



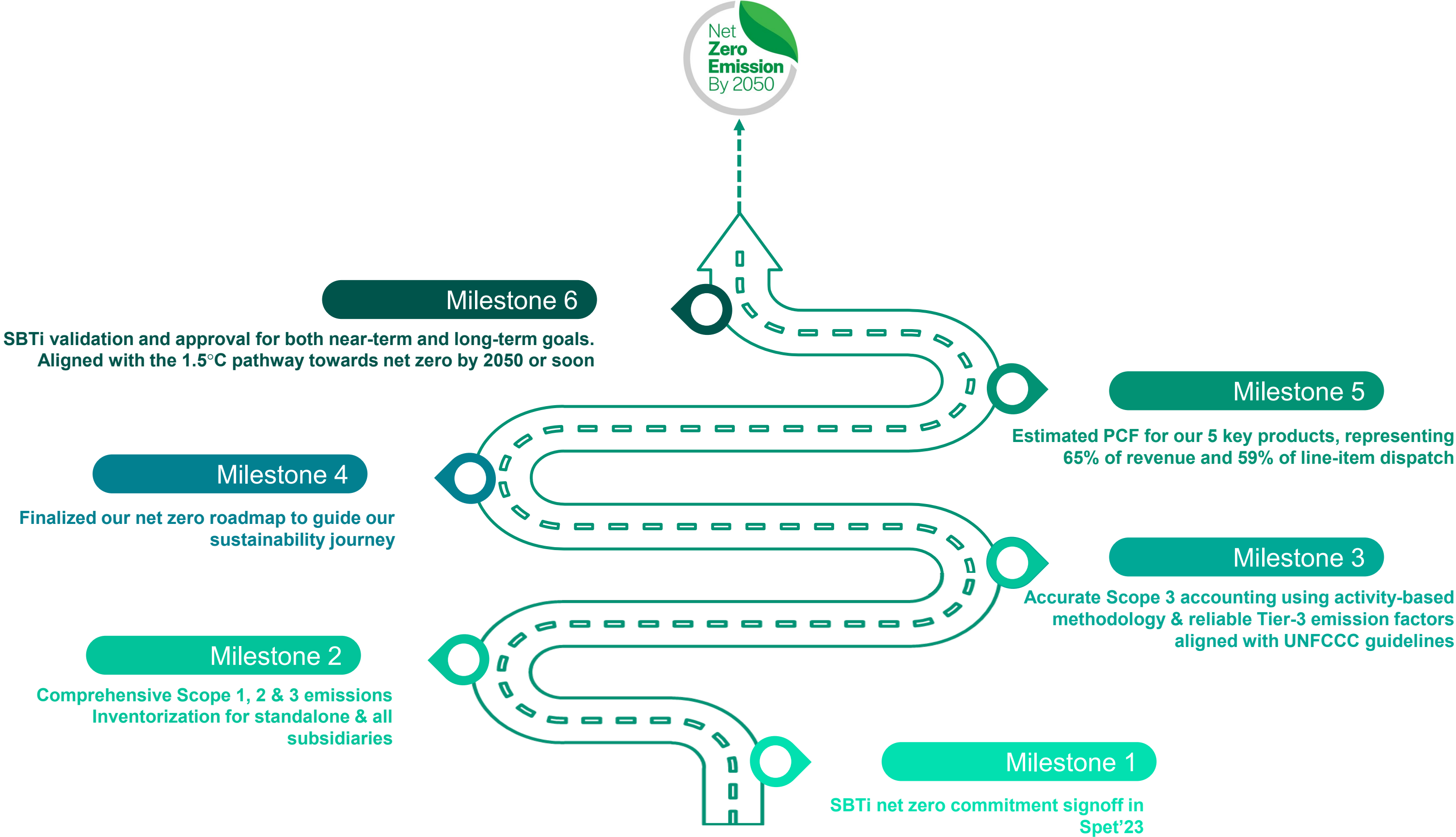
NET
ZERO

Decarbonization Strategy

Vision | Approach | Methodology

JUNE 2025

Our decarbonization vision



Our Carbon Footprint (FY23 (Base year) Vs FY 24 & FY 25

Granules GHG Emission Profile , tCo2 eq (Consolidated)		Emission Profile For FY 2022-23		
Scope	Emission Category	FY 22-23 (Base year)	FY 23-24	FY 24-25
Scope-1	Direct emissions from sources owned or controlled by a company (Coal, Fuels)	57,816	58,254	59,649
Scope-2 (Market-Based)	Indirect emissions from the generation of purchased energy (Electricity)	57,974	34,519	27,140
Scope-2((Location -Based)	Indirect emissions from the generation of purchased energy (Electricity)	64,101	63,078	68,435
Scope-1+2 (Market Based) Total		1,15,790	92,773	86,789
Scope-3	Category 1 - Purchased Goods & Services	4,96,689	5,19,808	3,77,620
Scope-3	Category 2 - Capital Goods	5,170	28,830	50,609
Scope-3	Category 3 - Fuel and Energy Related Activities	27,191	23,453	26,694
Scope-3	Category 4 - Upstream Transportation & Distribution	8,425	8,640	10,962
Scope-3	Category 5 - Waste Generated from Operations	4,618	3,721	2,204
Scope-3	Category 6 - Business Travel	332	931	491
Scope-3	Category 7 - Employee Commuting	1,790	2,089	1,667
Scope-3	Category 8 - Upstream Leased Assets	4,792	7,781	1,457
Scope-3	Category 9 - Downstream Transportation & Distribution	25,512	25,924	21,222
Scope-3	Category 10 - Processing of Sold Products	46,658	41,188	29,905
Scope-3	Category 11 - Use of Sold Products	-	-	0
Scope-3	Category 12 - End of Life Treatment of sold products	4,059	4,330	3,403
Scope-3	Category 13 - Downstream Leased Assets	-	-	0
Scope-3	Category 14 - Franchises	-	-	0
Scope-3	Category 15 - Investments	-	-	0
Scope-3 Total		6,25,236	6,66,694	5,26,234
Total Emissions - Scope 1 ,Scope 2 (marked Based) and Scope 3		7,41,026	7,59,467	6,13,023

Our Targets and Progress overview

Our Goals	Our Progress FY 23 (Base Year) Vs FY 25
<ul style="list-style-type: none">• Achieve Net Zero Emissions by 2050• Sourcing 100% renewable electricity by 2030• Reduce Scope 1,2 and Scope 3 absolute emissions by 42% by FY30 from FY 23 baseline	<p>Standalone Basis</p> <ul style="list-style-type: none">• 32.2 % - Scope1 and Scope2 Absolute Reduction Over base year FY 23• 23 % - Scope1 and Scope2 Intensity Reduction Over base year FY 23• 68.7 % - Share of Renewable Energy of Electricity Consumed (Including PPA & I-RECs as an interim strategy)
