

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), as defined in the *Methodological Note*.

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 Envi-

ronmental Accounts and only relative to the aspects which are specifically signalled in the text. Please see the chapter *Water Company data sheets and overseas activities* (outside the scope of the NFS). In 2021, Berg and Demap were included in the NFS scope. In this regard, the data for the three-year period have been updated to facilitate comparability¹⁷⁴.

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 **about 500 items and parameters monitored** which quantify the physical flows generated by the activities and some performance indicators.

The substances used by the Group - whether natural, like water or not natural, like *chemicals* - the “products”, emissions, effluents and waste related to the activities managed, are reported for the three-year period and are attributable to **producing and distributing ener-**

gy, for **collecting and distributing drinking water**, for **purification** and for all the processes connected to **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.

For the three areas - Energy, Environment, and, Water - the **renewable and non-renewable** resources used are illustrated. In particular, among the renewable re- sources listed we highlight water and the biomasses used for the production of compost.

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 2019-2021 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.

¹⁷⁴ The Berg, Demap, Aquaser, Acea Innovation and Ecogena companies 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 SEGMENT

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

ELECTRICITY – GENERATION (*)	u. m.	2019	2020	2021	Δ% 2021/2020
summary data					
total gross electricity produced (1) = (3+11+14+19)	GWh	919.61	916.44	1,008.85	10.1
total net electricity produced (2) = (10+13+18+21)	GWh	854.85	846.56	931.20	10.0
from fossil fuels (thermoelectric) (5 + 0.57x 15 _{San Vittore del Lazio} + 0.57x 16 _{Terni})	GWh	269.10 29.3% of (1)	291.27 31.8% of (1)	310.63 30.8% of (1)	6.6
from renewable sources (hydroelectric, photovoltaic, biodegradable portion of waste and biogas) (4+11+0.43x15 _{San Vittore del Lazio} +0.43 x 16 _{Terni} +19)	GWh	650.50 70.7% of (1)	625.17 68.2% of (1)	698.22 69.2% of (1)	11.7
Acea production – hydroelectric and thermoelectric					
total gross electricity produced (3) = (4+5)	GWh	516.23	468.41	542.44	15.8
total gross hydroelectric energy (4)	GWh	425.95	376.25	434.70	15.5
A. Volta Castel Madama	GWh	26.17	22.45	28.99	29.1
G. Ferraris Mandela	GWh	0.00	5.02	18.42	267.0
G. Marconi Orte	GWh	57.06	53.72	70.31	30.9
Sant'Angelo	GWh	162.05	116.58	146.11	25.3
Salisano	GWh	178.42	176.84	167.62	-5.2
Other minor	GWh	2.24	1.65	3.26	97.3
total gross thermoelectric energy (5)	GWh	90.29	92.16	107.74	16.9
from diesel Montemartini power plant (**)	GWh	1.36	1.49	1.65	10.9
from natural gas Tor di Valle plan – CAR	GWh	88.93	90.67	106.09	17.0
total losses of electricity (6) = (7+8+9)	GWh	12.19	12.74	13.21	3.7
self consumption hydro plants (7)	GWh	2.40	2.43	2.19	-10.2
self consumption thermo plants (Tor di Valle, Montemartini) (8)	GWh	5.27	5.04	5.40	7.2
first processing losses (9)	GWh	4.52	5.27	5.63	6.7
total net electricity produced by Acea Produzione (10) = (3-6)	GWh	504.04	455.67	529.23	16.1
Acea production – photovoltaic					
gross photovoltaic electrical energy (11)	GWh	26.38	74.96	78.61	4.9
total electricity losses including own consumption (12)	GWh	2.29	3.98	3.38	-15.1
net photovoltaic energy (13) = (11-12)	GWh	24.09	70.98	75.23	6.0
Acea Ambiente - waste-to-energy					
total gross electricity produced (14) = (15)+(16)	GWh	357.20	346.15	356.41	3.0
San Vittore del Lazio plant (15)	GWh	276.27	269.38	267.74	-0.6
Terni plant (16)	GWh	80.93	76.77	88.67	15.5
self consumption + losses from first processing (17)	GWh	49.12	44.95	45.64	1.5
San Vittore del Lazio plant	GWh	41.12	37.30	36.83	-1.3
Terni plant	GWh	8.00	7.65	8.81	15.2
total net electricity produced (18) = (14-17)	GWh	308.08	301.20	310.77	3.2
Acea Ambiente - Biogas					
total gross electricity produced from biogas (19)	GWh	19.79	26.91	31.39	16.6
Orvieto plant	GWh	19.79	17.56	13.99	-20.3
Aprilia plant	GWh	0.0	4.84	12.32	154.6
Monterotondo Marittimo plant	GWh	0.0	4.51	5.07	12.4
self consumption (20)	GWh	1.16	8.20	15.43	88.2
Orvieto plant	GWh	1.16	1.09	0.89	-18.3
Aprilia plant	GWh	0.0	3.48	9.59	175.9
Monterotondo Marittimo plant	GWh	0.0	3.63	4.94	36.3
total electricity transferred in network (21) = (19-20)	GWh	18.63	18.71	15.96	-14.7

(*) 2020 data has been rectified in as much as the figure for energy produced by hydroelectric plants was certified as definitive.

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

THERMAL ENERGY – GENERATION, DISTRIBUTION AND SALES					Δ%
	u. m.	2019	2020	2021	2021/2020
Acea Produzione					
gross thermal energy produced Tor di Valle power station (22)	GWh _t	95.92	94.00	98.67	5.0
total losses of thermal energy (23)	GWh _t	29.47	27.71	23.94	-13.6
distribution losses	GWh _t	20.66	20.90	20.37	-2.6
production losses	GWh _t	8.80	6.81	3.57	-47.6
net thermal energy sold (24) =(22-23)	GWh _t	66.45	66.29	74.73	12.7

ELECTRICITY – TRANSPORT AND SALE					Δ%
	u. m.	2019	2020	2021	2021/2020
in Rome and Formello - summary data					
supply from Acea Group (25)	GWh	2.65	2.29	3.47	51.5
electricity from the market (26)	GWh	10,606.69	9,667.68	9,826.70	1.6
from Single Buyer	GWh	2,537.45	2,509.36	2,230.42	-11.1
from importation	GWh	n/a	70.81	78.56	10.9
from wholesalers + other producers	GWh	8,069.24	7,087.51	7,517.72	6.1
electricity requested by the network (27) =(25+26) = (28+29+30+31+32)	GWh	10,609.35	9,669.97	9,830.17	1.7
distribution, transport and commercial losses (28)	GWh	741.14 7.0% of (27)	563.70 5.8% of (27)	593.35 6.0% of (27)	5.3
uses for own transmission and distribution (29)	GWh	39.47	35.80	30.71	-14.2
net electricity transferred to third parties (30)	GWh	16.45	94.87	102.19	7.7
net electricity conveyed from Acea to clients of the open market (31)	GWh	7,615.16	6,998.47	7,410.22	5.9
net electricity sold by Acea Energia to clients of the open market on distribution company grid (Areti)	GWh	6,119.50	5,594.36	5,909.37	5.6
net electricity sold by other sellers to clients of the open market on distribution company grid (Areti)	GWh	1,495.66	1,404.12	1,500.85	6.9
net electricity sold to managed clients (32)	GWh	2,197.13	1,977.12	1,693.70	-14.3
sale in Italy - summary data					
net electricity sold by Acea Energia on the open market – including sale on Rome (33)	GWh	3,825.82	4,571.96	6,074.57	32.9
net electricity sold by Acea Energia in Italy (free market + greater protection) (34) = (32+33)	GWh	6,022.95	6,549.08	7,768.27	18.6

GAS - SALES					Δ%
	u. m.	2019	2020	2021	2021/2020
gas sold by Acea Energia in Italy (35)	MSm ³	108.38	139.89	174.68	24.9

PUBLIC LIGHTING					Δ%
	u. m.	2019	2020	2021	2021/2020
luminous flux to Rome (36)	MIumen	2,002	2,010	2,021	0.5

CONTROLS AND MEASUREMENTS					Δ%
	u. m.	2019	2020	2021	2021/2020
measurement and control activity (37)	no.	375	505	431	-14.7
electro-magnetic field measurements	no.	26	22	41	86.4
noise measurements	no.	20	21	34	61.9
PCB chemical analyses	no.	68	65	69	6.2
waste classification	no.	40	26	23	-11.5
transformer diagnostics	no.	200	356	253	-28.9
other	no.	21	15	11	-26.7

PRODUCTS - ENVIRONMENT SEGMENT

The data refers to the plants of **Acea Ambiente, Acque Industriali** and, from 2021, **Berg**. For Acea Ambiente, these are the three composting plants (located in Aprilia, Monterotondo Marittimo and Sabaudia), the waste management centre of Orvieto and the chemical/physical and biological treatment plant for non-hazardous liquid waste and treatment of sewage waste at Chiusi, acquired by Acea Ambiente through the merger of the Bio Ecologia Company in May 2021. 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 data relating to the Bio Ecologia and Berg plants¹⁷⁵, included for the first time in the Environment Accounts, are reported with a three-year outlook.

After the revamping work of recent years, **the Aprilia and Monterotondo Marittimo plants** have both implemented a new **anaerobic di-**

gestion section; these are to be added to the one with the same name in Orvieto.

The Sabaudia plant has undergone revamping/maintenance since 2016, and operations were resumed in August 2018. Since 31.10.2019, they have been suspended again to allow other revamping works; the plant was shut down for the whole of 2021. **The Aprilia plant**, which suffered from the vicissitudes of a preventive seizure, since 2019 was able to operate continuously achieving conditions close to full operation and under the control of the judicial custodian as in the previous year. Thanks to the actions taken by the Company, and specifically the complete closure of biofilters and creation of 3 chimneys for atmospheric emissions, the plant was released on 18 March 2021.

In February 2020, **the San Jacopo plant** interrupted its activities; an application to renew the authorisation was presented and the first service conference was held; we are waiting to establish any subsequent interventions on the plant.

