

Metsä Group Green Finance Framework

EUR 100 million Green loan 2021 – 2026




Allocation and impact report




4 October, 2024

Green Bank Loan EUR 100 mln

Financed assets under the Loan consist of three target areas: Sustainable Water Management, Pollution Prevention and Control, and Renewable Energy

ELIGIBLE ASSETS AND PROJECTS

Green Bond Principles Categories	Metsä Group description of projects	Linkage to the UN SDGs
Renewable Energy	<p>Renewable energy means energy produced of the biomass generated from harvesting residues, or resource-efficient energy production from side streams of the bioproduct and pulp mills, sawmills and other mechanical wood engineering operations, board mills or tissue paper mills.</p> <p>Examples of eligible uses are projects that</p> <ul style="list-style-type: none"> increase the production or share of renewable energy instead of fossil-based energy renew the equipment or process for renewable energy production at mills 	
Energy Efficiency	<p>Energy efficiency projects develop production technology and processes to reduce the consumption of energy in relation to production.</p> <p>Examples of eligible uses are projects that</p> <ul style="list-style-type: none"> develop production processes to reduce energy consumption replace equipment with more energy efficient solutions. Typically, the improvement in these projects is over 25 % renew the production line entirely or partially to improve specific energy consumption per production develop the energy recovery of processes develop closed loop processes (e.g. water systems) are "Green field investments" for the production unit utilising best available technology (BAT) compared to the earlier practices. 	
Pollution Prevention and Control	<p>Projects related to improving the environmental performance of our operations as well as improving the utilisation of all resources.</p> <p>Examples of eligible uses are projects that</p> <ul style="list-style-type: none"> prevent and/or decrease emissions to air prevent and/or decrease emissions to water improve the utilisation of industrial side streams reduce the amount of landfill waste 	

Environmentally sustainable management of living natural resources and land use	<p>Projects that develop sustainable forest management practices, such as harvesting, regeneration and transportation of wood from sustainably managed forests.</p> <p>Examples of eligible uses are projects that</p> <ul style="list-style-type: none"> improve sustainable forest management practices and safeguard biodiversity based on international sustainable forest management schemes, such as PEFC and/or FSC increase the amount of carbon stored in forests 	
Sustainable Water (and waste water) Management	<p>Projects that improve sustainable use of water. Water is globally a key resource. Even though Metsä Group operates in areas with abundant surface water resources, we aim to reduce water use even further.</p> <p>Examples of eligible uses are projects that</p> <ul style="list-style-type: none"> reduce the intake of water and the use of process water improve the recycling and reuse of process water use cooling water to heat raw waters 	
Circular Economy Adapted Products, Production Technologies and Processes	<p>Projects that explore new sustainable, wood-based alternatives to be commercialised and to broaden the product portfolio of forest industry.</p> <p>Examples of eligible uses are projects that</p> <ul style="list-style-type: none"> take ideas from the R&D to production and full commercialisation enable more sustainable and more resource-efficient production. improve material efficiency 	

Kemi Bioproduct Mill, Allocation & Impact report of five industrial facilities financed by the Green Loan of 100 MEUR

- This report is published on 4th October, 2024
- Our target is to publish this Allocation & Impact report during the H1 of a financial year. However now in 2024, due to the explosion at the Kemi site evaporation facility in March 2024, any earlier reporting has not been possible
- The Green Loan, on the back of Kemi BTT green/sustainable facilities matures on 11th February, 2026. Funds have been allocated in full.
- Metsä Group sustainability issues can be followed also through our CSRD -reporting

Action Plan from November 2020; Green Bank Loan target assets and cost estimate

Assets for Green Bank Loan	Category under Metsä Group Sustainable Finance Framework	Estimated total investment
Effluent Treatment Plant	Sustainable Water (and waste water) Management	EUR 39.7m
Sulphuric Acid Plant	Pollution Prevention and Control, and/or Sustainable Water (and waste water) Management	EUR 15.6m
Cooling towers	Sustainable Water (and waste water) Management	EUR 18.1m
Total water preservation		EUR 73.4m
Bark drying and gasification	Renewable Energy	EUR 26.2m
Sludge handling and pelletizing	Pollution Prevention and Control, and/or Renewable Energy	EUR 16.1m
Total renewable energy		EUR 42.3m
Total		EUR 115.7m

