

ENVIRONMENTAL ACCOUNTS

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SCOPE

The scope of the *Environmental Accounts* is consistent with the reporting scope of the *Sustainability Report (Consolidated Non-Financial Statement)* pursuant to Legislative Decree no. 254/2016/NFS), as defined in the *Methodological Note*. Therefore, as of 2022, data from Deco, which was acquired by the Group in December 2021, and the Grasciano Hub, which was acquired in Acea Ambiente in 2022 and is operated by Deco, are also represented in the *Environmental Accounts*²²⁷. The facilities are reported collectively and

presented below under the term "Deco sites" (for further details, see "Relations with the environment - Environment Area").

The water Companies in which Acea has an investment: Acque, Publiacqua and Umbra Acque - consolidated in the Financial Statements with the equity method - are marginally included in the *Environmental Accounts* and only relative to the aspects which are specifically signalled in the text. Please see the chapter *Water companies data sheets and overseas activities* (outside the scope of the NFS).²²⁸

The *Environmental Accounts*, integral part of the *Sustainability Report*, combines and presents systematically the information and environmental performance data of the principal Companies of the Group. The data is divided into "product systems" pertaining to the energy, "environment" and "water fields", according to the Life Cycle Assessment approach (standard ISO Series 14040), which assesses the entire life cycle of the systems.

The report comprises **over 500 items and parameters monitored** which quantify the physical flows generated by the activities and some performance indicators.

For the three areas — Energy, Environment, Water — the substances used by the Group over a three-year period — whether natural, like water, or not natural, like chemicals, renewable or

not — the products, emissions, effluents and waste related to the activities managed are attributable to **producing and distributing energy**, for **collecting and distributing drinking water, treatment**, and all the processes associated with **waste management**, including **waste-to-energy**. Every use of resources is reduced to a minimum in terms of quantity and every substance is selected carefully in terms of quality, safety and environmental sustainability.

In the *Explanatory Notes*, we provide additional information regarding the **quality of the data presented**, in particular, whether it was **measured, estimated** or **calculated**, and the principal items of the *Environmental Accounts*, indicated in the tables and in the text by a number in brackets, including a brief description.

PRODUCT SYSTEMS



ENERGY SEGMENT

- ENERGY GENERATION (HYDROELECTRIC + THERMOELECTRIC + PHOTOVOLTAIC + FROM WASTE AND BIOGAS)
- DISTRIBUTION OF ELECTRICITY
- PRODUCTION AND DISTRIBUTION OF HEAT
- PUBLIC LIGHTING
- CONTROLS AND MEASUREMENTS



ENVIRONMENT SEGMENT

- SOLID AND LIQUID WASTE DISPOSED OF
- COMPOST PRODUCTION
- ANALYSIS AND MEASUREMENTS



WATER SEGMENT

- DRINKING WATER SUPPLY
- WATER DISTRIBUTION
- ADDUCTION/PURIFICATION WASTEWATER
- ANALYSIS AND MEASUREMENTS

The data are provided for the 2020-2022 three-year period and aggregated in three homogeneous categories:

- **the products supplied,**
- **the resources used,**
- **the waste produced.**

The service indicators and the principal environmental performance indicators are explained below for every area.

²²⁷ In addition to its own properties, Deco manages an active landfill, a depleted landfill, and an inactive treatment facility for the Grasciano Hub.

²²⁸ Demap, Aquser and Acea Innovation are present in the *Environmental Accounts*, and precisely in *Resources (fuel used by the main Group Companies for transport and heating)* and in *Emissions (the emissions of carbon dioxide from transport and packaging)*. In fact, they cannot be present in the other product systems (according to ISO 14040) as they do not have a product cycle system that can be reported.

PRODUCTS – ENERGY AREA

The financial statement data for the generation of electricity refer to Acea Produzione, Ecogena, Acea Ambiente – Waste-to-Energy (San Vittore del Lazio and Terni plants) and Biogas Production (the Orvieto hub, Aprilia and Monterotondo Marittimo plants) and Deco (production of biogas).

The data presented in the tables below reflect two perspectives. The first refers to an expanded reporting scope that includes the photovoltaic plants of Acea Produzione's operating subsidiary, even though they are not fully consolidated²²⁹, and the second refers solely to the reporting scope associated with the NFS.

SUMMARY POWER GENERATION DATA, INCLUDING PHOTOVOLTAIC SUBSIDIARIES (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
total gross electricity produced	GWh	926.44	1,015.56	940.91	-7.4
total net electricity produced	GWh	858.24	938.68	864.56	-7.9
<i>electricity from fossil fuels (thermoelectric)</i>	GWh	301.27 32.5% of total gross electricity	317.33 31.2% of total gross electricity	304.77 32.4% of total gross electricity	-4.0
<i>electricity from renewable sources (hydroelectric, photovoltaic, biodegradable portion of waste and biogas)</i>	GWh	625.17 67.5% of total gross electricity	698.22 68.8% of total gross electricity	636.14 67.6% of total gross electricity	-8.9

(*) Some figures for the 2020-2021 two year period have been adjusted following consolidation.

SUMMARY POWER GENERATION DATA - NFS SCOPE (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
total gross electricity produced (1) = (5+10+13+16+22)	GWh	926.44	1,015.56	842.49	-17.0
total net electricity produced (2) = (9+12+15+18+26)	GWh	858.24	938.68	767.12	-18.3
<i>from fossil fuels (thermoelectric)</i> (7 + 0.53x13 _{San Vittore del Lazio} + 0.59x13 _{Terni})	GWh	301.27 32.5% of (1)	317.33 31.2% of (1)	304.77 36.2% of (1)	-4.0
<i>from renewable sources (hydroelectric, photovoltaic, biodegradable portion of waste and biogas)</i> w(6+10+0,47x13 _{San Vittore del Lazio} + 0,41 x 13 _{Terni} + 16)	GWh	625.17 67.5% of (1)	696.09 68.8% of (1)	537.71 63.8% of (1)	-22.8

(*) Some figures for the 2020-2021 two year period have been adjusted following consolidation.

SUMMARY THERMAL POWER GENERATION DATA					Δ%
	u. m.	2020	2021	2022	2022/2021
gross thermal energy produced (3) = (19+22)	GWh	118.23	121.94	105.29	-13.7
net thermal energy produced (4) = (21+27)	GWh	87.61	95.42	82.34	-13.7

²²⁹ We refer, in particular, to KT 4 Srl, Solaria Real Estate Srl, Acea Sun Capital Srl, Trinovolt Srl, Marche Solar Srl, Fergas Solar Srl, Euroline 3 Srl, IFV Energy Srl, PF Power of Future Srl, JB Solar Srl, M2D Srl, PSL Srl, Solarplant Srl, and Acea Green Srl, which produce photovoltaic energy and left the scope of full consolidation in March 2022, following the transaction described in the *Methodological Note*, and merged into **AE Sun Capital**, a subsidiary of Acea Produzione. The plants in question produced 98.42 GWh in 2022.

BREAKDOWN OF POWER GENERATION DATA - NFS SCOPE (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
Acea production – hydroelectric and thermoelectric					
total gross electricity produced (5) = (6+7)	GWh	468.41	542.44	450.18	-17.0
total gross hydroelectric energy (6)	GWh	376.25	434.70	335.30	-22.9
<i>A. Volta Castel Madama</i>	GWh	22.45	28.99	16.29	-43.8
<i>G. Ferraris Mandela</i>	GWh	5.02	18.42	8.50	-53.8
<i>G. Marconi Orte</i>	GWh	53.72	70.31	46.81	-33.4
<i>Sant'Angelo</i>	GWh	116.58	146.11	91.52	-37.4
<i>Salisano</i>	GWh	176.84	167.62	168.98	0.8
<i>Other minor</i>	GWh	1.65	3.26	3.21	-1.6
total gross thermoelectric energy (7)	GWh	92.16	107.74	114.88	6.6
<i>from diesel fuel - Montemartini power plant (*)</i>	GWh	1.49	1.65	2.21	33.8
<i>from natural gas - Tor di Valle power plant - CAR</i>	GWh	90.67	106.09	112.67	6.2
total loss of electrical energy (8)	GWh	12.74	13.21	12.93	-2.1
<i>self-consumption - hydroelectric plants</i>	GWh	2.43	2.19	1.95	-10.7
<i>self consumption thermoelectric plants (Tor di Valle, Montemartini)</i>	GWh	5.04	5.40	5.45	1.0
<i>first processing losses</i>	GWh	5.27	5.63	5.53	-1.7
total net electricity produced by Acea Produzione (9) = (5-8)	GWh	455.67	529.23	437.25	-17.4
Acea Production and other Companies - photovoltaic					
gross photovoltaic electrical energy (10)	GWh	74.96	78.61	13.51	-82.8
<i>Acea Produzione</i>	GWh	11.09	9.66	13.51	39.9
<i>other PV Companies (**)</i>	GWh	63.87	68.95	-	-
total electricity losses including own consumption (11)	GWh	3.98	3.38	1.48	-56.2
<i>Acea Produzione</i>	GWh	0.11	0.10	0.14	39.9
<i>other PV Companies (**)</i>	GWh	0.64	0.69	-	-
net photovoltaic energy (12) = (10-11)	GWh	74.21	77.82	13.38	-82.8
<i>Acea Produzione</i>	GWh	10.98	9.57	13.38	41.1
<i>other PV Companies (**)</i>	GWh	63.23	68.26	-	-
Acea Ambiente - waste-to-energy					
total gross electricity produced (13)	GWh	346.15	356.41	337.08	-5.4
<i>San Vittore del Lazio plant</i>	GWh	269.38	267.74	251.26	-6.2
<i>Terni plant</i>	GWh	76.77	88.67	85.81	-3.2
self consumption + losses from first processing (14)	GWh	44.95	45.64	43.23	-5.3
<i>San Vittore del Lazio plant</i>	GWh	37.30	36.83	34.43	-6.5
<i>Terni plant</i>	GWh	7.65	8.81	8.79	-0.2
total net electricity produced (15) = (13-14)	GWh	301.20	310.77	293.85	-5.4
Acea Environment and Deco - biogas					
total gross electricity produced from biogas (16)	GWh	26.91	31.39	36.31	15.7
<i>Orvieto plant</i>	GWh	17.56	13.99	12.67	-9.5
<i>Aprilia plant</i>	GWh	4.84	12.32	15.04	22.1
<i>Monterotondo Marittimo plant</i>	GWh	4.51	5.07	5.95	17.3
<i>Deco sites</i>	GWh	-	-	2.66	-
self consumption (17)	GWh	8.20	15.43	16.07	4.2
<i>Orvieto plant</i>	GWh	1.09	0.89	0.89	0.1
<i>Aprilia plant</i>	GWh	3.48	9.59	9.98	4.1
<i>Monterotondo Marittimo plant</i>	GWh	3.63	4.94	5.19	5.1
<i>Deco sites</i>	GWh	-	-	0	-
total electricity transferred in network (18) = (16-17)	GWh	18.71	15.96	20.24	26.8

(*) The Montemartini power plant is maintained operational but in reserve mode.

(**) Figures for the 2020-2021 two-year period pertain to the PV Companies, which left the full consolidation scope in March 2022 due to the transaction described in the Methodological Note.

BREAKDOWN OF GENERATION, DISTRIBUTION AND THERMAL ENERGY SALES DATA					Δ%
	u. m.	2020	2021	2022	2022/2021
Acea Produzione					
gross thermal energy produced Tor di Valle power station (19)	GWh _t	94.00	98.67	87.69	-11.1
total losses of thermal energy (20)	GWh _t	27.71	23.94	21.29	-11.1
distribution losses	GWh _t	20.90	20.37	18.96	-6.9
production losses	GWh _t	6.81	3.57	2.33	-34.6
net thermal energy sold (21) = (19-20) (*)	GWh _t	66.29	74.73	66.40	-11.1
Ecogena					
gross electricity produced (22)	GWh	10.00	6.71	5.40	-19.4
gross thermal energy produced (23)	GWh _t	24.23	23.27	17.60	-24.4
gross refrigeration energy produced (24)	GWh _r	10.95	11.07	11.60	4.8
total consumption (25)	GWh	5.50	5.46	5.88	7.6
self-consumed electricity	GWh	1.56	1.82	3.00	64.4
heat dissipated	GWh _t	2.90	2.58	1.66	-35.6
refrigeration energy consumed	GWh _r	1.04	1.06	1.22	15.3
net electricity (26)	GWh	8.44	4.88	2.41	-50.7
net thermal energy (27)	GWh _t	21.32	20.69	15.94	-23.0
net refrigeration energy (28)	GWh _r	9.92	10.01	10.38	3.7
ELECTRICITY TRANSPORT AND SALES					
	u. m.	2020	2021	2022	Δ% 2022/2021
in Rome and Formello - summary data					
supply from Acea Group (29)	GWh	2.29	3.47	3.18	-8.4
electricity from the market (30)	GWh	9,667.68	9,826.70	10,058.83	2.4
from Single Buyer	GWh	2,509.36	2,230.42	2,096.22	-6.0
from importation	GWh	70.81	78.56	77.71	-1.1
from wholesalers + other producers	GWh	7,087.51	7,517.72	7,884.90	4.9
electricity requested by the network (31) = (29+30) = (32+33+34+35+36)	GWh	9,669.97	9,830.17	10,062.01	2.4
distribution, transport and commercial losses (32)	GWh	563.70 5.8% of (27)	593.35 6.0% of (27)	653.62 6.5% of (27)	10.2
uses for own transmission and distribution (33)	GWh	35.80	30.71	28.94	-5.8
net electricity transferred to third parties (34)	GWh	94.87	102.19	103.49	1.3
net electricity conveyed from Acea to clients of the open market (35)	GWh	6,998.47	7,410.22	7,884.90	6.4
net electricity sold by Acea Energia to clients of the open market on distribution company grid (Areti)	GWh	5,594.36	5,909.37	6,341.77	7.3
net electricity sold by other sellers to clients of the open market on distribution company grid (Areti)	GWh	1,404.12	1,500.85	1,543.13	2.8
net electricity sold to managed clients (36)	GWh	1,977.12	1,693.70	1,391.06	-17.9
sale in Italy - summary data					
net electricity sold by Acea Energia on the open market including sale on Rome (37)	GWh	4,571.96	6,074.57	5,985.69	-1.5
net electricity sold by Acea Energia in Italy (free market + greater protection) (38) = (36+37)	GWh	6,549.08	7,768.27	7,376.75	-5.0
GAS SALES					
	u. m.	2020	2021	2022	Δ% 2022/2021
gas sold by Acea Energia in Italy (39)	Msm ³	139.89	174.68	170.40	-2.5

PUBLIC LIGHTING					Δ%
	u. m.	2020	2021	2022	2022/2021
luminous flux to Rome (40)	Mlumen	2,010	2,021	1,877	-7.1

CONTROLS AND MEASUREMENTS					Δ%
	u. m.	2020	2021	2022	2022/2021
measurement and control activity (41)	no.	490	420	226	-46.2
electro-magnetic field measurements	no.	22	41	25	-39.0
noise measurements	no.	21	34	6	-82.4
PCB chemical analyses	no.	65	69	25	-63.8
waste classification	no.	26	23	48	108.7
transformer diagnostics	no.	356	253	122	-51.8

PRODUCTS - ENVIRONMENT AREA

The data refer to the **Acea Ambiente**, **Acque Industriali** and **Berg** plants **and also include the Deco sites from 2022**. For Acea Ambiente, these are the Orvieto Waste Management Hub, the three composting plants (located in Aprilia, Monterotondo Marittimo and Sabaudia), the chemical/physical and biological treatment plant for non-hazardous liquid waste, the Grasciano2 plant located in Notaresco and operated by Deco, and the treatment plant at Chiusi (Bio Ecologia). For Acque Industriali the data refers to the liquid waste disposal plants located in the Tuscan provinces of Pisa (Pontedera and Pisa-San Jacopo), Florence (Empoli-Pagnana) and Siena

(Poggibonsi). Berg only has one facility where waste storage, disposal and treatment is carried out. The Waste Management Hub, owned by Deco, consists of the facilities from the landfills located at Casoni and Colle Cese²³⁰ and an MBT plant.