NON-HAZARDOUS WASTE DISPOSED AND RECOVERED - ORVIETO PLANT					
	u. m.	2019	2020	2021	Δ% 2021/2020
total incoming waste (38) = (39)+(40)	t	99,910	106,477	108,361	1.8
waste sent for treatment (39)	t	65,674	73,216	67,155	-8.3
waste sent to the anaerobic digester and aerobic treatment	t	43,958	34,200	32,855	-3.9
sent for aerobic treatment or just shredding	t	21,716	39,016	34,299	-12.1
waste sent directly to landfill (40)	t	34,236	33,261	41,207	23.9
waste sent to landfill after treatment (41)	t	22,438	34,427	31,239	-9.3
waste recovered (42)	t	64	80	52	-35.1
quality compost (43)	t	5,240	4,618	3,559	-22.9
reduction due to stabilisation (44) = (38) - (40 +41+42+43)	t	37,933	34,091	32,304	-5.2
COMPOST PRODUCTION					
	u. m.	2019	2020	2021	Δ% 2021/2020
total incoming organic waste (45) = (46+47+48)	t	53,419.28	115,473.21	141,506.00	22.5
incoming sludge (46)	t	8,809.26	14,945.10	26,912.42	80.1
Aprilia plant	t	3,644.44	4,441.74	9,005.22	102.7
Monterotondo Marittimo plant	t	585.74	10,503.36	17,907.20	70.5
Sabaudia plant	t	4,579.08	0.00	0.00	-
incoming green (47)	t	10,459.84	25,317.15	26,184.14	3.4
Aprilia plant	t	5,287.70	12,926.64	14,529.62	12.4
Monterotondo Marittimo plant	t	1,839.96	12,390.51	11,654.52	-5.9
Sabaudia plant	t	3,332.18	0.00	0.00	-
organic fraction of municipal solid waste and other agrifood waste (48)	t	34,150.18	75,210.96	88,409.44	17.5
Aprilia plant	t	32,588.90	53,395.48	60,274.56	12.9
Monterotondo Marittimo plant	t	1,561.28	21,815.48	28,134.88	29.0
quality compost (49) (*)	t	9,330.36	13,869.00	24,185.00	74.4
Aprilia plant	t	6,756.00	9,340.00	12,500.00	33.8
Monterotondo Marittimo plant	t	0.00	4,529.00	11,685.00	158.0
Sabaudia plant	t	2,574.36	0.00	0.00	-
non-compostable material for disposal (50)	t	6,753.22	11,615.87	11,813.09	1.7
Aprilia plant	t	6,149.06	7,807.11	7,365.30	-5.7
Monterotondo Marittimo and Sabaudia plants	t	604.16	3,808.76	4,447.79	16.8
reduction through stabilisation (51) = (46+47-49-50) (*)	t	37,335.7	89,988.3	105,507.9	17.2

(*) The quantities of compost produced in 2020 were adjusted, as they had estimated for the previous report, and consequently also the figures relating to the reduction due to stabilisation.

¹⁷⁵ The Demap company, owner of a plant authorised to process 75,000 tonnes of plastics per year, also falls within the NFS 2021 reporting scope. Information on Demap is included in "Relations with the environment".

LIQUID WASTE AND WASTE WATER DISPOSAL - BIO ECOLOGIA PLANT					Δ%
	u. m.	2019	2020	2021	2021/2020
liquid waste (52)	t	71,617	68,501	92,792	35.5
waste water treated (53)	m ³	280,118	284,826	148,862	-47.7
ANALYTICAL DETERMINATIONS ON WASTE AND ON QUALITY COMPOST					Δ%
	u. m.	2019	2020	2021	2021/2020
total analytical determinations (54) (*)	no.	122	118	118	-
analytical determinations on compost - Orvieto plant	no.	13	11	10	-9.1
analytical determinations on compost - Aprilia, Monterotondo Marittimo and Sabaudia plants	no.	30	41	48	17.1
analytical determinations on waste - Orvieto plant	no.	79	59	67	13.6

(*) The 2020 figure has been adjusted.

LIQUID WASTE DISPOSAL AND INDUSTRIAL WATER TREATMENT (*)					Δ%
	u. m.	2019	2020	2021	2021/2020
total incoming waste (55) = (56+57+58+59)	t	132,988.4	111,090.5	92,381.1	-16.8
incoming sludge (56)	t	48,765.8	34,827.7	24,520.8	-29.6
Pagnana plant	t	14,118.8	14,642.6	10,574.5	-27.8
Pontedera plant	t	9,351.2	5,915.6	8,896.1	50.4
Poggibonsi plant	t	14,984.3	13,262.3	5,050.3	-61.9
San Jacopo plant	t	10,311.5	1,007.2	0.0	-
liquid waste (57)	t	17,310.05	10,379.2	10,649.9	2.6
Pagnana plant	t	8,345.2	3,994.5	3,832.0	-4.1
Pontedera plant	t	8,964.9	6,384.7	6,817.9	6.8
sewage waste and others (58)	t	14,399.6	12,131.8	7,627.2	-37.1
Pagnana plant	t	9,778.6	8,700.0	1,331.0	-84.7
Pontedera plant	t	4,150.1	2,890.5	6,156.4	113.0
Poggibonsi plant	t	437.5	531.2	139.8	-73.7
San Jacopo plant	t	33.3	10.1	0.0	-
leachate (59)	t	52,513.0	53,751.8	49,583.2	-7.8
Pagnana plant	t	27,308.5	28,048.4	30,338.1	8.2
Pontedera plant	t	25,204.4	25,703.4	19,245.1	-25.1
Poggibonsi plant	t	0.0	0.0	353.7	-
ammonium sulphate produced (60)	kg	311,904	255,040	219,670.0	-13.9
Pagnana plant	kg	136,400	57,460	141,930.0	147.0
Pontedera plant	kg	175,504	197,580	77,740	-60.7

TREATED AND DISCHARGED WATER - INDUSTRIAL WATER (*)					Δ%
	u. m.	2019	2020	2021	2021/2020
treated and discharged water (61)	m ³	139,398	117,789	93,916	-20.3
Pagnana plant	m ³	71,265	64,685	55,655	-14.0
Pontedera plant	m ³	37,884	34,576	30,483	-11.8
Poggibonsi plant	m ³	22,099	17,725	7,778	-56.1
San Jacopo plant	m ³	8,150	803	0	-

(*) Some of the 2020 figures have been updated following consolidation.

LIQUID WASTE AND SOLIDS DISPOSAL - BERG (*)					Δ%
	u. m.	2019	2020	2021	2021/2020
total incoming waste (62) = (63+64)	t	139,171.28	141,865.41	133,090.69	-6.2
solid waste (63)	t	1,249.97	384.20	226.32	-41.1
liquid waste (64)	t	137,921.31	141,481.21	132,864.37	-6.1

(*) The Berg plant, in addition to waste disposal, brokered approximately 10,500 t of waste in 2021.

PRODUCTS - WATER SEGMENT

The water data **summarized at national level** includes the principal water Companies of the Acea Group: Acea Ato 2 and Acea Ato 5 (Latium), 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, GORI AdF and Gesesa.

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 also carried out this year for the entire three-year period, according to Resolution ARERA 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.

SUMMARISED WATER DATA OF THE MAIN GROUP COMPANIES IN ITALY (*)	u. m.	2019	2020	2021	Δ% 2021/2020
total drinking water collected from the environment or from other systems and fed into the aqueduct systems (65)	Mm ³	1,372.6	1,355.8	1,317.8	-2.8
total drinking water supplied and billed (66)	Mm ³	628.0	629.5	632.3	0.4

(*) Some figures for the 2019-2020 two year period have been updated following consolidation. Some 2021 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, GORI, GESESA AND AdF (*)	u. m.	2019	2020	2021	Δ% 2021/2020
total drinking water collected from the environment or from other systems and fed into the aqueduct systems (67)	Mm ³	1,079.9	1,074.0	1,039.9	-3.2
total drinking water supplied (68)	Mm ³	474.9	479.5	481.5	0.6

(*) Some figures for the 2019-2020 two year period have been updated following consolidation. The 2021 figures are estimated and will be consolidated with the subsequent reporting.

WATER BALANCES OF THE COMPANIES OPERATING IN THE NFS SCOPE (*)	u. m.	2019	2020	2021	Δ% 2021/2020
Acea Ato 2 for Ato 2 – Lazio Centrale (Rome + municipalities acquired as at 31/12/2021)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (69)	Mm ³	691.0	691.1	667.8	-3.4
surface (lakes and rivers)	Mm ³	0.0	0.0	0.0	-
from wells	Mm ³	86.2	89.6	87.0	-2.9
from springs	Mm ³	598.2	595.3	575.1	-3.4
from other aqueduct systems	Mm ³	6.5	6.2	5.7	-8.1
total drinking water leaving the aqueduct system (70) = (71+72+73+74)	Mm ³	382.4	398.1	401.8	0.9
total drinking water supplied and billed in the ATO 2 network (71)	Mm ³	329.0	332.4	331.6	-0.2
measured volume of water delivered to users	Mm ³	299.3	307.3	306.6	-0.2
volume consumed by users and not measured	Mm ³	29.7	25.1	25.0	-0.4
total drinking water authorised and not billed in the network (72)	Mm ³	12.2	18.2	22.4	23.1
measured unbilled authorised consumption	Mm ³	0.0	0.4	0.5	25.0
unmeasured unbilled authorised consumption	Mm ³	12.2	17.8	22.0	23.6
drinking water exported to other systems (73)	Mm ³	41.3	46.8	46.4	-0.9
measured drinking water losses (74)	Mm ³	0.0	0.7	1.4	100.0
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (75)-	Mm ³	308.5	293.0	266.0	-9.2
water loss percentages (76)-	%	44.7	42.4	39.8	-6.1
Acea Ato 5 for Ato 5 – Southern Latium - Frosinone (86 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (77)	Mm ³	121.9	119.8	115.8	-3.3
from wells	Mm ³	63.1	59.3	55.6	-6.2
from springs	Mm ³	45.2	44.8	46.0	2.7
from other aqueduct systems	Mm ³	13.6	15.7	14.2	-9.5
total drinking water leaving the aqueduct system (78) = (79+80+81)	Mm ³	29.1	37.9	38.8	2.4
total drinking water dispensed and billed in the network (79)	Mm ³	21.6	24.6	26.5	7.7
measured volume of water delivered to users	Mm ³	17.6	18.6	19.4	4.3
volume consumed by users and not measured	Mm ³	4.0	6.0	7.1	18.3
total drinking water authorised and not billed in the network (80)	Mm ³	0.6	6.8	6.9	1.5

