Position paper: The role of DHC in the FitFor55 package – EC funded projects' point of view

Renewable and Waste Heat Recovery for Competitive District Heating and Cooling Networks

REWARDHeat

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The H2020 REWARDHeat and ReUseHeat projects have provided their position on the review of Directives relevant to the Fit-For-55 package at the beginning of 2022. In this updated version, the two projects have joined forces with HYPERGRYD, WEDISTRICT, Bio-FlexGen and ConnectHeat to reflect on the updated EU legislative framework. The six projects bring together a wide range of stakeholders with considerable knowledge and hands-on experience on integrating energy efficiency principles, waste and renewable heat in district heating and cooling networks.

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1. Executive Summary

Heating and cooling accounts for 50% of the energy consumed in the European Union (EU) with over 75% coming from fossil fuels. Despite significant measures to reduce demand, buildings as well as industry will always need energy to cover heating and cooling demands. Energy efficiency and the deployment of renewables and waste heat in district heating and cooling (DHC) networks, together with extensive interoperability among energy vectors, contribute significantly to delivering sustainable heating and cooling and achieving carbon neutrality by 2050. It is estimated that increasing DHC networks to cover 20% of the EU heat market, compared to the current 13%, could save over 24 billion cubic meters of gas demand[1].

On the 14th of July 2021, the European Commission published the Fit-For-55 package to make the EU's climate, energy, land use, transport and taxation policies suitable for reducing net greenhouse gas (GHG) emissions by at least 55% by 2030, compared to 1990 levels. With these proposals, the Commission presented the legislative tools to deliver the targets agreed in the Green Deal and European Climate Law. The key components having the highest impact on DHC are the revision of the Energy Efficiency Directive (EED, ratified in September 2023), the revision of the Renewable Energy Directive (RED, ratified in October 2023), the revision of the Energy Performance of Buildings Directive (EPBD, ratified in March 2024) and the revision and extension of the EU Emissions Trading System Directive (ETSD, ratified in June 2023).

The new legislation has significant implications on the heating and cooling sector and strengthens the role of DHC and waste heat on the way to decarbonisation. The scope of the present document is to review the evolution of regulatory framework, highlighting margins for further improvement and suggesting channels towards the national implementation.

In this section we report the main outcomes of the analysis, while a detailed assessment is reported in the continuation of the document.

- Energy Efficiency First also through lowering supply temperature

Significant energy savings can be achieved in the network by reducing supply temperatures. Therefore, energy savings achieved in the energy transformation, distribution, and transmission sectors, including efficient DHC infrastructure, should be reinstated in the EED. Additionally, lowering distribution temperatures facilitates the integration of low-temperature waste and renewable heat within urban areas. Reducing supply temperatures is supported by more energy-efficient buildings. However, the majority of the EU building stock is energy inefficient and requires high supply temperatures, which hinders the transition to more efficient low-temperature DHC. We need to accelerate building renovations to support low temperature DHC networks.

- Exploiting waste heat should be a standard approach to circular energy

In the EU, 35% of the heating and cooling demand could be met by waste heat. Heat produced as a by-product of industrial or tertiary activities can be harnessed as a resource instead of being released into the environment. This waste heat could play a crucial role in a cost-effective transition to a smart, integrated energy system, complementing renewable energy solutions like geothermal, large-scale heat pumps, biomass, or solar thermal in district heating networks. The European

[1] Fit for 2050 Unleashing the potential of efficient district heating and cooling to decarbonise Europe; EHP blueprint, https://api.euroheat.org/uploads/Fit_for_2050_Unleashing_the_potential_of_efficient_district_heating_and_cooling_to_decarbonise_Europe_9179c66257.pdf

Commission should provide specific guidance to Member Stats (MS) on removing legislative barriers and facilitating the integration of waste heat into DHC networks through standardised norms and contracts.

- A greater ambition for heating and cooling sector targets is needed

The annual Renewable Energy Sources (RES) increase target in the heating and cooling sector should be doubled to at least 2% for 2021-2025 and 2.6% for 2026-2030 to help the EU reach 42.5% by 2030. For DHC, the indicative target of 2.2% annual increase over the same periods should be made compulsory. MS should encourage DHC networks to connect with renewable and waste heat suppliers and establish coordination frameworks.