It should be noted that some facilities **are inactive as at 31/12/2022**. In particular, **the Sabaudia** has been inactive since 2020, the **Poggibonsi** plant has been inactive since June 2021, pending the issuance of a new IEA, the **San Jacopo** plant has been shut down since February 2020 and is being decommissioned, and the **Pontedera** plant was shut down in July 2022.

ORVIETO HUB - INCOMING WASTE, DISPOSED OF AND RECOVERED					Δ%
	u. m.	2020	2021	2022	2022/2021
total incoming waste (42) = (43+44)	t	106,477	108,361	97,661	-9.9
waste sent for treatment (43)	t	73,216	67,155	45,674	-32.0
waste sent to the anaerobic digester and aerobic treatment	t	34,200	32,855	31,193	-5.1
sent for aerobic treatment or just shredding	t	39,016	34,299	14,480	-57.8
waste sent directly to landfill (44)	t	33,261	41,207	51,988	26.2
waste sent to landfill after treatment (45)	t	34,427	31,239	17,549	-43.8
waste recovered (46)	t	80	52	28	-46.6
quality compost (47)	t	4,618	3,559	3,412	-4.1
reduction due to stabilisation (48) = (42-44+45+46+47)	t	34,091	32,304	24,684	-23.6

DECO SITES - INCOMING WASTE, DISPOSED OF AND RECOVERED					Δ%
	u. m.	2020	2021	2022	2022/2021
total incoming waste (49) = (50+51)	t	-	-	243,566	-
waste entering the landfills (Casoni and Grasciano2) (50)	t	-	-	1,924	-
waste sent to MBT plant (51)	t	-	-	241,642	-
leaving the MBT plant and proceeding to recovery - SRF (52)	t	-	-	96,093	-
leaving the MBT plant and proceeding to recovery - metals (53)	t	-	-	4,121	-
waste leaving the MBT plant and proceeding to disposal (54)	t	-	-	84,162	-
reduction due to stabilisation (55) = (49-50+52+53+54)	t	-	-	57,266	-

NOTE Sites owned and operated by Deco have been included in the reporting since 2022.

COMPOST PRODUCTION					Δ%
	u. m.	2020	2021	2022	2022/2021
total incoming organic waste (56) = (57+58+59)	t	115,473.21	141,506.00	149,184.88	5.4
incoming sludge (57)-	t	14,945.10	26,912.42	31,490.46	17.0
<i>Aprilia plant</i>	t	4,441.74	9,005.22	13,114.68	45.6
<i>Monterotondo Marittimo plant</i>	t	10,503.36	17,907.20	18,375.78	2.6
<i>Sabaudia plant</i>	t	0.00	0.00	0.00	-
incoming green (58)	t	25,317.15	26,184.14	26,347.66	0.6
<i>Aprilia plant</i>		12,926.64	14,529.62	15,799.06	8.7
<i>Monterotondo Marittimo plant</i>	t	12,390.51	11,654.52	10,548.60	-9.5
<i>Sabaudia plant</i>	t	0.00	0.00	0.00	-
organic fraction of municipal solid waste and other agrifood waste (59)	t	75,210.96	88,409.44	91,346.76	3.3
<i>Aprilia plant</i>	t	53,395.48	60,274.56	67,253.54	11.6
<i>Monterotondo Marittimo plant</i>	t	21,815.48	28,134.88	24,093.22	-14.4
quality compost (60)	t	13,869.00	24,686.75	33,563.68	36.0
<i>Aprilia plant (*)</i>	t	9,340.00	13,001.75	17,500.00	34.6
<i>Monterotondo Marittimo plant</i>	t	4,529.00	11,685.00	20,449.00	75.0
<i>Sabaudia plant</i>	t	0.00	0.00	0.00	-
non-compostable material for disposal (61)	t	11,615.87	11,813.09	5,768.53	-51.2
<i>Aprilia plant</i>	t	7,807.11	7,365.30	2,476.90	-66.4
<i>Monterotondo Marittimo and Sabaudia plants</i>	t	3,808.76	4,447.79	3,291.63	-26.0
reduction due to stabilisation (62) = (57+58-60-61) (*)	t	89,988.34	105,006.16	109,852.67	4.6

(*) The quantities of compost produced in 2021 were adjusted, as they had estimated for the previous report, and consequently also the figures relating to the reduction due to stabilisation.

LIQUID WASTE AND WASTE WATER DISPOSAL - BIO ECOLOGIA PLANT					Δ%
	u. m.	2020	2021	2022	2022/2021
liquid waste (63)	t	68,501	92,792	98,023	5.6
waste water treated (64)	m³	284,826	148,862	81,996	-44.9

ANALYTICAL DETERMINATIONS ON WASTE AND ON QUALITY COMPOST					Δ%
	u. m.	2020	2021	2022	2022/2021
total analytical determinations (65)	no.	111	125	198	58.4
<i>analytical determinations on compost - Orvieto plant</i>	no.	11	10	12	20.0
<i>analytical determinations on compost - Aprilia, Monterotondo Marittimo and Sabaudia plants</i>	no.	41	48	12	33.3
<i>analytical determinations on waste - Orvieto plant</i>	no.	59	67	65	-3.0
<i>analytical determinations on waste - Deco sites</i>	no.	-	-	57	-

LIQUID WASTE DISPOSAL AND INDUSTRIAL WATER TREATMENT (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
total incoming waste (66) = (67+68+69+70)	t	111,090.5	92,381.1	49,922.1	-46.0
incoming sludge (67)	t	34,827.7	24,520.8	8,741.9	-64.3
<i>Pagnana plant</i>	t	14,642.6	10,574.5	5,681.3	-46.3
<i>Pontedera plant</i>	t	5,915.6	8,896.1	3,060.6	-65.6
<i>Poggibonsi plant</i>	t	13,262.3	5,050.3	0.0	-
<i>San jacopo plant</i>	t	1,007.2	0.0	0.0	-

liquid waste (68)	t	10,379.2	10,649.9	7,774.0	-27.0
<i>Pagnana plant</i>	t	3,994.5	3,832.0	4,129.0	7.7
<i>Pontedera plant</i>	t	6,384.7	6,817.9	3,645.0	-46.5
sewage waste and others (69)	t	12,131.8	7,627.2	7,796.7	2.2
<i>Pagnana plant</i>	t	8,700.0	1,331.0	5,421.0	307.3
<i>Pontedera plant</i>	t	2,890.5	6,156.4	2,375.7	-61.4
<i>Poggibonsi plant</i>	t	531.2	139.8	0.0	-
<i>San jacopo plant</i>	t	10.1	0.0	0.0	-
leachate (70)	t	53,751.8	49,583.2	25,609.5	-48.4
<i>Pagnana plant</i>	t	28,048.4	30,338.1	20,177.6	-33.5
<i>Pontedera plant</i>	t	25,703.4	19,245.1	5,431.9	-71.8
<i>Poggibonsi plant</i>	t	0.0	353.7	0.0	-
ammonium sulphate produced (71)	kg	255,040	219,670.0	139,040.0	-36.7
<i>Pagnana plant</i>	kg	57,460	141,930.0	84,260.0	-40.6
<i>Pontedera plant</i>	kg	197,580	77,740	54,780.0	-29.5

TREATED AND DISCHARGED WATER - INDUSTRIAL WATER					Δ%
	u. m.	2020	2021	2022	2022/2021
treated and discharged water (72)	no.	117,789	93,916	50,998	-45.7
<i>Pagnana plant</i>	m ³	64,685	55,655	41,730	-14.0
<i>Pontedera plant</i>	m ³	34,576	30,483	9,268	-11.8
<i>Poggibonsi plant</i>	m ³	17,725	7,778	0	-
<i>San Jacopo plant</i>	m ³	803	0	0	-

LIQUID WASTE AND SOLIDS DISPOSAL - BERG (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
total incoming waste (73) = (74+75)	t	141,865.41	133,090.69	93,689.15	-29.6
solid waste (74)	t	384.20	226.32	123.80	-45.3
liquid waste (75)	t	141,481.21	132,864.37	93,565.35	-29.6

(*) The Berg plant, in addition to waste disposal, brokered almost 6,900 t of waste in 2022.

PRODUCTS - WATER SEGMENT

Water data **summarized at the national level** include water Companies Acea Ato 2 and Acea Ato 5 (Lazio), Gesesa and Gori (Campania), Umbra Acque (Umbria), Acque, Publiacqua and AdF (Tuscany). The details of the water balances are presented only for the Companies in the reporting scope of the *Consolidated Non-Financial Statement* (NFS, pursuant to Legislative Decree No. 254/2016): Acea Ato 2, Acea Ato 5, Gesesa, Gori and AdF. Please see the chapter *Water companies data sheets and overseas*

activities for the water balance sheets of the other Companies of the Group not in the scope of the NFS.

The loss assessment was conducted according to ARERA Resolution 917/17 R/IDR. In particular, ARERA procedures establish that water losses are calculated on the entire scope of the aqueduct system (and not only on the distribution network) and include apparent losses.

SUMMARY WATER DATA - NFS SCOPE (ACEA ATO 2, ACEA ATO 5, GESESA, GORI, ADF) AND MAIN SUBSIDIARIES (ACQUE, UMBRA ACQUE, PUBLIACQUA) (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
total drinking water collected from the environment or from other systems and fed into the aqueduct systems (76)	Mm³	1,356.0	1,317.3	1,284.7	-2.5
total drinking water supplied and billed (77)	Mm³	627.9	633.2	626.9	-1.0
total drinking water leaving the system (78)	Mm³	728.4	740.0	739.2	-0.1

(*) Some figures for the 2021-2022 two year period have been updated following consolidation. Some 2022 items were estimated and will be consolidated in the months following publication.

SUMMARY WATER DATA OF THE COMPANIES OPERATING IN THE NFS SCOPE: ACEA ATO 2, ACEA ATO 5, GESESA, GORI, AND ADF (*)	u. m.	2020	2021	2022	Δ% 2022/2021
total drinking water collected from the environment or from other systems and fed into the aqueduct systems (79)	Mm ³	1,074.0	1,039.7	1,009.6	-2.9
total drinking water supplied and billed (80)	Mm ³	479.5	482.0	473.8	-1.7
total drinking water leaving the system (81)	Mm ³	566.5	574.0	573.0	-0.2

(*) The figures for the 2020-2021 two year period have been updated following consolidation. The 2022 figures are estimated and will be consolidated with the subsequent reporting.

SUMMARY WATER BALANCES NFS SCOPE (ACEA ATO 2, ACEA ATO 5, GESESA, GORI, ADF) (*)	u. m.	2020	2021	2022	Δ% 2022/2021
Acea Ato 2 for OTA 2 – central Lazio (Rome + municipalities acquired as at 31/12/2021)(**)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (82)	Mm ³	691.1	667.8	656.2	-1.7
<i>surface (lakes and rivers)</i>	Mm ³	0.0	0.0	0.0	-
<i>from wells</i>	Mm ³	89.6	87.0	95.3	9.5
<i>from springs</i>	Mm ³	595.3	575.1	555.5	-3.4
<i>from other aqueduct systems</i>	Mm ³	6.2	5.7	5.5	-3.5
total drinking water leaving the aqueduct system (83) = (84+85+86+87)	Mm ³	398.7	401.3	400.8	-0.1
total drinking water released and invoiced into the OTA 2 network (84)	Mm ³	332.4	331.6	323.8	-2.4
<i>measured volume of water delivered to users</i>	Mm ³	307.3	306.6	305.7	-0.3
<i>volume consumed by users and not measured</i>	Mm ³	25.1	25.0	18.1	-27.6
total drinking water authorised and not billed in the network (85)	Mm ³	18.8	21.9	29.2	33.3
<i>measured unbilled authorised consumption</i>	Mm ³	0.4	0.5	0.3	-40.0
<i>unmeasured unbilled authorised consumption</i>	Mm ³	18.4	21.4	28.9	35.0
drinking water exported to other systems (86)	Mm ³	46.8	46.4	46.2	-0.4
measured drinking water losses (87)	Mm ³	0.7	1.4	1.7	21.4
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (88)-	Mm ³	292.5	266.5	255.4	-4.2
water loss percentages (89)-	%	42.3	39.9	38.9	-2.5
Acea Ato 5 for OTA 5 – Southern Lazio - Frosinone (86 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (90)	Mm ³	119.8	115.8	109.8	-5.2
<i>from wells</i>	Mm ³	59.3	55.6	54.4	-2.2
<i>from springs</i>	Mm ³	44.8	46.0	42.1	-8.5
<i>from other aqueduct systems</i>	Mm ³	15.7	14.2	13.2	-7.0
total drinking water leaving the aqueduct system (91) = (92+93+94)	Mm ³	37.9	38.8	39.1	0.8
total drinking water dispensed and billed in the network (92)	Mm ³	24.6	26.5	26.8	1.1
<i>measured volume of water delivered to users</i>	Mm ³	18.6	19.4	24.7	27.3
<i>volume consumed by users and not measured</i>	Mm ³	6.0	7.1	2.1	-70.4
total drinking water authorised and not billed in the network (93)	Mm ³	6.8	6.9	7.1	2.9
<i>measured unbilled authorised consumption</i>	Mm ³	0.0	0.0	0.0	-
<i>unmeasured unbilled authorised consumption</i>	Mm ³	6.8	6.9	7.1	2.9
drinking water exported to other systems (94)	Mm ³	6.6	5.4	5.1	-5.6
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (95)	Mm ³	81.9	77.1	70.7	-8.3
water loss percentages (96)	%	68.4	66.5	64.4	-3.2

Gesesa – OTA Calore Irpino - Benevento (21 municipalities)

drinking water collected from the environment or from other systems and fed into the aqueduct systems (97)	Mm³	19.0	19.4	17.8	-8.2
<i>from wells</i>	<i>Mm³</i>	7.4	6.0	5.1	-15.0
<i>from springs</i>	<i>Mm³</i>	2.1	3.2	2.4	-25.0
<i>drinking water collected from other aqueduct systems</i>	<i>Mm³</i>	9.5	10.2	10.4	2.0
total drinking water leaving the aqueduct system (98) = (99+100+101)	Mm³	7.7	8.2	7.9	-3.7
total drinking water dispensed and billed in the network (99)	Mm³	7.6	8.0	7.7	-3.8
<i>measured volume of water delivered to users</i>	<i>Mm³</i>	6.0	7.4	7.2	-2.7
<i>volume consumed by users and not measured</i>	<i>Mm³</i>	1.6	0.6	0.5	-16.7
total drinking water authorised and not billed in the network (100)	Mm³	0.0	0.0	0.0	-
drinking water exported to other systems (101)	Mm³	0.1	0.1	0.1	-
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (102)-	Mm³	11.3	11.2	10.0	-10.7
water loss percentages (103)-	%	59.4	57.8	55.9	-3.3

