

Addendum to “6.1.1.2 CO2 Management Review 2018”

Update done in February 2022

Author: Lauriane Avril, Group Sustainability Manager

Informed & Signing off the 2020 – full year results and the 2021 – half year results & Performance

Commercial Waste NL:

- Lucas van de Weijer, Director SHEQ CW NL
- Alice Schimmelpenninck, Sustainability Manager CW NL
- Peter Kralt, SHEQ Manager Organics

Specialities:

- Albert van Veldhuizen, SHEQ Manager Coolrec
- Marco Goverde, SHEQ Manager Maltha

Mineralz&Water

- Jacques de Jong – Director Compliance M&W
- Ulbe Noordenbos, SHEQ Manager M&W

Group:

- Bas Van Ginkel, Director Strategy & Business Development
- Jeanine Peppink – Van der Sterren – Group SHEQ Director

*

<h2>Table of content</h2>

Contents

1	Introduction.....	3
1.1	Introduction.....	3
1.2	Change of Renewi legal’s organization in April 2020	3
1.3	Improving the CO2 reporting system & Internal Ways of working.....	3
1.4	CO2 Results.....	4
1.4.1	Renewi Netherlands - CO2 results by end 2020.....	4
1.4.2	Commercial Waste NL - CO2 results by end 2020.....	6
1.4.3	Mineralz&Water - CO2 results by end 2020.....	6
1.4.4	Specialities - CO2 results by end 2020.....	8
1.4.5	End 2020 – Conclusion by Management team.....	11
1.4.6	Renewi Netherlands - CO2 results by end H1 2020	11
1.4.7	End 2021 – beg.2022: Conclusion by Management team.....	12
2	2021 CO2 Reduction targets	13
2.1	Targets – on both scope 1 & 2 – in previous REPORT // with previous organization	13
2.2	Targets are unchanged on both scope 1 & 2 despite the change of organization in Renewi. 13	
2.3	2022 and 2025 targets: A continuous ambition to Reduce Renewi’s Carbon footprint.	14
3	2020 and 2021 – Overview of projects.....	15

1 | Introduction

1.1 Introduction

In January 2022, Renewi NL runs for the CO2 Performance ladder re-certification.

Data provided for the audit are of the **calendar year 2020** and of **H1-2021** – as results of calendar year 2021 are not yet fully available. Each year, it takes more than a month for Renewi to gather & assemble all CO2 related data.

Renewi Group publishes Financial & Sustainable reports on financial year – which are different from calendar year.

Financial year for Renewi is from 1st of April Year 0 – to end of March of Year 1.

In the CO2 performance ladder certification of next year (2023), we will stop reporting in calendar year for the CO2 Performance ladder. We will start reporting data in Financial year. The baseline will be renewed accordingly.

1.2 Change of Renewi legal's organization in April 2020

In April 2020, Renewi Group went through a reorganization of its entities. As presented in the 2 excel file about Boundaries of this audit (“overview of locations” and “overview of juridical entities”, Renewi has now 3 “newly named divisions” operating in The Netherlands:

- **Commercial Waste Netherlands (CW NL)**
- **Mineralz & Water (M&W)**
- **Specialities** (with in scope in NL 2 of the 3 sub divisions: Coolrec & Maltha)

In order to track & follow up CO2 performance in time (since reporting year 2016), the reporting frame of the new organization has been applied “retrospectively” to previous reporting year. This will change 2016 baseline but will allow “like for like” comparison between reporting years.

1.3 Improving the CO2 reporting system & Internal Ways of working

A new sustainability network

End 2021, there have been some changes in the sustainability network of Renewi. A new Group Sustainability Manager has been appointed (Lauriane Avril). The function now reports to the Strategy & business Development Director (Bas van Ginkel). This will enable to bring more sustainability topics within key strategic discussions at company level and as well a more regular focus on KPIS progresses VS Targets. Furthermore, Sustainability topics are now monthly brought to the agenda of the monthly executive committee steering meeting.

There will be soon officially named one Sustainability leader per division or sub division. This new structure will enable each division/sub division to have full ownership & responsibility of the data. Internally: this will bring more traction & visibility around division/ sub divisions reporting and tracking progresses.

More awareness// more accuracy – already from January 2022

For the first time, a complete project team was assembled in order to gather/collect/ generate key documents & reports. The team is made of the Group Sustainability Manager and the newly appointed Divisional Sustainability leader(s) or Divisional SHEQ manager.

This exercise was beneficial to the team and to Renewi's reporting as some gaps/mistakes or incoherence's of previous year's reporting were detected and thus corrected. Renewi has now a better

grip of it's CO2 eq. emission's reporting. And the "Sustainability reporting Guidelines" of Renewi are therefore updated to capture the learnings.

Improved reporting tool

As of today, the CO2 data of Renewi are tracked through Excel documents. It is also part of the short term/midterm plans of Renewi to get a new reporting tool. This will facilitate the reporting process and bring visibility on history (any retrospective changes and modifications of data).

Looking at 2023 CO2 Performance ladder certification:

- Renewi Group publishes Financial & Sustainable reports on financial year – which are different from calendar year. Financial year for Renewi are: from 1st of April Year 0 – to end of March of Year 1.
- As of next year, we will stop reporting in calendar year for the CO2 Performance ladder. We will start reporting data in Financial year. So the baseline will be renewed accordingly.