- Sector coupling adds value to the overall energy system

There is significant potential for sector coupling by coordinating DHC networks with electricity grids. This enhances the value not only of DHC networks but also of the entire energy system. Sector coupling involves combining thermal and electric grids, enabled by electric-driven heat pumps and digitalisation, and facilitated by thermal energy storage capacity. As technical innovation advances, stakeholders across sectors must be encouraged to find new ways to collaborate and develop business cases, facilitated by a supportive policy framework. A thorough discussion should be initiated to incorporate thermal networks into the overall renewable energy communities' regulatory framework, as a vital catalyst for sector coupling.

- Municipal heating plans should assume a district-level approach

A district-level approach to building renovations and energy performance assessment should be implemented to develop cost-effective and resource-efficient strategies, optimising both existing and new energy infrastructures. Proper assessment at district level will ensure the full exploitation of locally available waste and renewable heat sources. To maximise the impact of renovations, integrated programs should address heating and energy at the district level, considering the extension or upgrade of nearby DHC infrastructure in coordination with municipal heating and cooling plans. Support is needed at MS level to provide technical capacity building for municipalities in terms of guidelines and access to special data deployments.

- Carbon prices should deploy a level playing field across sectors

Different carbon prices between ETS2 and ETS1 may lead to unfair competition in the heating and cooling sector, which calls for a uniform CO_2 price to ensure a level playing field. The mechanisms chosen to manage ETS2 should be as easy to implement as possible, with a clear scope to limit the administrative burden. A well-functioning and well-designed combination of an ETS2 and the use of its revenues, should account for a mix of infrastructural investments, reduced taxes and levies on renewable heat, and help with the provision of municipal heating plans.

- De-risking instruments are needed to foster DHC investments

The deployment of clean DHC projects is capital intensive and faces high investment risks, particularly with renewable and waste heat sources. MS should introduce de-risking mechanisms to accelerate the deployment of these projects, supported by flexible regulatory frameworks and by establishing national financing agencies/platforms for municipalities. Together with this, standardising and coordinating the EU Taxonomy with other relevant EU Directives would attract substantial private capital to the heating and cooling sector.

2. Energy Efficiency Directive (EED)

Unlocking energy efficiency in district heating and cooling

The inclusion of the "energy efficiency first" (EE1st) principle in Article 3 of the EED provides a solid basis in EU legislation dedicated to energy efficiency, underpinning all climate and energy policies and being applied to planning and investment decisions. Energy efficiency should always be considered before installing additional heating and cooling capacity. Applying the EE1st principle involves lowering the operating temperature of DHC networks, thereby reducing heat losses, and facilitating the recovery of low temperature renewable energy and waste heat from industrial facilities and urban sources.

The Article 8 of the revised EED, relating on energy savings obligations, does not account for energy savings achieved in energy distribution, (i.e. district heating) to contribute towards the target of obligatory energy savings as of 2024 (Article 8 paragraph 8. (c)). Some MS have already used this provision as an effective mechanism to incentivise energy efficiency in distribution. Relevant energy savings are possible in the network by reducing supply temperatures; thus, energy savings "achieved in the energy transformation, distribution and transmission sectors, including efficient district heating and cooling infrastructure", should be reintroduced into the text, to count towards the energy saving obligation target in the period from 1 January 2024 to 31 December 2030. Furthermore, MS shall incentivise DHC operators to adopt such energy efficiency measures as a preliminary step, facilitating the decarbonisation of their DHC networks.

Article 26 of the revised EED proposes two definitions of "efficient DHC", based either on a gradual inclusion of renewables and waste heat or on a decreasing CO_2 content per unit of energy distributed, giving a clear and ambitious timeline to the DHC sector towards net zero emissions by 2050. However, the increased mandatory share of renewable energy and waste heat lacks indications on a gradual transition. The alternative approach using a CO_2 calculation methodology may lead to disparities between MS and requires facing a discussion on the most appropriate methodology, prior to adoption at national level.

Furthermore, MS and stakeholders may be reluctant to transition to more renewable based DHC systems and away from fossil fuels due to high upfront costs, as it is not a legislative requirement.

The specification for DHC systems above 5 MW excludes other systems below this threshold from the efficiency improvement requirements. As such, these systems might not face the same scrutiny or efficiency improvement requirements.

