

Kempower Corporation

Shades of Green Assessment Update 2023

6 September 2023

 Sector: Manufacturing
(EV Infrastructure)
 Region: Europe

EXECUTIVE SUMMARY

Kempower Corporation (“Kempower”) is a leading Finnish company specialising in developing charging infrastructure for electric vehicles (EV). It designs and manufactures direct current (DC) fast-charging solutions that are modular, moveable, and satellite-based. As of June 30, 2023, Kempower has two production sites in Lahti, Finland and has delivered solutions to all continents and over 50 countries globally as of 2022. This is an update of Kempower’s Shades of Green Assessments published in 2022.

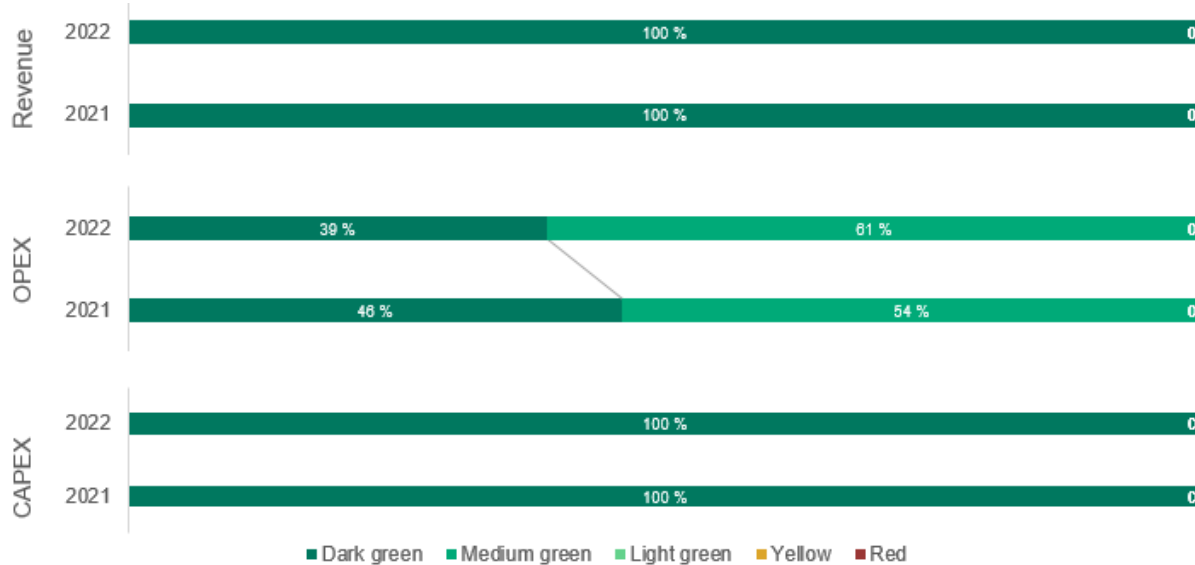


Figure 1: Shading of revenue and investments for Kempower from 2021 to 2022

In 2022, the shading of Kempower’s revenue and CAPEX remains unchanged, with 100% of revenue and investments (CAPEX) receiving Dark Green shading. The Dark Green shading reflects the contribution of Kempower’s EV charging products and accessories as an enabler of a low carbon and climate-resilient future (LCCR). EV infrastructure is currently insufficient and is a persistent concern among potential electric vehicle buyers, be it individuals considering personal EVs, public transport, or logistic companies considering electrifying their fleet. Therefore, the needed shift to the electrification of transportation depends on the effective roll-out and operations of charging infrastructure for both private and public transportation.

The 61% of OPEX related to the COGS, which includes raw materials and components, has been shaded Medium Green, reflecting a 7 percentage point increase from last year. Kempower sources various pre-assembled components and critical materials that are energy and emission-intensive to produce, such as aluminium, ferrous metals, and plastics. The limited visibility and information on Kempower's various supply chain actors

Nasdaq Green Designation Annual Renewal¹

Based on this review, Shades of Green assesses that Kempower meets the Nasdaq Green Equity Designation requirements for annual renewal as set out in the Nasdaq Green Equity Principles. The final confirmation of the Green Designation annual renewal is subject to Nasdaq approval.

¹ Shades of Green is an approved reviewer to assess alignment with the Nasdaq Green Equity Principles, [Nasdaq.com/Solutions/Nasdaq-Nordic-Green-Designations](https://www.nasdaq.com/solutions/nasdaq-nordic-green-designations)

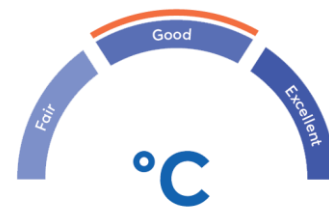
² For the purpose of this assessment, revenue and turnover are used interchangeably, as are operating costs and OPEX, investments and CAPEX

and activities make it challenging to fully assess its climate and other sustainability risks stemming from its extended value chain. Therefore, the Medium Green shading reflects the limited information on Kempower’s sub-suppliers and associated climate risks. The remaining OPEX are related to general internal business expenditures, including personnel, product development, IT, office and vehicle leasing, and other similar types of operational expenses and have been shaded Dark Green.