	<p>Consolidation Basis</p> <ul style="list-style-type: none">• 25 % - Scope1 and Scope2 Absolute Reduction Over base year FY 23• 15.8 % - Scope3 Absolute Reduction Over base year FY 23• 17.27% % - Scope1,2 and Scope 3 absolute Reduction Over base year FY 23

Our Carbon Footprint (FY 24-25)

Scope	Emission Category	GIL Standalone	GPI	GUSA	GLS	GCZRO	All subsidiaries of GIL	GIL Consolidated
Scope-1	Direct emissions from sources owned or controlled by a company (Coal, Fuels)	57,414	1,893	145	155	42	2,235	59,649
Scope-2 (Market-Based)	Indirect emissions from the generation of purchased energy (Electricity)	18,853	1,642	349	5,963	333	8,287	27,140
Scope-1+2 Total		76,267	3,535	494	6,118	375	10,522	86,789
Scope-3	Category 1 - Purchased Goods & Services	3,60,046	2,016	1,410	2,519	11,629	17,574	3,77,620
Scope-3	Category 2 - Capital Goods	17,521	2,352	151	29,324	1,261	33,088	50,609
Scope-3	Category 3 - Fuel and Energy Related Activities	24,196	700	111	1,590	97	2,498	26,694
Scope-3	Category 4 - Upstream Transportation & Distribution	8,488	82	168	2,201	23	2,474	10,962
Scope-3	Category 5 - Waste Generated from Operations	2,074	52	29	48	1	130	2,204
Scope-3	Category 6 - Business Travel	377	50	36	4	24	114	491
Scope-3	Category 7 - Employee Commuting	1,064	316	227	57	3	603	1,667
Scope-3	Category 8 - Upstream Leased Assets	341	954	162	-	-	1,116	1,457
Scope-3	Category 9 - Downstream Transportation & Distribution	20,648	288	187	99	-	574	21,222
Scope-3	Category 10 - Processing of Sold Products	29,905	-	-	-	-	-	29,905
Scope-3	Category 11 - Use of Sold Products	-	-	-	-	-	-	-
Scope-3	Category 12 - End of Life Treatment of sold products	3,402	0.205	-	0.327	-	1	3,403
Scope-3	Category 13 - Downstream Leased Assets	-	-	-	-	-	-	-
Scope-3	Category 14 - Franchises	-	-	-	-	-	-	-
Scope-3	Category 15 - Investments	-	-	-	-	-	-	-
Scope-3 Total		4,68,062	6,810	2,481	35,842	13,038	58,172	5,26,234
Total Emission-Scope-1,2 and 3		5,44,329	10,345	2,975	41,960	13,413	68,694	6,13,023