Part 1: Sustainable water (and waste water) management

Financed assets:

- Effluent treatment plant
- Cooling towers

Category in Green Finance Framework: Sustainable water and waste water management

Two facilities financed at Kemi Bioproduct plant: Effluent Treatment Plant and Cooling Towers (1)

- **Effluent treatment plant**

- Estimated cost 39,7 M€. Realized cost: 63,7 M€
- Purpose: to reduce waste water load to the sea
- Analysis below:

Impact target, to achieve a value below the permit limits	Impact target, value	Realized target 2024	Analysis:
COD, chemical oxygen demand	< 30 000 kg/day → 25 000 kg/day	July 2024: 931 kg/day August 2024: 7532 kg/day	Achieved
P, phosphorous	< 30 kg/day → 20 kg/day	July 2024: 8,03 kg/day August 2024: 5,69 kg/day	Achieved
N, nitrogen	< 700 kg/day → >600 kg/day	July 2024: 170 kg/day August 2024: 191 kg/day	Achieved
TSS, total suspended solids	3000 kg/day	July 2024: 2565 kg/day August 2024: 2438 kg/day	Achieved

Category in Green Finance Framework: Sustainable water and waste water management

Two facilities financed at Kemi Bioproduct plant: Effluent Treatment Plant and Cooling Towers (2)

- **Cooling towers**

- Estimated cost 18,1 M€. Realized cost: 25,9 M€
- Purpose: to reduce water heat load to sea
- Impact target: 470 MW -> 20 MW. Total load heat load remains below the current level (130 MW)
- Realized impact: Achieved. Total heat load to the sea varies btw 5,5 – 10,1 Tj/month while permit limit is 4400 Tj/annum.

Part 2: Renewable Energy & Pollution Prevention and Control

Financed assets:

- Bark drying and gasification
- Sludge handling and pelletizing
- Sulphuric acid plant

Category in Green Finance Framework: Renewable energy & Pollution prevention and control

Three facilities financed at Kemi Bioproduct Plant as below:

- **Bark drying and gasification. Estimated cost 23,5 M€. Realized cost: 26,2 M€**
 - Purpose: Reduce Co2 emissions from fossil fuels
 - Impact target: fossil Co2/year emissions after investment to be zero tonnes Co2/year
 - Realized impact: Achieved. The Mill does not use fossil fuels.
- **Sludge handling and pelletizing. Estimated cost 16,1 M€. Realized cost: 33,8 M€**
 - Purpose: to reduce suspended solids to the sea and produce biopellets from the sludge
 - Impact: Suspended solids to the sea current 3000 kg/day. Suspended solids to the sea will not grow despite of the larger mill production volumes.
 - Realized impact: Achieved with some variance. The process is under constant development. Suspended solids amounts have stayed below 3000 kg/day. Examples: July 2024 2565 kg/day and August 2024 2438 kg/day.
- **Sulphuric acid plant (“SAP”). Estimated cost 15,6 M€. Realized cost: 16,4 M€**
 - Purpose: to reduce sulphate load to the sea
 - Impact: Reduces the use of purchased sulfuric acid 18 000 t/a (- 33 %) and sulfate emission 17 000 t/a
 - Realized impact: Process works, although the acid strength is under development. There have been some problems and damages in the technical application during 2024.

Allocation of funds per 30 June 2024

Eligible investments	Category in Green Finance Framework	Budgeted funds EUR millions	Final cost EUR millions	Completion % 30.6.2024
Effluent treatment plant	Sustainable Water (and waste water) Management	39,7	63,7	100
Sulphuric acid plant	Pollution prevention and control	15,6	16,4	100
Cooling towers	Sustainable Water (and waste water) Management	18,1	25,9	100
Bark drying and gasification	Renewable energy	26,2	23,5	100
Sludge handling and pelletizing	Pollution prevention and control	16,1	33,8	100
Total		115,7	163,3	

Category in Green Finance Framework	Budgeted expenses EUR millions	Final allocated proceeds EUR millions (of EUR 100m€ Green Term Loan)
Renewable energy (<i>Bark drying and gasification</i>)	23,5	23,2
Pollution prevention and control (<i>Sludge handling, Sulphur acid plant</i>)	50,2	50,2
Sustainable water (and waste water) management (<i>Effluent treatment, Cooling towers</i>)	57,8	89,6
Total expenses	115,7	163,3