Certain plug-in hybrid electric vehicles (PHEV) can also use Kempower's charging products. Such vehicles do not fully support or enable the 2050 solution due to fossil-fuel emissions and contributing factors to further potential lock-in effects of fossil-fuel technologies. Further, Kempower’s charging infrastructure can be used to charge heavy-duty vehicles, including vehicles for mining applications, which could be associated with the mining of coal, rare earths, and metals. In general, these are minor considerations given Kempower’s market focus which is aimed at the fast-charging market primarily catering to fully electric vehicles, machinery, and transport systems.

Kempower maintains a “Good” governance score and continues to demonstrate awareness of environmental and sustainability concerns.

Since our previous assessment, the company has made progress on further developing its sustainability strategy and improving its environmental governance. In March 2023, the company published its first sustainability report, which references GRI and SASB reporting standards. Additional sustainability governance roles have also been added and essential policies have been expanded to include protocols for social sustainability. While Shades of Green considers Kempower’s efforts to be positive, the company still has potential to improve its reporting of full scope of emissions, including reporting of absolute and intensity-based emissions across scope 1, 2 and 3 emission categories. Also, the company has yet to implement the internal carbon pricing for its operations or link executive compensation or board of director remuneration with any sustainability objectives or KPIs.



The relevant EU Taxonomy activity for Kempower remains Infrastructure enabling low-carbon road transport and public transport. Shades of Green assesses that Kempower’s revenue, OPEX, and CAPEX are 100% likely aligned with the technical mitigation criteria and the do no significant harm criteria³. Shades of Green deems that Kempower to likely fulfil the minimum social safeguards of the EU Taxonomy.

Table 1: Sector Specific Metrics for Kempower				
	Charging units delivered	Scope 1-2 emissions	Scope 3 emissions	Emissions avoided
2022	<9000	68.43 (tCO ₂ eq)	25.04 (tCO ₂ eq)	To be calculated
2021	<1000	235.18 (tCO ₂ eq)	2.3 (tCO ₂ eq)	To be calculated
2020	<200	N/A	N/A	To be calculated

³ See Appendix 2 for all details.



Contents

	EXECUTIVE SUMMARY	1
1	Kempower key developments 2023	4
	Company update	4
	Governance Update.....	4
	Key performance indicators	6
2	Assessment of Kempower’s revenues and investments	8
	Shading of Kempower’s revenue, operating expenses and investments	8
	Nasdaq Green Designation.....	10
	EU Taxonomy update	10
3	Terms and methodology	12
	Shading corporate revenue and investments	12
	About Shades of Green	14
	Appendix 1: Referenced documents list	15
	Appendix 2: EU Taxonomy criteria and alignment	16

1 Kempower key developments 2023

Company update

Kempower Corporation (“**Kempower**” or the “**company**”) is a publicly listed company founded in 2017 and headquartered in Lahti, Finland. The company is a subsidiary of the Kemppi group, which owns the majority of the shares⁴. Kempower designs, manufactures, and commercializes direct current (DC) fast charging infrastructure and services for the electric vehicle (EV) market. Kempower offers charging solutions and services for electric passenger cars, heavy-duty transport, public transport, electric boats, and electric mining and construction equipment. Modular, moveable, and satellite-based solutions are part of the company's product portfolio and cater to a range of charging applications. As of June 30, 2023, Kempower has two production sites in Lahti, employs 596 employees across 30 nationalities, and its charging solutions have been delivered to almost 50 countries globally⁵.

Kempower opened production lines at a new facility in Lahti⁶ that became fully operational in late 2022. The new facility increased production capacity, which in addition to increased production lines, added a new laboratory for research & development, a vehicle charging area, and supplementary office space. The company informs that all its production lines in Finland run on electricity only, and that the new production line in Lahti runs on improved infrastructure with improved energy consumption. Additionally, Kempower is currently establishing operations in North Carolina, US, with a target to start production during the second half of 2023⁷. The new facility in the US will initially operate on energy provided from the local grid, with plans for the incorporation of expanded renewable energy use in the future. The company informs that the use of fossil fuel (natural gas) at the new facility would only be for heating purposes. In June 2023, Kempower also announced plans to establish a third production site in Lahti, Finland that will increase laboratory capacity and is expected to be operational in 2024. Between 2021 and 2022, Kempower grew its daily charging capacity from 80 MWh to more than 390 MWh, while increasing energy charged through Kempower chargers worldwide from 2,500 MWh to 12,000 MWh of energy.

Governance Update

Kempower continues to demonstrate awareness of environmental and sustainability concerns. To further advance its sustainability initiatives, the company published its first Sustainability Report in March 2023, which references the GRI and SASB reporting standards. The company also onboarded new staff to include a Sustainability Manager, Investor Relations Manager, and a Human Resources Director, who apart from other business responsibilities, are accountable for updating the company's protocols for social sustainability. The company is yet to link executive compensation or board of director remuneration with any sustainability objectives or KPIs.

⁴ This company assessment assesses Kempower Oyj, and does not consider its parent company, Kemppi group.