measured unbilled authorised consumption	Mm ³	0.0	0.0	0.0	-
unmeasured unbilled authorised consumption	Mm ³	0.6	6.8	6.9	1.5
drinking water exported to other systems (81)	Mm³	6.8	6.6	5.4	-18.2
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (82)	Mm³	92.8	81.9	77.1	-5.9
water loss percentages (83)	%	76.2	68.4	66.5	-2.8
Gesesa – Ato Calore Irpino - Benevento (21 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (84)	Mm³	17.6	19.0	19.4	2.3
from wells	Mm ³	6.6	7.4	6.0	-18.7
from springs	Mm ³	2.4	2.1	3.2	49.8
drinking water collected from other aqueduct systems	Mm ³	8.7	9.5	10.2	7.0
total drinking water leaving the aqueduct system (85) = (86+87+88)	Mm³	7.6	7.7	8.2	5.9
total drinking water dispensed and billed in the network (86)	Mm³	7.6	7.6	8.0	5.6
measured volume of water delivered to users	Mm ³	7.1	6.0	n/a	-
volume consumed by users and not measured	Mm ³	0.5	1.6	n/a	-
total drinking water authorised and not billed in the network (87)	Mm³	0.0	0.0	0.0	-
drinking water exported to other systems (88)	Mm³	0.0	0.1	0.1	-
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (89)	Mm³	10.0	11.3	11.2	-1.0
water loss percentages (90)	%	56.9	59.4	57.8	-2.7
GORI – Sarnese-Vesuviano District (74 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (91)	Mm³	189.7	184.0	176.0	-4.3
from wells	Mm ³	60.7	59.6	50.4	-15.5
from springs	Mm ³	2.5	2.4	2.0	-18.0
drinking water collected from other aqueduct systems	Mm ³	126.5	121.9	123.6	1.4
total drinking water leaving the aqueduct system (92) = (93+94)	Mm³	88.8	87.6	88.7	1.3
total drinking water dispensed and billed in the network (93)	Mm³	88.0	86.9	87.2	0.3
measured volume of water delivered to users	Mm ³	82.9	80.6	81.4	1.1
volume consumed by users and not measured	Mm ³	5.1	6.3	5.7	-9.3
total drinking water authorised and not billed in the network (94)	Mm³	0.4	0.4	1.2	177.0
measured unbilled authorised consumption	Mm ³	0.0	0.0	0.0	-
unmeasured unbilled authorised consumption	Mm ³	0.4	0.4	1.2	177.0
drinking water exported to other systems (95)	Mm³	0.3	0.3	0.4	22.8
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (96)	Mm³	101.0	96.3	87.3	-9.4
water loss percentages (97)	%	53.2	52.4	49.6	-5.3
AdF - Optimal Territorial Conference 6 Ombrone (55 Municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (98)	Mm³	59.7	60.0	60.9	1.5
surface water (**)	Mm ³	1.1	1.0	1.1	7.7
from wells	Mm ³	20.1	17.9	17.9	-
from springs	Mm ³	37.7	40.5	41.3	2.0
from other aqueduct systems	Mm ³	0.8	0.6	0.6	-
total drinking water leaving the aqueduct system (99) = (100+101+102+103)	Mm³	32.3	34.5	37.1	7.6
total drinking water dispensed and billed in the network (100)		28.7	28.1	28.2	0.3
measured volume of water delivered to users	Mm ³	28.7	28.1	28.2	0.3
volume consumed by users and not measured	Mm ³	0.0	0.0	0.0	-
total drinking water authorised and not billed in the network (101)	Mm³	0.1	2.7	4.9	78.5
measured unbilled authorised consumption	Mm ³	0.0	0.0	0.00	-
unmeasured unbilled authorised consumption	Mm ³	0.1	2.7	4.9	78.5
drinking water exported to other systems (102)	Mm³	1.6	1.6	1.5	-7.9
measured drinking water losses (103)	Mm³	1.9	2.1	2.6	24.7
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (104)	Mm³	27.4	25.5	23.8	-6.8
water loss percentages (105)	%	45.8	42.5	39.0	-8.2

(*) Some figures for the 2019-2020 two year period have been updated following consolidation. The 2021 figures are estimated and will be consolidated with the subsequent reporting.

(**) This is fresh water, apart from the 1.2% of the amount drawn from marine sources.

TOTAL WASTE WATER TREATED BY THE MAIN COMPANIES OF THE GROUP IN ITALY – SUMMARY DATA	u. m.	2019	2020	2021	Δ% 2021/2020
waste water treated in the main treatment plants of the main Group companies in Italy (*) (106)	Mm ³	853.7	914.4	980.8	7.3

(*) Some Group company data for 2020 have been adjusted/consolidated.

TOTAL WASTE WATER TREATED BY THE COMPANIES OPERATING IN THE NFS SCOPE (ACEA ATO 2, ACEA ATO 5, GORI, AdF AND GESESA - SUMMARY DATA)	u. m.	2019	2020	2021	Δ% 2021/2020
waste water treated in the main treatment plants of Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa (*) (107)	Mm ³	692.1	713.7	778.7	9.1

(*) 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.	2019	2020	2021	Δ% 2021/2020
waste water treated in the main treatment plants (108)	Mm ³	514.1	512.2	516.4	0.8
Rome South	Mm ³	286.4	284.9	290.1	1.8
Rome North	Mm ³	91.5	93.7	88.5	-5.6
Rome East	Mm ³	90.9	92.8	97.2	4.8
Rome Ostia	Mm ³	29.8	30.6	29.5	-3.4
CoBIS	Mm ³	6.6	6.7	6.8	1.9
Fregene	Mm ³	8.8	3.5	4.2	20.5
other – Municipality of Rome	Mm ³	9.7	8.7	9.2	6.5
other – outside the Municipality of Rome	Mm ³	76.0	76.0	75.9	-0.1
total waste water treated by Acea Ato 2 (109)	Mm ³	599.8	596.9	601.5	0.8
WASTE WATER TREATED BY ACEA ATO 5	u. m.	2019	2020	2021	Δ% 2021/2020
waste water treated in the main treatment plants (110)	Mm ³	21.3	21.2	25.0	18.1
WASTE WATER TREATED BY GORI	u. m.	2019	2020	2021	Δ% 2021/2020
Total waste water treated (111)	Mm ³	45.2	70.1	124.0	76.8
WASTE WATER TREATED BY AdF	u. m.	2019	2020	2021	Δ% 2021/2020
waste water treated in the main treatment plants (112)	Mm ³	16.8	16.3	16.6	1.9
waste water treated in other plants	Mm ³	9.0	7.0	9.3	33.4
total waste water treated by AdF (113)	Mm ³	25.8	23.3	25.9	11.3
WASTE WATER TREATED BY GESESA	u. m.	2019	2020	2021	Δ% 2021/2020
waste water treated in the main treatment plants (114)	Mm ³	n/a	2.2	2.3	3.7

ANALYTICAL DETERMINATIONS ON DRINKING WATER AND WASTE WATER OF THE MAIN GROUP COMPANIES IN ITALY – SUMMARY DATA (*)	u. m.	2019	2020	2021	Δ% 2021/2020
analytical determinations on total drinking water – main Group companies (115)	no.	1,456,316	1,523,028	1,472,131	-3.3
analytical determinations on total waste water – main Group companies (116)	no.	495,921	448,829	483,526	7.7

(*) Some Group company data for 2020 have been adjusted/consolidated.

ANALYTICAL DETERMINATIONS ON DRINKING WATER AND WASTE WATER OF THE COMPANIES OPERATING IN THE NFS SCOPE: ACEA ATO 2, ACEA ATO 5, GORI, AdF AND GESESA - SUMMARY DATA					Δ%
	u. m.	2019	2020	2021	2021/2020
analytical determinations on drinking water of Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa (117)	no.	729,983	769,888	738,488	-4.1
analytical determinations on waste water of Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa (118)	no.	288,863	252,160	274,478	8.9
ANALYTICAL DETERMINATIONS ACEA ATO 2					Δ%
	u. m.	2019	2020	2021	2021/2020
analytical determinations on Acea Ato 2 drinking water (119)	no.	365,728	365,633	346,164	-5.3
analytical determinations on Acea Ato 2 waste water (120)	no.	170,641	124,625	127,417	2.2
ANALYTICAL DETERMINATIONS ACEA ATO 5					Δ%
	u. m.	2019	2020	2021	2021/2020
analytical determinations on Acea Ato 5 drinking water (121)	no.	123,790	116,327	105,430	-9.4
analytical determinations on Acea Ato 5 waste water (122)	no.	41,616	43,812	40,636	-7.2
GESESA ANALYTICAL DETERMINATIONS					Δ%
	u. m.	2019	2020	2021	2021/2020
analytical determinations on Gesesa drinking water (123)	no.	8,428	9,372	11,955	27.6
analytical determinations on Gesesa waste water (124)	no.	5,514	5,736	11,448	99.6
GORI ANALYTICAL DETERMINATIONS					Δ%
	u. m.	2019	2020	2021	2021/2020
analytical determinations on GORI drinking water (125)	no.	109,363	141,288	136,156	-3.6
analytical determinations on GORI waste water (126)	no.	21,027	25,499	43,270	69.7
AdF ANALYTICAL DETERMINATIONS					Δ%
	u. m.	2019	2020	2021	2021/2020
analytical determinations on AdF drinking water (127)	no.	122,674	137,268	138,783	1.1
analytical determinations on AdF waste water (128)	no.	50,065	52,488	51,707	-1.5