Exploiting the untapped potential of waste heat recovery

There is a substantial potential for waste heat as a resource for heating and cooling, avoiding additional energy generation and fostering sector integration. Studies within the projects involved in this position paper estimate that there is the potential to expand DHC to supply 50% of the European heat demand, including 25–30% using large-scale electric heat pumps[2]. At the same time, the EU produces more waste heat than the demand of its entire building stock as underlined in the

[2] Heat Matters: The Missing Link in REPowerEU, https://api.euroheat.org/uploads/Heat_matters_the_missing_link_in_RE_Power_EU_Aalborg_University_2023_f362bc76ba.pdf

Heat Roadmap Europe[3], as well as in the 2016 EU Heating and Cooling Strategy[4]. Moreover, there is significant heat recovery potential from waste heat sources; studies conservatively estimate that waste heat could cover at least 25% of district heating supply. Approximately 340 TWh per year are possible to recover from data centres, metro stations, hospitals and other service sector buildings, and waste-water treatment plants. This corresponds to more than 10% of the EU's total energy demand for heat and hot water.[5] Another recent study shows that excess heat in the EU amounts to 2,860 TWh/y and could meet most of the EU demand for buildings and hot water[6].

Without adequate recovery solutions, waste heat is released into the atmosphere or water, and the potential of this circular energy is lost. Recovering and using waste heat from industrial and tertiary sources closes the energy loop, therefore applying the EE1st principle. For example, exhaust heat from the refrigeration system of a supermarket is normally dissipated in air. Using a heat pump, this heat can be recovered directly by the supermarket and indirectly by nearby buildings through a district heating network. The average medium-sized supermarket in Europe produces enough waste heat from its refrigeration units in one year to meet the thermal energy needs of 200 homes over the same period[7]. District heating networks and heat pumps are complementary solutions that can be used synergistically to enable the recovery and reuse of heat that would otherwise be wasted. The role and location of the heat pump in the DHC system is determined by the operating temperature of the network: for a low temperature network (30°C-70°C), a heat pump is needed to raise the temperature of the waste heat to the network's level. In the case of a neutral temperature network (up to 30°C), heat recovery can be performed directly, but heat pumps are needed at the user's site to raise the temperature to the level required.

The revised EED has introduced positive changes and additions recognising waste heat as a valuable source towards decarbonisation. The definition of efficient DHC under Article 26 includes waste heat on par with other renewable sources. Article 26 implies that MS shall ensure that data centres with a total rated energy input exceeding 1 MW must implement waste heat recovery, unless it is demonstrated that this is not economically or technically viable. However, it only focuses on installations exceeding specific energy input thresholds, which may exclude smaller installations from energy efficiency improvement benefits. The expanded exemptions from the analysis may reduce the number of installations subject to it, potentially overlooking opportunities for energy efficiency improvements. Additionally, excluding DHC installations with specific operating hours or proximity to geological storage may lead to installations with significant waste heat recovery potential being unexploited.

The EC should provide specific guidance and support to MS to unlock waste heat potential. MS in return shall remove barriers to the utilisation of waste heat and provide support for its uptake in newly planned or refurbished DHC installations.

[3] Heat Roadmap Europe, https://heatroadmap.eu/
[4] 2016 EU Heating and Cooling Strategy, https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1575551754568&uri=CELEX:52016DC0051
[5] ReUseHeat, Accessible Urban Waste Heat, https://cordis.europa.eu/article/id/125213-reuseheat-quantified-eu28-urban-waste-heat-potential
[6] Danfoss, The world's largest untapped energy source: Excess heat, https://api.euroheat.org/uploads/Danfoss_Waste_heat_white_paper_1957e65178.pdf
[7] Feasibility Study for a Neighbourhood Energy Management System in Trento, Stardust project, https://stardustproject.eu/wp-content/uploads/2024/03/04-Trento.pdf

Facilitating local heating & cooling planning

Article 26 of the revised EED integrates additional positive changes concerning the heating and cooling plans in municipalities with populations above 45,000 inhabitants. The mandatory nature of this Article is a promising means to foster the green transition locally.

However, the obligation does not rest directly on municipalities due to subsidiarity, but on the MS to transpose it at national level and design a suitable structure to elaborate the local heating and cooling plans, which may come with certain challenges due to the diversity of local contexts encountered.