⁵ [Kempower Business Review Q1-2023](#)

⁶ [Kempower information centre - new 10,300 square meter factory will be opened on schedule](#)

⁷ [Kempower Annual Report 2022](#)



In the last year the company has made progress on further developing its sustainability strategy that aims to anchor all Kempower’s sustainability initiatives and establish targets for emissions following the GHG protocol for scopes 1-3. As part of the initial assessment of its emissions, it has identified the following emission types: purchased goods (raw material, components, capex towards new factory), logistics and business travel, electricity and heating of facilities, waste, and employee commuting. However, at this time only Scope 3 emissions relating to waste, and business travel have been quantified. The company is in the preliminary stages of collecting emissions-related data from suppliers and is planning to enhance scope 3 reporting in the future. It also works with suppliers to improve environmental data collection and performance. Kempower informs it is essential that suppliers meet its sustainability requirements and has now made it mandatory for all suppliers to adhere to Kempower’s CoC, by affirming to the requirements at the time of origination of contract. The company also informs that supplier non-compliance with this CoC or other emissions reporting requirements, environmental objectives, and human rights initiatives would be viewed critically and that it could result in the further evaluation and potential termination of a supplier relationship by leadership. The company engages with its suppliers regarding procurement of critical raw material and conflicting minerals; however, it is yet to implement the “OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas”.



In 2022, the company also carried out a climate risk and opportunity assessment of its business model, including scenario analysis as per TCFD guidance, for which it used two climate scenarios: IPCC SSP1-2.6 (global temperature increase well below 2°C), and IPCC SSP4-8.5 (global temperature increase up to 4°C)⁸. The top risks identified were physical, especially in the 4°C scenario, which include local damages due to extreme weather, disruptions in the global supply chain and negative regional impacts on the workforce, all of which were estimated to have a small or small-to-medium financial impact.

The overall assessment of Kempower’s governance structure and processes gives it a rating of “**Good**.” Kempower still has potential to improve its reporting of full scope of emissions, including reporting of absolute and intensity-based emissions across scope 1, 2 and 3 emission categories. Also, the company has yet to implement internal carbon pricing for its operations and investments.

⁸ [Kempower Sustainability Report 2022](#)

Key performance indicators

Table 2: The table summarises Kempower’s CO2-emissions and main CO2-emission reduction targets

Emissions	Total (tons CO ₂ eq ⁹)	Scope 1	Scope 2	Scope 3
Main Targets	100% carbon neutrality by 2035		100% fossil-free electricity by 2025 in its production and operations	Reducing the amount of landfill waste to zero by 2025
2022	93.47	N/A	68.43	25.04
2021	237.49	N/A	235.18	2.3
Change 2022-2021	-60.6%	NA	-70.9%	988.7%
Main sources			Electricity and heating	Waste management

With the goal to achieve 100% carbon neutrality by 2035, Kempower reported a 60.6% decrease in its overall CO₂e emissions from 2021. Kempower’s assembly process primarily involves piecing together the various pre-assembled components as well as performing quality control and testing of finished products. According to Kempower, these processes are done manually and mostly by hand, without the use of heavy machinery. Therefore, for Scope 1 emissions, Kempower has informed that their facilities do not currently emit process emissions from its production lines.

Kempower’s Scope 2 emissions decreased by 70.9% from 2021 through the purchase of renewable energy credits (RECs), which is consistent with the company’s goal to source 100% renewable electricity by 2025 in its production and operations. Meanwhile, scope 3 emissions saw a substantial increase in 2022 as a result of facility expansions and overall revenue growth. Carbon offsets were used for business travel emissions so only waste management is included in Scope 3 reporting.

Kempower’s relative Scope 1 and 2 emissions were 0.66g CO₂-eq/EUR in 2022,¹⁰ demonstrating a 7.9 g CO₂-eq/EUR reduction in relative emissions intensity compared to that of the previous year. Reductions in relative emissions intensity (Scope 1 and 2) can be attributed to Kempower’s renewable energy procurement to offset Scope 2 emissions and a significant increase in revenue in the last year. However, in comparison to a physical intensity measure, a revenue-based intensity measure has limitations in terms of how well it reflects Kempower’s improvements in carbon efficiency, as it is also affected by changes in pricing.

Table 3: Energy Mix for Kempower (% of total heating)

Energy Source	2021	2022	Notes
Heating: Natural Gas	50%	38%	
Heating: District Heating	50%	62%	

⁹ CO₂e, carbon dioxide equivalent is a measurement term for greenhouse gas accounting.

¹⁰ According to Kempower, the reported figure of 2.5 g CO₂-eq/EUR in its 2022 Sustainability Report does not account for its purchase of RECs.



Kempower's offices and facilities are heated primarily with local district heating. The company informs that it intends to replace heating based on natural gas with district heating, which it expects will further decrease its scope 2 emissions. According to the company, the main source of district heat is biomass. Since 2021, Kempower has decreased its use of natural gas 12% with further plans to ramp down its use of natural gas at all its facilities in Lahti. At Kempower's second site in Lahti there is a need to continue using natural gas when outside temperatures get low, otherwise this site is heated using air and water heat pumps that run on electricity.