RESOURCES USED - ENERGY SEGMENT

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

GENERATION, TRANSPORT AND SALE OF ELECTRICITY AND HEAT, PUBLIC LIGHTING (*)					Δ%
	u. m.	2019	2020	2021	2021/2020
natural gas					
electricity and heat generation (129) = (130+131)	Nm ³ x 1,000	25,828	25,148	28,033	11.5
thermoelectric and heat production (130)	Nm ³ x 1,000	22,468	22,272	23,912	7.4
<i>Tor di Valle – high-efficiency cogeneration (CAR)</i>	Nm ³ x 1,000	22,468	22,272	23,912	7.4
waste-to-energy (131)	Nm ³ x 1,000	3,359	2,876	4,122	43.3
<i>San Vittore del Lazio waste-to-energy plant</i>	Nm ³ x 1,000	3,029	2,486	3,764	51.4
<i>Terni waste-to-energy plant</i>	Nm ³ x 1,000	331	390	358	-8.4
diesel for thermoelectric generation					
thermoelectric production (132)	l x 1,000	630	639	707	10.6
<i>Montemartini power plant</i>	l x 1,000	574	587	647	10.2
<i>Terni and San Vittore del Lazio plants</i>	l x 1,000	56	52	60	15.3
RDF (Refuse-Derived Fuel) processed					
San Vittore del Lazio waste-to-energy plant (133)	t x 1,000	340.531	319.122	307.391	-3.7
waste-to-energy paper mill pulper					
Terni waste-to-energy plant (134)	t x 1,000	94.092	90.215	99.730	10.5

biogas for the production of electricity

composting and waste management plants (135)	Nm ³ x 1,000	11,491	17,153	18,166	5.9
Orvieto plant	Nm ³ x 1,000	11,491	10,867	9,131	-16.0
Aprilia plant	Nm ³ x 1,000	0	3,621	6,411	77.0
Monterotondo Marittimo plant	Nm ³ x 1,000	0	2,665	2,623	-1.6

water

derivation from hydroelectric production (136)	Mm ³	3,458	2,926	3,894	33.1
process water (137)	Mm ³	0.25	0.18	0.17	-8.3
water for civilian/sanitary uses (138)	Mm ³	0.27	0.30	0.33	11.7

miscellaneous materials

dielectric mineral oil in operation (139)	t	10,004	10,138	10,045	-0.9
dielectric mineral oil - reintegrations	t	0.76	1.19	1.19	-
SF ₆ in operation (140)	t	21.94	22.29	22.31	0.1
SF ₆ - replenishment	t	0.40	0.37	0.30	-19.8
cooling fluids (HCFC type) in operation (141)	t	1.49	1.68	1.78	5.7
cooling fluids (HCFC type) - reintegrations	t	0.00007	0.00035	0.00000	-
miscellaneous chemicals (142)	kg	9,944,328	9,788,481	10,895,640	11.3
sodium chloride	kg	13,000	9,000	9,000	0.0
sodium hydroxide (caustic soda)	kg	256,470	247,640	173,260	-30.0
sodium bicarbonate	kg	7,181,660	7,140,770	8,333,700	16.7
hydrochloric acid	kg	253,200	255,680	216,270	-15.4
ammonia solution	kg	560,340	598,950	526,850	-12.0
activated carbon	kg	511,520	468,160	673,040	43.8
carbamine	kg	631,040	228,820	190,220	-16.9
other (for TLR e waste-to-energy)	kg	537,098	839,461	773,300	-7.9
miscellaneous oils and greases/lubricants (143)	kg	34,387	37,844	28,433	-24.9

electricity

consumption for electrical distribution (144) = (28)	GWh	741.14	563.70	593.35	5.3
consumption for electricity production (145) = (1)-(2)	GWh	64.76	69.87	77.66	11.1
consumption for offices (50% of the electricity consumed by the Parent Company) (146)	GWh	5.75	5.13	5.38	4.9
other consumption (147)	GWh	1.22	1.32	1.33	0.7
other personal uses (148)	GWh	39.47	35.80	30.71	-14.2
total (149) = (144+145+146+147+148)	GWh	852.33	675.82	708.43	4.8

public lighting

consumption for Public Lighting (150)	GWh	70.08	66.96	67.33	0.5
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(*) Some figures for the 2020-2021 two-year period have been adjusted for consolidation.

RESOURCES USED - ENVIRONMENT SEGMENT

The data on the resources refers to the three composting plants of Acea Ambiente located in Aprilia, Monterotondo Marittimo and Sabaudia, the waste management plant of Orvieto, the Bio Ecologia, the Berg plant and four of Acque Industriali's plants in Pontedera, Pagnana, Poggibonsi and San Jacopo.

WASTE MANAGEMENT – ORVIETO PLANT	u. m.	2019	2020	2021	Δ%
miscellaneous chemicals (151)	t	140.9	87.0	99.2	14.1
electricity (152)	GWh	4.722	4.398	4.476	1.8
diesel (153)	l	245,735	229,533	262,762	14.5
process water (154)	m ³	5,574	4,792	6,041	26.1
water for civilian/sanitary uses (155)	m ³	1,180	1,230	1,055	-14.2

COMPOST PRODUCTION	u. m.	2019	2020	2021	Δ% 2021/2020
miscellaneous chemicals (posting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (156)	t	41.48	540.45	1,694.72	213.6
electricity (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (157)	GWh	3.942	4.039	2.266	-43.9
diesel (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (158)	l x 1,000	170.47	220.73	286.31	29.7
locally produced biogas (composting plants of Aprilia and Monterotondo Marittimo) (159)	Nm ³	176,614	6,286,431	9,034,615	43.7
process water (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (*) (160)	m ³	16,562	28,928	38,406	32.8
water for civil use (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (161)	m ³	1,480	2,330	2,650	13.7

(*) The 2020 figure was rectified following actual recorded consumption.

DISPOSAL OF INDUSTRIAL WASTE WATER (AI), BERG AND BIO ECOLOGIA PLANT (*)	u. m.	2019	2020	2021	Δ% 2021/2020
miscellaneous chemicals (AI plants - Pagnana, Pontedera and Poggibonsi, Berg and Bio Ecologia plant) (162)	t	2,487.9	2,728.8	2,184.1	-20.0
electricity (AI plants - Pagnana, Pontedera Poggibonsi, San Jacopo - Berg and Bio Ecologia plant) (163)	GWh	3.325	3.159	3.023	-4.3
methane (AI plants) (164)	Sm ³	30,307	25,079	38,315	52.8
diesel fuel (Berg and Bio Ecologia plant) (164 B)	l	10,515	8,436	6,775	-19.7
BTZ (Basso Tenore di Zolfo - Low Sulphur Content) combustible Oil (Pontedera plant) (165)	t	0.045	0.049	0.031	-36.7
LPG (Pontedera plant)	t	-	-	18.361	-
process water (AI plants - Pagnana, Pontedera Poggibonsi, San Jacopo - Berg and Bio Ecologia plant) (166)	m ³	53,523	50,183	48,576	-3.2
water for civil use (AI plants - Pagnana, Pontedera Poggibonsi, San Jacopo - Berg and Bio Ecologia plant) (167)	m ³	743	747	619	-17.1

(*) The figures for 2019-2020 have been restated to include those of Berg and of the Bio Ecologia plant.

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, GORI AdF and Gesesa.

COLLECTION, SUPPLY AND DISTRIBUTION OF DRINKING AND NON-DRINKING WATER (*)	u. m.	2019	2020	2021	Δ% 2021/2020
reagents for purification and disinfection (168)	t	3,587.4	3,689.0	4,560.7	23.6
reagents for chemical analyses (169)	t	1.50	1.65	1.55	-6.1
gas for chemical analyses (170)	MNm ³	6.06	5.79	6.30	8.8
cooling fluids (HCFC type) in operation (171) = (141)	t	1.49	1.68	1.78	5.7
cooling fluids (HCFC type) - reintegrations	t	0.00007	0.00035	0.00000	-
total electricity consumed (172)	GWh	416.17	482.80	446.52	-7.5
water pumping plants (173)	GWh	409.12	476.28	439.65	-7.7
offices/personal use (50% of energy consumed by the Parent Company) (174) = (146)	GWh	5.75	5.13	5.38	4.9
chemical laboratory (175)	GWh	1.29	1.40	1.49	6.8
drinking water					
total drinking water consumed (176)	Mm³	1.80	2.31	2.12	-8.2
civilian/sanitary uses	Mm ³	1.63	2.14	1.92	-10.3
offices (50% of the drinking water consumed by the Parent Company)	Mm ³	0.17	0.17	0.20	18.0
non-drinking water					
total non-drinking water consumed (176 A)	Mm³	n/a	0.48	2.16	353.7
process uses	Mm ³	n.a.	0.48	2.16	353.7

(*) Some figures for the 2019-2020 two-year period have been adjusted following consolidation.

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

WASTEWATER TREATMENT (*)	u. m.	2019	2020	2021	Δ% 2021/2020
miscellaneous materials and natural resources					
reagents for purification waste water (177)	t	12,188	14,262	16,716	17.2
polyelectrolyte for sludge dehydration	t	2,305	2,507	2,472	-1.4
sodium hypochlorite for final disinfection	t	2,761	3,981	4,244	6.6
ferric chloride for sludge dehydration	t	497	462	1,008	118.2
peracetic acid	t	3,673	4,075	5,382	32.1
other (anti-foaming etc.)	t	2,412	3,153	3,478	10.3
reagent kit for on-site controls (178)	no.	53,856	113,136	100,461	-11.2
oil and fat (179)	t	13.6	9.3	16.1	72.3
electricity					
sewerage and purification (180)	GWh	251.3	250.7	270.2	7.7
fuels					
methane for processes (dryers and other processes) (181)	Nm³ x 1,000	2,868.8	3,058.8	3,485.2	13.9
diesel for processes and generators (182)	l x 1,000	111.8	226.5	69.0	-69.5
petrol for processes and generators (183)	l x 1,000	n/a	2.6	3.4	32.1
biogas produced and consumed on site (184)	Nm³ x 1,000	2,382.5	5,320.7	3,282.3	-38.3

(*) Some figures for the 2019-2020 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.	2019	2020	2021	Δ% 2021/2020
transport (Group car fleet)					
petrol (185)	l x 1,000	122.6	225.3	562.1	149.5
diesel (186)	l x 1,000	3,501.1	3,461.8	3,452.1	-0.3
methane (186 B)	Nm³ x 1,000	0.0	0.6	0.7	22.1
LPG (187)	l x 1,000	5.1	18.6	24.5	31.8
heating					
diesel (188)	l x 1,000	1.9	0.9	0.0	-
methane (189)	Nm³ x 1000	419.6	387.3	408.4	5.5
LPG (190)	l x 1,000	30.1	33.9	25.9	-23.5

(*) Some figures for the 2019-2020 two-year period have been adjusted following consolidation and for the inclusion of new companies in the NFS scope.

