, and impairment	-1,015	-889	-2,079
Other operating expenses	-1,464	-2,795	-4,885
Operating profit (loss)	-4,664	-7,075	-13,260
Financial income and expenses	95	24	83
Earnings before interest and taxes	-4,569	-7,051	-13,177
PROFIT FOR THE FINANCIAL PERIOD	-4,534	-7,031	-13,153
Earnings per share, basic			
EUR	-0.23	-0.36	-0.67

CONSOLIDATED BALANCE SHEET

EUR thousand	30 June 2024	30 June 2023	31 December 2023
ASSETS			
Non-current assets			
Development expenses	4,215	4,275	4,309
Property, plant and equipment	1,074	1,130	1,050
Right-of-use assets	301	404	414
Other non-current receivables	199	212	209
Deferred tax assets	95	51	60
Non-current assets, total	5,884	6,072	6,042
Current assets			
Trade receivables	125	82	299
Other receivables	81	377	148
Accrued income and prepaid expenses	856	142	502
Investments	8,240	16,956	13,372
Cash and cash equivalents	1,742	1,558	943
Current assets, total	11,044	19,115	15,194
Total assets	16,928	25,187	21,236

SHAREHOLDERS' EQUITY AND LIABILITIES

EUR thousand	30 June 2024	30 June 2023	31 December 2023
Equity			
Share capital	80	80	80
Invested unrestricted equity reserve	45,172	45,107	45,172
Translation differences	7	3	6
Retained earnings	-31,499	-18,511	-18,319
Profit for the financial period	-4,534	-7,031	-13,153
Total equity	9,227	19,647	13,786
Non-current liabilities			
Capital loans	4,974	2,245	4,802
Loans from financial institutions	5	9	7
Government loans	274	252	375
Lease liabilities	118	156	222
Deferred tax liabilities	0	-	0
Non-current liabilities, total	5,370	2,661	5,405
Current liabilities			
Loans from financial institutions	4	3	3
Lease liabilities	195	262	198
Government loans	112	113	0
Accounts payable	371	959	418
Other payable	160	219	146
Accruals and deferred income	1,489	1,323	1,280
Current liabilities, total	2,331	2,879	2,045
Total liabilities	7,701	5,540	7,450
Shareholders' equity and liabilities, total	16,928	25,187	21,236

CONSOLIDATED CASH FLOW STATEMENT

	1-6/2024	1-6/2023	1-12/2023
EUR thousand			
Cash flow from operating activities			
Profit for the financial period	-4,534	-7,031	-13,153
Adjustments:			
Depreciation, amortisation and impairment	1,015	889	2,079
Net financial income and expenses	-102	-24	-83
Share-based payments	-26	78	269
Other adjustments	37	-4	17
Income taxes	-35	-21	-29
Cash flow before change in working capital	-3,645	-6,113	-10,899
Working capital change:			
Change in account payable and other payables	177	-327	-258
Change in trade receivables and other receivables	-226	20	-512
Cash flow from operating activities before financing items and taxes	-3,695	-6,421	-11,669
Interest paid and payments from other financial expenses	16	-2	-7
Net cash flow from operating activities (A)	-3,679	-6,423	-11,676
Cash flow from investing activities			
Investing in tangible and intangible assets	-795	-1,689	-3,179
Repayment of credit claims	7	4	3
Proceeds from the disposal of other investments	5,414	8,644	0
Other investments	0	0	12,404
Net cash flow from investing activities (B)	4,625	6,959	9,228
Cash flow from financing activities			
Long-term loan disbursements	0	0	2,500
Repayment of short-term loans	-2	-2	-3
Repayment of lease liabilities	-146	-144	-273
Net cash flow from financing activities (C)	-148	-146	2,224
Change in cash and cash equivalents (A + B + C) increase (+) / decrease (-)	799	391	-224
Cash and cash equivalents at the beginning of the period	943	1,167	1,167
Cash and cash equivalents at the end of the period	1,742	1,558	943
Change	799	391	-224

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

1–6/2024 EUR thousand	Equity attributable to owners of the parent						Total equity
	Share-capital	Invested unrestricted equity reserve	Share issues	Treasury shares	Translation differences	Retained earnings	
Shareholders' equity 1 Jan 2024	80	45,172	0	0	6	-31,473	13,786
Comprehensive income							
Profit (loss) for the financial period	0	0	0	0	0	-4,534	-4,534
Other comprehensive income differences							
Translation differences	0	0	0	0	1	0	1
Comprehensive income (loss) for the period, total	0	0	0	0	1	-4,534	-4,533
Transaction with owners							
Issues less transaction costs	0	0	0	0	0	0	0
Registration of shares	0	0	0	0	0	0	0
Cancellation of treasury shares	0	0	0	0	0	0	0
Share-based payments	0	0	0	0	0	-26	-26
Other adjustments	0	0	0	0	0	0	0
Total transaction with owners	0	0	0	0	0	-26	-26
Shareholders' equity 30 June 2024	80	45,172	0	0	7	-36,033	9,227

1-6/2023 EUR thousand	Equity attributable to owners of the parent						Total equity
	Share-capital	Invested unrestricted equity reserve	Share issues	Treasury shares	Translation differences	Retained earnings	
Shareholders' equity 1 Jan 2023	80	45,086	0	0	4	-18,589	26,582
Comprehensive income							
Profit (loss) for the financial period	0	0	0	0	0	-7,031	-7,031
Other comprehensive income differences							
Translation differences	0	0	0	0	-2	0	-2
Comprehensive income (loss) for the period, total	0	0	0	0	-2	-7,031	-7,033
Transaction with owners							
Issues less transaction costs	0	0	0	0	0	0	0
Registration of shares	0	0	0	0	0	0	0
Cancellation of treasury shares	0	0	0	0	0	0	0
Share-based payments	0	20	0	0	0	78	98
Other adjustments	0	0	0	0	0	0	0
Total transaction with owners	0	20	0	0	0	78	98
Shareholders' equity 30 June 2023	80	45,107	0	0	3	-25,542	19,647