2 Assessment of Kempower’s revenues and investments

Shading of Kempower’s revenue, operating expenses and investments

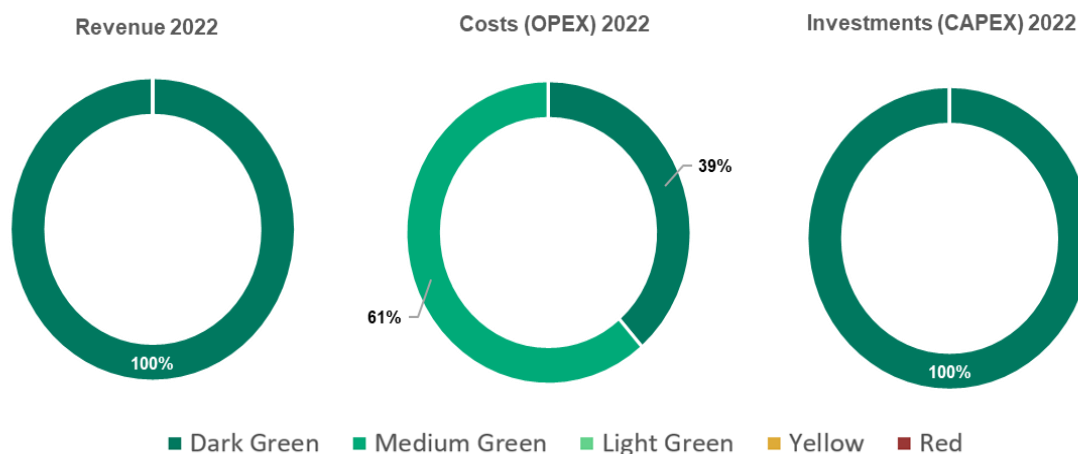


Figure 3: Shading of revenue and investments for Kempower¹¹

In accordance with Shades of Green’s methodology, the Shade of Green assigned to an activity reflects its overall climate risk and environmental impact. In assigning a shade of green to Kempower’s revenue streams and costs, we have considered Kempower’s Governance Score of Good, the company’s management of key environmental concerns, and its alignment with the technical criteria set forth by the EU taxonomy.

Shades of Green considers Kempower’s charging products and accessories to contribute toward climate change mitigation and act as an important enabler of the 2050 solution. EV infrastructure is currently insufficient and is a persistent concern among potential EV buyers, be it private individuals considering passenger cars, public transport operators considering electric buses, or logistic companies considering electric trucks. Therefore, the needed shift to the electrification of transportation depends on effective roll-out and operations of charging infrastructure. As such, all revenues generated from the sale of charging stations and services have maintained a shading of Dark Green, which is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate-resilient future. It should be noted that certain plug-in hybrid electric vehicles (PHEV) can also use Kempower's charging products. Such vehicles do not fully support or enable the 2050 solution due to fossil-fuel emissions and contributing factors to further potential lock-in effects of fossil-fuel technologies. Further, Kempower’s charging infrastructure can be used to charge heavy-duty vehicles, including vehicles for mining applications, which could be associated with the mining of coal, rare earths, and metals. In general, these are minor considerations given Kempower’s market focus which is aimed at the fast-charging market primarily catering to

¹¹ The figures are aligned with Kempower’s financial reporting. Investors should note that our assessment is based on data reported or estimated by the company and has not always been verified by a third party. We analyse revenue, operating costs and capital expenditures, however there is typically not an explicit link between sustainability and financial data. Our shading often requires allocating line items in financial statements to projects or products, for this we rely on the company’s internal allocation methods. In addition, there are numerous ways to estimate, measure, verify and report e.g., data on emissions, which may make direct comparisons between companies or regulatory criteria difficult and somewhat uncertain.



fully electric vehicles, machinery, and transport systems. Overall, in 2022 we find that 100% of operating costs remain associated with assets with some Shade of Green.

The 61% of OPEX related to the COGS, which includes raw materials and components, has been shaded Medium Green reflecting a 7 percentage point increase from last year. A Shade of Medium Green is allocated to projects and solutions that represent significant steps towards the long-term vision but are not quite there yet. Kempower sources various pre-assembled components and critical materials that are energy and emission-intensive to produce, such as aluminium, ferrous metals, and plastics. The limited visibility and information on Kempower's various supply chain actors and activities make it challenging to fully assess its climate and other sustainability risks stemming from its extended value chain. Therefore, the Medium Green shading reflects the limited information on Kempower's sub-suppliers and associated climate risks. The remaining OPEX, which was Dark Green and went down by 7 percentage points in 2022, are related to general internal business expenditures, including personnel, product development, IT, office and vehicle leasing, and other similar types of operational expenses and have been shaded Dark Green.

As was the same in 2021, CAPEX investments have been shaded Dark Green and include modest investments in equipment and machinery used for its laboratory and testing of products, and expansion of its new production facility in Lahti. These CAPEX investments support the Dark Green revenue generation and do not include fossil fuel elements.