Our SBTi Target Approval

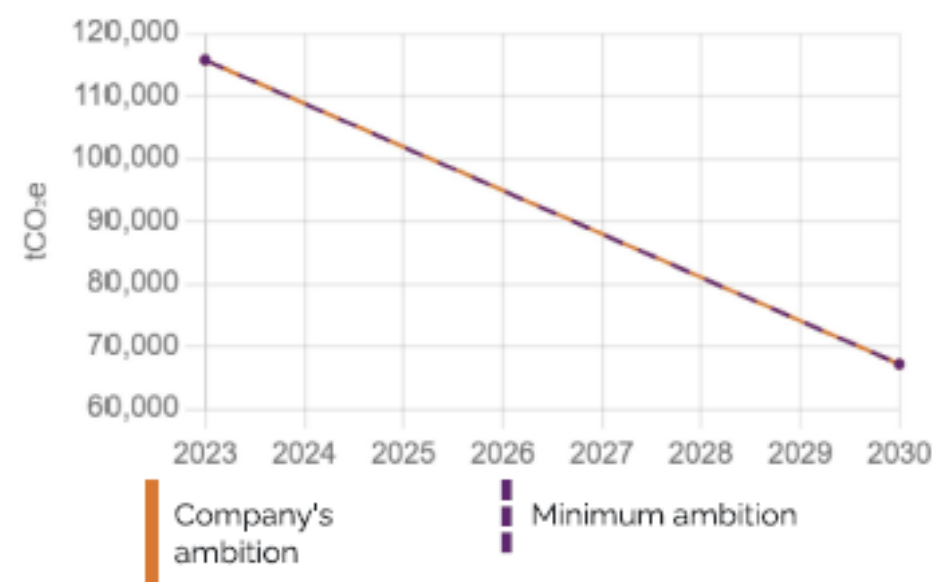
OVERVIEW OF NEAR-TERM SCIENCE-BASED TARGETS

GRANULES INDIA LIMITED commits to reduce absolute scope 1 and 2 GHG emissions 42% by FY2030 from a FY2023 base year.* *The target boundary includes land-related emissions and removals from bioenergy feedstocks.

Public: Yes

Temperature classification: 1.5°C

ABSOLUTE EMISSIONS



Target Coverage

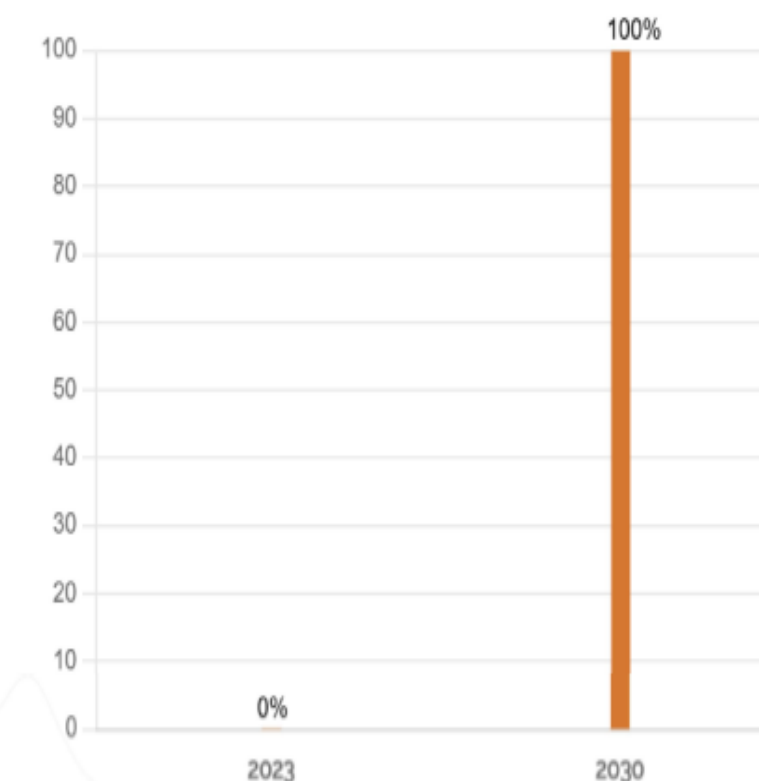
GHG Inventory breakdown	Minimum boundary emissions	Outside minimum boundary	Biogenic Total
Scope 1	100.00%	N/A	N/A
Scope 2 market-based	100.00%	N/A	N/A
Scope 3 total	0.00%	N/A	N/A
1. Purchased goods and services	N/A	N/A	N/A
2. Capital goods	N/A	N/A	N/A
3. Fuel- and energy-related activities	N/A	N/A	N/A
4. Upstream transportation and distribution	N/A	N/A	N/A
5. Waste generated in operations	N/A	N/A	N/A
6. Business travel	N/A	N/A	N/A
7. Employee commuting	N/A	N/A	N/A
8. Upstream leased assets	N/A	N/A	N/A
9. Downstream transportation and distribution	N/A	N/A	N/A
10. Processing of sold products	N/A	N/A	N/A
11. Use of sold products	N/A	N/A	N/A
12. End-of-life treatment of sold products	N/A	N/A	N/A
13. Downstream leased assets	N/A	N/A	N/A
14. Franchises	N/A	N/A	N/A
15. Investments	N/A	N/A	N/A

OVERVIEW OF NEAR-TERM SCIENCE-BASED TARGETS

GRANULES INDIA LIMITED also commits to increase active annual sourcing of renewable electricity from 0% in FY2023 to 100% in FY2030.