Gori – Sarnese-Vesuviano District (74 municipalities)

drinking water collected from the environment or from other systems and fed into the aqueduct systems (104)	Mm³	184.0	176.0	166.9	-5.2
<i>from wells</i>	<i>Mm³</i>	59.6	50.4	50.0	-0.8
<i>from springs</i>	<i>Mm³</i>	2.4	2.0	1.7	-15.0
<i>drinking water collected from other aqueduct systems</i>	<i>Mm³</i>	121.9	123.6	115.2	-6.8
total drinking water leaving the aqueduct system (105) = (106+107+108)	Mm³	87.6	88.7	88.2	-0.6
total drinking water dispensed and billed in the network (106)	Mm³	86.9	87.2	86.8	-0.5
<i>measured volume of water delivered to users</i>	<i>Mm³</i>	80.6	81.4	81.0	-0.5
<i>volume consumed by users and not measured</i>	<i>Mm³</i>	6.3	5.7	5.8	1.8
total drinking water authorised and not billed in the network (107)	Mm³	0.4	1.2	1.0	-16.7
<i>measured unbilled authorised consumption</i>	<i>Mm³</i>	0.0	0.0	0.0	-
<i>unmeasured unbilled authorised consumption</i>	<i>Mm³</i>	0.4	1.2	1.0	-16.7
drinking water exported to other systems (108)	Mm³	0.3	0.4	0.5	25.0
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (109)-	Mm³	96.3	87.3	78.6	-10.0
water loss percentages (110)-	%	52.4	49.6	47.1	-5.0

AdF - Optimal Territorial Conference 6 Ombrone (55 Municipalities)

drinking water collected from the environment or from other systems and fed into the aqueduct systems (111)	Mm³	60.0	60.7	58.9	-3.0
<i>surface water (***)</i>	<i>Mm³</i>	1.0	1.1	1.0	-9.1
<i>from wells</i>	<i>Mm³</i>	17.9	17.4	19.2	10.3
<i>from springs</i>	<i>Mm³</i>	40.5	41.6	38.0	-8.7
<i>from other aqueduct systems</i>	<i>Mm³</i>	0.6	0.6	0.7	16.7
total drinking water leaving the aqueduct system (112) = (113+114+115+116)	Mm³	34.5	37.0	37.0	-
total drinking water dispensed and billed in the network (113)		28.1	28.7	28.7	-
<i>measured volume of water delivered to users</i>	<i>Mm³</i>	28.1	28.7	28.7	-
<i>volume consumed by users and not measured</i>	<i>Mm³</i>	0.0	0.0	0.0	-
total drinking water authorised and not billed in the network (114)	Mm³	2.7	4.2	4.2	-
<i>measured unbilled authorised consumption</i>	<i>Mm³</i>	0.0	0.00	0.00	-
<i>unmeasured unbilled authorised consumption</i>	<i>Mm³</i>	2.7	4.2	4.2	-
drinking water exported to other systems (115)	Mm³	1.6	1.7	1.6	-5.9
measured drinking water losses (116)	Mm³	2.1	2.4	2.5	4.2
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (117)-	Mm³	25.5	23.7	21.9	-7.6
water loss percentages (118)-	%	42.5	39.0	37.2	-4.6

(*) Some figures for the 2020-2021 two year period have been updated following consolidation. The 2022 figures are estimated and will be consolidated with the subsequent reporting.

(**) the 2022 data are consistent with the calculation methods indicated by the Authority and do not include the municipalities of Civitavecchia and Percile in order to maintain the reporting scope compared to the previous two-year period and to allow for verification of achievement of the improvement targets.

(***) This is fresh water, apart from the 1% of the amount drawn from marine sources.

TOTAL WASTEWATER TREATED - NFS SCOPE (ACEA ATO 2, ACEA ATO 5, GESESA, GORI, ADF) AND MAIN INVESTEE COMPANIES (ACQUE, UMBRA ACQUE, PUBLIACQUA)	u. m.	2020	2021	2022	Δ% 2022/2021
wastewater treated in the main Group companies' main treatment plants in Italy (119) (*)	Mm ³	914.3	980.9	940.0	-4.2

(*) The 2021 figures for Puplicqua have been adjusted following consolidation.

SUMMARY TOTAL WASTEWATER TREATED DATA - NFS SCOPE (ACEA ATO 2, ACEA ATO 5, GESESA, GORI, ADF)	u. m.	2020	2021	2022	Δ% 2022/2021
waste water treated in the principal treatment plants of Acea Ato 2, Acea Ato 5, Gesesa, Gori and AdF (120) (*)	Mm ³	713.7	778.7	759.2	-2.5%

(*) Gesesa company estimated the figure for the first time in 2020, having started to install the first flow meters during the same year.

WASTE WATER TREATED BY ACEA ATO 2	u. m.	2020	2021	2022	Δ% 2022/2021
waste water treated in the main treatment plants (121)	Mm ³	512.2	516.4	510.2	-1.2
<i>Rome South</i>	Mm ³	284.9	290.1	287.2	-1.0
<i>Rome North</i>	Mm ³	93.7	88.5	90.0	1.7
<i>Rome East</i>	Mm ³	92.8	97.2	98.9	1.7
<i>Rome Ostia</i>	Mm ³	30.6	29.5	24.6	-16.8
<i>CoBIS</i>	Mm ³	6.7	6.8	5.7	-16.8
<i>Fregene</i>	Mm ³	3.5	4.2	3.9	-8.2
other – Municipality of Rome	Mm ³	8.7	9.2	8.2	-10.9
other – outside the Municipality of Rome	Mm ³	76.0	75.9	71.1	-6.4
total waste water treated by Acea Ato 2 (122)	Mm ³	596.9	601.5	589.5	-2.0

WASTE WATER TREATED BY ACEA ATO 5	u. m.	2020	2021	2022	Δ% 2022/2021
waste water treated in the main treatment plants (123)	Mm ³	21.2	25.0	24.8	-0.8

WASTE WATER TREATED BY GESESA	u. m.	2020	2021	2022	Δ% 2022/2021
waste water treated in the main treatment plants (124)	Mm ³	2.2	2.3	1.8	-18.6

WASTE WATER TREATED BY GORI	u. m.	2020	2021	2022	Δ% 2022/2021
Total waste water treated (125)	Mm ³	70.1	124.0	117.5	-5.3

WASTE WATER TREATED BY ADF	u. m.	2020	2021	2022	Δ% 2022/2021
waste water treated in the main treatment plants (126)	Mm ³	16.3	16.6	16.5	-0.7
waste water treated in other plants	Mm ³	7.0	9.3	9.1	-2.0
total waste water treated by AdF (127)	Mm ³	23.3	25.9	25.6	-1.2

ANALYTICAL DETERMINATIONS ON DRINKING WATER AND WASTEWATER - NFS SCOPE (ACEA ATO 2, ACEA ATO 5, GESESA, GORI, ADF) AND MAIN SUBSIDIARIES (ACQUE, UMBRA ACQUE, PUBLIACQUA) (*)	u. m.	2020	2021	2022	Δ% 2022/2021
analytical determinations on total drinking water (128)	no.	1,523,028	1,449,341	1,538,299	6.1
analytical determinations on total waste water - main Group Companies (129)	no.	448,829	478,361	514,724	7.6

(*) The 2021 figures for Puplicqua have been adjusted following consolidation.

ANALYTICAL DETERMINATIONS ON DRINKING WATER AND WASTEWATER OF OPERATING COMPANIES IN THE NFS SCOPE (ACEA ATO 2, ACEA ATO 5, GESESA, GORI, AdF) - SUMMARY DATA					
	u. m.	2020	2021	2022	Δ% 2022/2021
analytical determinations on drinking water of Acea Ato 2, Acea Ato 5, Gesesa, Gori and AdF (130)	no.	769,888	738,488	739,549	0.1
analytical determinations on waste water of Acea Ato 2, Acea Ato 5, Gori, Gesesa and AdF (131)	no.	252,160	274,478	299,995	9.3
ANALYTICAL DETERMINATIONS ACEA ATO 2					
	u. m.	2020	2021	2022	Δ% 2022/2021
analytical determinations on Acea Ato 2 drinking water (132)	no.	365,633	346,164	365,546	5.6
analytical determinations on Acea Ato 2 waste water (133)	no.	124,625	127,417	135,906	6.7
ANALYTICAL DETERMINATIONS ACEA ATO 5					
	u. m.	2020	2021	2022	Δ% 2022/2021
analytical determinations on Acea Ato 5 drinking water (134)	no.	116,327	105,430	107,420	1.9
analytical determinations on Acea Ato 5 waste water (135)	no.	43,812	40,636	67,810	66.9
GESESA ANALYTICAL DETERMINATIONS					
	u. m.	2020	2021	2022	Δ% 2022/2021
analytical determinations on Gesesa drinking water (136)	no.	9,372	11,955	12,307	2.9
analytical determinations on Gesesa waste water (137)	no.	5,736	11,448	12,234	6.9
GORI ANALYTICAL DETERMINATIONS					
	u. m.	2020	2021	2022	Δ% 2022/2021
analytical determinations on Gori drinking water (138)	no.	141,288	136,156	132,538	-2.7
analytical determinations on Gori waste water (139)	no.	25,499	43,270	43,564	0.7
ADF ANALYTICAL DETERMINATIONS					
	u. m.	2020	2021	2022	Δ% 2022/2021
analytical determinations on AdF drinking water (140)	no.	137,268	138,783	121,738	-12.3
analytical determinations on AdF waste water (141)	no.	52,488	51,707	40,481	-21.7

RESOURCES USED - ENERGY AREA

The data on the resources used refer to Acea Produzione, Ecogena, Deco sites, Acea Ambiente's waste-to-energy plants and Areti.

GENERATION, TRANSPORT AND SALE OF ELECTRICITY AND HEAT, PUBLIC LIGHTING (*)					
	u. m.	2020	2021	2022	Δ% 2022/2021
natural gas					
electricity generation and heat (142) = (143+144)	Nm³ x 1,000	29,005	31,329	30,308	-3.3
thermoelectric and heat production (143)	Nm³ x 1,000	26,129	27,208	26,687	-1.9
<i>Tor di Valle - high-efficiency cogeneration (CAR)</i>	<i>Nm³ x 1,000</i>	<i>22,272</i>	<i>23,912</i>	<i>24,131</i>	<i>0.9</i>
<i>Ecogena Plants</i>	<i>Nm³ x 1,000</i>	<i>3,857</i>	<i>3,296</i>	<i>2,557</i>	<i>-22.4</i>
waste-to-energy (144)	Nm³ x 1,000	2,876	4,122	3,621	-12.1
<i>San Vittore del Lazio waste-to-energy plant</i>	<i>Nm³ x 1,000</i>	<i>2,486</i>	<i>3,764</i>	<i>3,244</i>	<i>-13.8</i>
<i>Terni waste-to-energy plant</i>	<i>Nm³ x 1,000</i>	<i>390</i>	<i>358</i>	<i>377</i>	<i>5.3</i>
diesel for thermoelectric generation					
Thermoelectric production (145)	l x 1,000	639	707	937	32.5
<i>Montemartini power plant</i>	<i>l x 1,000</i>	<i>587</i>	<i>647</i>	<i>883</i>	<i>36.6</i>
<i>San Vittore del Lazio and Terni plants</i>	<i>l x 1,000</i>	<i>52</i>	<i>60</i>	<i>54</i>	<i>-11.0</i>

RDF (Refuse-Derived Fuel) processed

San Vittore del Lazio waste-to-energy plant (146)	t x 1,000	319.122	307.391	289.550	-5.8
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waste-to-energy paper mill pulper

Terni waste-to-energy plant (147)	t x 1,000	90.215	99.730	97.796	-1.9
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biogas for the production of electricity

Composting and waste management plants (148)	Nm³ x 1,000	15,649	17,633	20,207	14.6
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<i>Orvieto plant</i>	<i>Nm³ x 1,000</i>	<i>10,867</i>	<i>9,131</i>	<i>8,462</i>	<i>-7.3</i>
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<i>Aprilia plant</i>	<i>Nm³ x 1,000</i>	<i>2,578.47</i>	<i>6,090.45</i>	<i>7,012.98</i>	<i>15.1</i>
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<i>Monterotondo Marittimo plant</i>	<i>Nm³ x 1,000</i>	<i>2,203.46</i>	<i>2,411.22</i>	<i>2,645.82</i>	<i>9.7%</i>
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<i>Deco sites</i>	<i>Nm³ x 1,000</i>	<i>-</i>	<i>-</i>	<i>2,086</i>	<i>-</i>
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water

derivation from hydroelectric production (149)	Mm³	2,926	3,894	2,672.24	-31.4
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process water (150)	Mm³	0.26	0.24	0.27	12.5
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water for civilian/sanitary uses (151)	Mm³	0.30	0.33	0.31	-5.9
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miscellaneous materials

dielectric mineral oil in operation (152)	t	10,216	10,122	10,215	0.9
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dielectric mineral oil - reintegrations	t	1.19	1.19	1.34	13.1
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SF₆ in operation (153)	t	22.85	22.87	22.81	-0.3
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SF ₆ - replenishments	t	0.37	0.30	0.21	-29.6
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cooling fluids (HCFC type) in operation (154)	t	1.68	1.78	1.78	-
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cooling fluids (HCFC type) - reintegrations	t	0.00035	0.00000	0.00050	-
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miscellaneous chemicals (155)	kg	9,788,481	10,898,850	11,315,365	3.8
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<i>sodium chloride</i>	<i>kg</i>	<i>9,000</i>	<i>9,000</i>	<i>12,750</i>	<i>41.7</i>
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<i>sodium hydroxide (caustic soda)</i>	<i>kg</i>	<i>247,640</i>	<i>173,260</i>	<i>186,130</i>	<i>7.4</i>
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<i>sodium bicarbonate</i>	<i>kg</i>	<i>7,140,770</i>	<i>8,333,700</i>	<i>8,707,070</i>	<i>4.5</i>
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<i>hydrochloric acid</i>	<i>kg</i>	<i>255,680</i>	<i>219,480</i>	<i>236,970</i>	<i>8.0</i>
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<i>ammonia solution</i>	<i>kg</i>	<i>598,950</i>	<i>526,850</i>	<i>582,250</i>	<i>10.5</i>
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<i>activated carbon</i>	<i>kg</i>	<i>468,160</i>	<i>673,040</i>	<i>668,120</i>	<i>-0.7</i>
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<i>carbamine</i>	<i>kg</i>	<i>228,820</i>	<i>190,220</i>	<i>257,735</i>	<i>35.5</i>
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<i>other (for TLR and waste-to-energy)</i>	<i>kg</i>	<i>839,461</i>	<i>773,300</i>	<i>664,340</i>	<i>-14.1</i>
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miscellaneous oils and greases/lubricants (156)	kg	37,844	28,434	47,857	68.3
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electricity

<i>consumption for electrical distribution (157) = (32)</i>	<i>GWh</i>	<i>563.70</i>	<i>593.35</i>	<i>653.62</i>	<i>10.2</i>
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<i>consumption for electricity production (158) = (1)-(2)</i>	<i>GWh</i>	<i>71.43</i>	<i>79.48</i>	<i>76.18</i>	<i>-4.2</i>
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<i>consumption for offices (50% of the electricity consumed by the Parent Company) (159)</i>	<i>GWh</i>	<i>5.13</i>	<i>5.38</i>	<i>5.47</i>	<i>1.7</i>
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<i>other consumption (160)</i>	<i>GWh</i>	<i>1.32</i>	<i>1.33</i>	<i>1.16</i>	<i>-12.8</i>
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<i>other personal uses (161)</i>	<i>GWh</i>	<i>35.80</i>	<i>30.71</i>	<i>28.94</i>	<i>-5.8</i>
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total (162) = (157+158+159+160+161)	GWh	677.38	710.25	765.37	7.8
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public lighting

consumption for Public Lighting (163)	GWh	66.96	67.33	67.42	0.1
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(*) Some figures for the 2020-2021 two-year period have been adjusted for consolidation.