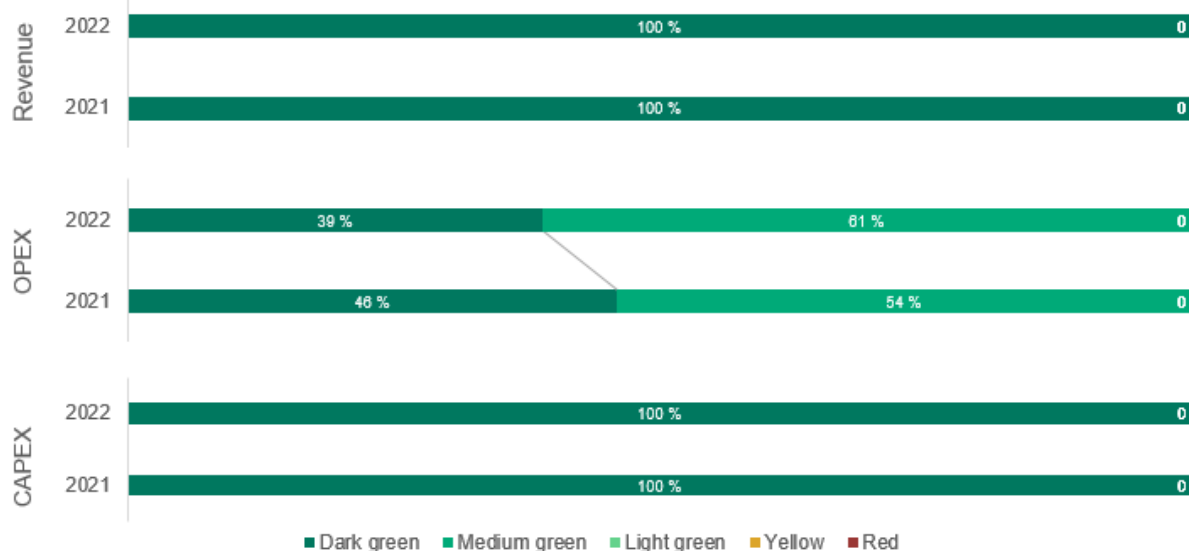


Figure 4: Past shading of revenue and investments for Kempower

The total share of projects shaded some shade of green in 2022 was 100%, which remained unchanged from last year. The total share of projects shaded Dark Green in 2022 was 100% of revenue and CAPEX, and 39% of OPEX, which reflected a 7 percentage point decrease compared to 2021.

The shading in this update is based on the same methodology Shades of Green used in 2021 to allow for a comparison of Kempower's portfolio performance over time. Investors should be aware that our methodology is dynamic, as technology, regulations, and sector norms continuously evolve. If Kempower decides to complete a new full company assessment as required at the end of three years, we will use an updated methodology incorporating the latest sector information at that time.



Investors should note that our assessment is based on data reported or estimated by the company and has not always been verified by a third party. We analyse revenue, operating costs and investments, however there is typically not an explicit link between sustainability and financial data¹². Our shading often requires allocating line items in financial statements to projects or products, for this we rely on the company’s internal allocation methods. In addition, there are numerous ways to estimate, measure, verify and report e.g., data on emissions, which may make direct comparisons between companies or regulatory criteria difficult and somewhat uncertain.

Nasdaq Green Designation

Shades of Green confirms that Kempower meets the requirements for Nasdaq Green Equity Designation set out in the Nasdaq Green Equity Principles.

In 2022, 100% of Kempower’s turnover came from assets with some Shade of Green, exceeding the 50% threshold for green activities for company turnover. The sum of OPEX and CAPEX allocated a Shade of Green is 100%. This exceeds the 50% threshold for investments, defined as the sum of CAPEX and OPEX. In 2022, Kempower had no turnover assessed shaded Red, meeting the threshold of less than 5% of the company’s turnover being derived from fossil fuel activities.

In addition, this report provides transparency on alignment of the company’s activities with the EU Taxonomy and transparency on the company’s environmental targets and KPIs is provided.

EU Taxonomy update

The mitigation and adaptation criteria in the EU taxonomy include specific thresholds and do no significant harm (DNSH) criteria for Infrastructure enabling low-carbon road transport and public transport¹³. Comments on alignment are given in the table below, and detailed thresholds, NACE-codes and likely alignment with DNSH criteria are given in Appendix 2.

As previously reported, the most relevant risks for Kempower are labour rights violations through its subcontractors and supply chain. Kempower assesses these social risks and has established screening mechanisms for all its sub-suppliers, including on-site evaluations of its key suppliers. Shades of Green considers that Kempower currently fulfil the minimum social safeguards of the EU Taxonomy.

Table 5: Overall EU Taxonomy alignment (Substantial contribution to mitigation + DNSH + minimum safeguards)	Revenue	OPEX	CAPEX
Total share eligible (activities covered by criteria)	100%	100%	100%
Total share likely aligned	100%	100%	100%
Total share likely aligned to Technical Criteria only	100%	100%	100%

¹² Most accounting systems do typically not provide a break-down of revenue and investments by environmental impact, and the analysis may therefore include imprecisions and may not be directly comparable with figures in the annual reporting

¹³ [European Commission – ANNEX to the Commission Delegated Regulation](#)



Overall, we find likely shares of portfolio alignment with the EU Taxonomy as follows:

Table 6: Economic Activity: Infrastructure enabling low-carbon road transport and public transport (NACE Codes F42.11, F42.13, F71.1 and F71.20)