EMISSIONS AND WASTE - ENERGY SEGMENT

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

ATMOSPHERIC EMISSIONS	u. m.	2019	2020	2021	Δ% 2021/2020
CO₂ (191) = (192+193+194+195) (*)	t	338,410	396,232	379,025	-4.3
Acea Produzione (192)	t	48,506	45,773	51,567	12.7
Areti - SF ₆ replenishment (193)	t	9,400	8,695	6,975	-19.8
HCFC replenishment (194)	t	0.0	0.7	0.0	-
waste-to-energy (195)	t	280,504	341,763	320,483	-6.2
NO_x (196) = (197+198)	t	188.19	190.67	198.11	3.9
Acea Produzione (197)	t	17.44	20.83	26.05	25.1
waste-to-energy (198)	t	170.75	169.84	172.06	1.3
CO (199) = (200+201)	t	7.02	8.34	7.68	-8.0
Acea Produzione (200)	t	4.19	6.12	4.13	-32.5
waste-to-energy (201)	t	2.83	2.22	3.55	59.8

SO₂ (202) = (203+204)	t	0.33	0.90	1.60	78.3
<i>Acea Produzione (203)</i>	<i>t</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>-</i>
<i>waste-to-energy (204)</i>	<i>t</i>	<i>0.31</i>	<i>0.88</i>	<i>1.57</i>	<i>79.7</i>
powders (205) = (206+207)	t	0.60	0.60	0.74	23.6
<i>Acea Produzione (206)</i>	<i>t</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>-</i>
<i>waste-to-energy (207)</i>	<i>t</i>	<i>0.57</i>	<i>0.57</i>	<i>0.71</i>	<i>24.4</i>
HCl (208)	t	2.92	3.12	3.07	-1.4
HF (209)	t	0.12	0.06	0.08	23.4
organic carbon (210)	t	1.99	1.07	0.58	-45.5

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

OTHER EMISSIONS AND WASTE	u. m.	2019	2020	2021	Δ% 2021/2020
wastewater treated (211)	Mm ³	0.0300	0.0241	0.0200	-17.1
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	klumen	commitment to design the plants in order to limit to the utmost the emission value dissipated upwards			

WASTE (*)	u. m.	2019	2020	2021	Δ% 2021/2020
hazardous waste - excluding waste-to-energy area (212)	t	1,268.9	854.0	1,705.0	99.6
<i>production energy own area</i>	<i>t</i>	<i>1,268.1</i>	<i>853.4</i>	<i>1,704.4</i>	<i>99.7</i>
<i>proportion for the activities performed by the Parent Company (**)</i>	<i>t</i>	<i>0.8</i>	<i>0.6</i>	<i>0.6</i>	<i>-</i>
hazardous waste from waste-to-energy (213)	t	73,202.0	64,885.4	64,672.5	-0.3
non-hazardous waste - excluding waste-to-energy area (214)	t	1,167.0	902.8	1,257.5	39.9
<i>production energy own area</i>	<i>t</i>	<i>1,118.9</i>	<i>874.4</i>	<i>1,223.4</i>	<i>39.9</i>
<i>proportion for the activities performed by the Parent Company (**)</i>	<i>t</i>	<i>48.1</i>	<i>28.4</i>	<i>34.1</i>	<i>19.9</i>
non-hazardous waste from waste-to-energy (215)	t	24,239.3	22,633.3	28,092.9	24.1

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

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

EMISSIONS AND WASTE - ENVIRONMENT SEGMENT

The data refers to the three composting plants of Acea Ambiente located in Aprilia, Monterotondo Marittimo and Sabaudia, the waste management plant of Orvieto, the Bio Ecologia plant, Berg and four of Acque Industriali's plants in Pontedera, Pagnana, Poggibonsi and San Jacopo.

ORVIETO WASTE, COMPOST PLANTS (*)	u. m.	2019	2020	2021	Δ% 2021/2020
hazardous waste - composting plants of Aprilia, Monterotondo Marittimo and Sabaudia including leachate (216)	t	1.2	3,672.5	221.2	-94.0
non-hazardous waste - composting plants of Aprilia, Monterotondo Marittimo and Sabaudia including leachate (217)	t	14,821.2	24,762.1	40,469.1	63.4
hazardous waste Orvieto plant (218)	t	12.7	11.4	12.3	7.8
non-hazardous waste Orvieto plant including leachate (219)	t	21,635.0	20,237.1	23,608.1	16.7

(*) Some of the 2020 figures have been updated after the final calculations.

BIO ECOLOGIA PLANT	u. m.	2019	2020	2021	Δ% 2021/2020
hazardous waste Bio Ecologia plant (220)	t	3.3	6.7	5.7	-14.5
non-hazardous waste Bio Ecologia plant (221)	t	6,136.8	5,996.0	6,330.6	5.6

ATMOSPHERIC EMISSIONS – ORVIETO AND COMPOST PLANTS					Δ%
	u.m.	2019	2020	2021	2021/2020
CO ₂ (222)	t	1,265	1,349	1,644	21.9
particles (223)	t	0.001	0.274	0.473	72.8
total organic compounds (TOC) (224)	t	0.011	0.927	1.049	13.1
ammonia (225)	t	0.001	3.711	3.933	6.0
volatile inorganic compounds (SIV) (226)	t	0.062	1.941	0.420	-78.3
ATMOSPHERIC EMISSIONS - BIO ECOLOGIA PLANT					Δ%
	u.m.	2019	2020	2021	2021/2020
CO ₂ (227)	t	2.1	1.8	2.3	27.8
INDUSTRIAL WASTE WATER					Δ%
	u.m.	2019	2020	2021	2021/2020
hazardous waste Pagnana plant (228)	t	0.02	0.11	0.35	218.2
non-hazardous waste of Pagnana, Pontedera, Poggibonsi and San Jacopo (229)	t	3,124.5	2,516.8	1,470.5	-41.6
ATMOSPHERIC EMISSIONS – INDUSTRIAL WATER					Δ%
	u.m.	2019	2020	2021	2021/2020
CO ₂ (230)	t	201.5	204.2	229.6	12.4
Hydrogen Sulphide (231)	t	0.012	0.019	0.014	-27.8
ammonia (232)	t	0.019	0.038	0.011	-71.5
BERG'S WASTE					Δ%
	u.m.	2019	2020	2021	2021/2020
hazardous waste (233)	t	2,930.5	1,077.7	613.7	-43.1
non-hazardous waste (234)	t	3,085.3	2,901.1	2,526.9	-12.9
ATMOSPHERIC EMISSIONS – BERG					Δ%
	u.m.	2019	2020	2021	2021/2020
CO ₂ (235)	t	26.1	20.0	16.0	-20.0
particles (236)	t	0.069	0.121	0.045	-63.0
organic carbon (237)	t	0.149	1.253	0.816	-34.8
hydrogen sulphide and mercaptans (238)	t	0.261	0.001	0.001	-
ammonia (239)	t	0.161	0.037	0.124	238.1

EMISSIONS AND WASTE - WATER SEGMENT

The data refers to the Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa water Companies. The figures have been partially reorganised to respond to the new version of the GRI 306 Waste 2020 Standard.

WASTE PRODUCED (*)					Δ%
	u. m.	2019	2020	2021	2021/2020
specific process waste from treatment of waste water (**)					
total purification sludge (240) = (241+242+243+244+245)	t	132,190	125,850	152,791	21.4
Acea Ato 2 purification sludge (241)	t	100,298	78,934	66,416	-15.9
Acea Ato 5 purification sludge (242)	t	11,352	9,408	13,803	46.7
GORI purification sludge (243)	t	10,586	29,246	65,635	124.4
Gesesa purification sludge (244)	t	979	969	699	-27.9
AdF purification sludge (245)	t	8,975	7,292	6,238	-14.5