1.4 CO2 Results

1.4.1 Renewi Netherlands - CO2 results by end 2020

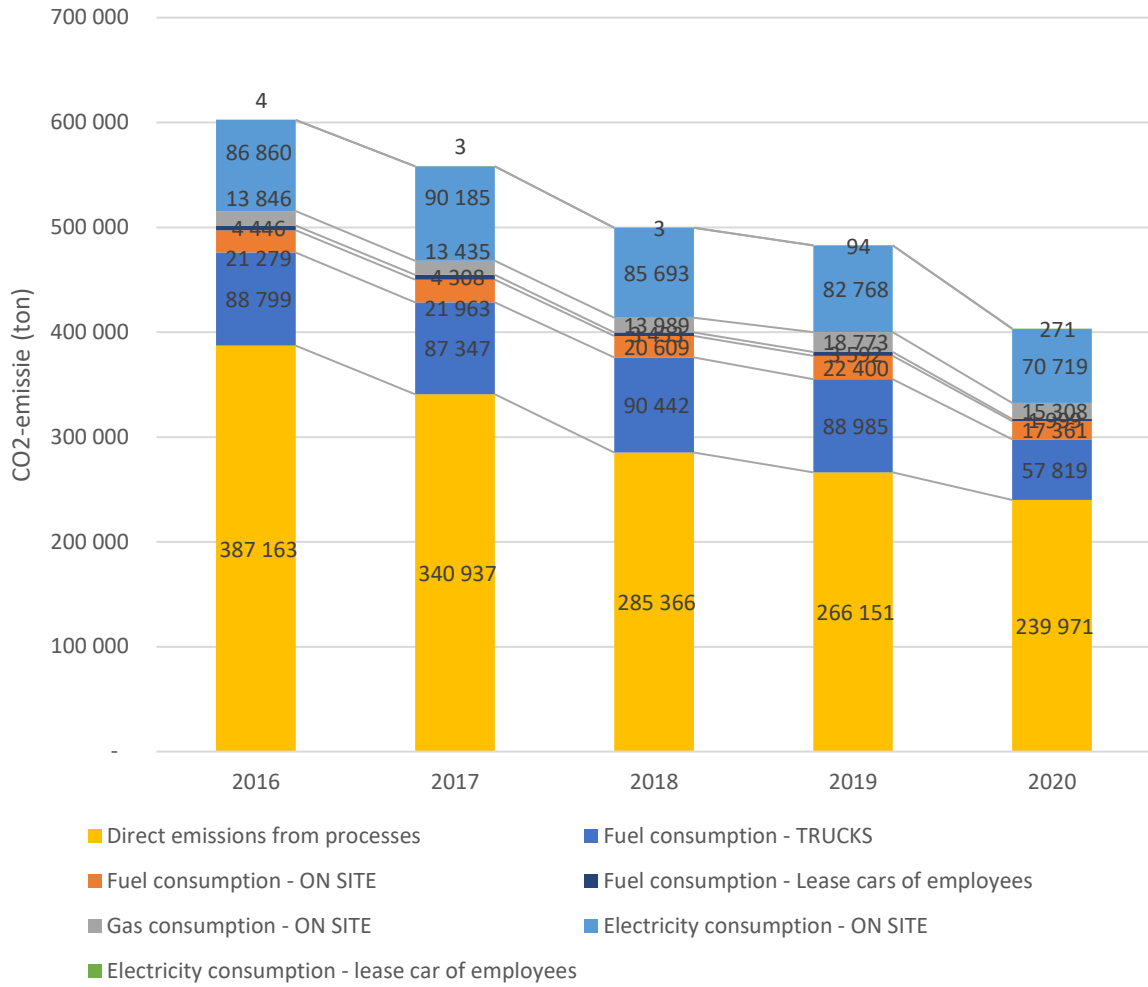
Renewi Netherlands Holding b.v.							
	2016	2017	2018	2019	2020	Difference 17/20	% between 17 & 20
Direct emissions from processes	387 163	340 937	285 366	266 151	239 971	-100 965	-29,6%
Fuel consumption - TRUCKS	88 799	87 347	90 442	88 985	57 819	-29 528	-33,8%
Fuel consumption - ON SITE	21 279	21 963	20 609	22 400	17 361	-4 602	-21,0%
Fuel consumption - Lease cars of employees	4 446	4 308	3 453	3 592	1 999	-2 310	-53,6%
Gas consumption - ON SITE	13 846	13 435	13 989	18 773	15 308	1 874	13,9%
Electricity consumption - ON SITE	86 860	90 185	85 693	82 768	70 719	-19 466	-21,6%
Electricity consumption - lease car of employees	4	3	3	94	271	268	8348,2%
Total	602 397	558 178	499 555	482 763	403 448	-154 730	-27,7%
	2016	2017	2018	2019	2020	Difference 17/20	% between 17 & 20
Scope 1	515 532	467 990	413 858	399 901	332 458	-135 532	-29,0%
Scope 2	86 865	90 188	85 697	82 862	70 990	-19 198	-21,3%