The Article also encourages heating and cooling plans for municipalities below 45,000 inhabitants. Currently, these municipalities design heating and cooling on a voluntary basis. Once effective support mechanisms are put in place, they should be required to do so. This should be facilitated through financial and technical support from MS and EU financing instruments (including the recovery funds, regional and cohesion funds and revenues from the EU ETS2), aimed to reduce investment risks and upfront capital costs for new projects.

Municipalities, both large and small, may lack the necessary workforce and expertise to draft heating and cooling plans. MS should provide guidance documents, training and working groups to build the capacity of municipalities and guide them in their efforts. Many MS will need to implement a completely new legislative framework and support mechanisms for municipalities. Cities will also need access to energy-related spatial data.

A clear European strategy supporting MS in this path is needed to keep the foreseen timeline and reach EU 2030 targets.

3. The Renewable Energy Directive (RED III)

Pursuing a greater ambition with respect to renewables for heating & cooling

Mature, market-ready technologies are contributing to the adoption of renewables in the heating and cooling sector. REDIII Article 23 (1) sets a 'binding baseline' target for increasing the use of renewables in heating and cooling by 0.8% annually from 2021-2025 and 1,1% from 2026-2030. Waste heat and cold recovery can contribute with a sizeable 0,4% to these targets. We believe that this target should be made more ambitious, as the growth rate envisaged would only lead to about a 30% share of renewables in the heating and cooling sector, far behind the binding target of 42,5% (and the indicative target of 45%) by 2030. The annual increase target should be doubled, with at least a 2% annual increase for 2021-2025 and 2,6% increase for 2026-2030. This would help the EU get closer to achieving 42,5% by 2030.

The specific target for DHC in Article 24 increased from a 1.0% indicative annual increase to 2.2%, calculated as an annual increase over 2021-2025 and 2026-2030. MS are also encouraged to ensure that operators of DHC networks with a thermal capacity over 25 MW connect with third-party renewables and waste heat suppliers, and to enable coordination frameworks between DHC operators and waste heat suppliers facilitating cooperation. Although not binding, raising the bar sends a strong signal to MS network operators.

Article 15 introduces a new target of at least a 49% share of renewables in buildings by 2030 and encourages MS to introduce measures in their national frameworks to promote RES in the building sector. The retention of efficient DHC is a valid means to satisfy this target. MS can include waste

heat, capped at 20%. This is an important change as waste heat from industrial and tertiary sources has the potential to meet the demand of decarbonised heat for buildings, together with renewables, in line with the EE1st principle and the definition of efficient DHC in the EED.

The requirement for MS to develop de-risking instruments (RED III Article 23.4) should cover insurance schemes to support heat recovery from industry and tertiary sources, as there is a high risk for these sources to shut down or relocate. This should be supported by providing subsidies for renewable and clean energy projects to hedge against market price fluctuations and ensure a fair cost compensation.

Fostering sector coupling

To unlock the potential of waste heat recovery and use, frameworks to facilitate coordination and cooperation among DHC operators and waste heat suppliers in industry and tertiary sectors (Article 24(6)) are needed.

Additionally, there is significant potential for sector coupling, via coordinating DHC operators and operators at both transmission and distribution grids (RED III Article 24 (8)); implementing grid interoperability is key for a wider and flexible integration of RES in the energy system across sectors. This involves the systematic combination of thermal and electric grids: the smart management of thermal capacity and loads embedded in a DHC system through diffused electric driven heat pumps enables potential electricity grid services, facilitated by the aggregation of the loads. Conversely, using electric driven heat pumps in DHC networks supports a more efficient and flexible use of the renewable electricity, aided by a large thermal capacity deployed. Artificial intelligence-enabled management of DHC networks, sustained by their digitalisation, will be central to achieve these sector coupling goals.

To achieve the annual increase of renewable energy in heating and cooling, MS are invited to implement at least two specific measures out of a list of twelve, among which is promoting thermal energy storage. Given the long list of measures, the one related to sector coupling might be considered expensive or difficult to implement.