Substantial contribution to mitigation	Full assessment from 2022	Updated comments on alignment
Mitigation Criteria	✓ 100% of activities are likely aligned, including Revenue, OPEX, CAPEX.	✓ Kempower designs and manufactures direct current (DC) fast-charging solutions for electric vehicles. ✓ Supports activities in reducing tailpipe emissions coming from the road transport, and substantially contributing to climate change mitigation.
DNSH-criteria	Full assessment from 2022	Updated comments on alignment
Climate Change Adaptation	✓ Likely aligned	✓ Likely aligned
Sustainable use and protection of water and marine resources	✓ Likely aligned	✓ Likely aligned
Transition to a circular economy (circular economy)	✓ Likely aligned	✓ Likely aligned
Pollution prevention and control	✓ Likely aligned	✓ Likely aligned
Protection and restoration of biodiversity and ecosystems	✓ Likely aligned	✓ Likely aligned











3 Terms and methodology

This analysis aims to be a practical tool for investors, lenders, and public authorities for understanding climate risk. Shades of Green encourages the client to make this annual update to the company assessment publicly available. If any part of the annual update or company assessment is quoted, the full report must be made available. Our annual assessment update, including governance, is relevant for the reporting year covered by the analysis. This annual assessment update is based on a review of documentation of the client’s policies and processes, as well as information provided to us by the client during meetings, teleconferences, and email correspondence. In our review, we have relied on the correctness and completeness of the information made available to us by the company.

Shading corporate revenue and investments

Our view is that the green transformation must be financially sustainable to be lasting at the corporate level. Therefore, we have shaded the company’s current revenue-generating activities, investments, and operating expenses.

The approach is an adaptation of the Shades of Green methodology for the green bond market. The Shade of Green allocated to a green bond framework reflects how aligned the likely implementation of the framework is to a low carbon and climate resilient future, and we have rated investments and revenue streams in this assessment similarly. We allocate a shade of green to the revenue stream and investments according to how these streams reflect alignment of the underlying activities to a low carbon and climate resilient future and taking into account governance issues.

Shading	Examples
 Dark Green is allocated to projects and solutions that correspond to the long-term vision of a low-carbon and climate resilient future.	 Solar power plants
 Medium Green is allocated to projects and solutions that represent significant steps towards the long-term vision but are not quite there yet.	 Energy efficient buildings
 Light Green is allocated to transition activities that do not lock in emissions. These projects reduce emissions or have other environmental benefits in the near term rather than representing low carbon and climate resilient long-term solutions.	 Hybrid road vehicles
 Yellow is allocated to projects and solutions that do not explicitly contribute to the transition to a low carbon and climate resilient future. This category also includes activities with too little information to assess.	 Healthcare services
 Red is allocated to projects and solutions that have no role to play in a low-carbon and climate resilient future. These are the heaviest emitting assets, with the most potential for lock in of emissions and highest risk of stranded assets.	 New oil exploration

In addition to shading from dark green to red, Shades of Green also includes a governance score to show the robustness of the environmental governance structure. When assessing the governance of the company, Shades of Green looks at five elements: 1) strategy, policies, and governance structure; 2) lifecycle considerations including



supply chain policies and environmental considerations towards customers; 3) the integration of climate considerations into their business and the handling of resilience issues; 4) the awareness of social risks and the management of these, and 5) reporting. Based on these aspects, an overall grading is given on governance strength, falling into one of three classes: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.

The EU Taxonomy, first introduced in 2020, seeks to set out common classification systems to determine the environmental sustainability of activities. The EU-taxonomy regulation¹⁴ defines six environmental objectives. To be considered environmentally sustainable, an activity must substantially contribute to one or more of the six objectives, not significantly harm any of the other six objectives (Do-No-Significant-Harm - DNSH), and comply with the technical screening criteria (TSC). In June 2021, EU published its delegated acts outlining the TSC for climate adaptation and mitigation objectives, respectively, which it was tasked to develop after the Taxonomy Regulation entered into law in July 2020¹⁵.

Shades of Green has assessed potential alignment against the mitigation thresholds and the DNSH criteria in the delegated acts published in June 2021 in the full assessment of the company carried out in 2022¹⁶.

In order to qualify as a sustainable activity under the EU regulation 2020/852 certain minimum safeguards must be complied with. The safeguards entail alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights, including the International Labour Organisation's ('ILO') declaration on Fundamental Rights and Principles at Work, the eight ILO core conventions and the International Bill of Human Rights. Shades of Green has completed a light touch assessment of the above social safeguards with a focus on human rights and labor rights risks¹⁷. We take the sectoral, regional and judicial context into account and focus on the risks likely to be the most material social risk.

Our assessment of alignment against the EU Taxonomy is based on a desk review of the listed source documents against the Taxonomy Delegate Act and following our own shading methodology.

¹⁴ EU-Taxonomy regulation (2020/852), <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0852&from=EN>
¹⁵ taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf (europa.eu)

¹⁶ Kempower Company Assessment, 2022: <https://www.spglobal.com/assets/documents/ratings/research/sog/green-company-assessment-kempower-19-august-2022.pdf>

¹⁷ Shades of Green is in the process of further developing its assessment method to ensure that it encompasses the object and purpose of the minimum safeguards.