Public: Yes

RENEWABLE ELECTRICITY PROCUREMENT TARGETS



Our SBTi Target Approval

OVERVIEW OF LONG-TERM SCIENCE-BASED TARGETS

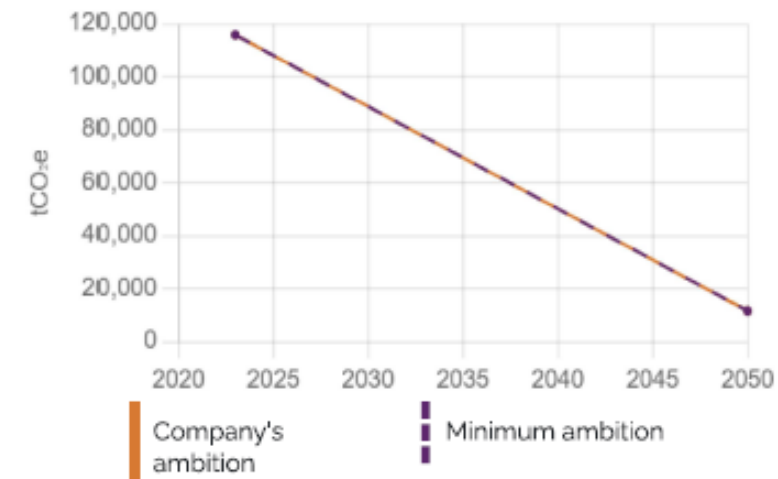
GRANULES INDIA LIMITED commits to reduce absolute scope 1 and 2 GHG emissions 90% by FY2050 from a FY2023 base year.* *The target boundary includes land-related emissions and removals from bioenergy feedstocks.

Public: Yes Sector pathway: Cross-sector pathway

Temperature classification: 1.5°C

Target Coverage

ABSOLUTE EMISSIONS



GHG Inventory breakdown	Minimum boundary emissions	Outside minimum boundary	Biogenic Total
Scope 1	100,00%	N/A	N/A
Scope 2 market-based	100,00%	N/A	N/A
Scope 3 total	0,00%	N/A	N/A
1. Purchased goods and services	N/A	N/A	N/A
2. Capital goods	N/A	N/A	N/A
3. Fuel- and energy-related activities	N/A	N/A	N/A
4. Upstream transportation and distribution	N/A	N/A	N/A
5. Waste generated in operations	N/A	N/A	N/A
6. Business travel	N/A	N/A	N/A
7. Employee commuting	N/A	N/A	N/A
8. Upstream leased assets	N/A	N/A	N/A
9. Downstream transportation and distribution	N/A	N/A	N/A
10. Processing of sold products	N/A	N/A	N/A
11. Use of sold products	N/A	N/A	N/A
12. End-of-life treatment of sold products	N/A	N/A	N/A
13. Downstream leased assets	N/A	N/A	N/A
14. Franchises	N/A	N/A	N/A
15. Investments	N/A	N/A	N/A

OVERVIEW OF LONG-TERM SCIENCE-BASED TARGETS

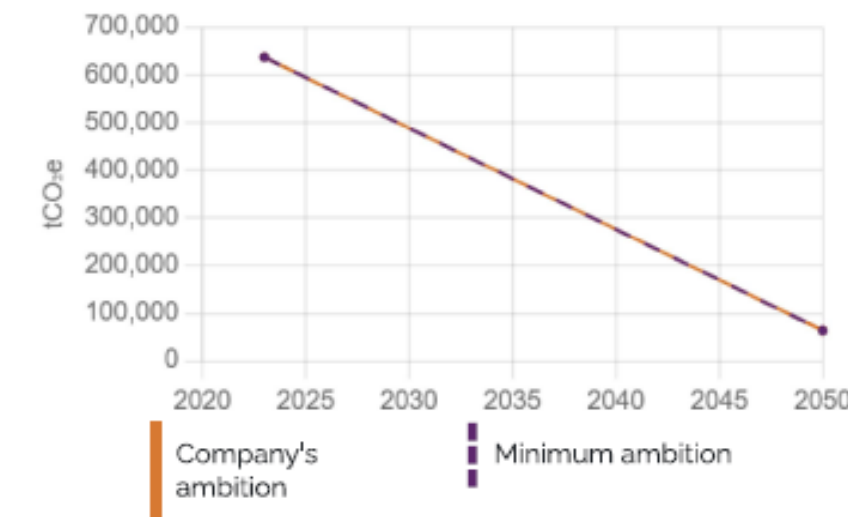
GRANULES INDIA LIMITED also commits to reduce absolute scope 3 GHG emissions 90% within the same timeframe.