RESOURCES USED - ENVIRONMENT AREA

The data refer to Acea Ambiente's three composting plants in Aprilia, Monterotondo Marittimo, and Sabaudia, the waste management hub in Orvieto, the Grasciano hub operated by Deco, sites owned by Deco, the Bio Ecologia site, the Berg plant, and the four Acque Industriali plants in Pagnana, Pontedera, Poggibonsi, and San Jacopo, which have partially ceased operations.

ORVIETO HUB WASTE MANAGEMENT AND DECO SITES					Δ%
	u. m.	2020	2021	2022	2022/2021
miscellaneous chemicals (164)	t	79.5	84.4	64.6	-16.3
oils and lubricants (164b)	t	20.0	22.0	26.9	22.2
electricity (165)	GWh	4.398	4.476	14.676	227.9
diesel (166)	l	229,533	262,762	278,843	6.1
process water (167)	m ³	18,732	22,593	23,225	284.5
water for civilian/sanitary uses (168)	m ³	1,230	1,055	2,661	152.2
COMPOST PRODUCTION					Δ%
	u. m.	2020	2021	2022	2022/2021
miscellaneous chemicals (posting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (169)	t	540.45	1,694.72	1,976.59	16.6
electricity (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (170)	GWh	4.039	2.266	0.874	-61.4
diesel (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (171)	l x 1,000	220.73	286.31	320.57	12.0
process water (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (172) (*)	m ³	26,673.0	35,337.0	37,591.6	6.4
water for civil use (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (173)	m ³	2,330	2,650	3,100	17.0

(*) The figures for the 2020-2021 two year period have been adjusted after the final calculations.

DISPOSAL OF WASTE FROM ACQUE INDUSTRIALI (AI), BERG AND BIO ECOLOGIA PLANT (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
miscellaneous chemicals (AI plants - Pagnana, Pontedera and Poggibonsi, Berg and Bio Ecologia plant) (174)	t	2,728.8	2,301.5	1,915.4	-16.8
electricity (AI plants - Pagnana, Pontedera Poggibonsi - Berg and Bio Ecologia plant) (175)	GWh	3.159	3.023	2.702	-0.1
methane (AI and Berg plants) (176)	Sm ³	25,079	38,315	41,280	7.7
diesel fuel (Berg and Bio Ecologia plant) (177)	l	8,436	6,775	6,098	-10.0
LSC (Low Sulphur Content) combustible oil (Pontedera plant) (178)	t	0.049	0.031	0.000	-
LPG (Pontedera plant) (178 A)	t	-	18.361	21.989	19.8
process water (AI plants - Pagnana, Pontedera Poggibonsi, San Jacopo - Berg and Bio Ecologia plant) (179)	m ³	71,401	70,140	75,436	7.6
water for civil use (AI plants - Pagnana, Pontedera Poggibonsi, San Jacopo - Berg and Bio Ecologia plant) (180)	m ³	747	619	464	-25.0

(*) Some figures from the previous two-year period have been adjusted after the final calculations.

RESOURCES USED - WATER SEGMENT

The data refers to the Water Companies of the Group included in the reporting scope of the *Consolidated Non-Financial Statement* (NFS, pursuant to Legislative Decree no. 254/2016): Acea Ato 2, Acea Ato 5, Gesesa, Gori and AdF.

COLLECTION, SUPPLY AND DISTRIBUTION OF DRINKING AND NON-DRINKING WATER (*)	u. m.	2020	2021	2022	Δ% 2022/2021
reagents for purification and disinfection (181)	t	3,689.0	4,560.7	4,514.7	-1.0
reagents for chemical analyses (182)	t	1.65	1.55	1.69	9.0
gas for chemical analyses (183)	MNm ³	5.79	6.30	4.77	-24.4
cooling fluids (HCFC type) in operation (184) = (154)	t	1.68	1.78	1.78	-
cooling fluids (HCFC type) - reintegrations	t	0.00035	0.00000	0.00050	-
total electricity consumed (185)	GWh	483.18	446.52	455.52	1.8
<i>water pumping plants (186)</i>	GWh	476.66	439.65	448.49	1.8
<i>offices/personal use (50% of energy consumed by the Parent Company) (187) = (159)</i>	GWh	5.13	5.38	5.47	1.7
<i>chemical laboratory (188)</i>	GWh	1.40	1.49	1.56	4.6
drinking water					
total drinking water consumed (189)	Mm³	2.31	2.12	2.19	3.1
<i>civilian/sanitary uses</i>	Mm ³	2.14	1.92	2.00	4.1
<i>offices (50% of the drinking water consumed by the Parent Company)</i>	Mm ³	0.17	0.20	0.19	-6.1
non-drinking water					
total non-drinking water consumed (190)	Mm³	0.48	2.16	2.33	7.6
<i>process uses</i>	Mm ³	0.48	2.16	2.33	7.6

(*) Some figures for the 2020-2021 two-year period have been adjusted following consolidation.

(**) It is water recovered from treatment plants.

WASTEWATER TREATMENT (*)	u. m.	2020	2021	2022	Δ% 2022/2021
miscellaneous materials and natural resources					
reagents for purification waste water (191)	t	15,894	17,600	17,130	-2.7
<i>polyelectrolyte for sludge dehydration</i>	t	2,507	2,472	3,467	40.2
<i>sodium hypochlorite for final disinfection</i>	t	3,981	4,244	3,327	-21.6
<i>ferric chloride for sludge dehydration</i>	t	462	1,008	1,046	3.8
<i>peracetic acid</i>	t	4,075	5,382	4,814	-10.5
<i>other (anti-foaming etc.)</i>	t	4,786	4,363	4,316	-1.1
reagent kit for on-site controls (192)	no.	113,136	100,461	98,375	-2.1
oil and fat (193)	t	9.3	16.1	14.9	-7.7
electricity					
sewerage and purification (194)	GWh	250.5	273.3	271.2	-0.8
fuels					
Methane for processes (dryers and other processes) (195)	Nm ³ x 1,000	3,058.8	3,527.2	3,779.6	7.2
diesel for processes and generators (196)	lx1.000	226.5	69.0	146.2	112.0
petrol for processes and generators (197)	lx1.000	2.6	3.4	3.8	9.8
biogas produced and consumed on site (198)	Nm ³ x 1,000	5,320.7	3,282.3	3,316.3	1.0

(*) Some figures for the 2020-2021 two-year period have been adjusted following consolidation.

FUEL USED BY THE MAIN GROUP COMPANIES FOR TRANSPORT AND HEATING

The figures refer to all the Companies in the NFS reporting scope.

TYPE OF FUEL (*)	u. m.	2020	2021	2022	Δ% 2022/2021
transport (car fleet)					
petrol (199)	l x 1,000	225.3	562.1	884.2	57.3
diesel (200)	l x 1,000	3,461.8	3,452.1	3,353.9	-2.8
methane (201)	Nm ³ x1,000	0.6	0.7	0.4	-48.7
LPG (202)	l x 1,000	18.6	24.5	22.0	-10.2
heating					
diesel (203)	l x 1,000	0.9	0.0	0.0	-
methane (204)	Nm ³ x 1000	387.3	408.4	334.6	-18.1
LPG (205)	l x 1,000	33.9	25.9	26.0	0.3

(*) Some figures for the 2020-2021 two-year period have been adjusted following consolidation.

EMISSIONS AND WASTE - ENERGY AREA

The data on the emissions and waste refer to Acea Produzione, Ecogena, to the waste-to-energy plants of Acea Ambiente and Areti.

ATMOSPHERIC EMISSIONS	u. m.	2020	2021	2022	Δ% 2022/2021
CO₂ (206) = (207+208+209+210+211) (*)	t	405,882	394,109	394,300	-
<i>Acea Produzione (207)</i>	t	45,773	53,551	56,724	5.9
<i>Ecogena (208)</i>		9,650	7,829	5,191	-33.7
<i>Areti and Acea Produzione - SF reinstatements₆ (209)</i>	t	8,695	7,045	4,959	-29.6
<i>HCFC replenishment (210)</i>	t	0.7	0.0	1.0	-
<i>waste-to-energy (211)</i>	t	341,763	325,684	327,426	0.5
NO_x (212) = (213+214)	t	190.67	198.11	191.30	-3.4
<i>Acea Produzione (213)</i>	t	20.83	26.05	27.56	5.8
<i>waste-to-energy (214)</i>	t	169.84	172.06	163.74	-4.8
CO (215) = (216+217)	t	8.34	7.68	5.95	-22.5
<i>Acea Produzione (216)</i>	t	6.12	4.13	2.90	-29.7
<i>waste-to-energy (217)</i>	t	2.22	3.55	3.05	-14.0
SO₂ (218) = (219+220)	t	0.90	1.60	1.51	-5.1
<i>Acea Produzione (219)</i>	t	0.02	0.02	0.03	46.6
<i>waste-to-energy (220)</i>	t	0.88	1.57	1.48	-5.9
dust (221) = (222+223)	t	0.60	0.74	0.36	-52.3
<i>Acea Produzione (222)</i>	t	0.03	0.03	0.05	45.4
<i>waste-to-energy (223)</i>	t	0.57	0.71	0.31	-56.7
HCl (224)	t	3.12	3.07	2.91	-5.2
HF (225)	t	0.06	0.08	0.11	34.1
organic carbon (226)	t	1.07	0.58	0.52	-11.6

(*) Some figures from the 2020-2021 two-year period have been adjusted after the final calculations, in particular, the ETS data after certification.

OTHER EMISSIONS AND WASTE					Δ%
	u. m.	2020	2021	2022	2022/2021
waste water treated (227)	Mm ³	0.0241	0.0200	0.0252	26.5%
electrical fields at 50 Hz	kV		monitored		commitment to maintain the value below the legal limit
magnetic fields at 50 Hz	μT		monitored		commitment to maintain the value below the legal limit
noise	dB		monitored		commitment to maintain the value below the legal limit
luminous flux dissipated	Mlumen				commitment to design the plants in order to limit to the utmost the emission value dissipated upwards

WASTE (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
hazardous waste - excluding waste-to-energy area (228)	t	854.0	1,705.0	2,025.5	18.8
energy area production	t	853.4	1,704.4	2,025.2	18.8
proportion for the activities performed by the Parent Company (**)	t	0.6	0.6	0.3	-54.2
hazardous waste from waste-to-energy (229)	t	64,885.4	64,672.5	69,624.4	7.7
non-hazardous waste – excluding waste-to-energy area (230)	t	902.8	1,257.5	824.9	-34.4
energy area production	t	874.4	1,223.4	793.9	-35.1
proportion for the activities performed by the Parent Company (**)	t	28.4	34.1	31.0	-9.1
non-hazardous waste from waste-to-energy (231)	t	22,633.3	28,092.9	24,196.4	-13.9

(*) Some figures for the 2020-2021 two-year period have been adjusted following the final calculations

(**) The portion is equal to 50% of the waste produced by the Parent Company.

EMISSIONS AND WASTE - ENVIRONMENT AREA

The data refer to Acea Ambiente's three composting plants located in Aprilia in Monterotondo Marittimo and Sabaudia, the waste management hub in Orvieto and the sites owned and managed by Deco (including Grasciano2 owned by Acea Ambiente), the Bio Ecologia plant, Berg, and Acque Industriali's four plants in Pagnana, Pontedera, Poggibonsi, and San Jacopo, which are partly closed as of 2022.

ORVIETO WASTE HUB AND DECO SITES, COMPOSTING PLANTS (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
hazardous waste Orvieto hub (232)	t	11.4	12.3	12.5	1.8
non-hazardous waste Orvieto hub including leachate (233)	t	20,386.7	23,758.0	19,084.1	-19.7
hazardous waste Deco sites (234)	t	-	-	10.5	-
non-hazardous waste Deco sites including leachate (235)	t	-	-	21,424.0	-
hazardous waste - composting plants of Aprilia, Monterotondo Marittimo and Sabaudia (236)	t	3,672.5	221.2	38.0	-82.8
non-hazardous waste – composting plants of Aprilia, Monterotondo Marittimo and Sabaudia (237)	t	27,984.0	40,469.8	46,257.5	14.3

(*) Some figures from the previous two-year period have been updated after the final calculations.

ATMOSPHERIC EMISSIONS – ORVIETO AND COMPOST PLANTS					Δ%
	u. m.	2020	2021	2022	2022/2021
CO ₂ (238)	t	1,349	1,644	1,743	6.0
particles (239)	t	0.274	0.613	0.720	17.3
total organic compounds (TOCs) (240)	t	0.927	1.049	1.841	75.5
ammonia (241)	t	3.711	3.933	1.956	-77.3
volatile inorganic compounds (VICs) (242)	t	1.941	0.420	0.544	29.3

ATMOSPHERIC EMISSIONS - DECO SITES					Δ%
	u. m.	2020	2021	2022	2022/2021
CO ₂ (243)	t	-	-	1.5	-
particles (244)	t	-	-	0.860	-
hydrochloric acid (245)	t	-	-	0.035	-
hydrofluoric acid (246)	t	-	-	0.004	-
Hydrogen Sulphide (247)	t	-	-	0.015	-
SO _x (248)	t	-	-	0.095	-
NO _x (249)	t	-	-	6.082	-
CO (250)	t	-	-	1.390	-
Total Organic Carbon (TOC) (251)	t	-	-	0.111	-
ammonia (252)	t	-	-	0.346	-
VOCs (253)	t	-	-	63.916	-
Cd (254)	t	-	-	0.00007	-
Hg (255)	t	-	-	0.00007	-
heavy metals (256)	t	-	-	0.00245	-

PLANT WASTE BIO ECOLOGIA					Δ%
	u. m.	2020	2021	2022	2022/2021
hazardous waste Bio Ecologia plant (257)	t	6.7	5.7	5.6	-2.2
non-hazardous waste Bio Ecologia plant (258)	t	5,996.0	6,330.6	6,192.5	-2.2

ATMOSPHERIC EMISSIONS - BIO ECOLOGIA PLANT					Δ%
	u. m.	2020	2021	2022	2022/2021
CO ₂ (259)	t	1.8	2.3	1.8	-21.7

BERG'S WASTE					Δ%
	u. m.	2020	2021	2022	2022/2021
hazardous waste (260)	t	1,077.7	613.7	407.1	-33.7
non-hazardous waste (261)	t	2,901.1	2,526.9	2,179.6	-13.7

ATMOSPHERIC EMISSIONS – BERG (*)					Δ%
	u. m.	2020	2021	2022	2022/2021
CO ₂ (262)	t	20.0	15.7	14.5	-7.6
particles (263)	t	0.113	0.037	0.033	-11.1
organic carbon (264)	t	1.060	0.747	0.673	-9.9
hydrogen sulphide and mercaptans (265)	t	0.001	0.001	0.011	-
ammonia (266)	t	0.040	0.076	0.062	-17.9

(*) Some figures for the 2020-2021 two-year period have been adjusted following the final calculations

INDUSTRIAL WASTE WATER					Δ%
	u. m.	2020	2021	2022	2022/2021
hazardous waste Pagnana plant (267)	t	0.11	0.35	0.00	-
non-hazardous waste of Pagnana, Pontedera, Poggibonsi and San Jacopo (268)	t	2,515.8	1,470.5	618.5	-57.9

ATMOSPHERIC EMISSIONS – ACQUE INDUSTRIALI					Δ%
	u. m.	2020	2021	2022	2022/2021
CO ₂ (269)	t	204.2	229.6	143.4	-37.5
Hydrogen Sulphide (270)	t	0.019	0.015	0.015	-
ammonia (271)	t	0.038	0.011	0.002	-78.6

EMISSIONS AND WASTE - WATER SEGMENT

The data refers to the Acea Ato 2, Acea Ato 5, Gesesa, Gori and AdF water Companies.

