°CICERO Shades of Green

Eidsiva
Green Finance Second Opinion

November 18, 2021

Eidsiva is a Norwegian energy and infrastructure company with activities in distribution of electricity, renewable energy, telecommunication network services, and district heating. Eidsiva is Norway's largest grid operator and among Norway's largest district heating providers. Eidsiva updated its 2019 green finance framework to incorporate its recent assessment of its sustainability work.

Proceeds can be allocated to energy efficiency, renewable energy, and clean transportation projects. Related to energy efficiency, approx. 80% of the proceeds will be allocated to the electricity grid infrastructure and approx. 12% to telecommunication networks focusing on fiber, which is the most energy efficient technology for broadband access networks. A minor share of the proceeds will be attributed to district heating where 95-99% of inputs come from renewable sources (bioenergy) and 1-5% from fossil fuel. The issuer has no immediate plans for direct investments in the renewable energy and clean transportation project categories.

CICERO Green assesses that Eidsiva is likely aligned with the relevant EU-taxonomy mitigation thresholds except for the Telecommunication Network category. Eidsiva has some gaps in respect of the Do No Significant harm (DNSH) criteria for climate change adaptation, transition to a circular economy, and pollution prevention and control. We consider that while Eidsiva will be likely aligned with the minimum social safeguards of the EU Taxonomy, it could implement more systematically the OECD social risk due diligence process.

Eidsiva aims at reducing CO_2 emissions from its own business, however no specific timeframe or emissions reduction targets have been given. Eidsiva currently reports on scope 1 and 2 emissions, and we welcome its intention to report scope 3 emissions in its reporting for 2021. On climate risks, the issuer confirmed following relevant regulations, but currently does not apply climate scenarios for assessing future physical risks, nor reports in line with TCFD recommendations.

Based on the overall assessment of the eligibility criteria in this framework, governance and transparency considerations, and the prioritized use of proceeds, this green finance framework receives an overall **CICERO Dark Green** shading and a governance score of **Good**. The overall shading assumes that the issuer will allocate most of the proceeds to investments in grid infrastructure, shaded Dark Green. The issuer would benefit from doing life cycle assessments (including scope 3 emissions), implementing concrete targets and goals, and from a more ambitious approach towards climate risks adaptation.

SHADES OF GREEN

Based on our review, we rate the updated Eidsiva's green finance framework **CICERO Dark Green.**

Included in the overall shading is an assessment of the governance structure of the green finance framework. CICERO Shades of Green finds the governance procedures in Eidsiva's framework to be **Good**.

GREEN BOND /LOAN PRINCIPLES

Based on this review, this updated green finance framework is found in alignment with the principles.

°CICERO Dark Green

°CICERO Shades of Green

Contents

1 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework dated November 2021**.** This second opinion remains relevant to all green bonds and/or loans issued under this framework for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. CICERO Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

The second opinion is based on a review of the framework and documentation of the client's policies and processes, as well as information gathered during meetings, teleconferences and email correspondence.

Expressing concerns with 'Shades of Green'

CICERO Green second opinions are graded dark green, medium green or light green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement. The shades are intended to communicate the following:

CICERO Shades of Green	Examples
Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Ideally, exposure to transitional and physical climate risk is considered or mitigated.	Wind energy projects with a strong governance structure that integrates environmental concerns
Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Physical and transition climate risks might be considered.	Bridging technologies such as plug-in hybrid buses
Light green is allocated to projects and solutions that are climate friendly but do not represent or contribute to the long-term vision. These represent necessary and potentially significant short-term GHG emission reductions, but need to be managed to avoid extension of equipment lifetime that can lock-in fossil fuel elements. Projects may be exposed to the physical and transitional climate risk without appropriate strategies in place to protect them.	Efficiency investments for fossil fuel technologies where clean alternatives are not available

Sound governance and transparency processes facilitate delivery of the client's climate and environmental ambitions laid out in the framework. Hence, key governance aspects that can influence the implementation of the green bond/loan are carefully considered and reflected in the overall shading. CICERO Green considers four factors in its review of the client's governance processes: 1) the policies and goals of relevance to the green finance framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of proceeds and 4) the reporting on the projects to investors. Based on these factors, we assign an overall governance grade: 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.

2 Brief description of Eidsiva's green finance framework and related policies

Eidsiva is a Norwegian energy and infrastructure company with activities in distribution of electricity, renewable energy, telecommunication network services, and district heating. Eidsiva is owned by 27 municipalities and 2 counties (Oslo Municipality and Innlandet County Municipality), holding a 50 % share, and the City of Oslo through its ownership of Hafslund Eco. After the merging of Eidsiva and Hafslund Eco, Eidsiva became the largest distribution company in Norway with approximately 1 million customers from Elvia, Eidsiva Bioenergi and Eidsiva Bredbånd.

It also has a significant ownership in hydropower production (6.2 TWh hydropower) and electrification operations through Hafslund Eco Vannkraft and Hafslund Ny Energi. In addition, Eidsiva is among the largest district heating producers in Norway, with around 400 GWh supplied.

Environmental Strategies and Policies

Eidsiva has updated its green finance framework to take into consideration its recent assessment of its sustainability work and the sustainable focus areas that has been identified by Eidsiva as a result. This updated review reflects the changes in the framework. The previous framework was dated August 2019.

Eidsiva reports on scope 1 and scope 2 emissions in its sustainability report. Its scope 1 emissions in 2020 totaled 50,146 tons of CO_2. Of these, 86% arose from waste incineration for district heating. Scope 1 emissions include the combustion of wood, used for district heating, and the district heating itself, where between 95-99% comes from renewable energy, and 1-5% from fossil fuel. Scope 2 emissions of Eidsiva and its subsidiaries amounted to 307 tons in 2020. The issuer informed us that Eidsiva has grid losses of 1330GWh in 2020, which will be included in scope 2 emissions from 2021. Eidsiva intends to report on scope 3emissions in its 2021 reporting.

Eidsiva has identified specific sustainable goals and focus areas. For example, the company aims at contributing towards climate change mitigation and electrification, by increasing annual district heating delivery to 500 GWh with a renewable share of at least 99% from bio energy, and by reducing CO_2 emissions from own business (scope 1 and 2). No specific timeframe has been given yet. Furthermore, Eidsiva aims to increase sustainability throughout the value chain by aiming at reducing CO_2 emissions in deliveries, in collaboration with its suppliers. Eidsiva informed that sustainability shall be emphasized in all pre-qualifications of suppliers, as well as in all solution choices and procurements. Eidsiva aims to report suppliers' emissions in the 2021 reporting. The issuer further informed that it is working on establishing a baseline for life cycle emissions by the end of this year, which will allow the issuer to conduct life cycle analysis and assess more specific goals and targets on emissions.

On climate risk assessment, the issuer informed that it aims to address physical climate risks more transparently within its next report, and that it is aligned with the local, regional and national regulations. However, the issuer does not yet have a systematic approach in addition to aligning with regulations. The issuer further informed us that it has conducted several studies to assess how to prevent climate impacts on business operations. For example, Eidsiva has studied how the earthing of electric facilities react to more heavy rainfalls and thunderstorms in specific areas, and how different types of trees close to the distribution network react to increased wind speed. Currently, the issuer does not apply climate scenarios for assessing future physical risks, nor reports in line with TCFD recommendations. However, the issuer informed that it follows the World Economic Forum's sustainability reporting principles, and aims to include the TCFD recommendations from the 2021 reporting onwards.

Use of proceeds

An amount equal to the net proceeds from green finance instruments issued under the framework will be used to finance a portfolio of assets and projects, in whole or in part, that contribute towards climate change mitigation and increased electrification. Eligible projects are mostly associated with the energy efficiency project category (i.e., distribution of electricity (approx. 80% of the proceeds), followed by telecommunication networks (approx. 12% of the proceeds), and infrastructure for distribution of district heating and cooling (a minor share of the proceeds)). The remaining minor share of the proceeds could potentially be attributed to the renewable energy project category (i.e., hydro and wind power), and clean transportation (i.e., infrastructure for zero-emission transport). The issuer informed us that it currently has no plan to directly invest in the renewable energy and clean transportation project categories, but rather through its ownership in other companies. The issuer informed that all projects are located in Norway.

Net proceeds from green finance instruments can be used for the financing of new assets and projects, as well as for refinancing purposes. The issuer informed that the refinancing share was 60% in 2020, as projects in the grid business were included in the asset pool for the first time, except "smart meters" which were included in 2019. Eidsiva expects to refinance part of a "surplus of eligible projects" from 2020 for bonds/loans issued in 2021. Going forward, financing will mainly be used for new projects.

Green finance instruments issued under the framework will finance and refinance capital expenditures and operating expenditures within the different green project categories. For operating expenditures, Eidsiva will use a maximum look-back period of three years. The issuer confirmed that only CAPEX will be financed. Green finance instruments will not be used to finance investments linked to fossil energy generation, nuclear energy generation, research and/or development within weapons and defense, potentially environmentally negative resource extraction, gambling, or tobacco. This includes investments in companies with fossil fuel or nuclear activities and exposure, as well as fossil vehicles.

Selection

The selection process is a key governance factor to consider in CICERO Green's assessment. CICERO Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for green finance funding. The broader the project categories, the more importance CICERO Green places on the governance process.

Eidsiva has established an internal green finance committee responsible for the evaluation and selection process. The green finance committee consists of members from Eidsiva's finance & control division. In addition, representatives from the business area relevant for a particular project will be included in the process of evaluating that project. All decisions will be made in consensus, and the environmental/sustainability specialist from the relevant business area will have veto power. The green finance committee will keep a register of all green projects, and all decisions made by the committee will be documented and filed. In the investment decision process, the issuer informed us that the committee is considering resilience and rebound effects.

In addition to the green project criteria, a number of project elements have been identified that would require additional due diligence before being classified as green projects, even if meeting the green project criteria. These include projects located in or near biodiversity-sensitive areas; vehicles and equipment running on fossil fuel are excluded; projects that have received fines or requests for rectification by public authorities; projects not following recommendations for mitigating climate-related risks according to the TCFD; projects which may lead to long-term lock-in of unsustainable energy sources; and projects facing material opposition from local communities. According to the issuer, Eidsiva will prioritize the dark green projects in the asset pool, and an evaluation of the project portfolio shall be conducted before raising capital.

Management of proceeds

CICERO Green finds the management of proceeds of Eidsiva to be in accordance with the Green Bond/Loan Principles.

An amount equal to the net proceeds from issued green finance instruments will be earmarked for financing and refinancing of eligible green projects. If a green project already funded by green finance instruments is sold, or for other reasons loses its eligibility in line with the criteria in the framework, it will be replaced by another qualifying green project as soon as practically possible. Net proceeds from green finance instruments awaiting allocation to green projects will be held as cash or cash-equivalents, including short-term money market instruments. Such temporary holdings, to the extent possible, will be subject to the exclusions listed in the Use of proceeds section above.