total sand and slabs from purification (246) = (247+248+249+250+251)	t	11,126	12,907	14,178	9.9
<i>Acea Ato 2 sand and slabs (247)</i>	<i>t</i>	<i>7,789</i>	<i>9,494</i>	<i>8,334</i>	<i>-12.2</i>
<i>Acea Ato 5 sand and slabs (248)</i>	<i>t</i>	<i>87</i>	<i>101</i>	<i>225</i>	<i>122.0</i>
<i>GORI sand and slabs (249)</i>	<i>t</i>	<i>2,289</i>	<i>2,515</i>	<i>4,597</i>	<i>82.8</i>
<i>Gesesa sand and slabs (250)</i>	<i>t</i>	<i>39</i>	<i>71</i>	<i>10</i>	<i>-85.7</i>
<i>AdF sand and slabs (251)</i>	<i>t</i>	<i>921</i>	<i>724</i>	<i>1,012</i>	<i>39.7</i>
other waste from treatment (252)					
<i>other Acea Ato 2</i>	<i>t</i>	<i>1,386</i>	<i>1,137</i>	<i>1,886</i>	<i>65.9</i>
<i>other Acea Ato 5</i>	<i>t</i>	<i>5,955</i>	<i>6,524</i>	<i>5,441</i>	<i>-16.6</i>
<i>other GORI</i>	<i>t</i>	<i>46</i>	<i>80</i>	<i>148</i>	<i>83.9</i>
<i>other Gesesa</i>	<i>t</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-</i>
<i>other AdF</i>	<i>t</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-</i>
extra process waste					
total hazardous waste (253) = (254+255+256+257+25+259)	t	91.3	175.2	309.4	76.6
<i>Acea Elaborasi (254)</i>	<i>t</i>	<i>19.7</i>	<i>15.9</i>	<i>16.6</i>	<i>4.4</i>
<i>Acea Ato 2 (255)</i>	<i>t</i>	<i>34.3</i>	<i>82.9</i>	<i>188.8</i>	<i>127.7</i>
<i>Acea Ato 5 (256)</i>	<i>t</i>	<i>2.0</i>	<i>0.9</i>	<i>0.4</i>	<i>-58.1</i>
<i>GORI (257)</i>	<i>t</i>	<i>16.2</i>	<i>33.7</i>	<i>51.0</i>	<i>51.6</i>
<i>AdF (258)</i>	<i>t</i>	<i>18.3</i>	<i>41.2</i>	<i>52.0</i>	<i>26.1</i>
<i>Proportion for the activities performed by the Parent Company (259) (**)</i>	<i>t</i>	<i>0.78</i>	<i>0.63</i>	<i>0.59</i>	<i>-7.3</i>
total non-hazardous waste (260) = (261+262+263+264+265+266)	t	2,747	5,665	1,748	-69.1
<i>Acea Ato 2 and Elaborasi (261)</i>	<i>t</i>	<i>1,022</i>	<i>2,363</i>	<i>1,059</i>	<i>-55.2</i>
<i>Acea Ato 5 (262)</i>	<i>t</i>	<i>34</i>	<i>43</i>	<i>26</i>	<i>-39.9</i>
<i>GORI (263)</i>	<i>t</i>	<i>1,227</i>	<i>213</i>	<i>129</i>	<i>-39.2</i>
<i>Gesesa (264)</i>	<i>t</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-</i>
<i>AdF (265)</i>	<i>t</i>	<i>416</i>	<i>3,017</i>	<i>499</i>	<i>-83.5</i>
<i>Proportion for the activities performed by the Parent Company (266) (***)</i>	<i>t</i>	<i>48</i>	<i>28</i>	<i>34</i>	<i>19.9</i>
other emissions and waste					
CO₂ from dryers and generators (267)	t	6,893	6,979	7,486	7.3
CO₂ from HCFC replenishment (268)	t	0.0	0.7	0.0	-
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 of the 2019 and 2020 figures have been updated after the final calculations.

(**) All process waste is non-hazardous apart from 87 t of oil mixtures produced by GORI.

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

EMISSIONS OF CARBON DIOXIDE FROM TRANSPORT AND PACKAGING

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

GROUP COMPANIES (*)	u. m.	2019	2020	2021	Δ% 2021/2020
transport					
CO₂ (269)	t	9,550	9,705	10,533	8.5
heating					
CO₂ (270)	t	940	872	881	1.0

(*) Some figures for the 2019-2020 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 SEGMENT

Environmental Key Performance Indicators.

INDICATOR	u. m.	2019	2020	2021
energy used for the processes (*)				
A consumption in the distribution of electricity		1,188.4 (330.1)	1,076.7 (299.1)	1,090.4 (302.9)
B consumption in the production of electricity (145)		233.1 (64.8)	251.5 (69.9)	279.6 (77.7)
C heat lost in the district heating network (23)		106.1 (29.5)	99.8 27.7	86.2 (23.9)
D consumption for Public Lighting (150)		252.3 (70.1)	241.1 (67.0)	242.4 (67.3)
E environment Segment consumption (152+157)		43.2 (12.0)	41.7 (11.6)	35.2 (9.8)
F water distribution (172-174)	TJoule (GWh)	1,477.5 (410.4)	1,719.6 (477.7)	1,588.1 (441.1)
G water purification (180)		904.8 (251.3)	902.7 (250.7)	972.5 (270.2)
H electricity for offices (Item 146+174)		41.4 (11.5)	36.9 (10.3)	38.7 (10.8)
I consumption for heating offices		16.2 (4.5)	15.1 (4.2)	15.6 (4.3)
L water area dryer consumption		106.7 (29.6)	113.8 (31.6)	129.7 (36.0)
M layoffs		126.5 (35.1)	128.3 (35.7)	142.6 (39.6)
total consumption = indirect consumption + consumption through mobility + heating		4,496.2 (1,248.9)	4,627.2 (1,285.3)	4,621.0 (1,283.6)
EMISSIONS, EFFLUENTS AND WASTE				
greenhouse-gas emissions (CO₂) (191+222+230+267+268+269+270)	t	357,432	415,356	399,811
emissions of SO₂, NO_x and other significant gasses by type				
NO_x (196)	t	188.19	190.67	198.11
CO (199)	t	7.02	8.34	7.68
SO₂ (171)	t	0.33	0.90	1.60
NO_x /thermoelectric production	g/kWh	0.42	0.44	0.43
CO₂/thermoelectric production	g/kWh	735	884	802
CO₂/Acea Produzione thermoelectric production	g/kWh	537	497	479
CO₂/Acea Produzione total production	g/kWh	89	84	83
CO₂/gross total production	g/kWh	357.8	422.9	368.8
SO₂/thermoelectric production	g/kWh	0.0	0.0	0.0
PRODUCTS AND SERVICES: electricity				
performance of the electrical production process of Acea Produzione				
gross average performance thermoelectric production (calculation 1)		40.7	41.9	40.3
Tor di Valle power plant (electrical performance cogeneration only)		41.2	42.4	40.6
Montemartini power plant		24.3	26.1	26.3
gross average thermoelectric production out included thermal energy recovered (calculation 2)	%	69.6	70.2	70.1
gross average performance hydroelectric production (calculation 3)		79.2	83.5	82.4
gross average performance overall production (calculation 4)		72.5	76.1	75.3
gross average total production performance including thermal energy recovered (calculation 5)		77.5	81.1	80.1

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

SRF produced/gross energy produced	kt/GWh	1.233	1.185	1.148
gross performance SRF conversion into electricity (calculation 6)	kWh/kg SRF	0.81	0.84	0.87
electrical output (calculation 7)	%	19.2	19.2	20.2
total waste produced/hours worked	t/h	3.36	3.18	3.28

Terni

gross performance pulper conversion into electricity (calculation 8)	kWh/kg pulper waste	0.86	0.85	0.89
electrical output (calculation 9)	%	11.1	10.5	11.9
total waste produced/hours worked	t/h	1.7	1.7	1.7

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	46.3	47.0
public lighting illumination efficiency (36)/(150)	Lumen/kWh	28.6	30.0	30.0
average performance of installed lamps (36)/(electrical power)	Lumen/W	127.9 (15,653 kW)	127.9 (15,716 kW)	127.8 (15,809 kW)
specific consumption per lamp (150)/(No. lamps)	kWh/ No. lamps	310.46 (225,730)	295.46 (226,635)	295.77 (227,635)
percentage of roads illuminated (**)	% (km of roads illuminated/ total km of roads)	88.8 (6,316/7,110)	89.1 (6,338/7,110)	89.6 (6,368/7,110)
no. operating and laboratory checks /GWh net electricity sold (37)/(32)	No./GWh	0.17	0.26	0.25
reintegrations of SF6/km electricity distribution network	kg/km	0.0128	0.0118	0.0094
total loss of electrical energy (28)/(27) (***)	% energy requested	7.0	5.8	6.0

(*) The figures for the 2019-2020 two-year period have been updated to include the new companies in the 2021 NFS scope.

(**) Estimate.

(***) 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.	2019	2020	2021
carbon footprint				
WATER SERVICE				
total CO ₂ /m ³ of water supplied (integrated water services) (**)	kgCO ₂ /m ³	0.50	0.51	0.46
CO ₂ /m ³ of water supplied (water distribution process)	kgCO ₂ /m ³	0.31	0.33	0.29
CO ₂ /m ³ of water treated (purification process)	kgCO ₂ /m ³	0.13	0.12	0.11
PRODUCT: DRINKING WATER				
Acea Ato 2 network				
specific electricity consumption per input in the water network (energy consumption of the Acea Ato 2 network)/(69)	kWh/m ³	0.259	0.275	0.262
intensity of the checks on drinking water distributed (119)/(70)	No./Mm ³	956	918	861
drinking water additive index (169 – Acea Ato 2 network)/(70)	g/m ³	7.1	7.2	8.9

Acea Ato 5 network

specific electricity consumption per input in the water network (energy consumption of the Acea Ato 5 network)/(73)	kWh/m ³	0.492	0.514	0.491
intensity of the checks on drinking water distributed (121)/(78)	No./Mm ³	4,259	3,068	2,721
drinking water additive index (169 – Acea Ato 5 network)/(78)	g/m ³	9.7	7.4	7.1

GORI network

specific electricity consumption per input in the water network (energy consumption of GORI network)/(91)	kWh/m ³	0.664	1.001	0.955
intensity of the checks on drinking water distributed (125)/(92)	No./Mm ³	1,232	1,613	1,534
drinking water additive index (169 – GORI network)/(92)	g/m ³	2.3	2.2	2.5

Gesesa network

specific electricity consumption per input in the water network (energy consumption of Gesesa network)/(84)	kWh/m ³	0.559	0.534	0.476
intensity of the checks on drinking water distributed (123)/(85)	No./Mm ³	1,110	1,213	1,462
drinking water additive index (169 Gesesa network)/(85)	g/m ³	8.3	7.3	4.4

AdF network

specific electricity consumption per input in the water network (energy consumption of AdF network)/(98)	kWh/m ³	0.547	0.485	0.476
intensity of the checks on drinking water distributed (127)/(99)	No./Mm ³	3,797	3,975	3,736
drinking water additive index (169 – AdF network)/(98)	g/m ³	10.2	9.0	11.7

SERVICE: WASTE WATER TREATMENT**Acea Ato 2**

disposed of sludge (241)	t	100,298	78,934	66,416
sand and slabs removed (247)	t	7,789	9,494	8,334
COD input	t	207,914	173,392	143,568
COD removed	t	188,327	159,487	127,527
efficiency of COD removal	%	91	92	89
SST input	t	134,685	100,637	91,904
SST removed	t	124,417	93,172	84,461
efficiency of SST removal	%	92	93	92
efficiency of BOD removal	%	88	90	90
total N input (like NH ₄ +NO ₂ +NO ₃ + organic)	t	18,433	17,993	15,611
total N removed	t	14,333	13,925	11,649
efficiency of N removal	%	78	77	75
Acea Ato 2 waste water additivation index	g/m ³	12.0	15.4	17.4
Acea Ato 2 specific consumption of electricity by purification process	kWh/m ³	0.299	0.282	0.281

