

Green Financing Framework

May 2021



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Background EEW at a Glance

EEW Energy from Waste GmbH (“EEW” or “the Company”) is Europe’s leading thermal waste recovery company, saving primary resources and supplying the society with sustainable low carbon energy. EEW is a vital element of the circular economy and contributes to the global climate goals of protecting our environment and the health of our communities.

Originally founded in 1873, and then evolved over time, EEW has been developing, building and operating waste-to-energy (“WtE”) facilities for the past 30 years, always with state-of-the-art technology and meeting the highest environmental standards. Headquartered in Helmstedt, Germany, we have a total of over 1,200 employees across all of our 18 sites.

Every day, our team works to further develop energy from waste as an integrated component of the energy transition, and continues to support a further reduction in greenhouse gas emissions and alternative disposal options such as landfill. Our range of services focuses on:

- Thermal recovery of municipal and industrial waste¹, in order to minimize adverse effects on human health and the environment.
- Thermal sewage sludge recovery, which contributes to the reduction of groundwater and soil pollution, as well as the recovery of the important mineral phosphorus.
- Hygienization, safe treatment and disposal of medical and hazardous waste.
- Production of sustainable power, heat and steam for industrial and commercial customers as well as district heating for residential customers.
- Recycling of ferrous and non-ferrous metals out of incineration bottom ashes (IBA), which contributes to saving primary resources including the energy consumption and emissions compared to production of primary metals by mining and refining.
- Additional recycling of agglomerates out of incineration bottom ashes (IBA), which contributes to the recovery of high quality minerals suitable as construction material substitutes.

We currently operate 18 plants in Europe: 16 in Germany, one in Luxembourg and one plant in the Netherlands. In addition, we have projects in Austria and Poland. In Germany and Luxembourg, EEW is the undisputed market leader measured by technical plant capacity. The Company’s annual recovery capacity at our 18 plants amounts to 5 million tons of waste.

By utilizing the energy contained in waste, EEW generates process steam for industrial plants, district heating for residential areas and eco-friendly electricity for the equivalent of around 740,000 households. As the waste contains at least 50% biogenic material on average, we generate energy from renewable sources in accordance with the German Renewable Energy Sources Act (EEG). In this way, we contribute to a sustainable and reliable supply of energy while conserving primary energy sources and supporting global climate goals.

As part of the WtE process, we also embrace circular economy principles by reclaiming secondary materials from the residues that remain after the waste combustion process.

The largest share consists of incineration bottom ash (IBA), which contains metals – such as iron, aluminium and copper – with a high degree of purity and minerals which can be used, after certain treatment, as materials in the building and road construction industry.

Other residues are fly ash and filter dust from flue gas cleaning; these flue gas cleaning residues (FGCR) have been retained by state-of-the-art filter technology to prevent pollutants from entering the environment. They are recovered for the refill underground cavities of former salt mines, in order to stabilize them.

¹ After comprehensive source separation, pre-treatment and recycling. On average, 50% organic content.

02

Sustainability Our Vision & Targets

At EEW, we firmly embed sustainability across all our operations and organizational structure through our company-wide Sustainability Policy. With our expertise and innovative strength, we develop forward-looking solutions in order to contribute to a circular economy and a low carbon energy supply. Our vision is to play a leading role in Europe in saving primary resources while providing society with sustainable energy.

EEW's sustainability strategy revolves around three key areas of action that relate to material Environmental, Social and Governance (ESG) issues by reason of EEW's business model, as well as stakeholders' expectations, and the leading international standards.

As part of EEW's approach of embedding sustainability across the company, we have also defined specific ESG targets for each of our three action areas, which we are going to track and report on over time, and through which we expect to contribute to the UN Sustainable Development Goals (SDGs):

Strengthening Relationships

with employees, customers and suppliers, with a focus on health & safety, equal opportunities and community engagement

Targets:

- Developing a new Stakeholder Management Policy, to increase customer satisfaction and loyalty on one hand, and to enhance synergies and communication amongst our employees, particularly in the sales area;
- Ensuring integrity and ethical behaviour through role-based compliance training, and by screening suppliers based on sustainability criteria;
- Promoting women's participation in the company and in senior positions;
- Supporting young talent and preparing them for future leadership positions through EEW's "Leadership Passport" program.