The finance department of Eidsiva will endeavor to ensure that the value of green projects exceeds the total nominal amount of green finance instruments outstanding. Internal monitoring as well as the allocation of funds from green finance instruments will be monitored by the group controller, whom will also be a member of the Green Finance Committee, according to the issuer.

Reporting

Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green finance programs. Procedures for reporting and disclosure of green finance investments are also vital to build confidence that green finance is contributing towards a sustainable and climate-friendly future, both among investors and in society.

Eidsiva will provide an annual green finance report, including an allocation and impact report. The allocation report will include the following information: amounts invested in each of the green project categories defined in the framework and the share of new financing versus refinancing; examples of green projects that have been funded by green finance instruments; the nominal amount of green finance instruments outstanding, divided into green bonds and green loans; the amount of net proceeds awaiting allocation to green projects (if any); and the information on possible changes/developments in the EU Taxonomy regulation and delegated acts criteria that may be of relevance for its green project criteria. The issuer informed us that if OPEX is financed by green finance instruments, which is unlikely, it will be reported as its own category. For CAPEX, the issuer informed us that in general, only the capital Eidsiva has contributed within the part-owned company is included. If the part-owned company is self-funded, projects and impact are not included.

The impact reporting calculations will, to some extent, be aggregated using a portfolio approach, and depending on data availability, be made on a best intention basis. For projects under construction, calculations may be based on preliminary estimates. According to the issuer, methodology and assumptions used in the impact calculations will be made available. Furthermore, only Eidsiva's share of the investment in the project is included in the impact reporting. The impact assessment may, where applicable, be based on selected metrics, such as: increase/improvement in energy distribution capacity, kilometers of installed fiber optic network, energy generation capacity, annual reduction and/or avoidance of GHG emissions, and number of installed charging stations for electric vehicles and vessels. The Nordic Public Sector Issuers Position Paper on Green Bonds Impact Reporting 2020 has been used as guidance to calculate reduced emissions due to investments in renewable energy.

An independent auditor will provide a limited assurance report confirming that an amount equal to the net proceeds from issued green finance instruments has been allocated to green projects as defined in the framework. This report will be made available on the company's website.

3 Assessment of Eidsiva's green Finance framework and policies

The framework and procedures for Eidsiva's green finance investments are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where Eidsiva should be aware of potential macro-level impacts of investment projects.

Overall shading

Based on the project category shadings detailed below, and consideration of environmental ambitions and governance structure reflected in Eidsiva's green finance framework, we rate the framework **CICERO Dark Green.**

Eligible projects under the Eidsiva's green finance framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds/loans aim to provide investors with certainty that their investments deliver environmental returns as well as financial returns. The Green Bond/Loan Principles (GBP) state that the "overall environmental profile" of a project should be assessed and that the selection process should be "well defined".

Category	Eligible project types	Green Shading and some concerns
Energy Efficiency	• **Distribution of electricity** Construction, installation, improvement, operation, repair, and maintenance of power grids for distribution of electricity (over and underground), smart grid solutions, and smart meters, as well as other monitoring systems aimed at enabling reduction of energy consumption. • **Telecommunication networks** Construction, installation (including trenching), improvement, operation, repair, and maintenance of fiber optic telecommunication networks and related technology/equipment to enable energy efficient and digitalized solutions for smart homes and cities.	**Dark to Medium Green** ✓ All activities concerning electricity grid infrastructure are shaded Dark Green. ✓ Both new capacity-increasing investments and reinvestments to maintain existing capacity are included according to the issuer, as well as overground and underground grids. ✓ The grid can transfer fossil produced energy by import from neighboring grids. However, green financial instruments will not be used to finance radial distribution lines which connects production with higher emissions than 100gCO_2/kWh in a life cycle perspective, according to the issuer. ✓ The issuer expects minimal rebound effects for grid investments. ✓ Eidsiva does not screen for heavy emitting clients. However, Eidsiva will not use proceeds from green bonds/loans to finance radial distribution lines to end-user engaged in fossil fuel activities, according to the issuer. ✓ Eidsiva conducts environmental impacts assessment in accordance with regulations.

• **District heating and cooling** Infrastructure for distribution of district heating and cooling. Facilities for district heating and cooling where at least 95% of the fuel comes from renewable sources such as locally sourced forestry waste and residues, recycled wood waste and waste heat from nearby industries, and max. 5% comes from fossil fuel.	✓ Eidsiva follows REN's recommended standards for grids installed in Norway when it comes to exceptional weather conditions. ✓ For the telecommunication activities, the issuer informed that Eidsiva Bredbånd operations includes digging trenches, installing ducts and optical fiber cables. This can include the replacement of old copper wires as well as the installation of new fiber cables. ✓ Fibre optic cables are the most energy efficient technology for broadband access networks. Fibre's reliance on fewer intermediate devices and amplifiers than other technologies, such as copper, which facilitates its energy efficiency[1]. ✓ However, the issuer cannot calculate specific energy savings as this depends on data volume which vary at different times of the day and year, as well as location of data being transferred, according to the issuer. ✓ Eidsiva informed that subsea cable may be included related to a specific shore power project being reviewed, however, no decision to build has yet been made by the issuer. Any investment will be done in a JV with other utility companies, according to the issuer. ✓ The issuer informed that activities related to energy intensive data centres and crypto currency mining, are exclude from the framework. ✓ Note that Eidsiva does not currently consider systematic environmental impact beyond energy efficiency improvements. Scope 3 emissions from varying energy intensive end uses (data centres, streaming etc.) are currently not included in Eidsiva's assessment. ✓ The Norwegian grid factor represents 8gCO_2/KWh, mostly from hydroelectricity and wind power. ✓ Investors should be aware of construction emissions related to the installation of cables. ✓ Investors should be aware that for district heating and cooling, the issuer informed us that Eidsiva will, in periods, be dependent on peak load which can be based on boilers using oil, gas, bio-oil and wood pellets, as a back-up for security of supply of heat, according to the issuer. The main source will however be renewable sources.

[1] Fibre is the most energy efficient broadband technology | Shaping Europe's digital future (europa.eu)

		✓ Central heating based on waste from other elements than wood will not be defined as a qualified project, according to the issuer. ✓ According to the issuer, nearby industries refer to sawmill, sorted recycle wood from recycling stations, coarse garden waste provided by private households and wood with a low/no alternative value (dry and wet wood chips) from felling operations.
Renewable Energy 	Development, construction, installation, improvement, operation, repair, and maintenance of 1. Hydro power projects with a power density above 5W/m^2, or life-cycle emissions below 100g CO_2e/kWh, or run-of-river plants without artificial reservoirs; 2. Wind power projects, and related infrastructure (such as dams, tunnels, buildings and roads).	**Dark Green** ✓ The issuer informed that it finances share of new hydro power and wind power, turbines, dams etc. through minority ownership in companies. ✓ The related grid systems are included while investment in the plant itself is excluded. ✓ Wind power is a key to a low-carbon transition. ✓ Wind projects can have adverse local environmental impacts, including on birds and bats migration trajectories, and impacts on local communities. ✓ Hydropower is a clean, renewable energy source, which contributes to Norway's low grid emissions factor, but large hydropower facilities and associated construction/renovation projects can have negative impacts on the surrounding environment and biodiversity. ✓ Eidsiva does not expect to participate in the financing of new projects as this will be financed by Hafslund Eco Vannkraft in the future. However, Eidsiva has participated in financing different projects, varying from 18 MW to 112 MW, and Eidsiva could potentially invest in projects that have been financed under the previous framework. ✓ Construction of new roads can be included, as long as the roads are directly connected to the facilities. Roads represented a minor share of the proceeds, according to the issuer. ✓ None of the existing projects are close to 100 gCO_2/kWh in a life cycle assessment, according to the issuer. However, emission for existing hydropower plants have not been calculated yet.
Clean Transportation 	Infrastructure for zero-emission transport, such as charging infrastructure for electric vehicles and vessels	**Dark Green** ✓ The issuer informed us that charging stations for onshore vehicles will be installed by the company Ladeklar (which is owned by affiliated company Hafslund Ny Energi). Eidsiva would consider installing charging facilities for the electrification of ferries and cruise ships in the Oslo fjord in

	cooperation or in joint venture with others, however the company has no concrete plans on this matter yet. ✓ Electric vehicles and other zero emission transport solutions, including charging infrastructure, contribute to the transition to a low-carbon society. ✓ Charging stations are essential for the electrification of the road and water transport sector. ✓ The production of batteries and sourcing of raw materials can have substantial climate and environmental impact.

Table 1. Eligible project categories

Background

Global energy demand is set to increase by 4.6 percent in 2021 - more than offsetting a 4% contraction in 2020 - and pushing demand 0.5% above 2019 levels. In 2021, demand for renewables is expected to increase across all key sectors, while renewables are set to provide more than half of the increase in global electricity supply[2]. In 2019, global renewable electricity generation grew 7% and reached a quarter of global power output, due to the continued growth of solar PV and wind technologies accounting for 65% of this increase. Despite this increase in renewable energy generation, renewable power still needs to expand significantly to meet the IEA's net zero by 2050 scenario, which aims for almost 90% of electricity generation to come from renewable sources, where wind power must increase 11-fold between now and 2050[3].

Recent improvements in energy efficiency have partly been achieved through regulations, such as fuel-economy standards, building energy codes and industry targets. Efficiency improvements are also delivered by price effects, technological change, and advances in energy management in the industrial and buildings sectors. To meet the 2-degree target, additional improvements must be made. On a global level, we need to increase energy efficiency at a rate of 4% per year through 2030 to be aligned with the IEA 2050 Roadmap, about three-times the average rate achieved over the last two decades [4]. Energy efficiency investments, such as smart technology aimed at reducing energy consumption, are key to reducing emissions.

In February 2020, Norway released updated targets for 2030 to cut emissions by 50-55% from 1990 levels[5]. Norway is projected to miss its 2020 emissions reductions target by around 4.5 million tCO_2e and needs fast action to reach the new 2030 goal. The government has outlined necessary steps to achieve this through the 'Klimakur 2030' analysis[6]. The analysis covers 60 emissions reductions measures in multiple sectors including energy, transport and industrials that will lead to a 50% emissions reduction by 2030. The implementation of electrification measures will make up 34% of total emissions reductions between 2021-2030 in Norway.