Remarks: Total reporting of year 2016, 2017, 2018 and 2019 are slightly different from previous reports as the following changes have been implemented:

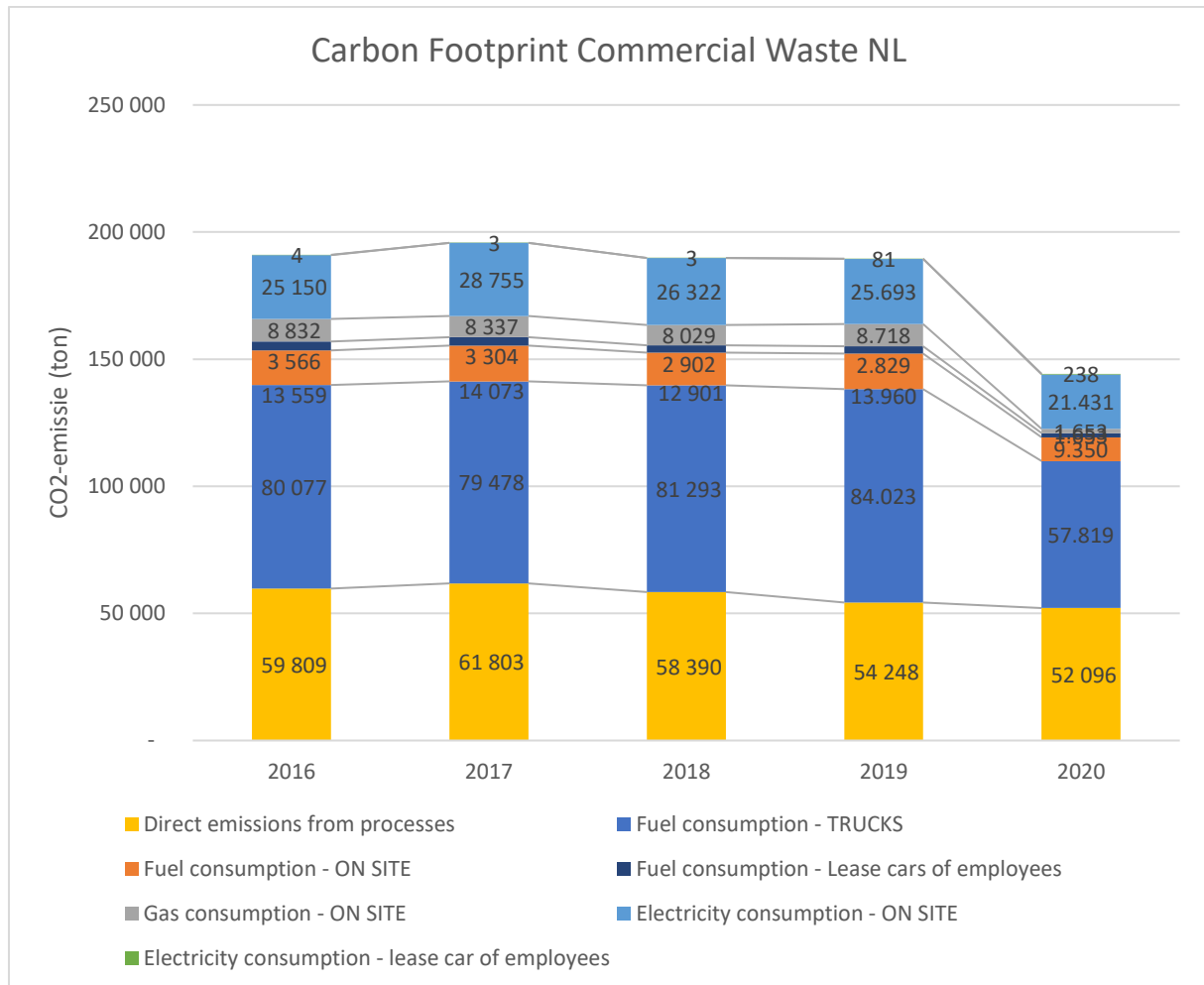
- During the CO2 performance ladder audit of January 2022, it was identified that 1 entity within Commercial Waste NL didn't have it's electricity bills being reported. This has been modified and added since 2016.
- Split of carbon em. From employees' cars (both fuel & electricity) between Scope 1 & 2 as per official guidelines (electricity is scope 2)

Since 2017, Renewi Netherlands Holding BV has succeeded to decrease its overall CO2 emissions by 27% (between 2017 & 2020). As per the graph below, we can see clearly that a significant decrease of 1) "Renewi's direct emissions from processes" and 2) "Fuel consumption with TRUCKS" do play a major role.

Carbon Footprint Renewi Netherlands Holding b.v.