Consequently, while technical innovation is evolving, the ability of stakeholders across sectors to identify new ways of collaboration should be nurtured and encouraged through a supportive regulatory framework: on the one hand, business models based on the value added by the flexible use of renewable and waste heat in DHC networks to electric grids should be developed and standardised; on the other hand, a participative approach, based on the energy community model, might help create a constructive environment, encouraging collaboration. As of today, renewable energy communities legally focus on interactions across electric grids only; a comprehensive discussion should be initiated to incorporate thermal networks into the overall renewable energy communities' regulatory framework.

4. European Performance of Buildings Directive

Making buildings ready for efficient DHC

In accordance with EED Article 24(1), zero-emission buildings (ZEBs) are allowed to use energy from renewables generated onsite or nearby, renewable energy from a renewable energy community, energy from carbon-free sources, and energy from an efficient DHC system, according to EED

criteria. This will ensure that connecting to efficient DHC networks is reflected positively in newly built and energy retrofitted buildings' energy performance certificates (EPCs).

The final EPBD text states that EPCs must include more information on the heating and cooling solution adopted, including voluntary information on the connection to a DHC network or information about a potential connection to an efficient DHC network, as well as primary energy and related carbon emission factors. The EPCs should give equal weight to DHC networks compared to individual heating and cooling solutions at building level.

Energy inefficient buildings across Europe necessitate high supply temperatures, hindering the transition to more efficient low-temperature DHC systems. Building renovations with newly installed low-temperature heat distribution terminals must be accelerated to allow DHC supply temperature reduction, hence facilitating technical and economic sustainability of low-temperature, urban waste and renewable heat integration in DHC networks.

A district approach to building renovations and energy performance assessments can ensure the development of cost- and resource-efficient strategies, where existing and new energy infrastructures are optimised. The proper assessment at a district level will allow to exploit optimally waste and renewable heat sources available. To maximise the impact of renovations, integrated programs should address heating and energy at district level, assessing possible extension or upgrade of nearby DHC infrastructure in combination with municipal heating and cooling plans.

5. New adjacent ETS for heating & cooling in buildings

Creating a level playing field for all heating and cooling solutions

Fossil fuels below 20 MW used in individual heating systems have an unjustified advantage as they are not covered by the EU ETS. This is detrimental to the development of efficient, low-carbon solutions as it puts collective solutions at a disadvantage compared to the individual ones. The current ETS has proven to be an efficient instrument in the fight against climate change and the improvement of this system will undoubtedly be useful for achieving the EU energy and climate targets. We welcome the new adjacent ETS for buildings and transport to bring a level playing field within the heating and cooling sector. The application of a carbon dioxide (CO_2) price on emissions in the building sector would be an important tool to implement the "polluter pays" principle, while providing funds to accelerate the clean energy transition.

Introducing a uniform CO_2 price across the heating and cooling sector

The ETS reform and extension of scope to cover all GHG emissions from fossil fuels, used in residential and commercial buildings, is important. Setting a CO_2 price on all fossil fuels is an essential aspect of the decarbonisation of the energy system. At present, the majority of generated district heat is covered by the existing ETS, whereas individual fossil fuel solutions are not. The ETS2 price cap of 45 EUR/ton of CO_2 emitted is much lower than the CO_2 price applied to DHC solutions under ETS1, which may lead to unfair competition in the heating and cooling sector. This situation calls for a uniform CO_2 price across the heating and cooling sector to ensure a level playing field and drive decarbonisation. In the DHC sector, such a uniform price would ensure greater efficiency and integration of renewables, making it more competitive, decarbonised, and prevalent. Using

CO_2 credits not only to foster investments but also to reduce taxes and levies on renewable heat would be highly beneficial, as it would directly narrow price gaps.

Supporting successful implementation

To tackle all installations below 20 MW that are not subject to the EU ETS, the chosen mechanism should be as easy to implement as possible, with a clear scope to limit the administrative burden. Until a level playing field is established, the DHC sector would continue to need free allocations.

A well-functioning and well-designed combination of an ETS2 and the use of its revenues in the Social Climate Fund (SCF) would contribute to achieving the decarbonisation target for buildings without risking increased rates of fuel poverty or other negative social impacts. CO_2 pricing and the SCF are essential building blocks of the policy framework of the European Green Deal. Without an adequate and targeted CO_2 pricing system covering fuels used for heating and cooling, the EU will not be able to achieve its own emissions reduction targets, nor the targets for renewable heating and cooling.