Norwegian power demand is estimated to increase by 5.8 TWh to account for the electrification of many sectors towards 2030. In 2020, Norway produced 154 TWh of electricity[7]. Electricity generation is expected to increase due to investments in wind power. Additionnally, the Norwegian hydropower system has a normal annual production of around 136 TWh. Norway currently has more than 800 reservoirs, with a storage capacity equivalent

[2] Global Energy Review 2021 – Analysis - IEA
[3] Net Zero by 2050 - A Roadmap for the Global Energy Sector (windows.net)
[4] Ibid.
[5] https://www.regjeringen.no/no/dokumenter/meld.-st.-13-20202021/id2827405/
[6] https://www.miljodirektoratet.no/globalassets/publikasjoner/m1625/m1625.pdf
[7] Electricity production - Energifakta Norge

to around 87 TWh. The 30 largest reservoirs, three of which are wholly or partly owned by Hafslund Eco, account for almost half of the total capacity. However, relatively little growth is expected in hydropower production in Norway in the next few years, as capacity investments in renewable energy are largely being channelled towards solar and wind power. Another source of energy generation in Norway comes from district heating, where the gross generation of energy in Norway's district heating plants was 6.5 TWh in 2020[8]. This energy is largely delivered as heat. The fuel mix of these plants contains fossil fuels, woodchips and other wood materials, bio-oils, waste-heat, electricity and waste. Waste stood for an average of ca. 50% of all district heating generation (GWh) in Norway in 2020[9].

Fibre optic cables have been found to reduce environmental impact, compared to conventional alternatives. In addition to acting as an enabling technology for digitalization, which is a key part of the low carbon transition, plastic and glass-based fibre optic cables are direct substitutes for copper wire cables, which contribute to significant emissions from mining. Furthermore, the demand for data and digital services is expected grow exponentially over the coming years, with global internet traffic expected to double by 2022 to 4.2 zettabytes per year (4.2 trillion gigabytes), where the vast majority of internet traffic goes through data centres[10].While data transmission networks have felt significant (annual 10-30%) improvements in energy efficiency in recent years, the IEA predicts that increase in data demand from such technologies as machine learning, blockchain, 5G and virtual reality will likely outstrip efficiency gains of current technologies.[11] To reduce the risk of rising energy use and emissions, investments in R&D for efficient next-generation computing and communications technologies are needed, alongside continued efforts to decarbonise the electricity supply. GHG emissions arising from data centres depends heavily on local grid emissions factors, and type of technology used.

EU Taxonomy

The EU Taxonomy Regulation[12] is a classification system establishing a list of environmentally sustainable economic activities. The regulation defines six environmental objectives. To be considered sustainable, an activity must substantially contribute to at least one of the six environmental objectives[13] without harming the other objectives ("Do No Significant Harm"), while complying with minimum social safeguards[14]. So far, the EU has adopted delegated acts under the regulation that set out the technical screening criteria for the climate mitigation and adaptation objectives, respectively. The DNSH-criteria are developed to make sure that progress against some objectives is not made at the expense of others and recognizes the relationships between different environmental objectives. Relevant EU-Taxonomy activities for Eidsiva are:

- Transmission and distribution of electricity
- District heating/cooling distribution
- Production of heat/cool from bioenergy
- Production of heat/cool using waste heat
- Electricity generation from hydropower
- Electricity generation from wind power
- Infrastructure enabling low-carbon road transport and public transport
- Infrastructure enabling low carbon water transport

[8] District heating and district cooling (ssb.no)
[9] Ibid.
[10] Data Centres and Data Transmission Networks – Analysis - IEA
[11] https://www.iea.org/commentaries/the-carbon-footprint-of-streaming-video-fact-checking-the-headlines
[12] Regulation EU 2020/852 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0852&from=EN
[13] The six environmental objectives as defined in the proposed Regulation are: (1) climate change mitigation; (2) climate change adaptation; (3) sustainable use and protection of water and marine resources; (4) transition to a circular economy, waste prevention and recycling; (5) pollution prevention and control; (6) protection of healthy ecosystems.
[14] 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.

While the ICT sector has been addressed in the EU Taxonomy (i.e., Point 8 Information and Communication)[15] and has been identified within relevant NACE codes (i.e., J61, J62 and J63.11), the activity of Eidsiva related to Telecommunication Network does not qualify under the Taxonomy.

Detailed comments on alignment as well as thresholds and NACE codes are given in Appendix 2. Where information was not provided by the issuer, and information was not easily accessible through searching other public available sources, CICERO Green has not been able to assess alignment.

CICERO Green assesses that all the project categories, at the exception of the "Telecommunication Networks" project category, are likely aligned with the mitigation criteria in the EU Taxonomy.

Eidsiva appears to be likely aligned with several of the DNSH-criteria. CICERO Green has not received sufficient information to assess alignment with DNSH-criteria related to:

- Pollution prevention and control for the activity District heating/cooling distribution;
- Sustainable use and protection of water and marine resources for the activity Infrastructure enabling low-carbon road transport and public transport;
- Protection and restoration of biodiversity and ecosystems for the activity Infrastructure enabling low-carbon road transport and public transport;
- Climate change adaptation for the activity Infrastructure enabling low carbon water transport;
- Sustainable use and protection of water and marine resources for the activity Infrastructure enabling low carbon water transport.

Main gaps

Climate change adaptation

Eidsiva informed us that it is aware of climate risks, and that it is aligned with the local, regional and national regulations regarding climate risks. The issuer further informed us that it has conducted several studies to assess how to prevent climate impacts on business operations, and that it has carried out climate risk assessments for most of its projects. However, the EU Taxonomy requires that all activities need to be scrutinized, and it is unclear whether assessments of climate risk and adaptation needs, followed by adaptation measures where relevant, are consistently implemented for the project categories included in the green finance framework. To be fully aligned with the DNSH-requirement related to climate change adaptation, Eidsiva needs to demonstrate that climate risk assessments, and implementation of adaptation solutions where needed, are carried out systematically for the project categories included in the framework. Further, in respect of wind projects, a more systematic approach beyond risk mapping is required for Eidsiva to be fully aligned. CICERO Green also encourages the issuer to include climate risk assessments in the requirements for suppliers and sub-contractors, as well as for subsidiaries.

Circular economy

The issuer confirmed that waste management is handled in accordance with national laws and regulations, and local policies, as stipulated in contracts with subcontractors. However, the issuer does not have a specific waste management policy at the company level, nor does systematically screen for particular equipment and components of high durability and recyclability and that are easy to dismantle and refurbish. Furthermore, to be fully aligned with the circular economy related DNSH requirement for some of its activities (i.e., Infrastructure enabling low-carbon road transport and public transport and Infrastructure enabling low carbon water transport), Eidsiva needs to ensure that at least 70 % (by weight) of the non-hazardous construction and demolition waste generated on the construction site is prepared for reuse, recycling and other material recovery, which is not clear at this stage.

[15] taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf (europa.eu)

Pollution prevention and control

Eidsiva confirmed that measurements on pollution preventions are applied in accordance with national rules and regulations, and that its requirements for contractors and suppliers will include noise reduction during the construction period. To be fully aligned with the pollution prevention and control DNSH requirements for some of its activities (i.e., Infrastructure enabling low-carbon road transport and public transport and Infrastructure enabling low carbon water transport), Eidsiva needs to take measures to reduce noise, dust and pollutant emissions during construction or maintenance works. However, Eidsiva has not yet established a procedure for handling dust and pollutants during construction or maintenance work. CICERO Green encourages the issuer to apply specific measures at the company level to mitigate and control pollution, particularly during construction or maintenance phases.

Alignment with minimum social safeguards

To qualify as a sustainable activity under the EU regulation certain minimum social safeguards must be complied with. CICERO Green has assessed the company's social safeguards with a focus on human and labor rights. We take the sectoral, regional and judicial context into account and focus on the risks likely to be the most material social risks. The most relevant risks for Eidsiva are related to equality, discrimination, bullying and harassment within the organization. Eidsiva is a company with gender imbalance and limited diversity. To manage discrimination cases and sexual harassment cases, the issuer informed that it has communicated internally a general offer of conversations with HR or the occupational health service if desired. Eidsiva has also clarified the possibility for whistleblowing and use of the external alert channel to do so. Eidsiva also mentioned having zero tolerance for harassment and discrimination, and that work streams are planned to clarify what this means in practice for the employees. However, it does not appear that Eidsiva integrates the OECD social risk due diligence process in a systematic manner yet.

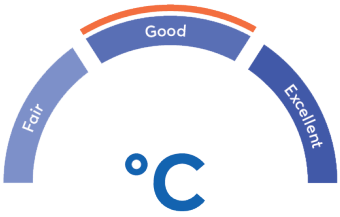
Governance Assessment

Four aspects are studied when assessing Eidsiva's governance procedures: 1) the policies and goals of relevance to the green finance framework; 2) the selection process used to identify eligible projects under the framework; 3) the management of proceeds; and 4) the reporting on the projects to investors. 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.

Eidsiva has relevant policies in place that support the realization of the framework. Eidsiva aims at reducing CO_2 emissions from own business (scope 1 and 2), however, no specific timeframe or emissions reduction targets are given. The company informed that it is working on establishing a baseline for life cycle emissions by the end of this year, which will allow the issuer to conduct life cycle analysis and assess more specific goals and targets on emissions. The issuer is not yet doing GHG reporting on its suppliers but aims to do so within next year. Currently, the issuer does not apply climate scenarios for assessing future physical risks, nor reports in line with TCFD recommendations. However, the issuer informed that it follows the World Economic Forum's sustainability reporting principles, and aims to include the TCFD recommendations from the 2021 reporting onwards.

Eligible projects are selected by the internal green finance committee. All decisions will be made in consensus, and the environmental/sustainability specialist from the relevant business area will have veto power. The issuer provided a list of exclusion, in addition to the criteria for eligible projects, and lock-in and rebound effects are considered.

Eidsiva will provide an annual green finance report, including an allocation and impact report. The allocation report will be externally reviewed and be made available on the company website. The impact reporting will be aggregated using a portfolio approach, and it covers all project categories with at least one relevant KPI per category. The Nordic Public Sector Issuers Position Paper on Green Bonds Impact Reporting 2020 has been used as guidance to calculate reduced emissions due to investments in renewable energy, and according to the issuer, methodology and assumptions used in the impact calculations will be made available.



The overall assessment of Eidsiva's governance structure and processes gives it a rating of **Good.**

Strengths

According to long term market analysis by the Norwegian transmission system operator Statnett, a growth in consumption of just under 20% by 2040 is expected at the Nordic level. In energy demand, this amounts to 60 TWh, where 20 TWh is related to Norway only[16]. This increase is driven to a large degree by the expected electrification of different parts of industry and transport, including road and water transport. Eidsiva addresses the electrification of previously fossil sectors in its policy for climate and the environment and intends to support this process.