Acea Ato 5

disposed of sludge (242)	t	11,352	9,408	13,803
sand and slabs removed (248)	t	87	101	225
COD input	t	13,506	19,341	11,382
COD removed	t	12,407	18,182	10,457
efficiency of COD removal	%	92	89	92
total N input	t	1,136	1,219	922
total N removed	t	757	827	610
efficiency of N removal (NH ₄ ⁺)	%	67	69	66
SST input	t	8,364	10,349	6,167
SST removed	t	7,940	9,993	5,854
efficiency of SST removal	%	95	96	95
Acea Ato 5 additivation index	g/m ³	33.2	33.6	28.8
Acea Ato 5 specific consumption of electricity by purification process	kWh/m ³	0.830	0.755	0.682

GORI

disposed of sludge (243)	t	10,586	29,246	65,635
sand and slabs removed (249)	t	2,289	2,515	4,597
COD input	t	7,579	25,650	44,206
COD removed	t	6,376	24,245	42,314
efficiency of COD removal	%	84	95	96
total N input	t	944	3,310	4,519
total N removed	t	714	3,159	4,303
efficiency of N removal (NH ₄ ⁺)	%	76%	95%	95%
SST input	t	3,438	6,967	17,118
SST removed	t	2,777	5,932	14,717
efficiency of SST removal	%	81	85	86
GORI additivation index	g/m ³	54.6	36.9	34.7
GORI specific consumption of electricity by purification process	kWh/m ³	0.634	0.584	0.464

Gesesa (*)**

disposed of sludge (244)	t	979.0	969.5	698.6
sand and slabs removed (250)	t	39.3	71.3	10.2
COD input	t	n/a	349	366
COD removed	t	n/a	307	341
efficiency of COD removal	%	n/a	88.1	93.3
total N input	t	n/a	30	13
total N removed	t	n/a	15	9
efficiency of N removal (NH ₄ ⁺)	%	n/a	48.2	71.9
SST input	t	n/a	76	28
SST removed	t	n/a	44	22
efficiency of SST removal	%	n/a	57.1	77.7
Gesesa additive index	g/m ³	n/a	42.3	47.3
Gesesa specific consumption of electricity by purification process	kWh/m ³	n/a	0.849	0.958

AdF

disposed of sludge (245)	t	8,975	7,292	6,238
sand and slabs removed (251)	t	921	724	1,012
COD input	t	8,120	9,172	7,377
COD removed	t	7,516	8,587	6,792
efficiency of COD removal	%	92.6	93.6	92.1
total N input	t	852	866	889
total N removed	t	574	562	628
efficiency of N removal (NH ₄ ⁺)	%	81.1	79.7	81.7
SST input	t	2,656	4,008	3,303
SST removed	t	2,512	3,872	3,107
efficiency of SST removal	%	94.6	96.6	94.1
AdF additive index	g/m ³	65.9	74.0	75.7
AdF specific consumption of electricity by purification process	kWh/m ³	0.929	1.018	0.950

(*) Some figures for the 2019–2020 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.

(***) Water purification efficiency data is estimated. Water purification indicators are available from 2020, when the company installed the first waste water flow meters at the main treatment plants.

KEY ENVIRONMENTAL PERFORMANCE INDICATORS (KPI) – ENVIRONMENT SEGMENT

Environmental Key Performance Indicators.

INDICATOR (*)	u. m.	2019	2020	2021
non-hazardous waste disposed in landfill/total incoming waste (40+41) / (38)	t/t	0.57	0.64	0.67
waste disposed of in landfill/energy consumed net of photovoltaic energy (40+41)/(152)	t/MWh	12.00	15.39	16.19
compost produced/incoming waste (43+ 49) / (38 + 45)	t/t	0.10	0.08	0.11
compost produced/consumed electrical energy (43+49)/(152+157)	kg/kWh	1.68	2.19	4.12
consumed electrical energy/incoming liquid waste in the Bio Ecologia plant	kg/kWh	0.02	0.02	0.01
consumed electrical energy/incoming waste in the Pagnana plant (163 – Pagnana's share)/(56+57+58+59 - Pagnana)	kWh/kg	0.004	0.004	0.005
consumed electrical energy/incoming waste in the Pontedera plant (163 - Pontedera's share)/ (56+57+58+59 - Pontedera)	kWh/kg	0.004	0.011	0.012
consumed electrical energy/incoming waste in the Poggibonsi plant (163 - Poggibonsi's share)/ (56+57+58+59 - Poggibonsi)	kWh/kg	0.003	0.003	0.009
consumed electrical energy/incoming waste in the Berg plant (163 Berg's share)/(62)	kWh/kg	0.009	0.009	0.009
chemicals consumed/incoming waste in the Bio Ecologia plant (162 – Bio Ecologia portion)/(52)	kg/t	5.57	6.26	3.71
chemicals used/incoming waste at the Pagnana plant (162 - Pagnana's share)/ (56+57+58+59 - Pagnana)	kg/t	7.59	5.13	7.04
chemicals used/incoming waste at the Pontedera plant (162 - Pontedera's share)/ (56+57+58+59 - Pagnana)	kg/t	11.65	15.33	11.19
chemicals used/incoming waste at the Poggibonsi plant (162 - Poggibonsi's share)/(56+57+58+59 - Poggibonsi)	kg/t	7.04	8.11	14.11
chemicals used/incoming waste at the Berg plant (162 - Berg's share)/(62)	kg/t	6.99	9.00	7.38

(*) Some figures for the 2019-2020 two-year period have been adjusted following consolidation.

ENVIRONMENTAL COMPLIANCE

INDICATOR	u. m.	2019	2020	2021
COMPLIANCE – MAIN GROUP COMPANIES				
penalties paid for non-conformities related to rules/agreements of an environmental nature	€	139,964	151,620	314,649
COMPLIANCE WITH COMPANY IN NFS SCOPE				
penalties paid for non-conformities related to rules/agreements of an environmental nature	€	121,150	49,523	249,562

DESCRIPTION OF THE CALCULATIONS USED TO DETERMINE THE ELECTRICAL GENERATION EFFICIENCY

CALCULATION 1

$$\text{Efficiency}_{\text{thermoelectric}} = \frac{\text{Energy}_{\text{thermoelectric}} (\text{kWh})}{\text{Energy}_{\text{diesel}} (\text{kWh}) + \text{Energy}_{\text{methane}} (\text{kWh})}$$

where:

$\text{Energy}_{\text{thermoelectric}}$ = gross electricity produced with the thermoelectric cycle

$$\text{Energy}_{\text{diesel}} (\text{kWh}) = \frac{\text{diesel (l)} \times 0.835 \times \text{LHV}_d \left(\frac{\text{kcal}}{\text{kg}} \right)}{860 \left(\frac{\text{kcal}}{\text{kWh}} \right)}$$

$$\text{Energy}_{\text{methane}} (\text{kWh}) = \frac{\text{methane (Nm}^3\text{)} \times \text{LHV}_m \left(\frac{\text{kcal}}{\text{Nm}^3} \right)}{860 \left(\frac{\text{kcal}}{\text{kWh}} \right)}$$

LHV_g = about 10,000 kcal/kg (Lower Heating Value of diesel fuel)

LHV_m about 8,500 kcal/Nm³ (Lower Heating Value of methane)

860 = energy conversion factor from kcal to kWh

0.835 = specific gravity of diesel fuel (kg/l)

NOTE: The calorific values used for Acea Production are the real values derived from measurements made by gas and diesel suppliers.

CALCULATION 2

$$\text{Efficiency (thermoelectric)} = \frac{\text{Energy}_{\text{thermoelectric}} (\text{kWh}) + \text{Energy}_{\text{thermal}} (\text{kWh})}{\text{Energy}_{\text{diesel}} (\text{kWh}) + \text{Energy}_{\text{methane}} (\text{kWh})}$$

$\text{Energy}_{\text{thermal}}$ = Gross thermal energy produced

$\text{Energy}_{\text{thermoelectric}}$ = Gross thermoelectric energy produced

$$\text{Energy}_{\text{diesel}} (\text{kWh}) = \frac{\text{diesel (l)} \times 0.835 \times \text{LHV}_d \left(\frac{\text{kcal}}{\text{kg}} \right)}{860 \left(\frac{\text{kcal}}{\text{kWh}} \right)}$$

$$\text{Energy}_{\text{methane}} (\text{kWh}) = \frac{\text{methane (Nm}^3\text{)} \times \text{LHV}_m \left(\frac{\text{kcal}}{\text{Nm}^3} \right)}{860 \left(\frac{\text{kcal}}{\text{kWh}} \right)}$$

LHV_g = Lower Heating Value of diesel fuel

LHV_m = Lower Heating Value of methane

860 = energy conversion factor from kcal to kWh

0.835 = specific gravity of diesel fuel (kg/l)

NOTE: The calorific values used for Acea Production are the real values derived from measurements made by gas and diesel suppliers.