Taking on challenges

to address global megatrends, in particular climate change, innovation and digitization, and operating our business in a resource efficient way

Targets:

- Optimizing overall equipment effectiveness (OEE) at EEW's plants by 2027;
- Substituting EEW staff road travel with e-mobility solutions and rail transport wherever feasible, and making greater use of digital technology;
- Investing in the development of phosphorus recovery from sewage sludge ash by 2022, as well as in the industrial recovery of carbon dioxide through carbon capture and utilization (CCU) by 2023;
- Converting business processes to low-paper ordering and invoicing and reducing paper consumption in our internal business processes by 2022.

Delivering results

combining economic performance with positive environmental and social impacts

Targets:

- Increasing the power generated by renewable energies at our plant sites, through the installation of solar photovoltaic (PV) systems, thus helping decarbonize local economies;
- Increasing the share of renewable electricity and gas based on renewable sources that we purchase, and promoting captive-use generation from PV;
- Reducing backfilling in mines by 3% by end of 2023 compared to 2019;
- Reducing accident figures by 30% by end of 2021 compared to 2018 and helping further develop partner firms with regards to occupational safety.
- Increase efficiency of energy transformation by developing new projects such as heat pipes.



Figure 1:
EEW's Sustainability
Strategy Pillars²



² Source EEW Sustainability Report 2019

Company-wide responsibility for sustainability lies with the Management Board of EEW. As the senior decision-making body, it determines the strategy, evaluates and adopts key strategic decisions and it is responsible for the budget.

We are currently working on multiple projects contributing to EEW's Vision and confirming our ambition to be a leader within the circular economy and the energy transformation. We strive for the highest energy efficiency possible; therefore we constantly look for projects that are increasing the efficiency of our energy produced throughout the entire plant fleet of EEW.

In other words, we concentrate on the use of most efficient products that follow directly from the combustion process such as steam and heat. We have included some sustainable projects examples in the box below.

EEW's Sustainability Projects – Examples

Process efficiency projects in process steam and heat generation

- **Hanover plant: new district heating pipeline completed in Q4/2019**

After installation of a new co-generation unit, the plant benefits from a 29% higher output efficiency and a more favourable mix of district heating (300GWh/a) and electricity generation (121 GWh/a), instead of electricity generation only (160 GWh/a). Previously, this district heat was generated by the local energy provider using hard coal and gas, with significant CO₂ emissions.

- **Premnitz plant: new district heating until mid-2022, planning approval process**

Replacement of the previous fluidized bed system with a state-of-the-art incinerator that can generate up to 50% more heat and 25% more electricity. The turbo-generator set of the combined heat and power plant will also be replaced, with a 16% increase in efficiency. The increase in output will then be used to connect a new district heating pipeline (20 km long, 100 GWh/a). Previously, this district heating was generated from fossil fuels by the local energy provider. The plant upgrade will lead to notable CO₂ savings.

Sewage sludge projects to recover phosphorus

- **Stapelfeld plant: permitting process, commissioning in 2022**

Besides the new state-of-the-art incineration facilities with more than doubled energy output efficiency, we inaugurate a new sewage sludge facility. Produced live steam is used for heat and electricity production, but the sludge incinerator receives back some heat for sludge drying and required auxiliary power, instead of using fossil fuels. This contributes to the protection of our environment and recovers the scarce mineral phosphorus.

- **Helmstedt plant: under construction until 2022**

First sewage sludge mono combustion in Lower-Saxony. Functioning is comparable to Stapelfeld plant above. We will be able to recover over 90% of the phosphorus which is contained in the sludge and, in addition, the steam generated will produce electricity. Currently, we are looking for steam and heat consumers in Helmstedt in order to use the generated steam more efficiently.

Innovation projects initiated

- **Bicarbonate production**

The onsite generated CO₂ will be used to produce sodium bicarbonate which is used as an adsorbent for acid gases in the flue gas cleaning process of the incineration process. The bicarbonate can be used in several plants within the EEW network (e.g. Stapelfeld and Leudelange in Luxemburg), thus reducing and conserving the volumes of Flue Gas Cleaning Residues (FGCR) to be transported for recovery in underground salt mines across Germany.

- **Green Hydrogen production**

The production of green hydrogen requires large inputs of low carbon energy. Our plant network provides the required infrastructure, and could be the green hydrogen supplier of choice, especially for local public transportation and waste trucks.