Fiber-optic cables have been found to reduce environmental impacts, compared to conventional alternatives and is an enabling technology for digitalisation which is a key part of the low carbon transition. It is therefore a strength that Eidsiva aims to increase its activity related to telecommunication networks focusing on fiber. There are however trade-offs on emissions and energy use from increasing energy demand for i.e., data centers, while reducing emissions in other sectors, such as in the transport sector. The extent of material climate benefits from digitalisation and expanding networks is still disputed[17].

Under the renewable energy category, proceeds could potentially be used in projects related to existing hydropower and wind power assets. This contributes to extending the lifetime of hydropower and wind power assets and has the potential to deliver increased capacity by improving the efficiency of systems. Although on a smaller scale, restoring and adding capacity in existing sites is positive for the environment and climate as it can avoid local impacts and emissions connected to new constructions.

Weaknesses

There are no apparent weaknesses in the framework.

Pitfalls

Investors should be aware that the grid can transfer fossil produced energy by import from neighboring grids. However, green financial instruments will not be used to finance radial distribution lines which connects production with higher emissions than 100gCO_2/kWh in a life cycle perspective, according to the issuer.

The project category energy efficiency contains district heating. The issuer informed us that Eidsiva will, in periods, be dependent on peak load which can be based on boilers using oil, gas, bio-oil and wood pellets as a back-up for security of supply of heat in emergency situations. The main source will however be renewable sources with low alternative value (approx., 95-99%). The issuer informed that district heating based on waste from other elements than renewables sources, such as wood waste, will not be defined as a qualified project.

[16] long-term-market-analysis-2018---executive-summary.pdf (statnett.no)
[17] https://www.iea.org/commentaries/the-carbon-footprint-of-streaming-video-fact-checking-the-headlines

Waste incineration projects should avoid the transportation of waste over long distances to the incineration point. According to the issuer, the incinerated waste is mostly sourced from the regions where Eidsiva is active. On occasion, waste is sourced from Western Norway in cases where deliveries from the local waste handling company are delayed due to logistical challenges.

There is no consensus yet on the extent to which fibre-optic networks will contribute to climate benefits. While it is expected to enable digitalisation and decarbonisation in multiple other sectors, including in the transport sector, the IEA reports that increase in demand from developments in energy intensive end uses e.g., in 5G, machine learning, virtual reality, data centres, and crypto currency mining, and will likely outstrip efficiency improvements from current technologies as more energy will be consumed, producing significant rebound effects. However, the issuer informed that activities related to energy intensive data centres and crypto currency mining are exclude from the framework. Also, this increase in demand from developments in energy intensive end uses may lead to lock-in effects of less efficient technologies, as the lifetime of networks are likely to be longer than the desired efficiency improvements. Eidsiva partly mitigates this by choosing a fiber technology which is the most energy efficient technology for broadband access networks. CICERO Green would encourage Eidsiva to ensure that these lock-in effects and rebound effects are considered.

On climate risk, the issuer is well aware of climate risks and mentioned being aligned with the local, regional and national regulations. However, the company has not implemented TCFD-reporting yet and is lacking a more systematic and ambitious approach to physical climate change risks. Eidsiva should introduce a more systematic approach to climate risk assessments, clearly implement adaptation measures where needed, as well as discuss adaptation solutions with suppliers and subsidiaries potentially exposed to climate risk.

Appendix 1:
Referenced Documents List

Document Number	Document Name	Description
1	Eidsiva Updated Green Finance Framework	Dated November 2021
2	Eidsiva - prosedyre prosjektutvelgelse v4	Procedures and Project Selection. Dated 02.09.2021
3	Eidsiva Energi Barekraftrapport 2020	Sustainability 2020
4	EIdsiva green-finance-report-2020	Financial report 2020
5	Eidsiva konsernpolicy-barekraft	Corporate Sustainable Policy
6	Eidsiva konsernpolicy-finansiering	Corporate Financial Policy
7	Eidsiva Konsernpolicy - innkjøp	Corporate Purchase Policy
8	Eidsiva konsernpolicy-risikostyring	Group Policy Risk Management
9	Eidsiva Konsernpolicy - HMS	Group Policy – Health and Safety
10	Eidsiva Konsernpolicy - HR	Group Policy - HR
11	Grønn finansiering-investeringsrapport 2019 - Kontrollrapport	PowerPoint Presentation: Green financing investment report 2019 - Control report

12	Grønn finansiering-investeringsrapport 2020 - Kontrollrapport - final	PowerPoint Presentation: Green financing investment report 2020 - Control report
13	Investeringsplan til Cicero	PowerPoint Presentation: Investment Plan Eidsiva Energi 2021-2025
14	Eidsiva – Etisk adferd	Additional document on ethic
15	Eidsiva – Krav til leverandører	Requirements for suppliers
16	Eidsiva – Standardvilkår for kjøp	Standard terms for purchase
17	Hafslunds- etiske retningslinjer for leverandører	Ethical principles for suppliers

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)

Transmission and distribution of electricity

Framework activity	**Energy efficiency**		
Taxonomy activity	**Transmission and distribution of electricity (NACE Code D.35.12, D.35.13)**		
Taxonomy version	**EU Technical mitigation criteria**	**Comments on alignment**	**CICERO Green's comments on alignment**
Mitigation criteria	• Substantial contribution to climate change mitigation. The activity complies with one of the following criteria: 1. The transmission and distribution infrastructure or equipment is in an electricity system that complies with at least one of the following criteria: (a) the system is the interconnected European system, i.e., the interconnected control areas of Member States, Norway, Switzerland and the United Kingdom, and its subordinated systems; (b) more than 67% of newly enabled generation capacity in the system is below the generation threshold value of 100 gCO2e/kWh measured on a life cycle basis in accordance with electricity generation criteria, over a rolling five-year period; (c) the average system grid emissions factor, calculated as the total annual emissions from power generation connected to the system, divided by the total annual net electricity production in that system, is below the threshold value of 100 gCO2e/kWh measured on a life cycle basis in accordance with electricity generation criteria, over a rolling five-year period. Infrastructure dedicated to creating a direct connection or expanding an existing direct connection between a substation or network and a power production plant that is more greenhouse gas intensive than 100 gCO_2e/kWh measured on a life cycle basis is not compliant. Installation of metering infrastructure that does not meet the requirements of smart metering systems of Article 20 of Directive (EU) 2019/944 is not compliant.	**Relevant contextual information** • Transmission lines need a license from the Norwegian Water Resources and Energy Directorate (NVE) according to the Energy Act. • Norwegian transmission and distribution infrastructure is interconnected with the European system. The generation of electricity in Norway is mainly from renewable sources where hydropower currently accounts for almost all of this production (90%). The Norwegian grid factor represents 8 gCO_2/KWh[18] **Information provided by the issuer** • In the period 2016-2020 Eidsiva replaced just below 950,000 measurers to Advanced Measurement and Control Systems	Likely aligned.

[18] Hvor kommer strømmen fra? - NVE

	2. The activity is one of the following: (a) construction and operation of direct connection, or expansion of existing direct connection, of low carbon electricity generation below the threshold of 100 gCO_2e/kWh measured on a life cycle basis to a substation or network; (b) construction and operation of electric vehicle (EV) charging stations and supporting electric infrastructure for the electrification of transport, subject to compliance with the technical screening criteria under the transport Section of this Annex; (c) installation of transmission and distribution transformers that comply with the Tier 2 (1 July 2021) requirements set out in Annex I to the Commission Regulation (EU) No 548/2014178 and, for medium power transformers with highest voltage for equipment not exceeding 36 kV, with AAA0 level requirements on no-load losses set out in standard EN 50588-1. (d) construction/installation and operation of equipment and infrastructure where the main objective is an increase of the generation or use of renewable electricity generation; (e) installation of equipment to increase the controllability and observability of the electricity system and to enable the development and integration of renewable energy sources, including: (i) sensors and measurement tools (including meteorological sensors for forecasting renewable production). (ii) communication and control (including advanced software and control rooms, automation of substations or feeders, and voltage control capabilities to adapt to more decentralised renewable infeed). (f) installation of equipment such as, but not limited to future smart metering systems or those replacing smart metering systems in line with Article 19(6) of Directive (EU) 2019/944 of the European Parliament and of the Council, which meet the requirements of Article 20 of Directive (EU) 2019/944, able to carry information to users for remotely acting on consumption, including customer data hubs; (g) construction/installation of equipment to allow for exchange of specifically renewable electricity between users; (h) construction and operation of interconnectors between transmission systems, provided that one of the systems is compliant. For the purposes of this Section, the following specifications apply: (a) the rolling five-year period used in determining compliance with the thresholds is based on five consecutive historical years, including the year for which the most recent data are available; (b) a 'system' means the power control area of the transmission or distribution network where the infrastructure or equipment is installed; (c) transmission systems may include generation capacity connected to subordinated distribution systems; (d) distribution systems subordinated to a transmission system that is deemed to be on a trajectory to full decarbonisation may also be deemed to be on a trajectory to full decarbonisation; (e) to determine compliance, it is possible to consider a system covering multiple control areas which are interconnected and with significant energy exchanges between them, in which case the weighted average emissions factor across all included control areas is used, and individual subordinated	(AMS). The AMS project is the largest modernisation of the power grid in recent times and is in accordance with letter f). Information regarding what happens the power grid closest to the customers means that the grid companies can operate the grid more efficiently. The new meters bring benefits to customers such as hourly registration of power consumption, automatic reading of meters, correct billing and easier change of power supplier. The new meters bring benefits to Eidsiva such as fewer faults and power outages in the transmission network, faster location and correction of faults, fewer ground faults/increased personal safety, and fewer voltage deviations. • 2400 clients with solar cells have connected to Eidsiva's grid the last years. • All new transformers satisfy the requirements according to Tier 2 from 1st of July 2021. For transformers in local distribution network, the transformers have satisfied the requirement in Tier 1 according to the previous framework (before 1st of July 2021). Eidsiva entered into new framework agreements in May/June 2021. Going forward, the requirements of Tier 2 will also be satisfied. Regarding new transformers (47 kV and above) in the regional distribution network, Eidsiva has satisfied the requirements of Tier 2 by a wide margin since the regulation	

	transmission or distribution systems within that system is not required to demonstrate compliance separately; (f) it is possible for a system to become non-compliant after having previously been compliant. In systems that become non-compliant, no new transmission and distribution activities are compliant from that moment onward, until the system complies again with the threshold (except for those activities that are always compliant, see above). Activities in subordinated systems may still be compliant, where those subordinated systems meet the criteria of this Section; (g) a direct connection or expansion of an existing direct connection to production plants includes infrastructure that is indispensable to carry the associated electricity from the power generating facility to a substation or to the network.	entered into force (also in the period with Tier 1 requirements).	
	EU Taxonomy DNSH-criteria	**Comments on alignment**	**Alignment**
Climate change adaptation	The physical climate risks that are material to the activity have been identified (chronic and acute, related to temperature, wind, water, and soil) by performing a robust climate risk and vulnerability assessment with the following steps[19]: **(a)** screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime; **(b)** where the activity is assessed to be exposed to physical climate risks, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity; **(c)** an assessment of adaptation solutions that can reduce the identified physical climate risk. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications, and open source or paying models. For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly. For new activities and existing activities using newly built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations. The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions or rely on blue or green infrastructure to the extent possible.	**Information provided by the issuer** The energy sector is subject to both sector recommendations and laws/regulations to ensure that grids are built and rehabilitated for the purpose of withstanding climate risk. REN (Rasjonell Effektiv Nettutvikling) develops, in collaboration with Norwegian grid companies, guidelines and tools in order to maintain best practice within projecting, installing, operations and maintenance of the power grid. This also includes projecting to face climate risks. The regulation "Forskrift om elektriske foryningsanlegg» (FOR-2005-12-20-1626) requires the following: Overhead high voltage lines must be dimensioned to withstand foreseeable climatic and other stress related to nature such as ice load, wind load, temperature, floods, snow, soil erosion etc. Climate risk is a part of the Risks and Vulnerability analysis ("Risiko- og sårbarhetsanalyser (ROS)) based on "Forskrift om sikkerhet og beredskap I	Likely partially aligned.