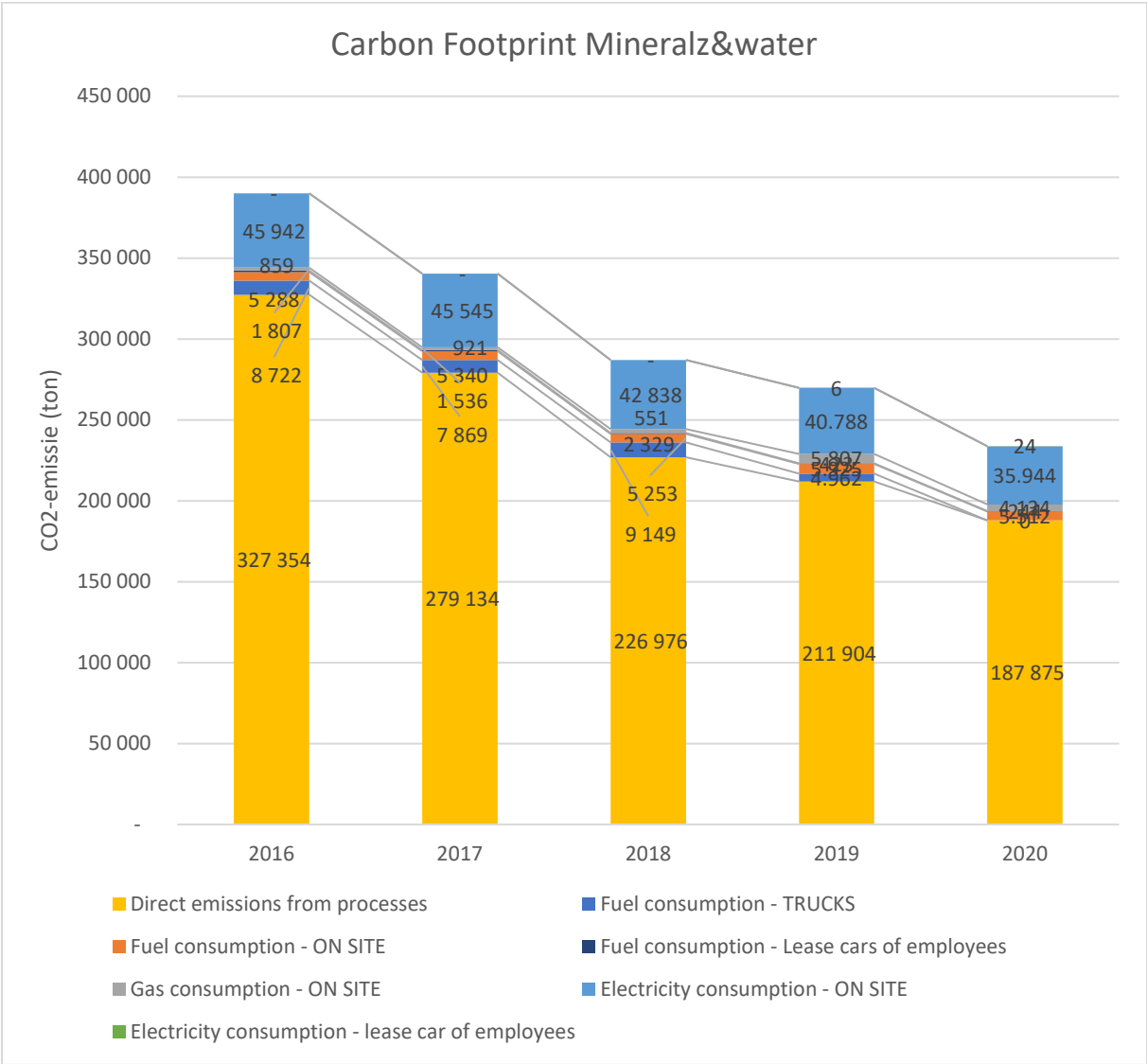
1.4.2 Commercial Waste NL - CO2 results by end 2020



Key contributors to the CO2 eq. emission reduction in CW NL:

- Total diesel consumption (fleet/Trucks and on-site vehicles) decreased by almost 10 % compared to 2019. Which is due to:
 - o Modernization of the fleet (since 2018 almost 800 Euro 6 trucks were purchased),
 - o COVID pandemic (less truck movements in some sectors),
 - o Replacement of equipment (electrical vs fossil driven).
- Decrease in electricity consumption due to Covid-19.
- Decrease gas consumption on sites due to decreased production by Icopower (-600.000 m3).