1-12/2023 EUR thousand	Equity attributable to owners of the parent						Total equity
	Share capital	Invested unrestricted equity reserve	Share issue	Treasury shares	Translation differences	Retained earnings	
Shareholders' equity 1 Jan 2023	80	45,086	0	0	4	-18,589	26,582
Comprehensive income							
Profit (loss) for the financial period	0	0	0	0	0	-13,153	-13,153
Other comprehensive income items							
Translation differences	0	0	0	0	2	0	2
Comprehensive income (loss) for the period, total	0	0	0	0	2	-13,153	-13,151
Transactions with owners							
Issues less transaction costs	0	0	0	0	0	0	0
Registration of shares	0	0	0	0	0	0	0
Cancellation of treasury shares	0	0	0	0	0	0	0
Share-based payments	0	86	0	0	0	269	355
Other adjustments	0	0	0	0	0	0	0
Total transactions with owners	0	86	0	0	0	269	355
Shareholders' equity 31 Dec. 2023	80	45,172	0	0	6	-31,473	13,786

Accounting principles applied to the consolidated financial statements

Betolar Plc's consolidated financial statements include the parent company Betolar Plc and its subsidiaries Betolar Chemicals Ltd (as of 1 November 2019) and Betolar India Private Ltd (as of 1 September 2021).

The half-year consolidated financial statements have been prepared in accordance with the International Accounting Standards (IFRS, IAS) and Interpretations Committee (IFRIC) issues by the International Accounting Board (IASB), which are accepted for application in the European Union. The consolidated financial statements for the period that ended 30 June 2024 have been prepared in accordance with the International Financial Reporting Standards (IFRS) and International Committee (IFRIC) in force on 30 June 2024.

Business continuity

Betolar's business is still in the productization phase. The development and commercialisation of Betolar's solutions have caused and will continue to cause significant costs to the company. To mitigate the expenditures, the company has taken active measures to secure the financial conditions to implement its strategy, which was updated in 2023. Betolar has adjusted its cost structure in 2023, reduced 13 employees through change negotiations and reduced the size of the Management Team.

Related party transactions

Betolar's related parties include the subsidiaries of the parent company Betolar Plc. Related parties also include the key employees of Betolar's management as well as their close family members and the entities under their control. The key management personnel are the members of Betolar's Board of Directors, the CEO, and other members of the management team. Transactions with

related parties are made on normal commercial terms. The transactions include consultancy services related to business development purchases from a member of the Board of Directors. In addition, share subscriptions made by related parties have been identified as related party transactions during the financial period.

No loans or any other guarantees or securities were issued to any related parties.

The following transactions were carried out with related parties:

EUR thousand	30 June 2024	30 June 2024	31 December 2023
Income statement	Group	Group	Group
Purchased services	72	53	133

EUR thousand	30 June 2024	30 June 2023	31 December 2023
Balance sheet	Group	Group	Group
Accounts payable	13	11	0

Management salaries and remunerations:

EUR thousand	30 June 2024	30 June 2023	31 December 2023
	Group	Group	Group
<u>Remuneration to the members of the Board of Directors</u>			
Chair	22	20	39
Other members of the Board	53	45	98
Board of Directors' fees, total	78	65	137

EUR thousand	30 June 2024	30 June 2023	31 December 2023
	Group	Group	Group
<u>CEO</u>			
Salaries and remuneration	188	327	404
Pension expenses	34	59	73
Indirect employee costs	6	9	11
Total	227	395	488

Other Management team

Salaries and remuneration	221	573	1,080
Pension expenses	40	104	196
Indirect employee costs	7	15	29
Total	268	692	1,305

During the financial periods 2024 and 2023, management has been granted options (pcs) as follows:

	2024	2023
	Group	Group
Members of the Board of Directors	0	0
CEO	0	280,000
Other members of the Management Team	0	278,333
Total	0	558,333

APPENDIX

Calculation formulas for certain financial indicators and operative indicators.

Measure	Definition	Purpose of use
Gross margin	Net sales – materials and services	Gross margin is a measure of the Group's profitability. Gross margin measures profitability after reducing the costs of materials and services.
EBITDA	Operating profit (loss) before depreciation, amortisation and impairment	EBITDA is a measure of the Group's performance.
Earnings per share, basic, EUR	Profit for the financial period / weighted average number of outstanding shares during the financial period	The measure reflects the distribution of the Company's earnings for each individual share.
Earnings per share, adjusted for dilution, EUR	Profit for the financial period / weighted average number of outstanding shares during the financial period + diluting potential shares	The measure reflects the distribution of the Company's earnings for each individual share, taking dilution into consideration.
Cash, cash equivalents and short-term fund investments	Cash and cash equivalents + current investments	Cash and short-term fund investments describe the company's liquid assets.
Order intake	The value of orders for materials and services received during the reporting period.	The indicator describes the expected future development of the company's sales.
New Non-Recurring Engineering (NRE) projects	The number of new NRE order intakes received in the reporting period.	The indicator describes the development of the contract of the company's research service business.
Number of new pilot customers	The number of new customers in the factory pilot phase at the end of the reporting period.	The indicator illustrates the volume development of the company's license-based business sales process.