[19] The Taxonomy is referring to Appendix A in the Taxonomy Annex 1.

		kraftsforsyningen» (FOR – 2012- 12-07-1157). Climate risk is defined as an "extraordinary event", which is the basis for the regulation.	
Sustainable use and protection of water and marine resources	• N/A	**Information provided by the issuer** Despite not being a requirement, Eidsiva chooses other materials than creosote posts when lines are established close to watercourses, streams and lakes.	N/A
Transition to a circular economy	• A waste management plan is in place and ensures maximal reuse or recycling at end of life in accordance with the waste hierarchy, including through contractual agreements with waste management partners, reflection in financial projections or official project documentation.	**Relevant contextual information** Waste is regulated in the Norwegian Waste regulation (avfallsforskriften). For bigger transmission lines, NVE requires the development of environment-, transport- and construction plan, including waste management. **Information provided by the issuer** The issuer does not have a specific waste management policy, but confirmed that transformers and cables are sold to recycling companies, while material where there is little residual value left (e.g., lines and suspension material) is delivered to an approved recipient (a facility that handles this type of waste). Oil-in-oil filled cables are delivered to an approved recipient. Eidsiva has framework agreements with certain recipients for waste (with sorting requirements) that ensures recycling of valuable material.	Likely partially aligned.
Pollution prevention and control.	Overground high voltage lines are eligible if:	**Relevant contextual information** For bigger transmission lines, NVE requires the development of environment-, transport- and	Likely aligned.

	• Construction site activities follow the principles of the IFC General Environmental, Health, and Safety Guidelines[20]. • Activities respect applicable norms and regulations to limit impact of electromagnetic radiation on human health, including for activities carried out in the Union, the Council recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)182 and for activities carried out in third countries, the 1998 Guidelines of International Commission on Non-Ionizing Radiation Protection (ICNIRP). • Activities do not use PCBs poly-chlorinated biphenyls.	construction plan, including waste management and HSE-issues. Electromagnetic radiation is regulated by the Regulations on Radiation Protection and Use of Radiation (strålevernsforskriften). In Norway, PCB is prohibited in transmission lines and has been phased out since 2010. **<u>Information provided by the issuer</u>** The industry has entered into a binding collaboration with REN (Rasjonell Effektiv Nettutvikling) on storage and handling. SF6 gas is a strong climate gas with great attention paid to its use. If SF6 gas is proposed for new plants, the process includes alternative solutions presented to the board before a decision is made. Eidsiva's new transformer station in Asker is under construction as a zero-emissions construction site with SF6-alternative technology. Furthermore, low-carbon concrete in class A will be used, if the temperature allows it. The station will be fully digital with less need of copper and employees on-site (HSE safety). The issuer mentioned being compliant with the principles of the IFC General Environmental, Health, and Safety Guidelines.	

[20] Environmental, Health, and Safety (EHS) Guidelines of 30 April 2007 (version of [adoption date]: https://www.ifc.org/wps/wcm/connect/29f5137d-6e17-4660-b1f9-02bf561935e5/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES&CVID=jOWim3p

Protection and restoration of biodiversity and ecosystems	An Environmental Impact Assessment (EIA) or screening has been completed in accordance with Directive 2011/92/EU[21], or 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 (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[22] [23].	**Relevant contextual information** Transmission lines need a license from the NVE according to the Energy Act. To receive a license, the company needs to complete an EIA if needed under the "Planning and Construction Act", including implementation of mitigative measures. **Information provided by the issuer** The requirement of EIA plans only applies to regional distribution networks. EIA analysis are conducted when local distribution network operations are close to nature reserves. Cultural monuments are always mapped in advance of planning new facilities so that alternative routes can be considered.	Likely aligned.

[21] The EU-EIA-directive. EUR-Lex - 32011L0092 - EN - EUR-Lex (europa.eu)
[22] Practical guidance is contained in Commission notice C/2018/2619 'Guidance document on the requirements for hydropower in relation to EU nature legislation' (OJ C 213, 18.6.2018, p. 1).
[23] The Taxonomy is referring to Appendix D in the Taxonomy Annex 1.

District heating/cooling distribution

Framework activity	Energy efficiency		
Taxonomy activity	**District heating/cooling distribution (NACE D35.30)**		
Taxonomy version	**EU Technical mitigation criteria**	**Comments on alignment**	**CICERO Green's comments on alignment**
Mitigation criteria	• Substantial contribution to climate change mitigation The activity complies with one of the following criteria: (a) for construction and operation of pipelines and associated infrastructure for distributing heating and cooling, the system meets the definition of efficient district heating and cooling systems laid down in Article 2, point 41, of Directive 2012/27/EU[24]; (b) for refurbishment of pipelines and associated infrastructure for distributing heating and cooling, the investment that makes the system meet the definition of efficient district heating or cooling laid down in Article 2, point 41, of Directive 2012/27/EU starts within a three-year period as underpinned by a contractual obligation or an equivalent in case of operators in charge of both generation and the network; (c) the activity is the following: (i) modification to lower temperature regimes; (ii) advanced pilot systems (control and energy management systems, Internet of Things).	**Relevant contextual information** In respect of point a) of the EU Technical mitigation criteria, Article 2, point 41, of Directive 2012/27/EU defines "efficient district heating and cooling" as "a district heating or cooling system using at least 50 % renewable energy, 50 % waste heat, 75 % cogenerated heat or 50 % of a combination of such energy and heat". **Information provided by the issuer** Eidsiva's green project criteria for District Heating and Cooling states that at least 95% of the energy used should come from renewable sources such as forestry waste and residues, recycled wood waste and waste heat from nearby industries. Eidsiva are acting in accordance with point a) but some more work remains to map point b).	Likely aligned.
	EU Taxonomy DNSH-criteria	**Comments on alignment**	**Alignment**
Climate change adaptation	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** Eidsiva uses a multistep process to identify, evaluate, and classify risks and opportunities. Risks are generally reported on the basis of the *bowtie method* that is used to analyse and demonstrate causal relationships. The bowtie method identifies the ways in which control measures fail. These factors or conditions are called "escalation factors". Climate is one important escalation factor in Eidsiva's strategic risk analysis, according to the issuer, and climate risk is important for different strategic topics. Security of	Likely partially aligned.

[24] The EU-directive on Energy Efficiency, EUR-Lex - 32012L0027 - EN - EUR-Lex (europa.eu)

		supply is one of the strategic topics of the company that is affected by climate risk, but also revenue risk. For example, rain and fog would increase the cost associated with drying wood chips and wood pellets, in addition is one of Eidsiva's plants (Trysil) located close to a river which makes it exposed to flooding. The pricing regime for district heating in Norway is linked to the spot price for electricity, which means that hydrology and wind in the Nord Pool Spot area is crucial for revenues. Temperature is also important for the consumption for heat from our customers.	
Sustainable use and protection of water and marine resources	• 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 potential as defined in Article 2, points (22) and (23), of Regulation (EU) 2020/852[25], in accordance with Directive 2000/60/EC[26] 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. • Where an Environmental Impact Assessment is carried out in accordance with Directive 2011/92/EU[27] 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.	**Relevant contextual information** District heating and cooling systems are covered by the Energy Act, and the licensing obligation is triggered if the system supplies external consumers and has a capacity of more than 10 MW. An EIA must be carried out if the system has a capacity of 150 MW or more. Waste incineration plants are subject to an EIA assessment if the capacity is more than 100 tons of waste per day. District heating and cooling installations under 50 MW are regulated by the "Pollution control regulation", and installations over 50 MW need a license from the Norwegian Environment Agency. Measures to avoid degradation of water are included in the permit and in the EIA-process. **Information provided by the issuer** Through the ISO 14001 standard, Eidsiva conducts risk analysis of environmental conditions for each facility in order to 1) reduce pollution risk and 2) reduce the	Likely aligned.

[25] The regulation on the establishment of a framework to facilitate sustainable investment. EUR-Lex - 32020R0852 - EN - EUR-Lex (europa.eu)
[26] The Water Framework Directive. EUR-Lex - 32000L0060 - EN - EUR-Lex (europa.eu)
[27] The EU-EIA-directive. EUR-Lex - 32011L0092 - EN - EUR-Lex (europa.eu)

		consequence. They will, for example, at known geographical risk areas, ensure that polluted water is not released to the municipal water system. On another side, Eidsiva's entire pipeline system is a major water-reservoir which they take care of by having new pipes of good quality and perform maintenance on existing systems. In addition to this, they have leakage-surveillance in order to quickly be aware of eventual leakages in the network. If plants are located close to drinking water sources, oil is not used for peak load. Only gas is used in order to eliminate the possibility of oil leaking to the drinking water source.	
Transition to a circular economy	• N/A	**Information provided by the issuer** Eidsiva's district heating business is based on the raw material strategy which states that energy is to be made of raw materials without an alternative value or better alternative usage. In practical terms, this means bioproducts from forestry, lumber and aging wood. Eidsiva has a waste incineration plant in Hamar that makes statutory final treatment of waste from the region that cannot be recycled and is therefore an important part of the circular economy. Eidsiva Bioenergy has built their bio-plants in Innlandet based on local raw materials and aim to be a local problem solver for their suppliers. The raw materials are, for example, old wood, felling waste from the forest and by-products from the wood industry. (An example is Trysil which is the neighbor of Moelven Trysil). Eidsiva also work to improve the energy utilization of the raw materials they use at all times.	N/A
Pollution prevention and control.	• Fans, compressors, pumps and other equipment used which is covered by Directive 2009/125/EC[28] comply, where relevant, with the top-class requirements of the energy label, and otherwise comply with implementing regulations under that Directive and represent the best available technology.	**Information provided by the issuer** Eidsiva's plants are relatively new. By modernizing older plants, they aim to use the best available technology. However, the issuer informed that it aims to use the equipment as long as possible before replacing it. The issuer also informed being concerned with sensors in components such as pumps, fans and compressors to control all processes as energy-efficiently as possible.	Not enough information to conclude on alignment.