WASTE PRODUCED (*)	u. m.	2020	2021	2022	Δ% 2022/2021
specific process waste from treatment of waste water (**)					
total purification sludge (272) = (273+274+275+276+277)	t	125,850	152,979	160,294	4.8
Acea Ato 2 purification sludge (273)	t	78,934	66,605	63,279	-5.0
Acea Ato 5 purification sludge (274)	t	9,408	13,803	12,474	-9.6
Gesesa purification sludge (275)	t	969	699	940	34.5
Gori purification sludge (276)	t	29,246	65,635	78,703	19.9
AdF purification sludge (277)	t	7,292	6,238	4,898	-21.5
total sand and slabs from purification (278) = (279+280+281+282+283)	t	12,907	14,203	15,477	9.0
Acea Ato 2 sand and slabs (279)	t	9,494	8,359	9,105	8.9
Acea Ato 5 sand and slabs (280)	t	101	225	176	-22.0
Gesesa sand and slabs (281)	t	71	10	66	552.2
Gori sand and slabs (282)	t	2,515	4,597	5,235	13.9
AdF sand and slabs (283)	t	724	1,012	896	-11.4
other waste from treatment (284)					
other Acea Ato 2	t	1,137	1,957	1,610	-17.8
other Acea Ato 5	t	6,524	5,441	4,305	-20.9
other Gesesa	t	0	0	0	-
other Gori	t	80	148	166	12.3
other AdF	t	0	0	0	-
extra process waste					
total hazardous waste (285) = (286+287+288+289+290+291)	t	175.2	309.5	213.8	-30.9
Acea Elabori (286)	t	15.9	16.6	15.7	-5.5
Acea Ato 2 (287)	t	82.9	188.9	168.2	-10.9
Acea Ato 5 (288)	t	0.9	0.4	1.2	215.4
Gori (289)	t	33.7	51.0	19.3	-62.2
AdF (290)	t	41.2	52.0	9.1	-82.5
Proportion for the activities performed by the Parent Company (291) (***)	t	0.63	0.59	0.27	-54.2
total non-hazardous waste (292) = (293+294+295+296+297+298)	t	5,665	1,748	1,626	-5.9
Acea Ato 2 and Elabori (293)	t	2,363	1,039	1,238	19.1
Acea Ato 5 (294)	t	43	26	44	70.3
Gesesa (295)	t	0	0	0	-
Gori (296)	t	213	129	87	-32.5
AdF (297)	t	3,017	499	226	-54.7
Proportion for the activities performed by the Parent Company (298) (***)	t	28	34	31	-9.1
other emissions and waste					
CO₂ from dryers and generators (299)	t	6,979	7,478	8,309	11.1
CO₂ from HCFC replenishment (300)	t	0.7	0.0	1.0	-
noise	dB		monitored	commitment to maintain the value below the legal limit	
odours			monitored	commitment to maintain the value below the limit of perception and in the areas adjacent to the treatment plants	

(*) Some figures for the 2020-2021 two-year period have been updated following consolidation.

(**) All process waste from 2022 was non-hazardous except for 200 t of sludge produced by Gesesa and 50 t of oil mixture produced by Gori.

(***) The portion is equal to 50% of the waste produced by the Parent Company.

THE EMISSIONS OF CARBON DIOXIDE FROM TRANSPORT AND PACKAGING

The figures refer to all the Companies in the NFS reporting scope.

GROUP COMPANIES (*)	u. m.	2020	2021	2022	Δ% 2022/2021
transport					
CO ₂ (301)	t	9,705	10,533	11,065	5.0
heating					
CO ₂ (302)	t	872	881	755	-14.3

(*) Some figures for the previous two-year period have been adjusted following consolidation and for the inclusion of new companies in the NFS scope.

KEY ENVIRONMENTAL PERFORMANCE INDICATORS (KPI) – ENERGY AREA

Environmental Key Performance Indicators.

INDICATOR	u. m.	2020	2021	2022
energy used for the processes (*)				
A consumption in the distribution of electricity		1,076.7 (299.1)	1,112.0 (308.9)	1,161.1 (322.5)
B consumption in the production of electricity		257.1 (71.4)	286.1 (79.5)	274.2 (76.2)
C heat lost in the district heating network		99.8 27.7	86.2 (23.9)	76.7 (21.3)
D consumption for public lighting		241.1 (67.0)	242.4 (67.3)	242.7 (67.4)
E Environment Area consumption		41.7 (11.6)	35.2 (9.8)	26.4 (7.3)
F water distribution	TJoule (GWh)	1,721.0 (478.1)	1,590.9 (441.1)	1,620.2 (450.1)
G water purification		901.8 (250.5)	983.7 (273.3)	976.3 (271.2)
H electricity for offices		36.9 (10.3)	38.7 (10.8)	39.4 (10.9)
I consumption for heating offices		15.1 (4.2)	15.6 (4.3)	13.3 (3.7)
L water area dryer consumption		113.8 (31.6)	129.7 (36.0)	140.7 (39.1)
M layoffs		132.0 (36.7)	143.2 (39.8)	150.0 (41.7)
total consumption = indirect consumption + consumption through mobility + heating		4,637.0 (1,288.1)	4,663.7 (1,295.5)	4,721.0 (1,311.4)
EMISSIONS, EFFLUENTS AND WASTE				
greenhouse-gas emissions (CO₂)	t	425,014	414,893	416,335
SO₂, NO_x emissions and other significant gases by type from the Energy Area				
NO _x	t	190.67	198.11	191.30
CO	t	8.34	7.68	5.95
SO ₂	t	0.90	1.60	1.51

Acea emission/production indicators (Acea Produzione and Acea Ambiente - waste-to-energy)

NO _x /thermoelectric production	g/kWh	0.44	0.43	0.42
CO ₂ /thermoelectric production	g/kWh	884	817	850
CO ₂ /Acea Produzione thermoelectric production	g/kWh	497	497	494
Co ₂ /thermoelectric production including Acea Produzione thermal energy	g/kWh	243	265	266
CO ₂ /total Acea Produzione production, including thermal production (**)	g/kWh	72	74	87
CO ₂ /gross total production (**)	g/kWh	418	333	408
CO ₂ /total gross production, including thermal energy (**)	g/kWh	154	146	176
SO ₂ /thermoelectric production	g/kWh	0	0	0

PRODUCTS AND SERVICES: electricity**performance of the electrical production process of Acea Produzione**

gross average performance thermoelectric production		41.9	40.3	40.3
Tor di Valle power plant (electrical performance cogeneration only)		42.4	40.6	40.7
Montemartini power plant		26.1	26.3	25.7
gross average thermoelectric production out included thermal energy recovered	%	70.2	70.1	67.6
gross average performance hydroelectric production		83.5	82.4	83.5
gross average hydroelectric production		75.3	74.0	72.5
gross average thermoelectric production, including recovered thermal energy		80.8	80.1	80.2

performance of the electrical production process - waste-to-energy plants**San Vittore in Lazio**

SRF produced/gross energy produced	kt/GWh	1.185	1.148	1.152
gross performance SRF conversion into electricity	kWh/kg SRF	0.84	0.87	0.87
electrical efficiency	%	19.2	20.2	19.6
total waste produced/hours worked	t/h	3.18	3.28	3.56

Terni

gross performance Pulper conversion into electricity	kWh/kg pulper waste	0.85	0.89	0.88
electrical efficiency	%	10.5	11.4	9.2
total waste produced/hours worked	t/h	1.7	1.7	1.6

performance of the electrical production process - photovoltaic energy

average efficiency photovoltaic modules	%	14.0	14.0	14.0
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other indicators (territory, public lighting, controls, losses)

protection of the territory (total length of HV cable lines/(length of overhead HV lines + cable lines) x 100)	%	46.3	47.0	49.3
public lighting illumination efficiency	Lumen/kWh	30.0	30.0	27.8
average performance of installed lamps (electrical power)	Lumen/W	127.9 (15,716 kW)	127.8 (15,809 kW)	89.7 (20,920 kW)
specific consumption per lamp (kWh/no. lamps)	kWh/ No. lamps	295.46 (226,635)	295.77 (227,635)	291.44 (231,347)
percentage of illuminated roads	% (km of roads illuminated/ total km of roads)	89.1 (6,338/7,110)	89.6 (6,368/7,110)	89.1 (6,461/7,252)
reintegrations of SF ₆ /km electricity distribution network	kg/km	0.0118	0.0094	0.0065
total loss of electrical energy (***)	% energy requested	5.8	6.0	6.5

(*) The figures for the previous two-year period have been updated for data consolidation.

(**) The denominator also includes PV energy produced by the subsidiary and is not fully consolidated.

(***) The total losses of electricity include: transformation losses, transport losses and commercial losses, these last due to fraud and incorrect readings.

KEY ENVIRONMENTAL PERFORMANCE INDICATORS (KPI) – WATER SEGMENT

Environmental Key Performance Indicators.

INDICATOR (*)	u. m.	2020	2021	2022
WATER SERVICE				
Energy consumption on water delivered and billed				
total electricity consumption in MWh/total water delivered and billed in Mm ³	MWh/Mm ³	1.52	1.48	1.52
carbon footprint				
total CO ₂ /m ³ of water supplied (integrated water services) (**)	kgCO ₂ /m ³	0.51	0.47	0.48
CO ₂ /m ³ of water supplied (water distribution process)	kgCO ₂ /m ³	0.33	0.29	0.30
CO ₂ /m ³ of water treated (purification process)	kgCO ₂ /m ³	0.12	0.11	0.11
PRODUCT: DRINKING WATER				
Acea Ato 2 network				
specific electricity consumption per input in the water network(***)	kWh/m ³	0.275	0.263	0.284
intensity of the checks on drinking water distributed	No./Mm ³	917	863	912
drinking water additive index	g/m ³	7.2	9.0	9.3
Acea Ato 5 network				
specific electricity consumption per input in the water network(***)	kWh/m ³	0.511	0.486	0.537
intensity of the checks on drinking water distributed	No./Mm ³	3,068	2,721	2,746
drinking water additive index	g/m ³	7.4	7.1	7.1
Gesesa network				
specific electricity consumption per input in the water network(***)	kWh/m ³	0.534	0.476	0.497
intensity of the checks on drinking water distributed	No./Mm ³	1,213	1,462	1,568
drinking water additive index	g/m ³	7.2	4.4	6.7
Gori network				
specific electricity consumption per input in the water network(***)	kWh/m ³	1.001	0.955	0.973
intensity of the checks on drinking water distributed	No./Mm ³	1,613	1,534	1,500
drinking water additive index	g/m ³	2.2	2.5	1.5
AdF network				
specific electricity consumption per input in the water network(***)	kWh/m ³	0.491	0.477	0.506
intensity of the checks on drinking water distributed	No./Mm ³	3,975	3,751	3,271
drinking water additive index	g/m ³	9.0	11.7	9.2
SERVICE: WASTE WATER TREATMENT				
Acea Ato 2				
sludge disposed of	t	78,934	66,605	63,279
sand and slabs removed	t	9,494	8,359	9,105
COD input	t	173,392	143,568	162,320
COD removed	t	159,487	127,527	146,599
efficiency of COD removal	%	92	89	90
SST input	t	100,637	91,904	99,998
SST removed	t	93,172	84,461	95,285
efficiency of SST removal	%	93	92	95
efficiency of BOD removal	%	90	90	93
total N input (as NH ₄ + NO ₂ + NO ₃ + organic)	t	17,993	15,611	15,567
total N removed	t	13,925	11,649	11,408
efficiency of N removal	%	77	75	73
Acea Ato 2 wastewater additivation index	g/m ³	15.4	17.4	16.5
Acea Ato 2 specific consumption of electricity by purification process	kWh/m ³	0.282	0.281	0.295
Acea Ato 5				
sludge disposed of	t	9,408	13,803	12,474
sand and slabs removed	t	101	225	176
COD input	t	19,341	11,382	10,598

COD removed	t	18,182	10,457	9,776
efficiency of COD removal	%	89	92	92
total N input	t	1,219	922	836
total N removed	t	827	610	631
efficiency of N removal (NH ₄ ⁺)	%	69	66	75
SST input	t	10,349	6,167	6,795
SST removed	t	9,993	5,854	6,584
efficiency of SST removal	%	96	95	97
Acea Ato 5 additivation index	g/m ³	33.6	28.8	33.9
Acea Ato 5 specific consumption of electricity by purification process	kWh/m ³	0.755	0.682	0.634
Gesesa				
sludge disposed of	t	969.5	698.6	939.6
sand and slabs removed	t	71.3	10.2	66.3
COD input	t	349	366	325.0
COD removed	t	307	341	292.6
efficiency of COD removal	%	88	93	90
total N input	t	30	13	22
total N removed	t	15	9	10
efficiency of N removal (NH ₄ ⁺)	%	48	72	45
SST input	t	76	28	25.36
SST removed	t	44	22	16.94
efficiency of SST removal	%	57.1	77.7	66.8
Gori additive index	g/m ³	42.3	47.3	48.0
Gesesa specific consumption of electricity by purification process	kWh/m ³	0.849	0.958	1.120
Gori				
sludge disposed of	t	29,246	65,635	78,703
sand and slabs removed	t	2,515	4,597	5,235
COD input	t	25,650	44,206	44,821
COD removed	t	24,245	42,314	42,073
efficiency of COD removal	%	95	96	94
total N input	t	3,310	4,519	3,098
total N removed	t	3,159	4,303	2,923
efficiency of N removal (NH ₄ ⁺)	%	95	95	94
SST input	t	6,967	17,118	19,984
SST removed	t	5,932	14,717	17,756
efficiency of SST removal	%	85	86	89
Gori additivation index	g/m ³	36.9	34.7	38.1
Gori specific consumption of electricity by purification process	kWh/m ³	0.584	0.464	0.466
AdF				
sludge disposed of	t	7,292	6,238	4,898
sand and slabs removed	t	724	1,012	896
COD input	t	9,172	7,377	8,215
COD removed	t	8,587	6,792	7,561
efficiency of COD removal	%	94	92	92
total N input	t	866	889	860
total N removed	t	562	628	701
efficiency of N removal (NH ₄ ⁺)	%	80	82	82
SST input	t	4,008	3,303	3,469
SST removed	t	3,872	3,107	3,264
efficiency of SST removal	%	97	94	94
AdF additive index	g/m ³	74.0	75.7	105.2
AdF specific consumption of electricity by purification process	kWh/m ³	1.008	0.948	0.973

(*) Some figures for the 2020-2021 two-year period have been adjusted following consolidation.