Public: Yes Sector pathway: Cross-sector pathway

Temperature classification: N/A

Target Coverage

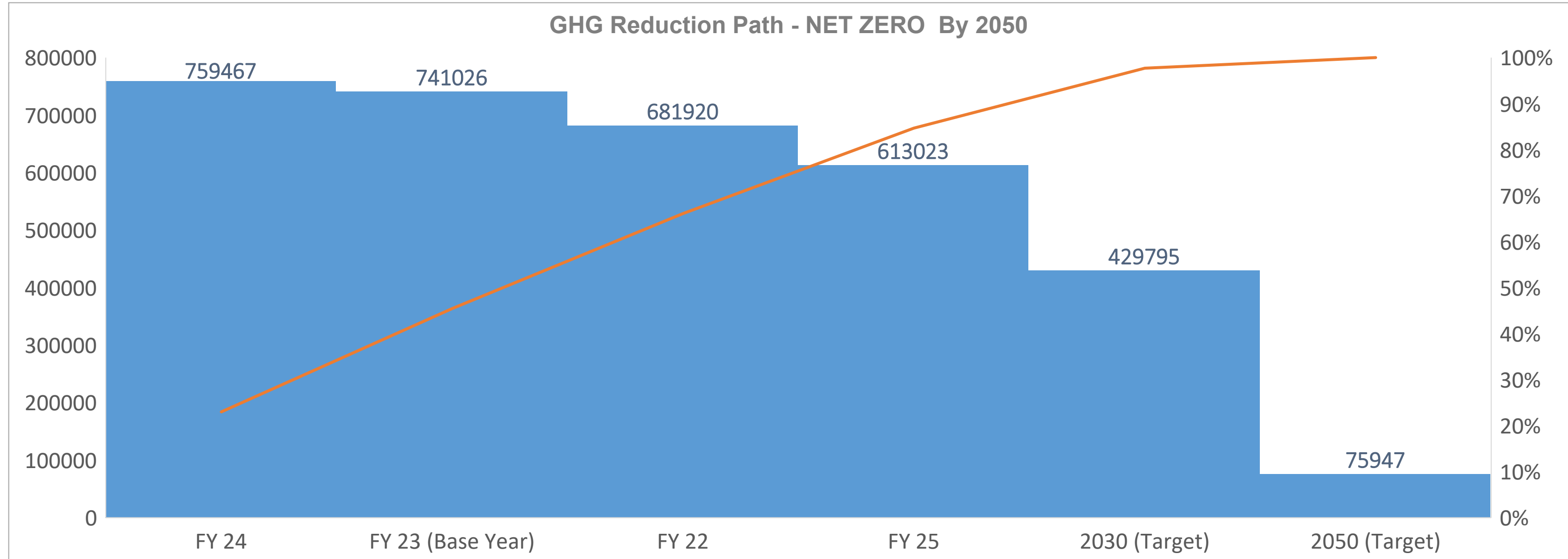
ABSOLUTE EMISSIONS



GHG Inventory breakdown	Minimum boundary emissions	Outside minimum boundary	Biogenic Total
Scope 1	N/A	N/A	N/A
Scope 2 market-based	N/A	N/A	N/A
Scope 3 total	100,00%	N/A	N/A
1. Purchased goods and services	100,00%	N/A	N/A
2. Capital goods	100,00%	N/A	N/A
3. Fuel- and energy-related activities	100,00%	N/A	N/A
4. Upstream transportation and distribution	100,00%	N/A	N/A
5. Waste generated in operations	100,00%	N/A	N/A
6. Business travel	100,00%	N/A	N/A
7. Employee commuting	100,00%	N/A	N/A
8. Upstream leased assets	100,00%	N/A	N/A
9. Downstream transportation and distribution	100,00%	N/A	N/A
10. Processing of sold products	100,00%	N/A	N/A
11. Use of sold products	N/A	N/A	N/A
12. End-of-life treatment of sold products	100,00%	N/A	N/A
13. Downstream leased assets	N/A	N/A	N/A
14. Franchises	N/A	N/A	N/A
15. Investments	N/A	N/A	N/A