[28] The EU-directive on establishing a framework for the setting of ecodesign requirements for energy-related products. EUR-Lex - 32009L0125 - EN - EUR-Lex (europa.eu)

Protection and restoration of biodiversity and ecosystems	Please see under Transmission and distribution of electricity.	**Relevant contextual information** An EIA must be carried out if the system has a capacity of 150 MW or more, including implementation of mitigative measures. Waste incineration plants are subject to an EIA assessment if the capacity is more than 100 tons of waste per day. **Information provided by the issuer** Eidsiva confirmed following national laws and regulations, where environmental impact as well as impact on biodiversity and surrounding areas are important requirements for attaining necessary licenses. The issuer informed not operating in areas with water scarcity. Eidsiva Bioenergi is certified in line with ISO 14001, meaning that in addition to what is required from a regulatory perspective, environmental impact is an integrated part of the company's business model and facility risk assessments. Eidsiva's largest plant, Trehørningen, has a capacity of 80,000 tons per year.	Likely aligned.

Production of heat/cool from bioenergy

Framework activity	**Energy efficiency**		
Taxonomy activity	**Production of heat/cool from bioenergy (NACE D35.30)**		
Taxonomy version	**EU Technical mitigation criteria**	**Comments on alignment**	**CICERO Green's comments on alignment**
Mitigation criteria	1. Agricultural biomass used in the activity for the production of heat and cool complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used in the activity complies with the criteria laid down in Article 29, paragraphs 6 and 7 of that Directive. 2. The greenhouse gas emission savings from the use of biomass are at least 80 % in relation to the GHG emission saving methodology and relative fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001. 3. Where the installations rely on anaerobic digestion of organic material, the production of the digestate meets the criteria in Sections 5.6 and criteria 1 and 2 of Section 5.7 of this Annex, as applicable. 4. Points 1 and 2 do not apply to heat generation installations with a total rated thermal input below 2 MW and using gaseous biomass fuels.	**Information provided by the issuer** Eidsiva's green project criteria for District Heating and Cooling ensures that forest biomass is locally sourced, where Norwegian standards and regulations for forest management apply, ensuring sustainable sourcing. Eidsiva operates in accordance with criteria 1 and 2. Point 3 applies to decay due to a deficit of oxygen and does not apply to Eidsiva.	Likely aligned.
	EU Taxonomy DNSH-criteria	**Comments on alignment**	**Alignment**
Climate change adaptation	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** Eidsiva uses a multistep process to identify, evaluate, and classify risks and opportunities. Risks are generally reported on the basis of the *bowtie method* that is used to analyse and demonstrate causal relationships. The bowtie method identifies the ways in which control measures fail. These factors or conditions are called "escalation factors". Climate is one important escalation factor in our strategic risk analysis, and climate risk is important for different strategic topics. Security of supply is one of our strategic topics that is affected by climate risk, but also revenue risk. Rain and fog would increase the cost associated with	Likely partially aligned.

		drying wood chips and wood pellets, in addition is one of our plants (Trysil) is located close to a river which makes it exposed to flooding. The pricing regime for district heating in Norway is linked to the spot price for electricity, which means that hydrology and wind in the Nord Pool Spot area is crucial for revenues. Temperature is also important for the consumption for heat from our customers. Eidsiva plans to report more in accordance with the TCFD recommendations from 2021.	
Sustainable use and protection of water and marine resources	• 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 potential 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. Where an Environmental Impact Assessment is carried out in accordance with Directive 2011/92/EU of the European Parliament and of the Council327 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[29].	**Information provided by the issuer** Eidsiva has leakage-surveillance in order to quickly discover eventual leakages in the grid. District heating is located in cities, industrial areas and urban areas where environmental degradation usually has already taken place. Leak capture systems are established when facilities are located near watercourses and streams to prevent leaks to watercourses or the municipal sewage system. Eidsiva use gas as peak load in plants close to drinking water sources, as a substitute for oil.	Likely aligned.
Transition to a circular economy	N/A	**Information provided by the issuer** Eidsiva's district heating business is based on the raw material strategy which states that energy is to be made of raw materials without an alternative value or better alternative usage. In practical terms, this means bioproducts from forestry, lumber and aging wood. Eidsiva has a waste incineration plant in Hamar that makes statutory final treatment of waste from the region that cannot be recycled and is therefore an important part of the circular economy.	N/A
Pollution prevention and control.	For installations falling within the scope of Directive 2010/75/EU, emissions are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the latest relevant best available techniques	**Relevant contextual information** In Norway, combustion plants above 50MW are subject to emission limits set by the Norwegian Environment Agency (Miljødirektoratet). The emission limits from the	Likely aligned.

[29] The Taxonomy is referring to Appendix B in the Taxonomy Annex 1.

	(BAT) conclusions, including the best available techniques (BAT) conclusions for large combustion plants, ensuring at the same time that no significant cross-media effects occur. For combustion plants with thermal input greater than 1 MW but below the thresholds for the BAT conclusions for large combustion plants to apply, emissions are below the emission limit values set out in Annex II, part 2, to Directive (EU) 2015/2193. For plants in zones or parts of zones not complying with the air quality limit values laid down in Directive 2008/50/EC, results of the information exchange203, which are published by the Commission in accordance with Article 6, paragraphs 9 and 10 of Directive (EU) 2015/2193 are taken into account. For anaerobic digestion of organic material, where the produced digestate is used as fertiliser or soil improver, either directly or after composting or any other treatment, it meets the requirements for fertilising materials set out in Component Material Categories (CMC) 4 and 5 in Annex II to Regulation (EU) 2019/1009 or national rules on fertilisers or soil improvers for agricultural use. For anaerobic digestion plants treating over 100 tons per day, emissions to air and water are within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set for anaerobic treatment of waste in the latest relevant best available techniques (BAT) conclusions, including the best available techniques (BAT) conclusions for waste treatment. No significant cross-media effects occur.	Environment Agency for NOX and dust are aligned with those in the EU Directive 2010/75, but do not include a limit for SO2. The EU directive 2010/75 is transposed in Norwegian law and supervised by the Norwegian Environment Agency through a license. The plants financed under the framework are below 50MW in size and are subject to the Norwegian pollution regulation (Forurensningsforskriften in Norwegian, Chapter 27a). For plants 5-50MW, emission limits for NOX and dust are in line with the EU Directive 2015/2193 but the Norwegian requirements do not include limits for, however combustion of bioenergy is associated with low SO2-emissions. For plants below 5MW, the Norwegian regulation does not include emission limits for NOX. There is currently a proposal in place to adjust the Norwegian pollution regulation in line with EU requirements and therefore it expects emission levels to harmonise over time. **Information provided by the issuer** Ash from flue gas processes is sent to Langøya deponi which has its own requirement for decomposition and storage. A requirement for the use of Best Available Techniques is included in the license from the Norwegian Environment Agency. Eidsiva demands the best available options from their suppliers in terms of technology as well as quality.	
Protection and restoration of biodiversity and ecosystems	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** Eidsiva confirmed following national laws and regulations, where environmental impact as well as impact on biodiversity and surrounding areas are important requirements for attaining necessary licenses. The company informed not operating in areas with water scarcity. Eidsiva Bioenergi is certified in line with ISO 14001, meaning that in addition to what is required from a	Likely aligned.

		regulatory perspective, environmental impact is an integrated part of the company's business model and facility risk assessments. District heating is located in cities, industrial areas and urban areas where environmental degradation usually has already taken place.	

Production of heat/cool using waste heat

Framework activity	**Energy efficiency**		
Taxonomy activity	**Production of heat/cool using waste heat (NACE D35.30)**		
Taxonomy version	**EU Technical mitigation criteria**	**Comments on alignment**	**CICERO Green's comments on alignment**
Mitigation criteria	The activity produces heat/cool from waste heat	**Information provided by the issuer** Eidsiva Bioenergi ensures safe treatment of waste from the entire Innlandet county after the waste companies have collected, sorted and recycled what they can. Waste incineration is a necessary and statutory final treatment of waste and the process creates surplus heat. The excess heat generated during the incineration of waste is recycled to district heating, industrial steam and electricity.	Likely aligned.
	EU Taxonomy DNSH-criteria	**Comments on alignment**	**Alignment**
Climate change adaptation	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** Eidsiva uses a multistep process to identify, evaluate, and classify risks and opportunities. Risks are generally reported on the basis of the *bowtie method* that is used to analyse and demonstrate causal relationships. The bowtie method takes it one step further and identifies the ways in which control measures fail. These factors or conditions are called "escalation factors". Climate is one important escalation factor in our strategic risk analysis, and climate risk is important for different strategic topics. Security of supply is one of our strategic topics that is affected by climate risk, but also revenue risk. Rain and fog would increase the cost associated with drying wood chips and wood pellets, in addition is one of our plants (Trysil) is located close to a river which makes it exposed to flooding. The pricing regime for district heating in Norway is linked to the spot price for electricity, which means that hydrology and wind in the Nord Pool Spot area is crucial for revenues. Temperature is also important for the consumption for heat from our customers. Eidsiva plans to report more in accordance with TCFD from 2021.	Likely partially aligned.

Sustainable use and protection of water and marine resources	N/A	**Information provided by the issuer** Leak capture systems are established when facilities are located near watercourses and streams to prevent leaks to watercourses or the municipal sewage system.	N/A
Transition to a circular economy	The activity assesses availability of and, where feasible, uses equipment and components of high durability and recyclability and that are easy to dismantle and refurbish.	**Information provided by the issuer** Eidsiva's district heating business is based on the raw material strategy which states that energy is to be made of raw materials without an alternative value or better alternative usage. In practical terms, this means bioproducts from forestry, lumber and aging wood. Eidsiva has a waste incineration plant in Hamar that makes statutory final treatment of waste from the region that cannot be recycled and is therefore an important part of the circular economy.	Likely aligned.
Pollution prevention and control.	Pumps and the kind of equipment used, which is covered by Ecodesign and Energy labelling comply, where relevant, with the top class requirements of the energy label laid down in Regulation (EU) 2017/1369, and with implementing regulations under Directive 2009/125/EC and represent the best available technology.	**Information provided by the issuer** Eidsiva demand the best available options from their suppliers in terms of technology as well as quality. Eidsiva have leakage-surveillance in order to quickly discover eventual leakages in the grid.	Likely aligned.
Protection and restoration of biodiversity and ecosystems	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** The company mentioned performing environmental impact assessments, and implementing plans to ensure minimal negative impact. The company confirmed following national laws and regulations, where environmental impact as well as impact on biodiversity and surrounding areas, are important requirements for attaining necessary licenses. Eidsiva Bioenergi is certified in line with ISO 14001, meaning that in addition to what is required from a regulatory perspective, environmental impact is an integrated part of the company's business model and facility risk assessments. District heating is located in cities, industrial areas and urban areas where environmental degradation usually has already taken place.	Likely aligned.