(**) These are emissions defined as "Scope 2", in other words resulting from the consumption of electricity by the water Companies in question.

(***) The indicator is calculated as the ratio of electricity used for water pumping systems to water withdrawn from the environment and other systems and fed into the aqueduct system.

KEY ENVIRONMENTAL PERFORMANCE INDICATORS (KPI) – ENVIRONMENT AREA

Environmental Key Performance Indicators.

INDICATOR (*)	u. m.	2020	2021	2022
non-hazardous waste disposed in landfill/total incoming waste	t/t	0.64	0.67	0.71
waste disposed of in landfill/energy consumed net of photovoltaic energy	t/MWh	15.39	16.19	18.52
compost produced/incoming waste	t/t	0.08	0.11	0.15
compost produced/consumed electrical energy	kg/kWh	2.19	4.19	7.99
consumed electrical energy/incoming waste in the Pagnana plant	kWh/kg	0.004	0.005	0.006
consumed electrical energy/incoming waste in the Berg plant	kWh/kg	0.009	0.009	0.012
consumed electrical energy/incoming liquid waste in the Bio Ecologia plant	kg/kWh	0.02	0.01	0.01
chemicals used/incoming waste at the Pagnana plant	kg/t	5.13	7.04	9.65
chemicals used/incoming waste Berg	kg/t	9.00	7.38	8.61
chemicals consumed/incoming waste in the Bio Ecologia plant	kg/t	6.26	4.97	6.44
recovered water (reintegration or first rain)/total water consumed for Environment Area	m ³ /m ³	0.22	0.25	0.18

(*) Some figures for the previous two-year period have been adjusted following consolidation. For data comparability, the 2022 value does not include Deco.

ENVIRONMENTAL COMPLIANCE

INDICATOR	u. m.	2020	2021	2022
COMPLIANCE - NFS SCOPE (ACEA ATO 2, ACEA ATO 5, GESESA, GORI, ADF) AND MAIN SUBSIDIARIES (ACQUE, UMBRA ACQUE, PUBLIACQUA) (*)				
non-conformities related to rules/agreements of an environmental nature	no.	67	230	96
penalties paid for non-conformities related to rules/agreements of an environmental nature	€	195,268	388,094	389,549
COMPLIANCE WITH COMPANY IN NFS SCOPE				
penalties paid for non-conformities related to rules/agreements of an environmental nature	€	43,023	249,562	272,494
<i>significant (**)</i>	€	n/a	n/a	136,700
non-conformities related to rules/agreements of an environmental nature	no.	30	186	56
<i>significant (**)</i>	no.	n/a	n/a	6

(*) The figures for the 2020-2021 two-year period have been adjusted following consolidation of the estimated values.

(**) These are fines above €10,000. Data for 2020-2021 are not available as they were not previously collected.

EXPLANATORY NOTES TO THE ENVIRONMENTAL ACCOUNTS

The numerical data presented in the *Environmental Accounts* is produced and certified by the competent Functions and has been checked as follows:

1. comparison with historical data to highlight and justify possible large deviations;
2. at least two repetitions of the acquisition process;
3. *feedback* to the Departments responsible for the final validation of the data.

The numerical data have been divided into the three categories:

- estimated;
- calculated;
- measured.

In the event of data resulting from estimates, the utmost attention was paid to the verification of the reasonableness of the basic criteria used, with the objective of resorting as little as possible, in the future, to this type of measurement of the sizes of environmental significance.

When data was achieved through calculation, the algorithm used was briefly explained to permit full understanding of the mathematical result.

Lastly, when the data was measured, an uncertainty estimate to be associated with the number was provided.

ADDITIONAL INFORMATION ON THE NUMERICAL DATA PROVIDED IN THE ENVIRONMENTAL ACCOUNTS

PRODUCTS – ENERGY AREA

item no.	explanation – comment
1	Gross total energy produced by Acea Ambiente and Acea Produzione. From 2022, the figure is net of PV production from the Subsidiary. The figure is calculated.
2	Electricity produced net of the losses due to just the production phase. From 2022, the figure is net of PV production from the Subsidiary. The figure is calculated.
3	Total gross thermal energy. The sum of Acea Produzione and Ecogena's thermal energy. The figure is calculated.
4	Total thermal energy produced, net of losses. The figure is calculated.
5	Total electricity produced, inclusive of the losses, by the Acea Produzione power plants. Includes thermoelectric and hydro- electric energy. The figure is measured with an uncertainty of less than $\pm 0.5\%$.
6	Total gross hydroelectric energy. The figure is calculated.
7	Total gross thermoelectric energy. The figure is calculated.
8	Losses of electricity attributable to just the production phase of the Acea Produzione power plants. Includes: the self-consumption (thermal and hydro) and the losses of initial transformation. The figure is measured with an uncertainty of less than $\pm 0.5\%$.
9	Electricity produced by the Acea Produzione power plants net of the losses. The figure is calculated.
10	Gross energy produced by photovoltaic installations. From 2022, the figure is net of PV production from the Subsidiary. The figure is measured with an uncertainty of less than $\pm 0.5\%$.
11	Total losses during photovoltaic generating phase, due in particular to joule effect (dissipation during heating) in the equipment. Estimated figure.
12	Net photovoltaic electricity made available by the generating installations. From 2022, the figure is net of PV production from the Subsidiary. The figure is calculated.
13	Electricity produced by the Waste-to-Energy installations: waste-to-energy of San Vittore del Lazio and waste-to-energy of Terni of Acea Ambiente. We wish to specify that the fuel used in the two installations (SRF – solid recovered fuel – for San Vittore del Lazio and paper mill pulp for the Terni plant) is composed of both biodegradable organic material, neutral on the balance of the CO ₂ , and by non-biodegradable organic substance (plastic, resins, etc.). In 2022, the renewable share for the San Vittore del Lazio plant was equal to 46.8%, the Terni incinerator share to 40.8%.
14	Self-consumption of the two waste-to-energy plants of San Vittore del Lazio and Terni and initial transformation losses. The figure is measured with an uncertainty of less than $\pm 0.5\%$.
15	Electricity produced by the two waste-to-energy plants of San Vittore del Lazio and Terni, net of the self-consumption and initial transformation losses. The figure is calculated.
16	Electrical energy produced from biogas by the waste management plant in Orvieto and, from 2020, the two composting plants in Aprilia and Monterotondo Marittimo (Acea Ambiente) and the Deco sites (owned and operated). The figure is calculated.

17	Self-consumption of biogas production plants, including small dissipations. The figure is measured with an uncertainty of less than $\pm 5\%$.
18	Net electricity produced from biogas and transferred to the network. The figure is measured with an uncertainty of less than $\pm 5\%$.
19	Thermal energy produced in the cogeneration plant of Tor di Valle including losses. The figure is measured with an uncertainty of $\pm 2\%$, near the delivery piping of the generators.
20	Losses of thermal energy of the district heating systems, due to: thermal dissipation, losses on the network, technical releases for maintenance operations, thermal reintegrations of the heat accumulation systems. The figure is calculated as the difference between the thermal energy produced and that actually supplied to the clients (invoiced).
21	Net thermal energy supplied to final clients. The figure, calculated, is obtained from the consumption invoiced.
22	Gross electricity produced by Ecogena plants. The Prepo facility was returned as of June 2022 due to assignment of the contract. The figure is calculated.
23	Gross thermal energy produced by Ecogena plants. The Prepo facility was returned as of June 2022 due to assignment of the contract. The figure is calculated.
24	Gross refrigeration energy produced by Ecogena plants. The figure is calculated.
25	Total self-consumption from Ecogena plants. The figure is calculated.
26	Electricity fed into the grid by Ecogena plants. A portion of the electrical output included in self-consumption is used to produce the other thermal carriers or for power plant operations. The figure is calculated.
27	Net thermal energy produced by Ecogena plants. The figure is calculated.
28	Net refrigeration energy produced by Ecogena plants. The figure is calculated.
29	Electricity supplied to Acea Produzione to Acea Energy with inter-Group exchange. The figure is marginal as a result of the choice made by the Acea Group to sell the electricity produced in Borsa (Stock Exchange) or through bilateral agreements.
30	Electricity supplied by the Single Purchaser and Market, including the amount imported subject to recalculation in relation to the ARERA DCO 492/2019/R/eel. The figure is measured with an uncertainty of $\pm 0.5\%$.
31	Energy requested on the electrical distribution network of Rome and Formello by all the client connected (open market + managed service). The figure is estimated.
32	Losses of electricity that occur during the distribution and transmission phase. They are attributable to: losses of transformation and transport, fraud and incorrect measurements. The figure is estimated.
33	Personal use of electricity for the implementation of the distribution activities. The figure is estimated.
34	This is electricity sold to distribution companies. The figure is measured with an uncertainty of $\pm 0.5\%$.
35	Total net electricity conveyed to final clients of the open market connected to the electrical distribution network of Rome and Formello. Includes both the quota of electricity sold by Acea Energia, and that sold by other operators active on the open market. The figure is measured with an uncertainty of $\pm 5\%$ according to Standard CEI 13-4.
36	Net electricity transferred to managed final clients. The decrease is the result of the progressive passage of managed service clients to the open market. In other words, it is a direct consequence of the deregulation process of the electricity market in effect in Italy since 1999 (Italian Legislative Decree no. 79/99). The figure is estimated based on the consumption invoiced.
37	Net electricity sold by Acea ENERGIA on the open market nationally. The figure is estimated.
38	Net electricity sold by Acea nationally on the open market and the standard service. The figure is calculated.
39	Natural gas sold by Acea on the national market. The figure is calculated.
40	Luminous flux supplied by the Public Lighting system in Rome. The figure, calculated, is the product of the number of lamps installed and the relative value of "rated" luminous flux.
41	Total number of measurements/controls performed in favour of the energy area, in particular, of Acea Produzione and Areti. The figure is calculated as the sum of the individual determinations carried out by the competent laboratories.

PRODUCTS – ENVIRONMENT AREA

item no.	explanation – comment
42	Total incoming waste. They are the quantities arriving at the Orvieto plant which include: unsorted municipal solid waste, organic fraction, green, non-hazardous industrial waste. The figure is calculated.
43	Waste partly sent for shredding only, partly just for aerobic treatment, partly both to the anaerobic digester and the aerobic treatment. The figure is calculated.

44	Waste disposed directly in landfill. The figure is measured with an uncertainty of $\pm 1\%$.
45	Waste disposed of in landfill after treatment. The figure is measured with an uncertainty of $\pm 1\%$.
46	Waste recovered and not sent to landfill. It is glass, paper and cardboard, iron and plastic. The figure is calculated.
47	Compost produced at the Orvieto plant. Thanks to the combination of the anaerobic and aerobic processes, the product is Quality Compost. The figure is measured with an uncertainty of $\pm 1\%$.
48	Reduction due to stabilisation. This represents the loss of mass due to the natural transformations of the material and the loss of water through evaporation. The figure is calculated.
49	Total waste entering Deco sites: some directly to Casoni landfills (owned by Deco) and Grasciano2 landfills (owned by Acea Ambiente from 2022), some to the mechanical biological treatment plant. The figure is calculated.
50	Waste disposed of directly in landfills (Casoni and Grasciano2). The figure is calculated.
51	Waste entering the Deco's mechanical biological treatment (MBT) plant. The figure is measured with an uncertainty of $\pm 1\%$.
52, 53, 54	Waste that is sent for recovery or disposal at third-party sites after treatment. In 2022, Deco sites produced 96,093 tonnes of SRF, of which 58% was used at foreign cement plants and 42% at waste-to-energy plants in Italy. The figure is calculated. The figure is measured with an uncertainty of $\pm 1\%$.
55	Reduction due to stabilisation. This represents the loss of mass due to the natural transformations of the material and the loss of water through evaporation. The figure is calculated.
56	Total incoming organic waste. They are the amounts arriving at the plants of Aprilia, Monterotondo Marittimo and Sabaudia, which include: sludge, green and organic fraction. The figure is calculated.
57	Incoming sludge. It is the quantity of sludge entering the composting plants of Aprilia, Monterotondo Marittimo and Sabaudia. The trend of increasing amounts depends on the resumption, after revamping, of the contributions at the Monterotondo Marittimo plant. The figure is measured with an uncertainty of $\pm 1\%$.
58	Incoming green. It is the quantity of green matter coming from the parks, woods or other areas arriving at the plants of Aprilia, Monterotondo Marittimo and Sabaudia. The figure is measured with an uncertainty of $\pm 1\%$.
59	Organic fraction of municipal solid waste (OFMSW) entering the composting plant of Aprilia and OFMSW and other agrifood waste arriving at the Monterotondo Marittimo plant. The figure is calculated.
60	Quality Compost. It is the quantity of quality compost produced at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The compost estimate is made based on the quantities transported daily for maturation or to the final storage areas. Due to process losses, at the time of sale the compost may be less than estimated. Compost production in 2022 at Monterotondo Marittimo was higher mainly due to the introduction of a new, higher-performance screening machine than the one used in previous years. Compost at Sabaudia is zero because the plant is at a standstill awaiting authorisation for revamping.
61	Non-compostable material for disposal. It is the non-biodegradable material (for example plastics) which is separated from the compostable material sent for disposal. The figure is measured with an uncertainty of $\pm 1\%$.
62	Reduction due to stabilisation. This represents the loss of mass due to the natural transformations of the material and the loss of water through evaporation. The figure is calculated.
63	Liquid waste. Represents the quantity of liquid waste coming into the Bio Ecologia plant. The figure is measured with an uncertainty of $\pm 1\%$.
64	Total wastewater treated in Bio Ecologia treatment plants. In 2022, the figure was significantly reduced as the management of the Buonconvento site was taken over by AdF, a Group company in the industrial sector. The figure is measured with an uncertainty of $\pm 1\%$.
65	Total analytical determinations. These are all the analytical measurements made at the Orvieto, Aprilia, Monterotondo Marittimo, Sabaudia and Deco sites. The figure is calculated.
66	Total incoming waste. These are the amounts arriving at Acque Industriali's plants at Pagnana, Pontedera, Poggibonsi and San Jacopo. The figure is calculated. Since June 2021, operations at the Poggibonsi plant have been suspended pending the issuance of a new IEA. Since February 2020, operations at the San Jacopo plant have been suspended pending the determination of further interventions on the plant. The Pontedera site discontinued operations in 2022. Due to these factors, the incoming tonnage for 2022 were drastically reduced.
67	Incoming sludge. Represents the quantity of incoming sludge at Acque Industriali's plants at Pagnana, Pontedera, Poggibonsi and San Jacopo. Due to the closure of the Pontedera site in July 2022 and the suspension of the Poggibonsi site in the same year, quantities have decreased. At the Pagnana site, quantities have been drastically reduced to preserve the wastewater output quality. Once accepted and implemented, an ongoing project involving minor plant modifications at Pontedera will enable waste with higher pollutant loads than at present to be processed while maintaining the quality of the final discharge. The figure is measured with an uncertainty of $\pm 1\%$.
68	Liquid waste. This is the amount of liquid waste coming into the Pagnana and Pontedera plants. The figure is calculated.