1.4.3 Mineralz&Water - CO2 results by end 2020

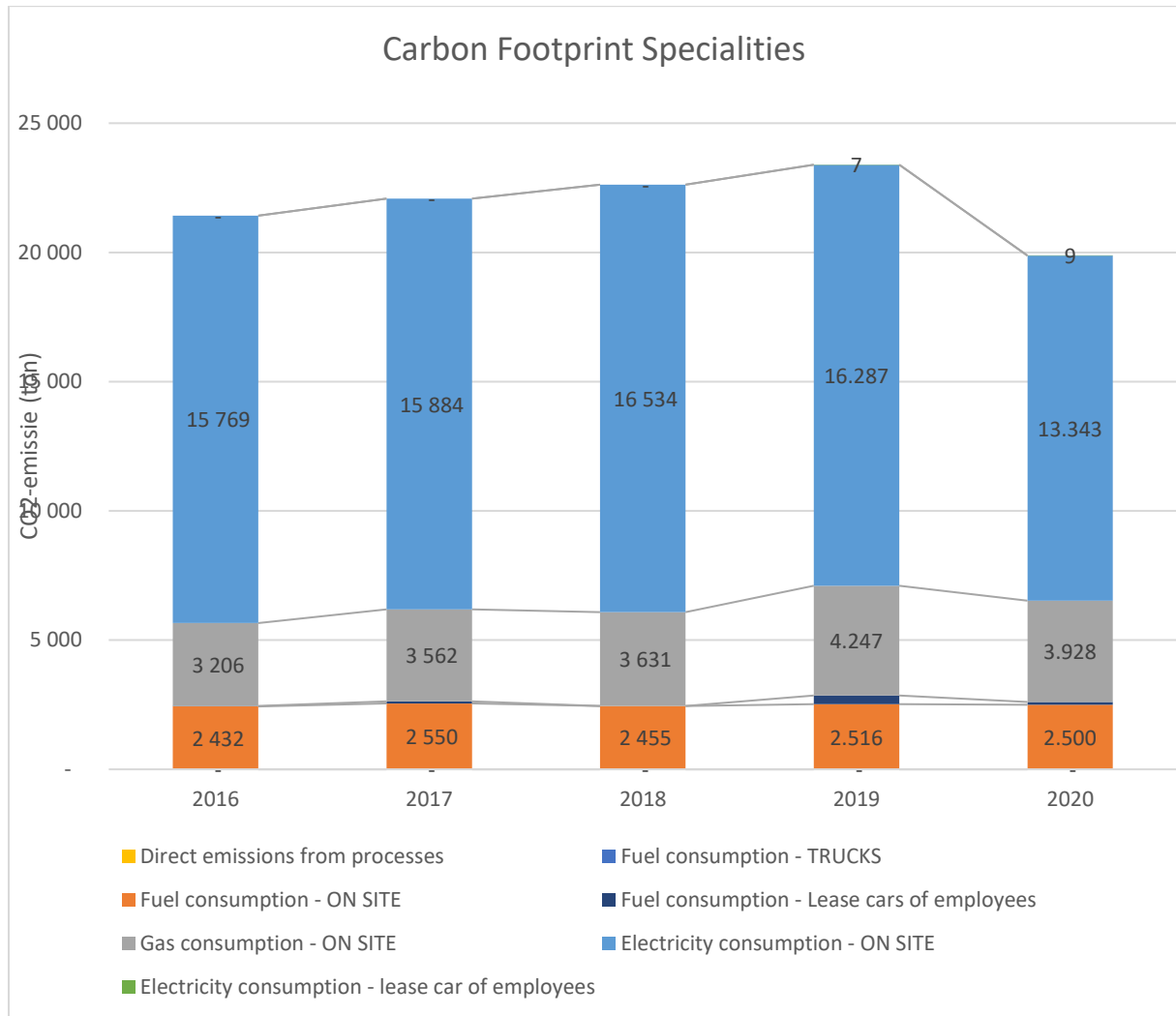


Key contributors to the CO2 eq. emission reduction in Mineralz&water:

- Selling the division of Reym in October 2019 (which had a significant impact: lowering the Carbon eq. emissions from trucks/fleet in 2019 reporting and bringing it to ZERO in 2020)
- Big maintenance sessions in summer & continuous process optimization- enabling greater energy performance.
 - o See in document “4.B.2 Addendum on progress report till end 2020” to see energy reduction plans of Mineralz&water.

1.4.4 Specialities - CO2 results by end 2020

Due to increase of activities, the 2 subdivisions Maltha & Coolrec did slightly increase their total carbon eq. emissions between 2016 & 2019. We are happy to share that a shift and a new reduction trend was delivered in 2020 VS 2019.



i) Maltha

Energy saving measures which have been implemented within Maltha up and until calendar year 2020:

- **Internal transport/ logistics efficiency**

Maltha has implemented a project that allows them to save 7% in transport efficiency.

- o The supply of untreated glass from a boat to production is coordinated with the production planning;
- o Boats/vessels are directly unloaded into the relevant bunkers;

- **General**

- o As much transport by water as possible;

- o Lease cars: stimulate the purchase of energy-efficient lease cars
- o Purchasing process: upon purchase, assessing the energy efficiency as part of the Management of Change (MOC) procedure
 - **Heijningen (biggest energy consumer)**
- o Replacement of diesel forklift trucks with electric forklift trucks: Q2 2020;
- o Replacement of bobcat by new model according to the latest technology: Q2 2020;
- o Replacement of old tractor (sprayer truck) by new tractor in combination with sprayer / sweeper truck according to the latest state of the art: Q3 2020;
- o 5 conveyor belts dismantled in connection with the new pre-sorting unit: electrical power drive motors of these removed conveyor belts: 1 x 2.5 kW and 4 times 1.5 kW: Q3
 - **France**

The biggest energy consumer is **the dryer** (both electricity and gas)

In Izon :

- We stop the dryer every time the weather allows it
- We limit the % of glass flow introduced when running
- We run at lower temperature

The **compressors** are significant consumers :

3 plants :

- We have installed variable capacity compressors
- We stop them at weekends
- We organize preventive maintenance to avoid of leaks and failures

Renewable energy :

In Izon :

- PV panels are installed on the roofs of production hall and covered storage (Izon, 2012)
This energy is the property of the Energy Company renting the roof (we don't use it nor sell it)

3 plants :

- 17% of the electricity supply comes from renewable (instead of 7% in 2018) as per French Energy Policy

ii) **Coolrec**

- Coolrec has a continuous plan in place to track energy consumption.
- Coolrec made some small improvements - but this subdivision is a small player – at the scale of Renewi and has therefore limited to no major impact on Renewi level.