Electricity generation from hydropower

Framework activity	Renewable energy		
Taxonomy activity	**Electricity generation from hydropower (NACE Code D35.11 and F42.22)**		
Taxonomy version	**EU Technical mitigation criteria**	**Comments on alignment**	**CICERO Green's comments on alignment**
Mitigation threshold	The activity complies with either of the following criteria: a) the electricity generation facility is a run-of-river plant and does not have an artificial reservoir; b) the power density of the electricity generation facility is above 5 W/m2; c) the life cycle GHG emissions from the generation of electricity from hydropower, are lower than 100gCO2e/kWh[30].	**Relevant contextual information** A study performed in 2019 by the Norwegian Institute for Sustainability Research (NORSUS) on Norwegian hydropower, indicates average life-cycle emissions of around 3.3g CO_2e/kWh. In addition, the study notes that hydropower plants in Norway tend to be located at high altitudes where there is little vegetation as well as colder climate, which leads to limited extra methane emissions from algae growth with could develop in the water storage basin where the climate is warmer[31]. **Information provided by the issuer** Eidsiva has participated in financing different projects, varying from 18MW to 112 MW. None of the projects are close to 100 gCO2/kWh in a life cycle assessment.	Likely aligned.
	EU Taxonomy DNSH-criteria	**Comments on alignment**	**Alignment**
Climate change adaptation	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** Risk assessments are carried out regularly. Climate risk is integrated in the evaluation of the stability of damns and the quality of floodplains and plays a large role in the decision on whether to implement measures or not. This is closely related to third party safety. The largest installations and installations with the biggest potential for damage if breached are prioritised (facilities classified in category 3 or 4 according to dam safety regulations, "damsikkerhetsforskriften").	Likely partially aligned.

[30] The life cycle GHG emissions are calculated using Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018162, ISO 14064-1:2018163 or the G-res tool. Quantified life cycle GHG emissions are verified by an independent third party.

[31] AR-01.19-The-inventory-and-life-cycle-data-for-Norwegian-hydroelectricity.pdf (norsus.no)

		None of the issuer's activities have an expected lifespan of less than 10 years. Both historic data and projected future scenarios are used in the assessment of projects. The issuer has development an investment plan for the next 10 years. Implementation of this plan is ongoing.	
Sustainable use and protection of water and marine resources	• Substantial contribution to climate change mitigation 1. The activity complies with the provisions of Directive 2000/60/EC[32], in particular with all the requirements laid down in Article 4 of the directive. 2. For operation of existing hydropower plants, including refurbishment activities to enhance renewable energy or energy storage potential, the activity complies with the following criteria: 2.1. In accordance with Directive 2000/60/EC and in particular Articles 4 and 11 of that Directive, all technically feasible and ecologically relevant mitigation measures have been implemented to reduce adverse impacts on water as well as on protected habitats and species directly dependent on water. 2.2. Measures include, where relevant and depending on the ecosystems naturally present in the affected water bodies: (a) measures to ensure downstream and upstream fish migration (such as fish friendly turbines, fish guidance structures, state-of-the-art fully functional fish passes, measures to stop or minimise operation and discharges during migration or spawning); (b) measures to ensure minimum ecological flow (including mitigation of rapid, short-term variations in flow or hydro-peaking operations) and sediment flow; (c) measures to protect or enhance habitats 2.3. The effectiveness of those measures is monitored in the context of the authorisation or permit setting out the conditions aimed at achieving good status or potential of the affected water body. 3. For construction of new hydropower plants, the activity complies with the following criteria:	**Relevant contextual information** The construction of energy production facilities larger than 1 MW needs a license from the Norwegian Water Resources and Energy Directorate (NVE) according to the "Energy Act" and the "Water Resources Act". Conditions and rules of operation will be stated in the license. Mitigation of negative environmental impacts as well as impacts on biodiversity, surrounding areas, and cultural heritages are important elements in attaining necessary licenses from NVE. Companies need to complete an EIA and to demonstrate alignment with the EU Water Framework Directive (WFD). For newer installations, minimum requirements include minimum water flow, functional fish migration pathways as well as safeguards for biodiversity and local ecosystems. River basin management (RBM) is conducted on a regional level, and hydropower plants need to be incorporated in the existing river basin management plans. This is regulated in the "Vanndirektivet". Old hydropower plants do not have licenses but must comply with and are subject to the same requirements and the same audit regime as plants with a license. Smaller energy projects with lesser environmental impacts may be handled through simplified handling procedures. NVE is carrying out audits to monitor performance. To receive a license for a new hydropower plant, the	Likely aligned.

[32] The Water Framework Directive, EUR-Lex - 32000L0060 - EN - EUR-Lex (europa.eu)

	3.1. In accordance with Article 4 of Directive 2000/60/EC and in particular paragraph 7 of that Article, prior to construction, an impact assessment of the project is carried out to assess all its potential impacts on the status of water bodies within the same river basin and on protected habitats and species directly dependent on water, considering in particular migration corridors, free-flowing rivers or ecosystems close to undisturbed conditions. The assessment is based on recent, comprehensive and accurate data, including monitoring data on biological quality elements that are specifically sensitive to hydromorphological alterations, and on the expected status of the water body as a result of the new activities, as compared to its current one. It assesses in particular the cumulated impacts of this new project with other existing or planned infrastructure in the river basin. 3.2. On the basis of that impact assessment, it has been established that the plant is conceived, by design and location and by mitigation measures, so that it complies with one of the following requirements: (a) the plant does not entail any deterioration nor compromises the achievement of good status or potential of the specific water body it relates to; (b) where the plant risks to deteriorate or compromise the achievement of good status/potential of the specific water body it relates to, such deterioration is not significant, and is justified by a detailed cost-benefit assessment demonstrating both of the following: (i) the reasons of overriding public interest or the fact that benefits expected from the planned hydropower plant outweigh the costs from deteriorating the status of water that are accruing to the environment and to society; (ii) the fact that the overriding public interest or the benefits expected from the plant cannot, for reasons of technical feasibility or disproportionate cost, be achieved by alternative means that would lead to a better environmental outcome (such as refurbishing of existing hydropower plants or use of technologies not disrupting river continuity). 3.3. All technically feasible and ecologically relevant mitigation measures are implemented to reduce adverse impacts on water as well as on protected habitats and species directly dependent on water. Mitigation measures include, where relevant and depending on the ecosystems naturally present in the affected water bodies:	Water Resource Act (§25) needs to be fulfilled, requiring that the overall consequences locally, regionally and nationally are investigated. This will be a part of the application to receive a and focus on e.g., the environment, nature and biodiversity. A license will only be issued if the advantages of the development are outweighing the disadvantages. Consequences must be adapted to the expected lifespan of the development. **<u>Information provided by the issuer</u>** The construction of energy production facilities larger than 1MW needs a license from the Norwegian Water Resources and Energy Directorate (NVE) according to the "Energy Law" and the "Water Resources Law" Companies need to complete an EIA and to demonstrate alignment with the WFD. This includes requirements for minimum water level. NVE is carrying out audits to monitor performance. River Basin Management (RBM) is conducted on a regional level, and hydropower plants need to be incorporated in the existing river basin management plans. This is regulated in "Vanndirektivet" The issuer confirms that measures have been implemented to reduce the negative effect on water and protected habitats and that the operation of all hydropower plants complies with the authorization or permit issued by the competent authority. Functional fish passes are a focus area for the issuer. Implemented measures include rebuilding old fish ladders to be better suited for the species in the local area and installing automatic fish counters as a replacement for manual counters, as well as other habitat-improving measures. Preventing all species and sizes of fish to enter hydropower tunnels and turbines is a very challenging task because of technological restrictions.	

	(a) measures to ensure downstream and upstream fish migration (such as fish friendly turbines, fish guidance structures, state-of the-art fully functional fish passes, measures to stop or minimise operation and discharges during migration or spawning); (b) measures to ensure minimum ecological flow (including mitigation of rapid, short-term variations in flow or hydro-peaking operations) and sediment flow; (c) measures to protect or enhance habitats. The effectiveness of those measures is monitored in the context of the authorisation or permit setting out the conditions aimed at achieving good status or potential of the affected water body. 3.4. The plant does not permanently compromise the achievement of good status/potential in any of the water bodies in the same river basin district. 3.5. In addition to the mitigation measures referred to above, and where relevant, compensatory measures are implemented to ensure that the project does not increase the fragmentation of water bodies in the same river basin district. This is achieved by restoring continuity within the same river basin district to an extent that compensates the disruption of continuity, which the planned hydropower plant may cause. Compensation starts prior to the execution of the project.	Sediment flow in large quantities is generally not an issue in reservoirs that are located in mountainous areas where the potential for sediment flow is naturally low. Cumulative impact assessments are a topic in the licensing process if the regulatory authority (NVE) finds it relevant.	
Transition to circular economy	N/A		N/A
Pollution prevention and control	N/A		N/A
Protection and restoration of biodiversity and ecosystems	Please see under Transmission and distribution of electricity.	**Relevant contextual information** The construction of energy production facilities larger than 1 MW needs a license from the Norwegian Water Resources and Energy Directorate (NVE)according to the "Energy Act" and the "Water Resources Act". To receive a license the company needs to complete an EIA, including implementation of mitigative measures. This is also required by the "Planning and Construction Act". **Information provided by the issuer** According to the issuer, for all hydropower projects, the company perform environmental impact assessments in the	Likely aligned.

		planning process and implement plans to ensure minimal negative impact throughout the asset's life cycle. During operation, the issuer informed performing a range of necessary mitigating measures to safeguard the environmental values in the surrounding watercourse. These measures include, but are not limited to, implementation of physical environmental measures in rivers and reservoirs such as habitat improvement measures for trout and salmon, improved methods for fish passage past hydropower plants and voluntary increased release of water (m2 /s) in regulated rivers. All its facilities are also regularly subject to environmental supervision by qualified employees to ensure good environmental conditions and to assess the need for implementing new mitigating measures. They adhere to the EU Water Framework Directive and they follow national laws and regulations. Environmental impact as well as impact on biodiversity and surrounding areas, are important requirements for attaining necessary licenses, as detailed by the Norwegian Water Resource and Energy Directorate (Norwegian: Norges vassdrags- og energidirektorat).	