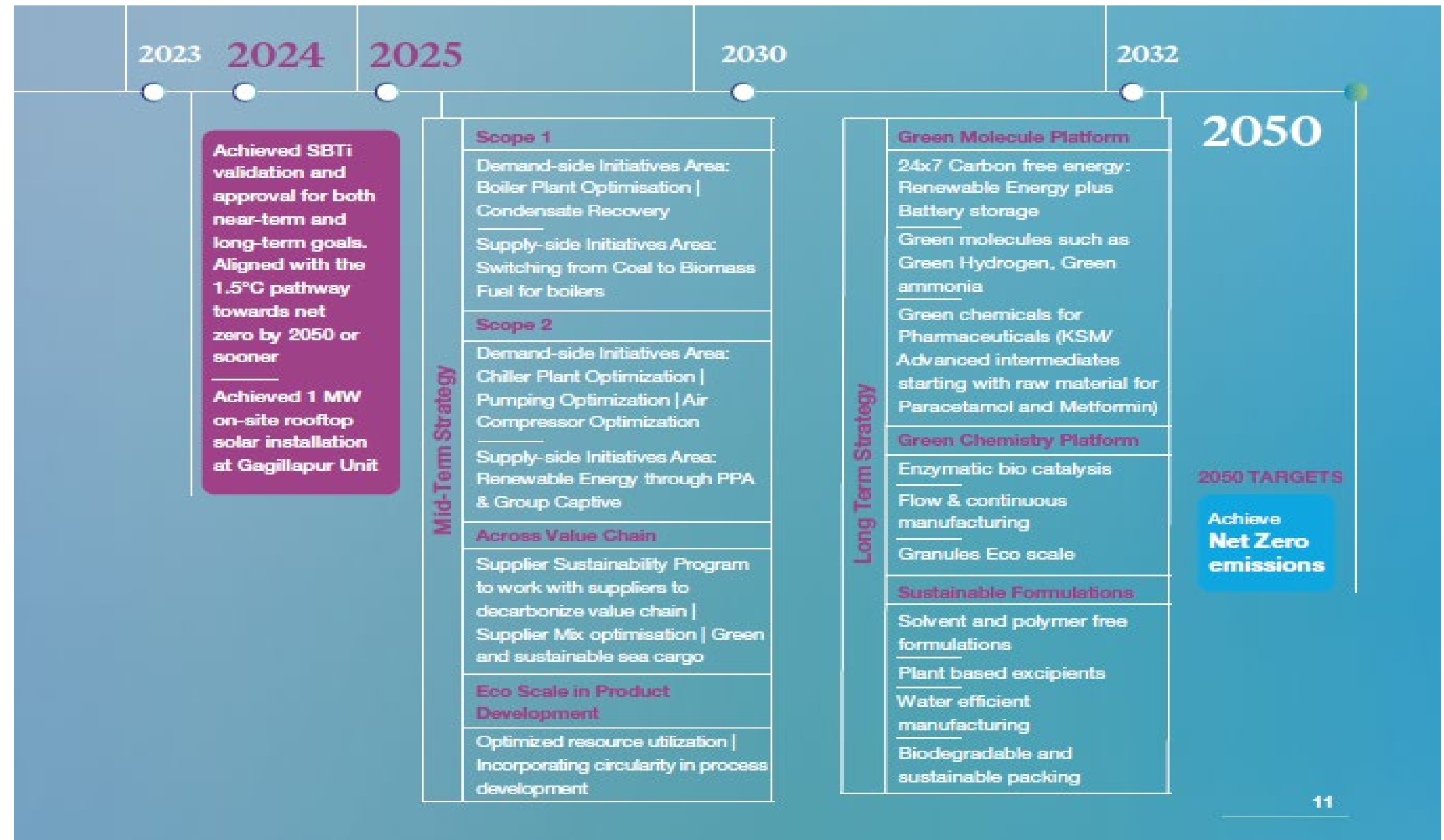
Our Net Zero Road map

Emission Category	FY 22	FY 23 (Base Year)	FY 24	FY 25	2030 (Target)	2050 (Target)
Scope 1	56262	57816	58254	59649	33533	5825
Scope 2 (Market Based)	45470	57974	34519	27140	33625	3452
Scope 1+2 (Market based)	101732	115790	92773	86789	67158	9277
Scope 3	580188	625236	666694	526234	362637	66669
Scope 1+2+3	681920	741026	759467	613023	429795	75947



Our Decarbonization Action Plan:

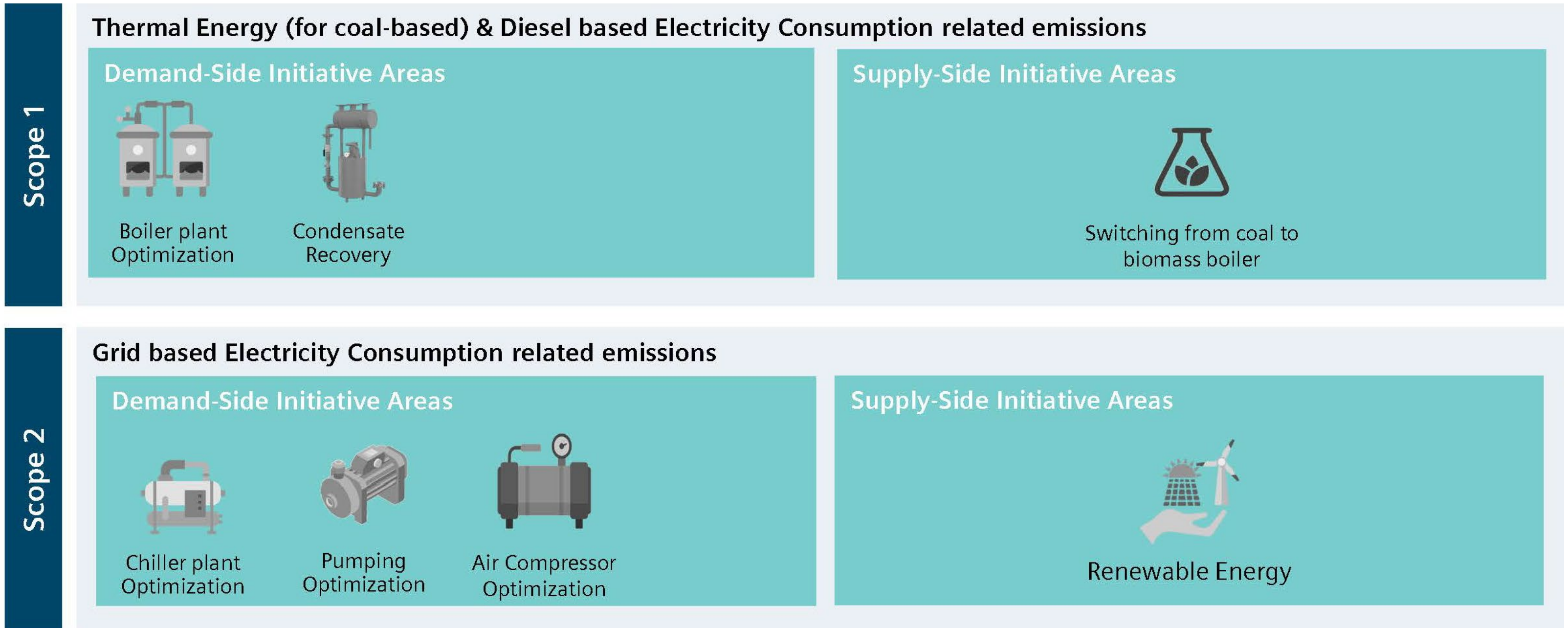
To reduce Scope 1 and Scope 2 GHG emissions a balanced approach of supply-side and demand-side initiatives has been identified to support decarbonization till 2030. It identifies that beyond 2030 a high green energy support will be needed to meet the decarbonization goals. This strategy is based on a detailed study at the Bonthapally and Gagillapur facilities, where the primary sources of emissions are coal-fired boilers and grid electricity. Granules will utilize a similar approach for other operational locations.