The policy alternatives can be considered complementary, but cannot replace a CO_2 price, as they do not create their own revenue streams. If executed correctly, the proposed ETS2 will accelerate the green transition and reduce the risk of energy poverty, as our current dependency on fossil energy will be greatly reduced.

6. Action Plan on Financing Sustainable Growth

Facilitating investments in sustainable DHC

The widespread implementation of DHC requires substantial near-future investments, with projections indicating costs of at least EUR 120 billion across the EU by 2030[8]. Given the high levels of public debt, it is improbable that governments can single-handedly provide the requisite funding. Thus, a pivotal question arises regarding the potential role of financial markets in bridging the escalating funding gap. In principle, regulatory frameworks like the EU Action Plan on Financing Sustainable Growth provide tailwind for accessing financial markets to attract institutional and retail investors. The Action Plan's foremost objective is to reorient capital flows towards sustainability[9]. A detailed EU Taxonomy is supposed to serve as a classification system for sustainable activities[10], integrating technical screening criteria with specific CO_2 thresholds for more than 100 business activities that are considered as climate sensitive.

As such, the EU taxonomy also serves as a methodological basis for the EU Green Deal and sustainability related disclosure obligations of financial institutions and non-financial corporations. The same applies to the Corporate Sustainability Reporting Directive (CSRD) and the Sustainable Finance Disclosure Regulation (SFDR). The CSRD obliges more than 50,000 corporations within the

[8] https://www.euroheat.org/news/fit-for-2050-unleashing-the-potential-of-efficient-district-heating-and-cooling-to-decarbonise-europe
[9] https://finance.ec.europa.eu/publications/renewed-sustainable-finance-strategy-and-implementation-action-plan-financing-sustainable-growth_en
[10] https://finance.ec.europa.eu/publications/renewed-sustainable-finance-strategy-and-implementation-action-plan-financing-sustainable-growth_en

EU to publish sustainability reports according to European Sustainability Reporting Standards[11]. By establishing requirements for financial market participants to disclose sustainability information, the SFDR aids investors aiming to allocate funds to companies and projects that support sustainability goals in making informed decisions. Additionally, the SFDR is intended to enable investors to effectively evaluate the integration of sustainability risks within the investment decision-making process[12].

Supporting hybrid financing schemes

To attract investors, innovative financial instruments such as blended finance should be leveraged, emphasising impact-oriented financing, insurance, and subsidised financing. As part of sustainable infrastructure finance, blended finance is a concept designed to facilitate the implementation of critical, yet challenging-to-fund investment projects. This approach hinges on the utilisation of public funds at rates below the market standard. The distinctive strength of blended finance lies in its capacity to engage governments, local entities, or development banks as co-investors or guarantors, resulting in a reduction in project costs and an improvement in the risk-return profile. This mechanism attracts private investors whose higher investment risk compared to other sectors is mitigated in this way, to an extent that it makes the risk-return relationship favourable. Private investors, such as investment funds, can benefit from a sustainable investment opportunity in DHC infrastructure, ideally aligned with the EU Taxonomy.

To unleash blended finance's full potential, a regulatory framework at EU-level is needed. A more flexible regulatory-(tax)-framework for investment funds is considered necessary. Furthermore, establishing national financing agencies/platforms for municipalities, modelled after successful initiatives, e.g., in Denmark and France, is posited as a potential mechanism to streamline and bolster financial support for sustainable infrastructure projects. Conversely, utilities, mostly small-size municipal ones, are encouraged to view financial markets and institutions as important partners, in successfully navigating the complexities of the clean energy transition.

Against the backdrop of the multitude and heterogeneity of the different regulatory frameworks, many stakeholders see the risk of a regulatory "overkill". In particular, Taxonomy regulations are considered to be too complex and too bureaucratic in their application. With respect to the SFDR, an increasing number of investment funds seem to avoid classifying their investments accordingly.

Thus, more simplification and standardisation are needed. In this context the integration and harmonisation of various regulatory frameworks is crucial, with a particular emphasis on harmonising the EU Taxonomy with EPBD, EED, and RED.

[11] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022L2464; https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en, https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32023R2772

[12] https://finance.ec.europa.eu/sustainable-finance/disclosures/sustainability-related-disclosure-financial-services-sector_en