Electricity generation from wind power

Framework activity	Renewable energy		
Taxonomy activity	**Electricity generation from wind power (NACE codes D.35.1.1 and F 42.22)**		
	EU Technical mitigation criteria	**Comments on alignment**	**CICERO Green's comments on alignment**
Mitigation criteria	• Substantial contribution to climate change mitigation. • The activity generates electricity from wind power.	**Relevant contextual information** Wind power is assumed to contribute substantially to climate change mitigation.	Likely aligned.
	EU Taxonomy DNSH-criteria	**Comments on alignment**	**Alignment**
Climate change adaptation	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** Icing and extreme winds are the main climate risks. The parks are located in Innlandet county where extreme winds so far has been rare. Since the wind parks are connected to the electricity grid the parks are dependent on grid availability, which could be affected by climate risk. The spot price for electricity produced is dependent on hydrology and wind in the Nord Pool Spot area. Temperature is also important for the consumption which means that revenue risk is closely linked to climate.	Likely partially aligned.
Sustainable use and protection of water and marine resources	• In case of construction of offshore wind, the activity does not hamper the achievement of good environmental status as set out in Directive 2008/56/EC[33] of the European Parliament and of the Council, requiring that the appropriate measures are taken to prevent or mitigate impacts in relation to that Directive's Descriptor 11 (Noise/Energy), laid down in Annex I to that Directive, and as set out in Commission Decision (EU) 2017/848159 in relation to the relevant criteria and methodological standards for that descriptor.	**Relevant contextual information** Wind farms are regulated by NVE. New wind farms in addition need an approved plan for environment, transport, and construction (MTA-plan), including input on how to minimize landscape changes and noise. Offshore windfarms are regulated by the Ocean Energy Act (Havenergiloven), also managed by NVE. **Information provided by the issuer** Eidsiva is only involved in land-based wind.	Likely aligned.
Transition to a circular economy	• The activity assesses availability of and, where feasible, uses equipment and components of high durability and recyclability and that are easy to dismantle and refurbish.	**Relevant contextual information** Licenses include requirements to allocate either locked funds or provide a bank guarantee for the amount required	Likely partially aligned.

[33] The EU-Directive establishing a framework for community action in the field of marine environmental policy. EUR-Lex - 32008L0056 - EN - EUR-Lex (europa.eu)

		for decommissioning, and development of plans for decommissioning, possible recycling and reuse of components and the restoration of land. **Information provided by the issuer** In general, many of the components of a wind turbines are recyclable. The tower is made of steel, the generator is made of steel and copper. Gears, transformers and cables can be recycled. The blades are made of fiberglass, which currently is considered demanding to be recycled. The same goes for the shield on the rotor housing at the top, although the amount of fiberglass here is small compared to the rotor blades	
Pollution prevention & control	• N/A		N/A
Protection and restoration of biodiversity and ecosystems	• Please see under Transmission and distribution of electricity. • In case of offshore wind, the activity does not hamper the achievement of good environmental status as set out in Directive 2008/56/EC, requiring that the appropriate measures are taken to prevent or mitigate impacts in relation to that Directive's Descriptors 1 (biodiversity) and 6 (seabed integrity), laid down in Annex I to that Directive, and as set out in Decision (EU) 2017/848 in relation to the relevant criteria and methodological standards for those descriptors.	**Relevant contextual information** In Norway, wind turbines for the production of electricity are covered by the Energy Act and are normally subject to a license. Plants consisting of up to 5 wind turbines with a total installed capacity of less than 1 MW are exempt from the licensing obligation. Wind power installations where installed effect exceed 10 MW need an EIA in accordance with the Planning and Building Act, as a part of the licensing process. **Information provided by the issuer** For all wind energy projects, the issuer performs environmental impact assessments, and implements plans to ensure minimal negative impact throughout the asset's life cycle. The company follows national laws and regulations, where environmental impact as well as impact on biodiversity and surrounding areas, are important requirements for attaining necessary concessions, as detailed by the Norwegian Water Resource and Energy Directorate (Norwegian: Norges vassdrags- og energidirektorat). This includes requirements on the construction and operational phases, as well as having concrete plans for decommissioning, including possible recycling and reuse of components and the restoration of land.	Likely aligned.

Infrastructure for enabling low-carbon road transport and public transport

Framework activity	**Clean transportation**		
Taxonomy activity	**Infrastructure for enabling low-carbon road transport (NACE Code F42.11, F42.13, F71.20 and F71.1)**		
Taxonomy version	**EU Technical mitigation criteria**	**Comments on alignment**	**CICERO Green's comment on alignment**
Mitigation criteria	• Substantial contribution to climate change mitigation 1. The activity complies with one or more of the following criteria: (a) 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); (b) the infrastructure and installations are dedicated to transhipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transhipment of goods; (c) the infrastructure and installations are dedicated to urban and suburban public passenger transport, including associated signaling systems for metro, tram and rail systems. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels.	**Relevant contextual information** Under this category, the issuer will support the infrastructure for zero-emission transport, such as charging infrastructure for electric vehicles and vessels. This could include charging stations for land based individual vehicles installed by the subsidiary Hafslund Eco. **Information provided by the issuer** Loans to finance or refinance electric charging points and electricity grid connection upgrades can be used by plug-in hybrid vehicles. These are not low carbon according to the definitions: Low carbon vehicles: Fully Electric, Hydrogen or otherwise zero-emission passenger and freight vehicles. Low carbon public and mass transportation: Fully Electric, Hydrogen or otherwise zero-emission public and mass transportation systems, such as busses, trains, trams and ferries.	Likely aligned.
	EU Taxonomy DNSH-criteria	**Comments on alignment**	**Alignment**
Climate change adaptation	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** The infrastructure assets eligible under framework mainly represent infrastructure where construction has already taken place, which means additional negative environmental impact is limited. Facilities will be installed in areas which are not threatened to climate change risk effect.	Likely partially aligned.
Sustainable use and protection of water and marine resources	Please see under District heating/cooling distribution.	**Information provided by the issuer** The issuer does not consider this DNSH relevant for onshore low-carbon road transportation.	Not enough information to conclude on alignment.

Transition to circular economy	• 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, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol. 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.	**Information provided by the issuer** Waste management is handled in accordance with national laws and regulations, and local policies, stipulated in contracts with subcontractors.	Likely partially aligned.
Pollution prevention and control	• 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[34]. • Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.	**Information provided by the issuer** Measurements on pollution preventions are applied in accordance with national rules and regulations. Eidsiva has not yet established a procedure for handling dust and pollutants during construction or maintenance work.	Likely partially aligned.
Protection and restoration of biodiversity and ecosystems	Please see under Transmission and distribution of electricity. • Where relevant, maintenance of vegetation along road transport infrastructure ensures that invasive species do not spread. Mitigation measures have been implemented to avoid wildlife collisions.	**Information provided by the issuer** Not applicable. The projects are very small and therefore do not require an EIA.	Not enough information to conclude on alignment.

[34] The EU-directive relating to the assessment and management of environmental noise. EUR-Lex - 32002L0049 - EN - EUR-Lex (europa.eu)

Infrastructure enabling low carbon water transport

Framework activity	Clean transportation		
Taxonomy activity	**Infrastructure for enabling low-carbon water transport (NACE Code F42.91, F71.1 or F71.20)**		
Taxonomy version	**EU Technical mitigation criteria**	**Comments on alignment**	**CICERO Green's comment on alignment**
Mitigation criteria	1. The activity complies with one or more of the following criteria: (a) the infrastructure is dedicated to the operation of vessels with zero direct (tailpipe) CO2 emissions: electricity charging, hydrogen-based refuelling; (b) the infrastructure is dedicated to the provision of shore-side electrical power to vessels at berth; (c) the infrastructure is dedicated to the performance of the port's own operations with zero direct (tailpipe) CO2 emissions; (d) the infrastructure and installations are dedicated to transhipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transhipment of goods. 2. The infrastructure is not dedicated to the transport or storage of fossil fuels	**Information provided by the issuer** According to the issuer, this category will only include electric energy charging facilities for electrification of ferries and cruise ships in the Oslo fjord. However, the issuer does not have any related to this activities yet.	Likely aligned.
	EU Taxonomy DNSH-criteria	**Comments on alignment**	**Alignment**
Climate change adaptation	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** The issuer informed having limited experience and knowledge on relevant risk currently, but will be taken into consideration in relevant partnerships.	Not enough information to conclude on alignment.
Sustainable use and protection of water and marine resources	Please see under Production of heat/cool from bioenergy.	**Information provided by the issuer** The issuer informed having limited experience and knowledge on relevant risk currently, but will be taken into consideration in relevant partnerships.	Not enough information to conclude on alignment.
Transition to circular economy	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, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste EN 163 EN Management Protocol[35]. Operators limit waste generation in	**Information provided by the issuer** Waste management is handled in accordance with national laws and regulations, and local policies stipulated in contracts with subcontractors. The issuer confirmed that its requirements for contractors and suppliers will include waste management.	Likely partially aligned.

[35] EU Construction and Demolition Waste Protocol (version of [adoption date]: https://ec.europa.eu/growth/content/eu-construction-and-demolition-waste-protocol-0_en).

	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.		
Pollution prevention and control	Measures are taken to reduce noise, vibration, dust and pollutant emissions during construction maintenance works.	**Information provided by the issuer** The issuer confirmed that its requirements for contractors and suppliers will include noise reduction during the construction period. Eidsiva has not yet established a procedure for handling dust and pollutants during construction or maintenance work.	Likely partially aligned.
Protection and restoration of biodiversity and ecosystems	Please see under Transmission and distribution of electricity.	**Information provided by the issuer** • Eidsiva's shore power facilities are only constructed after thorough assessment and considerations of the placement of the site itself and the required power cables to avoid permanent and temporarily harm to the environment, as well as controversies with and opposition from the local community being exposed to the construction and operation of the facilities. The company also confimed including suppliers and sub-contractors work and responsibilities in its assessment and have a set of environmental compliance criteria which suppliers and subcontractors must comply with.	Likely aligned.

°CICERO
Shades of
Green

Appendix 3:
About CICERO Shades of Green

CICERO Green is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Green.

CICERO Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO Green is independent of the entity issuing the bond, 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. CICERO Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University, the International Institute for Sustainable Development (IISD) and the School for Environment and Sustainability (SEAS) at the University of Michigan.