1.4.5 End 2020 – Conclusion by Management team

Agreement that focus needs to be continuous on 3 main pillars -where Renewi generates the most it's CO2 eq. emissions:

- **From Direct emissions from processes**
Specific innovation projects were initiated (especially in Mineralz&water) to identify solution to capture carbon.
- **From Fuel: in both Logistic and on site usage**
Through simple saving programs, Smart logistic and route optimization
- **From Electricity consumption:**
Managing directors did look at More Renewable energy sources.
A contract was signed for getting EU wind powered electricity for Commercial waste NL & Coolrec. This will enable the usage of a ZERO carbon em. factor in Renewi's Group annual reporting – but not for the CO2 performance ladder – as not recognized by SKAO guidelines.

1.4.6 Renewi Netherlands - CO2 results by end H1 2020

Renewi Netherlands Holding b.v.							
	2018	2019	2020	H1-2021		Difference half 20 and half 21	%
Direct emissions from processes	285 366	266 151	239 971	116 050		-3 936	-1,5%
Fuel consumption - TRUCKS	90 442	88 985	57 819	37 151		8 242	9,3%
Fuel consumption - ON SITE	20 609	22 400	17 361	10 339		1 659	7,4%
Fuel consumption - Lease cars of employees	3 453	3 592	1 999	1 973		973	27,1%
Gas consumption - ON SITE	13 989	18 773	15 308	8 076		422	2,2%
Electricity consumption - ON SITE	85 693	82 768	70 719	36 032		672	0,8%
Electricity consumption - lease car of employees	3	94	271	136		-	0,0%
Total	499 555	482 763	403 448	209 756		8 032	4,0%
	2018	2019	2020	H1-2021			
Scope 1	413 858	399 901	332 458	173 589		7 360	4,4%
Scope 2	85 697	82 862	70 990	36 167		672	1,9%

During the 1st half year of 2021, the CO2 eq. emissions of Renewi Netherlands did increase by +4% VS HALF of 2020 CO2 eq. emissions.

In the details:

- The overall direct emissions from processes did reduce.
- On top of a higher CO2 carbon em. Factor for diesel in 2021 VS 2020, Both total consumption of diesel for the fleet of Commercial Waste NL and total consumption of diesel on our sites (all divisions) did increase in H1 2021 VS half of 2020.
- For the electricity consumption: Both divisions Commercial Waste NL & Specialities also had an increase of electricity cons. in H1-2021 VS half of 2020. Only Mineralz&water did show a reduction.

For the last 2 points: This can be explained by an increase of production volume across all divisions but Commercial waste NL. Indeed for Commercial Waste NL in average the total volume remained relatively flat VS previous year but the division does increase its energy intensity per tonnes of waste processed in order to increase its recycling rate & deliver more carbon avoidance. This is a strategic business choice for

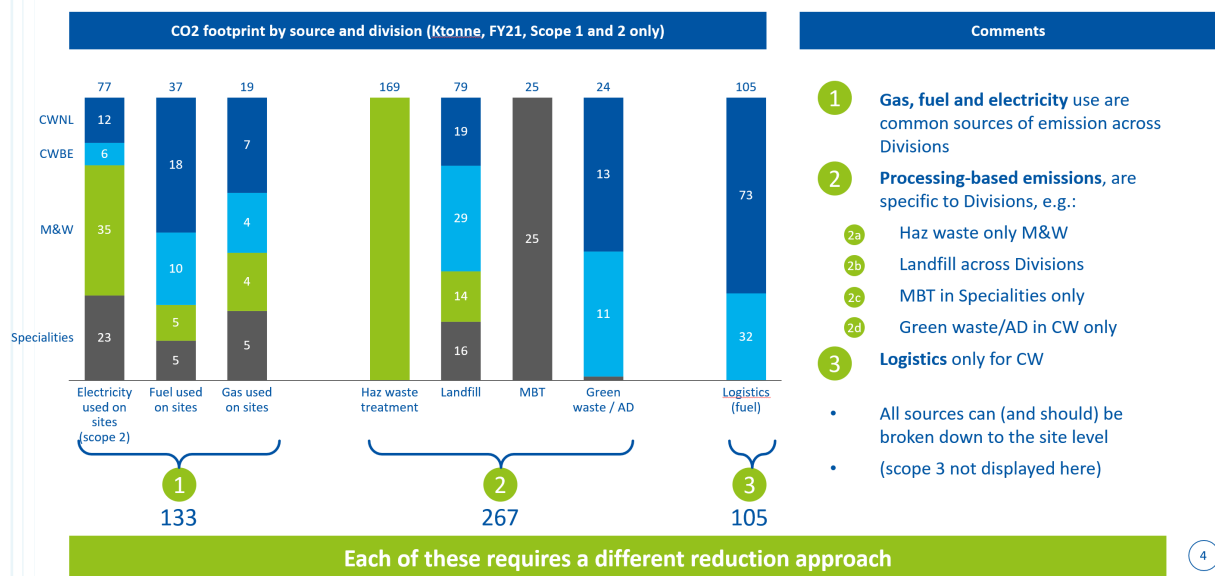
increasing Renewi's Overall Recycling rate, increasing carbon avoidance and enabling a lower carbon economy.