- **Aluminium Oxide Electricity Storage**

A high temperature chemical energy storage cycle based on aluminium to supply electricity when needed, independent from electricity generation.

- **Organic Rankine Cycle (ORC)**

Additional power generation based on low temperature heat recovery. Module under consideration for Leudelange plant in Luxemburg.

Final approvals of projects are taken in consensus with our strategic Steering Committee, – composed of the Management Board, Supervisory Board and our Shareholder – which meets on a quarterly basis.

Each of the approved projects is coordinated by an operational Steering Committee composed of representatives from the Management Board, Business Development, the Technology department, the Finance department, and the plant sites, and which meets on a monthly basis. The operational Steering Committees coordinate the projects across all departments and report to the Management Board and Supervisory Board.

To ensure the efficient implementation of these activities, project managers are appointed, serving as points of contact for all project decisions relating to their area of responsibility.

The project managers regularly report the progress of the projects to the operational Steering Committee, in order to measure progress towards the goals.

In addition, the implemented permanent Sustainability Officer is responsible for coordinating and managing all sustainability activities throughout the company, and serves as an intermediary between the operational Steering Committee and the Management Board.

More details on EEW's Sustainability Policy and initiatives are available on the corporate website (<https://www.eew-energyfromwaste.com>) and in our annual Sustainability Report, prepared in accordance with the Global Report Initiative (GRI) standard.

03

Scope of the Framework EEW's Green Financing Framework

In line with EEW's objective to contribute to a climate-friendly energy supply and its role in the circular economy, we have established this Green Financing Framework ("Framework"). In this respect, our Framework further encourages the circular economy by bringing together sustainable projects and sustainable financing. We believe that this consistent focus on sustainability will be beneficial to all stakeholders.

This Framework applies to all Green Financing Instruments of EEW, including green bonds, green loans and green promissory note loans to finance and/or re-finance assets or projects promoting environmental benefits.

The Framework is based on the existing international standards:

- The Green Bond Principles as published by the International Capital Market Association (ICMA)
- The Green Loan Principles published by the Loan Market Association (LMA)

Following the ICMA Green Bond Principles (GBP) 2018³ and the LMA Green Loan Principles (GLP) 2021⁴, EEW's Green Financing Framework is structured around four key pillars:

- Use of Proceeds
- Process for Project Evaluation and Selection
- Management of Proceeds
- Reporting

³ <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2018/Green-Bond-Principles---June-2018-140618-WEB.pdf>

⁴ https://www.lma.eu.com/application/files/9716/1304/3740/Green_Loan_Principles_Feb2021_V04.pdf






3.1 Use of Proceeds

The net proceeds of any Green Financing Instrument issued by EEW will be allocated to finance or re-finance, in full or in part, a portfolio of projects originated not earlier than, or funded up to, 36 months before issuance, and that contributes to environmental objectives in line with the GBP/GLP categories outlined below (“Eligible Projects”), together forming the “Eligible Project Portfolio”.

Any project, asset, expenditure or investment (included unallocated proceeds) related to the following activities will be excluded:

- Waste incineration without energy recovery;
- Landfill projects;
- Fossil based energy.

Eligible Projects will include:

GBP/GLP Category	Eligible Project Description	SDG Targets	
Energy Efficiency and Pollution Prevention & Control	Energy from waste: <ul style="list-style-type: none"> • Investments in process optimization and energy consumption management for electricity, district heating and industrial steam generation from thermal waste recovery, with at least 50% of biogenic waste input, on average⁵ • Investments in flue gas cleaning to fulfil BAT criteria (“Best Available Techniques” for Waste Incineration⁶) even if they are not implemented in national law or ordinances yet 	12.4 Environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	
Eco-efficient and circular economy adapted products, production technologies and processes	Innovation in circular waste management: <ul style="list-style-type: none"> • Investments related to the development, building and running of the thermal recovery of sewage sludge and recycling of phosphorus • Industrial recovery of carbon dioxide (through carbon capture and utilization CCU) to recycle flue gas cleaning residues (FGCR); and producing e-fuels together with green hydrogen (power to gas) • Recovery of secondary materials from thermal waste treatment residues like ferrous and non-ferrous metals, critical metals and agglomerates 	12.5 Substantially reduce waste generation through prevention, reduction, recycling and reuse	
		9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes	
Renewable Energy	Solar PV renewable energy for operations <ul style="list-style-type: none"> • Installation, operation and maintenance of solar PV systems at EEW plant sites • Purchase of renewable energy through Power Purchase Agreements (PPAs) 	7.2 Increase substantially the share of renewable energy in the global energy mix	
Clean Transportation	E-mobility <ul style="list-style-type: none"> • Investments in the installation of electric vehicles charging infrastructure and in the purchase of electric vehicles 	11.2 Provide access to safe, affordable, accessible and sustainable transport systems	