Our Decarbonization Action Plan:

Addressing Scope 1 and Scope 2 emissions

To reduce Scope 1 and Scope 2 GHG emissions a balanced approach of supply-side and demand-side initiatives has been identified to support decarbonization till 2030. It identifies that beyond 2030 a high green energy support will be needed to meet the decarbonization goals. This strategy is based on a detailed study at the Bonthapally and Gagillapur facilities, where the primary sources of emissions are coal-fired boilers and grid electricity. Granules will utilize a similar approach for other operational locations.



Our Decarbonization Action Plan:

Addressing Scope 3 emissions - Various levers identified

Category	Recommended initiatives	Carbon reduction impact	Implementation time	Feasibility
Cat 1: Purchased Goods & Services	Supplier Mix Optimization	High	Medium	High
	Scope 1/2 Targets	High	Low	Medium
	Sustainable Packaging	Low	Medium	Low
Cat 3: Fuel & Energy Related Activities	Emissions savings due to coal savings from FIMs	Medium	Low	High
	Emissions savings due to electricity savings from FIMs	Low	Low	High
	Emission savings due to grid decarbonization	High	High	High
Cat 4: Upstream T&D	Consolidating Shipments			
	Utilizing Multi-Modal Transportation			
Cat 5: Waste	Reduction of non-hazardous paper waste	Low	High	Medium
Cat 6: Business Travel	Optimize Mode of Travel	Low	Low	High
	Green Travel Options	Low	Low	High
Cat 7: Employee Commute	Flexible Working Hours	Low	Low	High
	Carpooling & Shared Mobility	Low	Low	High
	Offer EV charging Infra and Leasing Options for EV Adoption	Low	Medium	High
	EV Fleet for company buses / cars	Low	Medium	High
Cat 8: Upstream Leased Assets	Integrate renewable energy and implement BMS	Low	Medium	Medium
Cat 9: Downstream T&D	Transition of shipment mode from air to sea	Medium	High	Low
	Consolidation of container utilization	Low	High	Low
	Shift to EVs	Low	High	Low

Our Decarbonization Action Plan:

Pioneering Green Science (3-Pillar approach)

Green Molecule Platform



GRANULES
CZRO

Building our flagship green pharmaceutical plant

Green molecules

Such as Hydrogen (H_2), Ammonia (NH_3), Nitric acid (HNO_3) and Methanol (CH_3OH)



Built-in circularity

Green Chemistry



Granules eco-scale for product development



Enzyme and bio transformation for resource-efficient processes



Flow technology and continuous manufacturing platform

Sustainable Formulations



Plant-based excipients



Solvent/Polymer-free formulations



Water-efficient manufacturing



Biodegradable & sustainable packing

Our Decarbonization Action Plan:

Pioneering Green Science (Pillar-1)

Green Molecules platform

Energy

Renewable Power

Pumped Hydro Storage

24/7 CARBON FREE ENERGY

Molecule

Electrolyzer

Oxygen (O_2)

Green Hydrogen (H_2)

Atmospheric Nitrogen (N)

Carbon Capture

CHEMICAL FEEDSTOCK

Green Ammonia (NH_3)

Oxygen (O_2)

Green Methanol (CH_3OH)

Green Nitric Acid (HNO_3)

Chemical

KSM & Intermediates

Para Amino Phenol (PAP)

Acetic Anhydride (AA)