1.4.7 End 2021 – beg.2022: Conclusion by Management team.

Agreement that focus needs to be continuous on 3 main pillars -where Renewi generates the most it's CO2 eq. emissions. Each divisions will focus and deliver a specific Reduction roadmap as per the following 3 pillars:

- 1) Gaz, fuel & electricity
- 2) Processing based emissions
- 3) Logistic

Our carbon footprint by category and Division



Title: Carbon footprint Scope 1& 2 of Renewi Group
(aka: Renewi NL + Commercial Waste Belgium + Municipal sub division)

2 2021 CO2 Reduction targets

2.1 Targets – on both scope 1 & 2 – in previous REPORT // with previous organization

(Sub-)Doelstelling eind 2021 t.o.v. eind 2017		Reductie (relatief) eind 2021	
1.	Scope 1	-3,6%	-3,1% binnen totale CO ₂ -footprint
1.1.	Haz. Waste – Procesemissie ATM / ton verwerkt	-5%	-2,7% van -3,6% scope 1
1.2.	CW NL – Diesel trucks / ton getransporteerd	-5%	-0,9% van -3,6% scope 1
1.3.	Monostreams – Diesel op locatie / ton verwerkt	-5%	-0,06% van -3,6% scope 1
2.	Scope 2	-12%	-1,9% binnen totale CO ₂ -footprint
2.1.	CW NL – Elektriciteit op locatie / ton verwerkt	-6%	- 1,2% van 12% scope 2
2.2.	Haz. Waste – Elektriciteit op locatie / ton verwerkt	-4%	-1,7% van 12% scope 2
2.3.	Monostreams – Elektriciteit op locatie / ton verwerkt	-1%	-0,2% van 12% scope 2
2.4.	Alle divisies – 3800 MWh groene elektriciteit	-10%	-8,9% van 12% scope 2
	Totale gecombineerde relatieve reductiedoelstelling	-5%	Per ton verwerkt/getransporteerd
3.	Ketenanalyse doelstellingen		Reductie 2021 t.o.v. 2017
3.1.	Monostreams – Mineralz FORZ®Toeslagmateriaal (scope 3)		195 ton CO ₂ -emissie in de keten
3.2.	Commercial Waste NL – Peelpioneers (scope 3)		1400 ton CO ₂ -emissie in de keten

2.2 Targets are unchanged on both scope 1 & 2 despite the change of organization in Renewi.

Detailed Targets by End 2021 (VS Full year 2017)		Reduction relative to end 2021	
1.	Scope 1 – unchanged targets	-3,6%	-3,1% within total CO ₂ -footprint
1.1.	M&W – Process emission ATM / ton processed	-5%	
1.2.	CW NL – Diesel trucks / ton transported	-5%	
1.3.	Specialities – Diesel on location / ton processed	-5%	
2.	Scope 2 – unchanged targets	-12%	-1,9% within total CO ₂ -footprint
2.1.	CW NL – Electricity on location / ton processed	-6%	
2.2.	M&W – Electricity on location / ton processed	-4%	
2.3.	Specialities – Electricity on location / ton processed	-1%	
2.4.	All divisions – 3800 MWh Green electricity	-10%	<p>Already achieved</p> <ul style="list-style-type: none"> - end 2020 with: a total of 15 520 MWh green energy consumed - IN 2021, CW NL and Coolrec are using 100% renewable electricity (out of EU wind – which is not recognized by the SKAO carbon calculation)
	Total relative combined reduction target:	-5%	Per ton of processed or transported waste

--	--	--	--

2.3 2022 and 2025 targets: A continuous ambition to Reduce Renewi's Carbon footprint.

This Carbon Reduction targets for 2021 are now followed up with Publicly communicated 2025 targets. In Renewi's FY 2021 Sustainability Report, published in May 2021 ([see LINK HERE](#)), Renewi communicates the following targets:



Our goals and targets

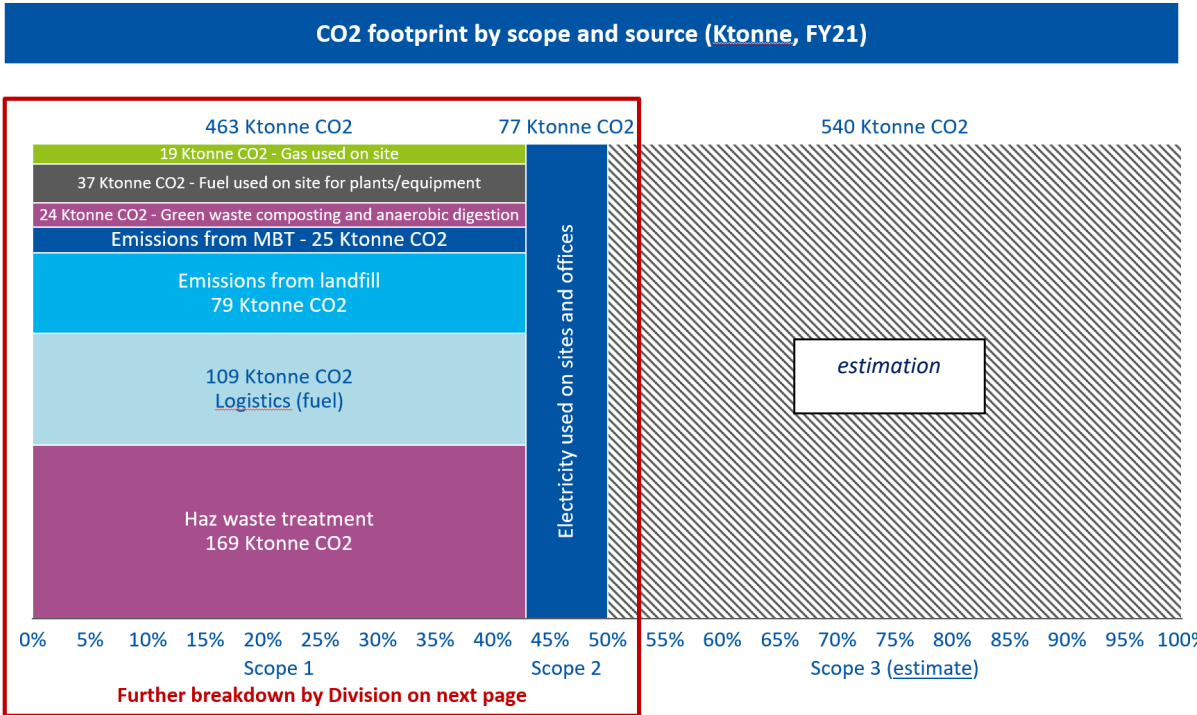
OBJECTIVE	METRIC	FY20	FY21	FY25 TARGET
Be a leader in clean and green waste collection	Carbon intensity of collection (kg CO ₂ per tonne waste collected)	10.04	9.84	<9.00 (-10%)
	Share of clean-emission trucks (% Euro 6 trucks of total fleet)	48.5%	60.9%	100%
	Zero-emission trucks (number)	0	2	65
Reduce the carbon impact of our operations	Carbon intensity of our sites (kg CO ₂ per tonne waste handled)	10.47	11.10	<9.42 (-10%)
	Share of renewable energy used on site (% renewable electricity out of total electricity use)	~15%	15.8%	25% (+10% points)
	Hybrid or electric lease cars (% (PH)EV vehicles out of total fleet)	12.5%	23.7	40.0% (+27.5% points)

Detailed Targets by End 2022 (VS Full year 2017)		Reduction relative to end 2022	
1.	Scope 1 – unchanged targets	-3,6%	-3,1% within total CO ₂ -footprint
1.1.	M&W – Process emission ATM / ton processed	-5%	
1.2.	CW NL – Diesel trucks / ton transported	-5%	
1.3.	Specialities – Diesel on location / ton processed	-5%	
2.	Scope 2 - – unchanged targets	-12%	-1,9% within total CO ₂ -footprint
2.1.	CW NL – Electricity on location / ton processed	-6%	
2.2.	M&W – Electricity on location / ton processed	-4%	
2.3.	Specialities – Electricity on location / ton processed	-1%	
2.4.	All divisions – 3800 MWh Green electricity	-10%	Already achieved end 2020
	Total relative combined reduction target:	-5%	Per ton of processed or transported waste

This is being followed by internal dedicated Roadmaps creation. Each divisions are currently building their pipeline of projects & initiatives to meet this targets (or over achieve on this 2025 targets).

To illustrate this had become a top priority topic in the strategy of Renewi, the total carbon footprint of Renewi & a “draft” path for reduction was discussed at the Monthly Executive Committee steering meeting of January. (see power point presentation : “2025 Carbon reduction options for Excom – Jan22”.)

Renewi will start mapping and quantifying its Carbon Footprint scope 3 in 2022 and start reporting progress and Net Zero targets by 2023. Therefore, it is sure that Renewi will keep remaining a key competitive player on the CO2 reduction topic.



Title: Estimated Carbon footprint scope 1,2 & 3 of Renewi Group
(aka: Renewi NL + Commercial Waste Belgium + Municipal sub division)

3 2020 and 2021 – Overview of projects

Status:

- Between Jan 1st 2020 – June 30th 2021; Renewi Netherlands had 5 bids in the division Commercial Waste NL where CO2PL certification is required. Indeed the bid requests descriptions on CO2.

Overview:

Gemeente Oldambt	started in 1-3-2020
Provincie NB	started in 1-1-2020
Gemeente Lansingerland	started in 1-1-2020

Waterschapsbedrijf Limburg started in 1/7/2020

Gemeente Drimmelen Best started in 1/12/2020

Together, these 5 bids account for:

2020 >> 349,4 ton of CO2 eq.

2021 >> 45,9 ton of CO2 eq.