⁵ Generation of energy from renewable sources in accordance with the German Renewable Energy Sources Act (EEG), as at least 50% of biogenic waste input, but not entitled to additional remuneration. Generation of heat is considered fully climate-friendly according to German Building Energy Act (GEG), negative carbon footprint possible.

⁶ <https://ec.europa.eu/jrc/en/news/new-eu-environmental-standards-waste-incineration>

3.2 Project Evaluation and Selection

EEW's strategic Steering Committee (the "Committee") will be responsible for overseeing the project evaluation and selection process and ensure selected projects comply with the eligibility criteria defined in the Use of Proceeds section and with EEW's Sustainability Policy. The strategic Steering Committee will meet on a quarterly basis.

The Committee will be responsible for:

- Reviewing and validating the selection of Eligible Projects based on the selection criteria defined in the Use of Proceeds section;
- Monitoring the Eligible Project Portfolio, throughout the life of the Green Financing Instruments;
- Removing from the Eligible Project Portfolio any projects that no longer meet the eligibility criteria, and replacing them with new Eligible Projects as soon as feasible.

EEW will strive to adapt this Framework and its eligibility criteria over time as the relevant standards further evolve.

3.3 Management of Proceeds

EEW intends to allocate an amount equivalent to the net proceeds raised from any Green Financing Instrument issued under this Framework to the Eligible Project Portfolio, selected in accordance with the criteria and evaluation and selection process presented above. EEW will manage the net proceeds from Green Financing Instruments issued under this Framework according to the Company's internal tracking and accounting systems.

EEW will strive to maintain a level of allocation for the Eligible Project Portfolio that matches or exceeds the balance of net proceeds from its outstanding Green Financing Instruments issued under this Framework.

Pending the full allocation to Eligible Projects, EEW commits to hold the balance of net proceeds not already allocated to Eligible Projects in EEW's treasury liquidity reserve and managed in accordance with the Company's cash management policies.

EEW intends to fully allocate the proceeds within 36 months after the issuance date of the Green Financing Instrument.

3.4 Reporting

Starting one year from issuance of any Green Financing Instrument, EEW will prepare and make readily available on the corporate website information on the allocation of net proceeds to the Eligible Project Portfolio, and will update that information annually, until full allocation. Wherever feasible, and until full allocation, EEW will also make available information on the environmental impact of the Eligible Project Portfolio.

The Allocation report will include:

- A list of Eligible Projects, including:
 - > A description of the project;
 - > The total amount of green financing proceeds allocated to each Eligible Project;
 - > The schedule;
- The share of new financing vs refinancing during the reporting period;
- Any unallocated balance.

The Impact report will include:

- A general description of selected Eligible Projects financed;
- Where available, metrics about the projects' impacts during the reporting period, such as:
 - > Estimated CO₂ emissions reduction (in tCO₂ equivalent/tons) per ton of waste processed;
 - > Estimated other emissions reduction per ton of waste processed
 - > Total power generated from renewable energy (solar PV) at plant sites (MWh)
 - > Number of EVs purchased;
 - > Number of EV charging stations installed.

EEW will include information on the methodology and assumptions used to measure such impact.

04

External Review

Second Party Opinion

EEW has appointed Sustainalytics to provide an independent Second Party Opinion (“SPO”) on this Framework. The SPO will be made publicly available on EEW’s corporate website at:

<https://www.eew-energyfromwaste.com>

Verification

In addition, starting one year after issuance of any Green Financing Instrument an independent external party will verify the internal tracking method and allocation of funds annually until full allocation of the outstanding Green Financing Instruments, confirming that an amount equal to the net proceeds of the Green Financial Instruments has been allocated in compliance with all material respects of the Eligible Projects criteria set forth in the Green Financing Framework.

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