About Shades of Green

Shades of Green, now a part of S&P Global and formerly part of CICERO, provides independent, research-based second party opinions (SPOs) of green financing frameworks as well as climate risk and impact reporting reviews of companies. At the heart of all our SPOs is the multi-award-winning Shades of Green methodology, which assigns shadings to investments and activities to reflect the extent to which they contribute to the transition to a low carbon and climate resilient future.

Shades of Green Company Assessments indicate the greenness of a company by providing a shading of revenues, operating costs and capital expenditures, as well as an assessment the company's governance structure. Shades of Green also provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green, sustainability and sustainability-linked bond investments. Shades of Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. Shades of Green is independent of the company being assessed, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. Shades of Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of assessments.





Appendix 1: Referenced documents list

Document Number	Document Name	Description
1	Kempower Business Review, dated Q1 2023	Company presentation and results, dated Q1 2023
2	Kempower Annual Report, 2022	Kempower Annual Report for fiscal year 2022.
3	Kempower Remuneration Report, 2022	Report on remuneration as of 2022. Based on the recommendations of the Finnish Corporate Governance Code 2020.
4	Kempower Company Presentation, Capital Market Day.	Company presentation and results, Capital Market Day, April 20, 2023.
5	Kempower Sustainability Report, 2022	Kempower Sustainability Report for fiscal year 2022
6	Kempower Sustainability Statement, 2021	Kempower sustainability statement, dated 2021.
7	Kempower Code of Conduct	Kempower Code of Conduct
8	Kempower Corporate Governance Statement, 2021	Kempower Corporate Governance Statement, Dated 31.12. 2021. Based on the recommendations of the Finnish Corporate Governance Code 2020.
9	Kempower Remuneration Report, 2021	Report on remuneration as of 2021. Based on the recommendations of the Finnish Corporate Governance Code 2020.

Appendix 2: EU Taxonomy criteria and alignment

Complete details of the EU taxonomy criteria are given in [taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R2800-annex-1)

Infrastructure enabling low-carbon road transport and public transport

Taxonomy activity	6.15. Infrastructure enabling low-carbon road transport and public transport (NACE codes F42.11, F42.13, F71.1 and F71.20)		
	EU Technical mitigation criteria	Comments on alignment	Alignment
Substantial contribution to climate change mitigation ¹⁸	<p>The activity complies with one or more of the following criteria:</p> <ul style="list-style-type: none"> ✓ the infrastructure is dedicated to the operation of vehicles with zero tailpipe CO2 emissions: electric charging points, electricity grid connection upgrades, hydrogen fuelling stations or electric road systems (ERS); ✓ the infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods; ✓ the infrastructure and installations are dedicated to urban and suburban public passenger transport, including associated signalling systems for metro, tram and rail systems. <p><i>The infrastructure is not dedicated to the transport or storage of fossil fuels.</i></p>	<ul style="list-style-type: none"> ✓ Kempower develops charging infrastructure for electric vehicles, including moveable charging stations, modular charging stations, stationary chargers, and associated software solutions. Therefore, it is likely aligned as it meets the technical screening criteria for substantial contribution to climate change mitigation activities. 	Likely aligned
	EU Taxonomy DNSH-criteria	Comments on alignment	Alignment
Climate change adaptation ¹⁹	<p>Physical climate risks material to the activity should be identified (chronic and acute, related to changing temperatures effecting freshwater, marine water, permafrost, etc.), wind (cyclone, hurricane, typhoon, storms, etc.), water-related (floods, ocean acidification, sea level rise, etc.) by performing a robust climate risk and vulnerability assessment.</p>	<ul style="list-style-type: none"> ✓ According to Kempower, The Company has an established risk assessment process which includes physical and transition climate risks and opportunities. This risk management process is carried out regularly and internally at Kempower. ✓ According to Kempower, the risk assessment process for physical and transitional climate risks and opportunities has been mapped following 	Likely aligned

¹⁸ [European Commission - ANNEX to the Commission Delegated Regulation - 6.15 Infrastructure enabling low-carbon road transport and public transport](#)

¹⁹ [European Commission - ANNEX to the Commission Delegated Regulation - APPENDIX A: GENERIC CRITERIA FOR DNSH TO CLIMATE CHANGE ADAPTATION](#)