69	Sewage and other waste. This is the amount of sewage and other non-hazardous waste. The figure is calculated.
70	Leachate. This is the amount of leachate coming into the Pagnana and Pontedera plants. The figure is measured with an uncertainty of $\pm 1\%$.
71	Ammonium Sulphate produced. This is the amount of quality of Ammonium Sulphate produced at the Pagnana and Pontedera plants. The figure is estimated.
72	Treated water before discharge at Acque Industriali facilities. These also include water that is consumed for industrial and/or civil use inasmuch as there are no distinct meters before discharge. The figure is calculated.
73	Total incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.
74	Solid incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.
75	Liquid incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.

PRODUCTS – WATER SEGMENT

item no.	explanation – comment
76	Total drinking water collected from the environment or from other systems and fed into the aqueduct systems. This is the total amount of water collected from the following Group Companies: Acea Ato 2, Acea Ato 5, Gesesa, Gori, AdF, Acque, Publiacqua, Umbra Acque. The figure is calculated.
77	Total drinking water supplied and invoiced to the respective clients by the Companies listed under line number 76. The figure is estimated.
78	Total amount of drinking water leaving the system from companies listed under 76. The figure is calculated.
79	Total drinking water collected from the environment or from other systems and fed into the aqueduct systems. This is the sum of the water taken from the Companies Acea Ato 2, Acea Ato 5, Gori, Gesesa, AdF. The figure is calculated.
80	Total drinking water supplied and invoiced to the respective clients by the Companies listed under line number 79. The figure is estimated.
81	Total amount of drinking water leaving the system from companies listed under 79. The figure is calculated.
82	Total drinking water collected from the environment or other systems by Acea Ato 2 and released into the aqueduct system of the Optimal Territorial Area 2 of Central Lazio. The figure is measured with an uncertainty of $\pm 3\%$.
83	Total amount of drinking water leaving the Acea Ato 2 aqueduct system. This is the sum of drinking water supplied and billed, drinking water authorised and not billed, water exported to other systems and measured drinking water losses. The figure is calculated.
84	Total drinking water supplied and billed (in other words measured at the meters, where present) to the customers connected to the Acea Ato 2 network.
85	Total drinking water authorised and not billed in the Acea Ato 2 network. The figure is estimated.
86	Total amount of drinking water exported to other aqueduct systems by Acea Ato 2. The figure for the year is estimated and may undergo consolidation after publication.
87	Total Acea Ato 2 drinking water losses. The figure is measured with an uncertainty of $\pm 3\%$
88	Water losses - Acea Ato 2 network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
89	Acea Ato 2 water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
90, 91, 92, 93, 94	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by Acea Ato 5.
95	Water losses - Acea Ato 5 network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
96	Acea Ato 5 water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
97, 98, 99, 100, 101	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by Gesesa.
102	Water leaks - Gesesa network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.

103	Gesesa water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
104, 105, 106, 107, 108	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by Gori.
109	Water leaks - Gori network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
110	Gori water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
111, 112, 113, 114, 115	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by AdF.
116	Total AdF drinking water losses. The figure is measured with an uncertainty of $\pm 3\%$
117	Water losses - Acea AdF network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
118	AdF water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
119	Total treated waste water in the main treatment plants of the following water Companies of the Group: Acea Ato 2, Acea Ato 5, Gesesa, Gori, AdF, Umbra Acque, Publiacqua, Acque. The figure is calculated.
120	Total amount of waste water treated in the main treatment plants of the water companies in the NFS scope: Acea Ato 2, Acea Ato 5, Gori AdF and Gesesa.
121	Total waste water sent to the principal treatment plants of Acea Ato 2 and treated. The total figure is calculated.
122	Total waste water sent to the treatment plants and treated by Acea Ato 2, including the quantities treated in the small plants of the municipalities of Rome and in those outside the municipalities of Rome. The total figure is calculated.
123	Total waste water sent to the main treatment plants and treated by Acea Ato 5. The figure is calculated.
124	Estimated amount of waste water, for the first time in 2020, used and treated in the main treatment plants of Gesesa and treated. The estimate is based on the value of invoicing in 2020. In 2020, the first flow meters were installed.
125	Total amount of waste water sent to the main treatment plants of Gori and treated. The substantial increase in the quantities treated in the last few years is linked to the management transfer of several treatment plants from the Campania region. In particular, two large treatment plants were transferred in 2021. The total figure is calculated.
126	Total amount of wastewater sent to the main treatment plants with PE > 10,000 and treated by AdF.
127	Total amount of waste water used in treatment plants and treated by AdF, including the quantities treated in minor plants.
128	Number of analytical determinations conducted overall on the drinking water by the main Companies of the Acea Group. The figure is calculated.
129	Number of analytical determinations conducted overall on the waste water by the main Companies of the Acea Group. The figure is calculated.
130	Number of analytical determinations conducted overall on the drinking water by Acea Ato 2, Acea Ato 5, Gori, AdF and Gesesa.
131	Number of analytical determinations conducted overall on the waste water by Acea Ato 2, Acea Ato 5, Gori, AdF and Gesesa.
132	Number of analytical determinations conducted overall on the drinking water by Acea Ato 2.
133	Number of analytical determinations conducted overall on the waste water by Acea Ato 2.
134	Number of analytical determinations conducted overall on the drinking water by Acea Ato 5.
135	Number of analytical determinations conducted overall on the waste water by Acea Ato 5.
136	Number of analytical determinations conducted overall on the drinking water by Gesesa.
137	Number of analytical determinations conducted overall on the waste water by Gesesa.
138	Number of analytical determinations conducted overall on the drinking water by Gori.
139	Number of analytical determinations conducted overall on the waste water by Gori.
140	Number of analytical determinations conducted overall on drinking water by Gesesa.
141	Number of analytical determinations conducted overall on waste water by Gesesa.

RESOURCES USED – ENERGY AREA

item no.	explanation – comment
142	Total quantity of natural gas used to generate the electricity and heat at the Acea Produzione and Ecogena plants and at the waste-to-energy plants of Acea Ambiente. The figures expressed in Normal cubic metres (volume at 0°C and 1 Atm), is measured with an uncertainty of $\pm 0.5\%$. Estimated figure.
143	Total amount of natural gas used in the Tor di Valle power plant and the Ecogena plants. The figure is calculated.
144	Total quantity of natural gas used by waste-to-energy plants. The figure is measured with an uncertainty of $\pm 2\%$.
145	Total quantity of diesel used to generate electricity at the Montemartini power plant (turbogas) and for operations at the waste-to-energy plants of Terni and, for a small part, of San Vittore del Lazio. The consumption of the Montemartini power plant is significant during those years when the power plant produces more electricity in order to fulfil the normal scheduled periodic tests, and to conduct extraordinary maintenance. The figure is measured with an uncertainty of $\pm 2\%$.
146	Quantity of RDF (Refuse-Derived Fuel) sent for waste-to-energy processing in the San Vittore del Lazio plant. The figure is measured with an uncertainty of $\pm 1\%$.
147	Quantity of paper mill pulp sent to waste-to-energy in the Terni plant. The figure is measured with an uncertainty of $\pm 1\%$.
148	Amount of biogas produced for the purpose of producing electrical energy. A minimal part is not used and burned in a flame. The figure is measured with an uncertainty of $\pm 1\%$.
149	Total water derived from surface resources and aqueducts (as in the case of the hydroelectric power plant of Salisano) for the production of hydroelectric energy. The figure is calculated.
150	Total quantity of water used in the industrial processes. The various contributions are due to: reintegration for losses in the district heating network; various uses in the waste-to-energy plants of San Vittore del Lazio and Terni (of water from aqueducts, wells and recovery of first and second rain recovery). The figure is calculated as the sum of the various contributions.
151	Quantity of aqueduct water used by the Companies included in the energy area, for civilian/sanitary uses. It is consumption of Acea Produzione and Areti of the waste-to-energy plants and 50% of the consumption of the Holding Company. The figure, calculated, refers to the consumption invoiced.
152	This is the total amount of dielectric mineral oil in Areti's primary and secondary substations, including the amount of oil in the Petersen coils installed in some primary substations. From 2022 on, the published data will include the volumes of dielectric oil in Acea Produzione's facilities over a three-year period. The figure is estimated. Areti and Acea Produzione reinstatement figures are estimated.
153	This is the total amount of gaseous insulation (SF_6) in the Areti and Acea Produzione plants. The figure is estimated. The figure referred to the reintegrations, also estimated, represents the total quantity of SF_6 released ex-novo into the production circuit during the year.
154	It represents the total quantity of cooling fluids in operation. The reintegrations represent the quantity of cooling fluids used for the maintenance of the air-conditioning equipment, during which the gas in operation is recovered and replaced with the new one. The data refer to the previous year compared to the year as they are based on ISPRA annual statements following the publication of the <i>Sustainability Report</i> . Both figures are calculated by attributing all the gas supplied overall by the Parent Company to the energy area and the water area in equal parts (50%).
155	Total chemical substances used in the electrical and thermal generating process in the Acea Produzione power plants and the waste-to-energy plants of Acea Ambiente. The figure is calculated.
156	Quantity of lubricating oils and fats used by Acea Produzione and the Terni waste-to-energy plant. The figure is measured with an uncertainty of $\pm 0.5\%$.
157	The figure matches Item 28.
158	Matches the difference between Items 1 and 2.
159	Electricity consumed by the processes not directly connected to the production phase (offices). The figure is calculated at 50% of the electricity consumed overall by the parent company. The remaining 50% is attributed as consumption to the water area.
160	Consumption of electricity at other sites and plants, including the consumption of the waste-to-energy plants (Terni and San Vittore del Lazio). The figure is estimated.
161	Other uses of the electricity in the energy area. The figure is calculated.
162	Total electricity consumer by the product systems included in the energy area. The figure is calculated.
163	Total electricity consumed for public lighting in the municipality of Rome. The figure is calculated based on the consistencies of the installations in operation during the year.

RESOURCES USED – ENVIRONMENT AREA

item no. explanation – comment

Orvieto plant and Deco sites

164	Total chemical substances used at the Orvieto plant and Deco sites. The figure is calculated.
(164b)	Amount of hydraulic oils and lubricants used mainly for power generation units at the Orvieto and Deco sites. The data is measured with an uncertainty of $\pm 0.5\%$.
165	Electricity consumed at the Orvieto plant and Deco sites. The considerable increase in 2022 is due to Deco entering the NFS scope. The figure is measured with an uncertainty of $\pm 1\%$.
166	Total amount of diesel consumed used at the Orvieto plant and Deco sites. The data is measured with an uncertainty of $\pm 2\%$.
167	Total water consumed at the Orvieto plant and Deco sites. It is specified that, for the Orvieto plant, this resource comes partly from roofs (rainwater) and partly from the riverbed (river water). For Deco sites, this is a surface resource provided by the Consorzio di Bonifica. The 2022 figure is much higher due to the entry of Deco sites into the reporting scope, which consumed 19,761 cubic meters for industrial use. Orvieto's consumption is in line with previous years. Estimated data.
168	Amount of water used for civilian purposes by the Orvieto hub and at Deco sites. It is supplied by tanker trucks for Orvieto, since the plant is not connected to the aqueduct. The 2022 figure is affected by the civilian consumption of Deco sites, which were added in the year. Estimated data.

Compost Production

169	Total chemical substances used at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The figure is calculated.
170	Electricity consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The significant decrease in 2022 is primarily attributable to a change in the plant configuration at the Aprilia site and, in particular, optimising the administration of the anaerobic digester. The figure is measured with an uncertainty of $\pm 1\%$.
171	Total quantity of diesel fuel consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. Although diesel consumption increased in 2022 due to an increase in the amount consumed at the Monterotondo site, the indicator "litres of diesel fuel/compost produced" fell by 10% at the same site. The figure is measured with an uncertainty of $\pm 2\%$.
172	Quantity of water consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The quantities of water recycled are included. The figure is estimated.
173	Quantity of water used for civil purposes in the composting plants of Aprilia, Monterotondo Marittimo and Sabaudia. The value is partially estimated.

Liquid waste disposal and Industrial Water treatment at Berg and the Bio Ecologia plant

174	Total chemical substances used at Acque Industriali's plants in Pagnana, Pontedera and Poggibonsi, and at Berg and the Bio Ecologia plant. Any fluctuations that may be evident in the figure from one year to the next depend on the chemical composition of incoming waste. Greater chemical complexity can require a greater consumption of chemicals for treatment prior to disposal. The figure is calculated.
175	Electricity consumed at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Bio Ecologia plant. The figure is measured with an uncertainty of $\pm 1\%$.
176	Amount of methane consumed at Acque Industriali's Pagnana plant and at Berg. The figure is measured with an uncertainty of $\pm 1\%$.
177	Amount of diesel fuel consumed at the Berg and Bio Ecologia facilities. The figure is calculated.
178	Amount of LSC (Low Sulphur Content) combustible oil at the Pontedera plant. The figure is measured with an uncertainty of $\pm 2\%$. In August 2021, the LSC boiler was replaced with a new LPG boiler.
178 A	Amount of LPG consumed by the boiler at the Pontedera plant. The figure is measured with an uncertainty of $\pm 2\%$.
179	Amount of water consumed at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Bio Ecologia plant. The figure is calculated.
180	Amount of water used for civil purposes at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Bio Ecologia plant. The figure is calculated.