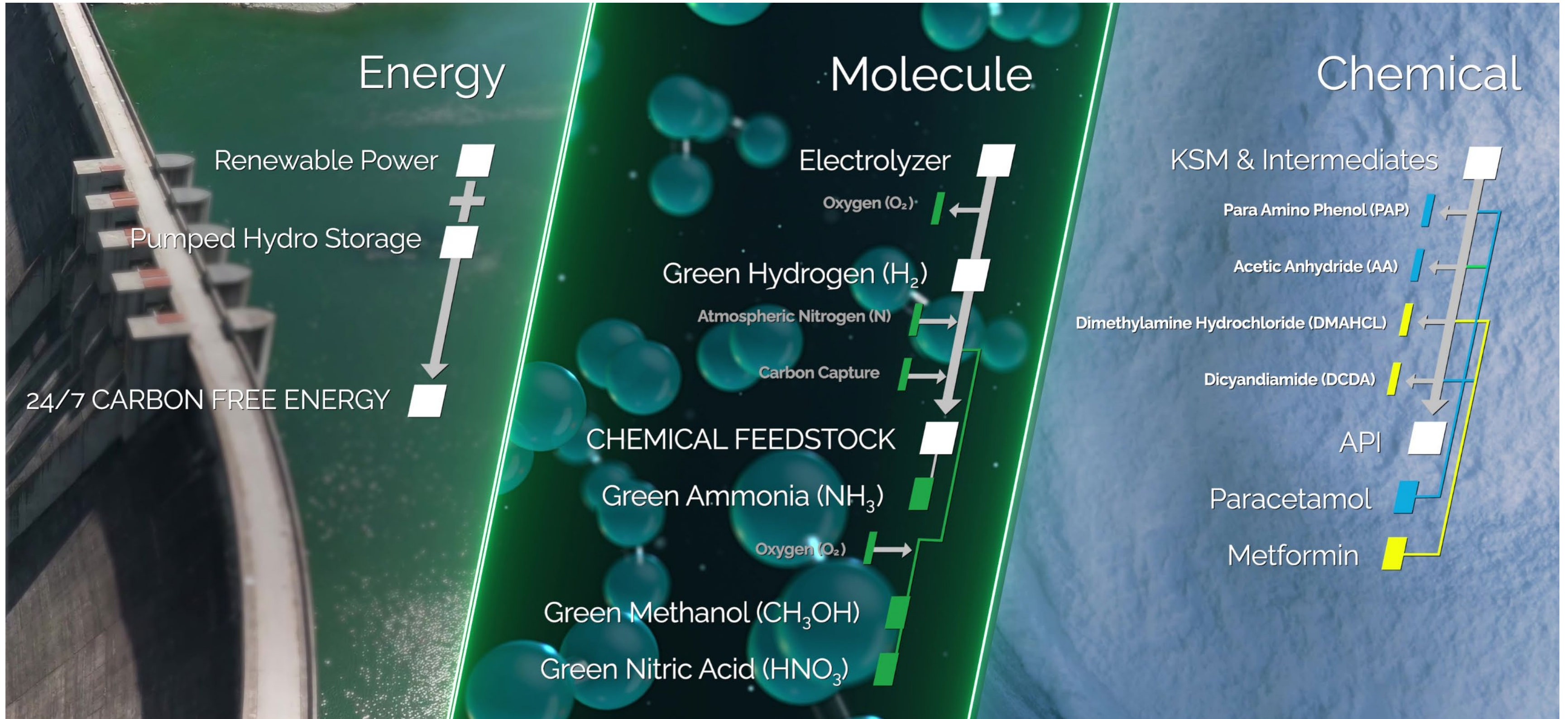
Dimethylamine Hydrochloride (DMAHCL)

Dicyandiamide (DCDA)

API

Paracetamol

Metformin



Our Decarbonization Action Plan:

Pioneering Green Science (Pillar-2)

Green Chemistry

Product

Granules **ECO SCALE**

6 Parameters and 38 sub-parameters
at every stage of the reaction

Atom Economy

Atom Efficiency

Safer Process

Reduced Effluent
& Waste

Improved Yield

Process

Enzymatic Bio
Transformation

Greater Selectivity

Low Pressure
& Temperature

Resource Efficiency

Technology

Flow & Continuous
Manufacturing

Lower Carbon Footprint

Efficient Heat
& Mass Transfer

Safe & Faster Operation

Our Decarbonization Action Plan:

Pioneering Green Science (Pillar-3)

Sustainable Formulations



Plant-Based
Excipients



Solvent-Polymer
Free Formulations



Water-Efficient
Manufacturing



Biodegradable &
Sustainable Packing

Our Decarbonization Action Plan: Supplier Sustainability Program





Our Supplier Engagement Approach


Our Decarbonization Action Plan:


Supplier Sustainability Program

Our Ask to Supplier Commitment

- 

1. Disclose Carbon Footprint
Disclose Scope 1, 2, and 3 emissions related to Granules business by the end of 2024.
- 

2. Commitment to Science Based Target Initiative (SBTi)
Develop and submit a science-based target to the SBTi by the end of 2025.
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3. Declare Product Carbon Footprint (PCF)
Provide Product carbon footprint (PCF) for products and facilities for business with Granules.
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4. Commit to Accelerating Renewable Energy Adoption
Increase renewable energy in the electricity purchase and to 100% renewable energy within next 5 years.

We have rolled out the supplier sustainability program for top suppliers covering the more than 80 % of our purchase value.



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