	<p>The assessment should be proportionate to the scale of the activity and its expected lifespan, such that:</p> <ul style="list-style-type: none"> ✓ for investments into activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using downscaling of climate projections; ✓ for all other activities, the assessment is performed using high resolution, state-of-the-art climate projections across a range of future scenarios consistent with the expected lifetime of the activity, including, at least, 10 to 30 years climate projections scenarios for major investments. <p>The economic operator has developed a plan to implement adaptation solutions to reduce material physical climate risks to the activity. The adaptation solutions identified need to be implemented within five years from the start of the activity. These adaptation solutions do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of assets and of other economic activities and are consistent with local, sectoral, regional or national adaptation efforts.</p>	<p>the TCFD recommendations in May 2022, during workshops with sustainability services consultants. The assessment includes countries and locations where Kempower business activities and assets are currently situated, as well as looking forward to the future based on the ongoing expansion plans.</p> <ul style="list-style-type: none"> ✓ According to Kempower, it takes climate projections into account when planning and assessing risks related to major long-term (>5-10 years lifespan) investments. Location-specific knowledge and publicly available scenarios (IPCC) of global warming and subsequent material climate-related risks in the geographical area of operations and supply chain are the basis of such assessments. ✓ The Company informs that its risk assessment process has a built-in approach for controlling and mitigating the identified risks. Actions are implemented to limit the consequences on all activities, including but not limited to operations and supply chain. Follow-up of agreed corrective measures is part of the regular risk process. ✓ Overall, Kempower currently assesses physical climate risks to be low, and at an acceptable level without current needs to eliminate or reduce the risks. 	
Sustainable use and protection of water and marine resources	<ul style="list-style-type: none"> • Environmental degradation risks related to preserving water quality and avoiding water stress are identified and addressed with the aim of achieving good water status and good ecological potential²⁰ • Environmental Impact Assessment is carried out²¹ 	<ul style="list-style-type: none"> ✓ The Company informs that none of its facilities are situated in water-stressed areas. ✓ The Company informs that all its activities are carried out in close cooperation with local authorities. Environmental impacts are always assessed when facilities are built, expanded, or renovated, and operations are planned for minimal impact on the natural environment and water resources. 	Likely aligned
Transition to a circular economy	<ul style="list-style-type: none"> • At least 70 % (by weight) of the non-hazardous construction and demolition waste (excluding naturally occurring material defined in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC) generated on the construction site is prepared for reuse, recycling and other material recovery, 	<ul style="list-style-type: none"> ✓ Kempower informs that it has action plans to actively reduce waste in all steps of the supply chain, operations and product life cycle. Specifically for building and demolition waste, close cooperation with the authorities and local waste re-use operators has resulted in minimal waste and full compliance with the waste management protocol. The collection of construction waste and demolition materials is controlled according to national laws and organised by 	Likely aligned

²⁰ As defined in Article 2, points (22) and (23), of Regulation (EU) 2020/852, in accordance with Directive 2000/60/EC of the European Parliament and of the Council and a water use and protection management plan, developed thereunder for the potentially affected water body or bodies, in consultation with relevant stakeholders.

²¹ In accordance with Directive 2011/92/EU of the European Parliament and of the Council and includes an assessment of the impact on water in accordance with Directive 2000/60/EC, no additional assessment of impact on water is required, provided the risks identified have been addressed.

	<p>including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol²⁷.</p> <ul style="list-style-type: none"> • Operators limit waste generation in processes related construction and demolition, in accordance with the EU Construction and Demolition Waste Management Protocol and taking into account best available techniques and using selective demolition to enable removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling by selective removal of materials, using available sorting systems for construction and demolition waste. 	<p>regional operators in Finland by whom the material flows, and re-use are reviewed, measured and documented.</p>	
Pollution and prevention control	<ul style="list-style-type: none"> • Where relevant, noise and vibrations from use of infrastructure are mitigated by introducing open trenches, wall barriers or other measures and comply with Directive 2002/49/EC. • Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works 	<ul style="list-style-type: none"> ✓ Kempower informs that noise and vibration are not among the most significant health and safety risks at Kempower operations, and therefore the company does not consider this a relevant issue. Further, Kempower informs that no pollutants or other emissions are emitted during its product assembly process, mainly involving the manual installation of cables and quality control testing of charging products. ✓ Kempower informs that with regards to the general criteria of pollution and prevention control, local regulations are strictly followed regarding the use and presence of chemicals, and the amount of chemicals in the process is not material. 	Likely aligned
Protection and restoration of biodiversity and ecosystems	<ul style="list-style-type: none"> • An Environmental Impact Assessment (EIA) or screening should be completed in accordance with national provisions • Where an EIA has been carried out, the required mitigation and compensation measures for protecting the environment are implemented • For sites/operations located in or near biodiversity-sensitive areas additional requirements²² apply: <ul style="list-style-type: none"> ➤ The new construction should not be built on one of the following: <ul style="list-style-type: none"> ○ a) arable land and crop land; ○ b) greenfield land of recognised high biodiversity value and land that serves as habitat of 	<ul style="list-style-type: none"> ✓ Kempower informs that environmental impacts are always assessed when facilities are built, expanded, or renovated, and operations are planned for minimal impact on the natural environment and water resource. While environmental impacts assessments are not currently required by regional authorities, all activities are still carried out in cooperation with local regulations. ✓ Kempower informs that limits have been set in Finland on amounts of chemicals stored or used, and that Kempower currently or in the near future, does not exceed or expect to exceed such limits that would require a full EIA. ✓ Kempower informs that its operations are not situated in or near biodiversity-sensitive areas such as Natura areas, conserved land, or habitat of endangered flora and fauna. 	Likely aligned

²² For sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment, where applicable, has been conducted and based on its conclusions the necessary mitigation measures are implemented



	endangered species (flora and fauna) listed on the European Red List or the IUCN Red List	✓ Kempower informs that its office and production facilities properties are leased, where one is leased from its parent company, Kemppi Group OYJ, and the other facility from a third party.	
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