RESOURCES USED – WATER SEGMENT

item no.	explanation – comment
181	The figure represents the sum of the consumption of reagents for the purification and disinfection of water for Acea Ato 2, Acea Ato 5, Gori and Gesesa. In particular, they are sodium hypochlorite, used as disinfectant at the request of the Health Authorities, aluminium polychloride, caustic soda and ozone. The figure is calculated.
182	Total quantity of chemical reagents used by the company Acea Elabori to carry out the official duties, namely the analytical checks for the Companies of the Acea Group. The figure is measured.
183	Total volume of pure gases for analysis, used by Acea Elabori. The figure is measured.
184	It represents the total quantity of cooling fluids in operation. The reintegrations indicate the quantity of cooling fluids used for the maintenance of the air-conditioning equipment, during which the gas in operation is recovered and replaced with the new one. The data refer to the previous year compared to the year as they are based on ISPRA annual statements following the publication of the <i>Sustainability Report</i> . Both figures are calculated by attributing all the gas supplied overall by the Parent Company to the energy area and the water area in equal parts (50%).
185	Total energy consumed in the water area. The figure is calculated.
186	Electricity used for the drinking water and non-potable water pumping stations. The figure is measured with an uncertainty of $\pm 1\%$.
187	Electricity consumed by the processes not directly connected to the production phase (offices). The figure is calculated at 50% of the electricity consumed overall by the parent company.
188	Electricity used by Acea Elabori. It includes all the energy related to the various fields of activity of the Company, not only the analytical laboratory activities. The figure is calculated.
189	This is the amount of drinking water for civil/sanitary uses at the offices of Acea S.p.A. (calculated at 50% of the water consumed overall by the Parent Company) and for Acea Ato 2, Acea Ato 5, Gori and Gesesa. The figure is calculated.
190	Quantity of water for process uses in Acea Ato 2 and Acea Ato 5. In 2022, only 1% of the quantity used by Acea Ato 5 is drinking water, The remaining amount (99%) is water recovered from treatment plants. The figure is calculated.
191	Total quantity of <i>chemicals</i> used in the purification process of waste water including: polyelectrolytes, sodium hypochlorite, iron chloride, lime. The figure is calculated.
192	Total number of reagent kits purchased from the Acea Ato 2 waste water treatment plants for additional controls beyond analytical testing. The use of the kits responds to the need of the laboratories connected to the treatment plants to be able to carry out complex analyses in a simple, fast manner. Acea Ato 2 uses photometers and rapid analysis systems for all the parameters of interest and to perform reliable monitoring of waste water legal limits.
193	Total quantity of lubricating oil and fat used for the equipment of the water area (pumps, centrifuges, motors etc.). The figure is calculated.
194	Electricity used to run the waste water treatment plants and to operate the sewerage network. The figure is measured with an uncertainty of $\pm 1\%$.
195	Amount of methane used in the treatment processes (for example in the dryers of Acea Ato 2 and Gori and for the treatment of sludge through thermochemical hydrolysis in the treatment plants of AdF). The figure is measured with an uncertainty of $\pm 2\%$.
196	Amount of diesel used in the purification and other (for example in the Ostia desiccator of Acea Ato 2 processes and for water, sewage and purification generators). The figure is measured with an uncertainty of $\pm 2\%$.
197	Quantity of petrol used in purification processes and generators. The figure is measured with an uncertainty of $\pm 2\%$.
198	Amount of biogas produced and consumed on site, excluding amounts burned in the flare. The figure is measured with an uncertainty of $\pm 2\%$.

FUELS USED BY THE GROUP (TRANSPORT AND HEATING)

item no.	explanation – comment
199	Total amount of petrol used for the main Companies of the Acea Group car fleet. The data come from the calculations of the Group's Energy managers. After two years marked by the COVID emergency, the increase in 2022 is primarily the result of increased operations. The 2021 Defra conversion factor was used to convert units of volume (litres) to units of mass (kg).
200	Total amount of diesel used for the main Companies of the Acea Group car fleet. The data come from the calculations of the Group's Energy managers. The 2021 Defra conversion factor was used to convert units of volume (litres) to units of mass (kg). The figure includes the fuel consumed by Aquaser's vehicles.

201	Total amount of methane used for the main Companies of the Acea Group car fleet. The data comes from the calculations of the Group's Energy managers.
202	Total amount of LPG (Liquefied Petroleum Gas) used for the main Companies of the Acea Group car fleet. The 2021 Defra conversion factor was used to convert units of volume (litres) to units of mass (kg).
203	Total quantity of diesel used for heating work areas and for the supply of the generators. The figure is measured with an uncertainty of ± 0.5%.
204	Total quantity of natural gas used for heating the work spaces. The figure is measured with an uncertainty of ± 0.5%.
205	Total quantity of LPG (Liquefied Petroleum Gas) used to heat the work spaces. The figure is measured with an uncertainty of ± 0.5%.

EMISSIONS AND WASTE – ENERGY AREA

item no.	explanation – comment
206	Total quantity of carbon dioxide released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and from the waste-to-energy process of SRF and pulper. Includes the equivalent CO ₂ estimated on the basis of the replenishment of SF ₆ and HCFC refrigerants. Estimated figure.
207	Quantity of carbon dioxide released into the atmosphere by the Acea Produzione power plants. The figure for the year preceding reporting is corrected in the year of publication, after ETS certification. The figure is calculated in accordance with current legislation.
208	Quantity of carbon dioxide released into the atmosphere by the Ecogena plants. The figure is calculated.
209	Quantity of equivalent CO ₂ estimated based on the of SF ₆ replenishment, considering that 1 t of this gas has a heating power 23,500 times that of the CO ₂ (source: GHG Protocol - IPCC Fifth Assessment Report).
210	Quantity of equivalent CO ₂ estimated on the basis of refrigerant fluid replenishments (HCFCs), considering that 1 t of gas has a heating capacity of about 700-2,500 times that of CO ₂ . The value depends on the specific type of gas (source: GHG Protocol - IPCC Fifth Assessment Report; for gas mixtures the factor is calculated on the primary source). Half of the emissions are allocated to the energy area and half to the water area, as is the case for the quantities of refrigerant fluids (HCFCs). The figure coincides with item No. 282.
211	Quantity of carbon dioxide released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure for 2021 was recorded following the issue of the ETS certificate. The figure is measured.
212	Total quantity of nitrogen oxides (NO + NO ₂) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels, and from SRF and waste-to-energy processes. Their presence in traces of the emissions is due to undesired secondary reactions which occur at high temperature between the nitrogen and the oxygen of the air. The figure is calculated.
213	Total quantity of nitrogen oxides (NO + NO ₂) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
214	Quantity of nitrogen oxides (NO + NO ₂) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
215	Total quantity of carbon oxide (CO) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and the waste-to-energy process. The existence of the pollutant in the emissions is due to incomplete fuel reaction and represents a symptom of deterioration in the performance of the combustion reaction. The figure is calculated.
216	Total quantity of carbon oxide (CO) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
217	Quantity of carbon oxide (CO) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
218	Total quantity of sulphur dioxide (SO ₂) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and from the waste-to-energy process of SRF and paper mill pulp. The use of methane and diesel with low sulphur content in the power plants enables this type of emission to be contained. The figure is calculated.
219	Quantity of sulphur oxide (SO ₂) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
220	Quantity of sulphur dioxide (SO ₂) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.

221	Total quantity of dustes (microscopic particles with average aerodynamic diameter equal or less than 10 thousand of a millimetre) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and from the SRF and pulper waste-to-energy processes. Basically, it is amorphous unburned carbon, with traces of other compounds of various composition, obtained as sub-product of the combustion when it achieved completely. The figure is calculated.
222	Quantity of dustes released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
223	Quantity of dustes released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
224	Quantity of hydrochloric acid (HCl) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
225	Quantity of hydrofluoric acid (HF) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
226	Quantity of organic carbon released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
227	Total quantity of waste water, treated, resulting from the thermoelectric energy production activities. The figure is measured with an uncertainty of $\pm 2\%$.
228	Total quantity of hazardous waste (pursuant to Italian Legislative Decree no. 152/06) disposed of by the main Companies of the Group excluding the waste-to-energy area. The figure is measured with an uncertainty of $\pm 2\%$.
229	Hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the waste-to-energy area. It is essentially light ashes and slag resulting from the incineration processes. The figure is measured with an uncertainty of $\pm 2\%$.
230	Total quantity of non-hazardous waste (pursuant to Italian Legislative Decree no. 152/06) disposed of by the main Companies of the Group excluding the waste-to-energy area. The figure is measured with an uncertainty of $\pm 2\%$.
231	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the waste-to-energy area. It is essentially heavy ashes and slag resulting from the incineration processes. The figure is measured with an uncertainty of $\pm 2\%$.

EMISSIONS AND WASTE – ENVIRONMENT AREA

item no.	explanation – comment
232	Hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Orvieto plant. The figure is measured with an uncertainty of $\pm 2\%$.
233	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Orvieto plant. The figure is measured with an uncertainty of $\pm 2\%$.
234	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Deco sites. The figure is measured with an uncertainty of $\pm 2\%$.
235	Non-hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Deco sites. The figure is measured with an uncertainty of $\pm 2\%$.
236	Hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Aprilia, Monterotondo Marittimo and Sabaudia plants. The increase is due to the almost fully operational restart of the Monterotondo Marittimo and Aprilia plants. The figure is calculated.
237	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Aprilia, Monterotondo Marittimo and Sabaudia plants. The increase is due to the almost fully operational restart of the Monterotondo Marittimo and Aprilia plants. The figure is calculated.
238	CO ₂ emissions from the composting plants and Orvieto and related to the ancillary services of the waste-to-energy plants, not strictly related to the production of electricity. They also include non-biogenic emissions from the combustion of biogas produced on site. The figure is measured with an uncertainty of $\pm 2\%$.
239, 240, 241, 242	They are dustes, total organic compounds (TOCs), ammonia and volatile inorganic substances (SIVs) issued at the Monterotondo Marittimo plant. The other plants provide only concentration values, with no regulatory obligation to calculate absolute values. The values in mg/l of all plants are well below official limits. The increase of the data is due to the almost fully operational restart of the Monterotondo Marittimo plant. The data is calculated starting from the measurement of the concentrations.
243	CO ₂ emissions from the Deco sites are related to fuel consumption. The figure is calculated.
244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256	These are dust, hydrochloric acid, hydrofluoric acid, hydrogen sulphide, SO _x , NO _x , CO, TOC, ammonia, VOCs, Cd, Hg and heavy metals emitted at Deco sites. The values in mg/l of all plants are well below official limits. The data is calculated starting from the measurement of the concentrations.

257	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Bio Ecologia plant. The figure is measured with an uncertainty of $\pm 2\%$.
258	Non-hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Bio Ecologia plant. The figure is measured with an uncertainty of $\pm 2\%$.
259	CO ₂ emissions from the Bio Ecologia plant. The figure is calculated.
260	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Berg plant. The figure is measured with an uncertainty of $\pm 2\%$.
261	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Berg plant. The figure is measured with an uncertainty of $\pm 2\%$.
262	CO ₂ emissions related to the Berg plant. The figure is calculated.
263	Dust emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
264	Organic carbon emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
265	Hydrogen sulphide and mercaptans emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
266	Ammonia emissions from the Berg plant. The data is calculated starting from the measurement of the concentrations.
267	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Pagnana plant. The figure is calculated.
268	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Pagnana, Pontedera, Poggibonsi and San Jacopo plants. The figure is calculated.
269	Emissions of CO ₂ of the Pagnana and Pontedera plants relate to the consumption of fuels. The figure is calculated.
270	Hydrogen Sulphide emissions from the Pagnana and Pontedera plants. The data is estimated taking into account the maximum value that can be recorded in the plant.
271	Ammonia emissions at the Pagnana and Pontedera Plants. The data is estimated taking into account the maximum value that can be recorded in the plant.

EMISSIONS AND WASTE – WATER SEGMENT

item no.	explanation – comment
272	Total quantity of purification sludge disposed of by Acea Ato 2, Acea Ato 5, Gori, Gesesa and AdF. Non-hazardous waste. The figure is measured with an uncertainty of $\pm 2\%$.
273	Total quantity of purification sludge disposed of by Acea Ato 2. The figure is measured with an uncertainty of $\pm 2\%$.
274	Total quantity of purification sludge disposed of by Acea Ato 5. The figure is measured with an uncertainty of $\pm 2\%$.
275	Total quantity of purification sludge disposed of by Gesesa. The figure is measured with an uncertainty of $\pm 2\%$.
276	Total quantity of purification sludge disposed of by Gori. The strong increase in the quantities produced in the three-year period is due to the progressive transfer to Gori of the management of treatment plants previously managed by the Campania Region. The figure is measured with an uncertainty of $\pm 2\%$.
277	Total quantity of purification sludge disposed of by AdF. The figure is measured with an uncertainty of $\pm 2\%$.
278	Total quantity of sand and slabs disposed of by Acea Ato 2, Acea Ato 5, Gori, Gesesa and AdF. The figure is measured with an uncertainty of $\pm 2\%$.
279	Total quantity of sand and slabs disposed of by Acea Ato 2. The figure is measured with an uncertainty of $\pm 2\%$.
280	Total quantity of sand and slabs disposed of by Acea Ato 5. The figure is measured with an uncertainty of $\pm 2\%$.
281	Total quantity of sand and slabs disposed of by Gesesa. The figure is measured with an uncertainty of $\pm 2\%$.
282	Total quantity of sand and slabs disposed of by Gori. The increase in the quantities produced is due to the progressive transfer to Gori of the management of treatment plants previously managed by the Campania Region. The figure is measured with an uncertainty of $\pm 2\%$.
283	Total quantity of sand and slabs disposed of by AdF. The figure is calculated.
284	Amount of other process waste, excluding sludge, sand and slabs. The figure is measured with an uncertainty of $\pm 2\%$.
285	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) including that disposed of by Acea Ato 2, Acea Elabiori, Acea Ato 5, and a portion of waste produced by the Parent Company (attributed in equal parts to the energy and water segments). The figure is calculated.

286	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Elabori. The figure is measured with an uncertainty of $\pm 2\%$.
287	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 2. The figure is measured with an uncertainty of $\pm 2\%$.
288	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 5. The figure is measured with an uncertainty of $\pm 2\%$.
289	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Gori. The figure is measured with an uncertainty of $\pm 2\%$.
290	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by AdF. The figure is measured with an uncertainty of $\pm 2\%$.
291	Proportion of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the Parent Company and attributed to the water segment. The same proportion was attributed to the energy area.
292	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) including that disposed of by Acea Ato 2, Acea Ato 5, Gori Gesesa and AdF, and a portion of waste produced by the Parent Company (attributed in equal parts to the energy and water segments). The figure is calculated.
293	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 2 and Acea Elabori. The increase in the quantities in 2020 is mainly due to the launching of filters at the drinking water plant of Pescarella. The figure is calculated.
294	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 5. The figure is estimated.
295	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Gesesa. The figure is estimated.
296	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Gori. The figure is estimated.
297	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by AdF. The data are derived from direct measurements.
298	Proportion of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the Parent Company and attributed to the water segment. The same proportion was attributed to the energy area.
299	Total amount of carbon dioxide emitted by dryers and generators. The figures are calculated using the consumption of fuel and the emission coefficients (MATTM data).
300	Quantity of equivalent CO ₂ estimated on the basis of refrigerant fluid replenishments (HCFCs), considering that 1 t of gas has a heating capacity of about 700-2,500 times that of CO ₂ . The value depends on the specific type of gas (source: GHG Protocol - IPCC Fifth Assessment Report; for gas mixtures the factor is calculated on the primary source). Half of the emissions are allocated to the energy area and half to the water area, as is the case for the quantities of refrigerant fluids (HCFCs). The figure coincides with item No. 194. For 2021, the figure is zero as there were no reintegrations in the year.

CO₂ EMISSIONS FROM TRANSPORT AND HEATING

item no.	explanation – comment
301	Total quantity of carbon dioxide issued by the motor pool of the Acea Group. The three-year figure is calculated using the consumption of fuel and the emission coefficients (ISPRA 2020). The figure is calculated.
302	Total quantity of carbon dioxide emitted by the systems used to air-condition the work spaces. The figure is calculated.