CALCULATION 3

$$\text{Efficiency (hydroelectric)} = \frac{(\text{Hydroelectric Energy (MWh)} \times 3.6 \times 10^9)}{[m \text{ (kg)} \times 9.8 \left(\frac{\text{m}}{\text{s}^2} \right) \times h \text{ (m)}] \text{ (Joule)}}$$

where:

3.6×10^9 = conversion factor of hydropower from joules to MWh

m = derived water for hydroelectric production

9.8 = acceleration of gravity at sea level

h = height of water fall (exposed surface - turbine)

$\text{Energy}_{\text{hydroelectric}}$ = energy produced in the hydroelectric cycle

CALCULATION 4

$$\text{Efficiency (average)} = \frac{E_i}{(E_i + E_T)} \times \eta_i + \frac{E_T}{(E_i + E_T)} \times \eta_T$$

where:

E_i = total amount of hydroelectric energy produced

E_T = total amount of thermoelectric energy produced

η_i = hydroelectric efficiency

η_T = thermoelectric efficiency

efficiency (average) = average production efficiency

CALCULATION 5

$$\text{Efficiency (average)} = \frac{E_i}{(E_i + E_T)} \times \eta_i + \frac{E_T}{(E_i + E_T)} \times \eta_T$$

where:

E_i = total amount of hydroelectric energy produced

E_T = total amount of energy (thermoelectric and thermal) produced

η_i = hydroelectric efficiency

η_T = efficiency (thermoelectric + thermal)

efficiency (average) = average production efficiency

CALCULATION 6

$$\text{Recovery efficiency} \left(\frac{\text{kWh}}{\text{kg}} \right) = \frac{\text{Gross electricity produced (kWh)}}{\text{SRF (kg)}}$$

Gross electricity produced (kWh) = gross electricity produced in San Vittore

CALCULATION 7

$$\text{Electrical efficiency} = \frac{\text{Gross electricity produced (kWh)}}{\text{Internal SRF energy (kWh)} + \text{Internal methane energy (kWh)}}$$

where:

Electrical energy produced = electrical energy produced in San Vittore del Lazio

$$\text{Internal methane energy} = \frac{\text{CH}_4 (\text{Sm}^3) \times \text{PCI}_m \left(\frac{\text{kcal}}{\text{Sm}^3} \right)}{860 \left(\frac{\text{kcal}}{\text{kWh}} \right)}$$

LHV_m = average Lower Heating Value of methane

860 = energy conversion factor from kcal to kWh

$$\text{Internal SRF energy (kWh)} = \frac{\text{SRF (kg)} \times \text{LHV}_{\text{SRF}} \left(\frac{\text{kcal}}{\text{kg}} \right)}{860 \left(\frac{\text{kcal}}{\text{kWh}} \right)}$$

LHV_{SRF} = average Lower Heating Value of the SRF

860 = energy conversion factor from kcal to kWh

CALCULATION 8

$$\text{Recovery efficiency} \left(\frac{\text{kWh}}{\text{kg}} \right) = \frac{\text{Gross electricity produced (kWh)}}{\text{paper mill pulp}}$$

Gross electricity (kWh) = electricity produced in Terni

CALCULATION 9

$$\text{Efficiency} = \frac{\text{Gross electricity produced (kWh)}}{\text{Internal paper mill pulp energy (kWh)} + \text{internal methane energy (kWh)}}$$

where:

Electricity produced = Electricity produced in Terni = (figure 16)

$$\text{Internal methane energy (kWh)} = \frac{\text{CH}_4 (\text{Sm}^3) \times \text{PCI}_m \left(\frac{\text{kcal}}{\text{Sm}^3} \right)}{860 \left(\frac{\text{kcal}}{\text{kWh}} \right)}$$

LHV_m = LHV methane = average Lower Heating Value of methane

860 = energy conversion factor from kcal to kWh

$$\text{Internal paper mill pulp energy (kWh)} = \frac{\text{Paper mill pulp} \times \text{LHV}_p \left(\frac{\text{kcal}}{\text{kg}} \right)}{860 \left(\frac{\text{kcal}}{\text{kWh}} \right)}$$

LHV_p = LHV paper mill pulp - average Lower Heating Value of paper mill pulp

860 = energy conversion factor from kcal to kWh

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 SEGMENT

item no.	explanation – comment
1	Gross total energy produced by Acea Ambiente and Acea Produzione. The figure is calculated.
2	Electricity produced net of the losses due to just the production phase. The figure is calculated.
3=4+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=7+8+9	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 $\pm 0.5\%$.
10	Electricity produced by the Acea Produzione power plants net of the losses. The figure is calculated.
11	Gross energy produced by photovoltaic installations. The figure is measured with an uncertainty of less than $\pm 0.5\%$.
12	Total losses during photovoltaic generating phase, due in particular to joule effect (dissipation during heating) in the equipment. Estimated figure.
13	Net photovoltaic electricity made available by the generating installations. The figure is calculated.
14=15+16	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 2021, the renewable share for the San Vittore del Lazio plant was equal to 43.0%, the Terni incinerator share to 43.4%.
17	Self-consumption of the two waste-to-energy plants of San Vittore del Lazio and Terni + initial transformation losses. The figure is measured with an uncertainty of less than $\pm 0.5\%$.
18	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.
19	Electrical energy produced from biogas by the waste management plant in Orvieto and, from 2020, the two composting plants of Aprilia and Monterotondo Marittimo (Acea Ambiente). The figure is calculated.
20	Self-consumption of biogas production plants, including small dissipations. The figure is measured with an uncertainty of less than $\pm 5\%$.
21	Net electricity produced from biogas and transferred to the network. The figure is measured with an uncertainty of less than $\pm 5\%$.
22	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.
23	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).
24	Net thermal energy supplied to final clients. The figure, calculated, is obtained from the consumption invoiced.
25	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.

26	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 $\pm 0.5\%$.
27	Energy requested on the electrical distribution network of Rome and Formello by all the client connected (open market + managed service). The figure is estimated.
28	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.
29	Personal use of electricity for the implementation of the distribution activities. The figure is estimated.
30	This is electricity sold to distribution companies. The increase is a consequence of two new closed distribution systems powered by Areti from July 2019. The figure is measured with an uncertainty of $\pm 0.5\%$.
31	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.
32	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.
33	Net electricity sold by Acea ENERGIA on the open market nationally. The figure is estimated.
34	Net electricity sold by Acea nationally on the open market and the standard service. The figure is calculated.
35	Natural gas sold by Acea on the national market. The figure is calculated.
36	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.
37	Total number of measurements/controls performed in favour of the energy segment, 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 SEGMENT

item no.	explanation – comment
38	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.
39	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.
40	Waste disposed directly in landfill. The figure is measured with an uncertainty of $\pm 1\%$.
41	Waste disposed of in landfill after treatment. The figure is measured with an uncertainty of $\pm 1\%$.
42	Waste recovered and not sent to landfill. It is glass, paper and cardboard, iron and plastic. The figure is calculated.
43	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 $\pm 1\%$.
44	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.
45	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 Monterotondo Marittimo plant, which had suspended deliveries in 2018, was restarted in 2019 after work on the construction of a new anaerobic digestion section, the Aprilia plant, placed under preventive seizure in 2017 by the Latina Public Prosecutor's Office for aspects related to odorous emissions, thanks to the activities taken and, in particular, to the complete closure of the biofilters and creation of the 3 chimneys for atmospheric emissions, was released on 18 March 2021.
46	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 $\pm 1\%$.
47	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 $\pm 1\%$.
48	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.
49	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 at Sabaudia is zero because the plant is at a standstill awaiting authorisation for revamping.

50	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 $\pm 1\%$.
51	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.
52	Liquid waste. Represents the quantity of liquid waste coming into the Bio Ecologia plant. The figure is measured with an uncertainty of $\pm 1\%$.
53	Total waste water treated in the Bio Ecologia treatment plant. The figure is measured with an uncertainty of $\pm 1\%$.
54	Total analytical determinations. They represent the total of analytical determinations made at the following plants: Orvieto, Aprilia, Monterotondo Marittimo and Sabaudia. The figure is calculated.
55	Total incoming waste. These are the amounts arriving at Acque Industriali's plants at Pagnana, Pontedera, Poggibonsi and San Jacopo. The figure is calculated.
56	Incoming sludge. Represents the quantity of incoming sludge at Acque Industriali's plants at Pagnana, Pontedera, Poggibonsi and San Jacopo. The figure is measured with an uncertainty of $\pm 1\%$.
57	Liquid waste. Represents the quantity of liquid waste coming into the Pagnana and Pontedera plants. The figure is calculated.
58	Sewage and other waste. Represents the quantity of sewage and other non-hazardous waste. The figure is calculated.
59	Leachate Represents the quantity of leachate coming into the Pagnana and Pontedera plants. The figure is measured with an uncertainty of $\pm 1\%$.
60	Ammonium Sulphate produced. Represents the quantity of quality of Ammonium Sulphate produced at the Pagnana and Pontedera plants. The figure is estimated.
61	Water treated before discharging at the Pontedera, Pagnana, Poggibonsi and San Jacopo plants. Some of these also include water that is consumed for industrial and/or civil use inasmuch as distinct flow meters before discharge are not always present. At San Jacopo, the water that is produced is input into the biological treatment plant of Acque SpA.
62	Total incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.
63	Solid incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.
64	Liquid incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.

PRODUCTS – WATER SEGMENT

item no.	explanation – comment
65	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.
66	Total drinking water supplied and invoiced to the respective clients by the Companies listed under line number 60. The figure is estimated.
67	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.
68	Total drinking water supplied and invoiced to the respective clients by the Companies listed under line number 62. The figure is estimated.
69	Total drinking water collected from the environment or other systems by Acea Ato 2 and released into the aqueduct system of the "Ambito Territoriale Ottimale 2" of Lazio Centrale. The figure is measured with an uncertainty of $\pm 3\%$.
70	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.
71	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.
72	Total drinking water authorised and not billed in the Acea Ato 2 network. The figure is estimated.
73	Total amount of drinking water exported to other aqueduct systems by Acea Ato 2. The 2020 figure is estimated and may undergo consolidation after publication.
74	Total Acea Ato 2 drinking water losses. The figure is measured with an uncertainty of $\pm 3\%$
75	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.
76	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.
77, 78, 79, 80, 81	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.

82	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.
83	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.
84, 85, 86, 87, 88	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.
89	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.
90	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.
91, 92, 93, 94, 95	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.
96	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.
97	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.
98, 99, 100, 101, 102	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.
103	Total AdF drinking water losses. The figure is measured with an uncertainty of $\pm 3\%$
104	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.
105	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.
106	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.
107	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.
108	Total waste water sent to the principal treatment plants of Acea Ato 2 and treated. The total figure is calculated.
109	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.
110	Total waste water sent to the main treatment plants and treated by Acea Ato 5. The figure is calculated.
111	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.
112	Total amount of waste water sent to the main treatment plants and treated by AdF. For 2019, this is water treated in treatment plants for a PE >20,000; for 2020-2021 it is the water treated in treatment plants for a PE >10,000. The figure is calculated.
113	Total amount of waste water used in treatment plants and treated by AdF, including the quantities treated in minor plants.
114	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.
115	Number of analytical determinations conducted overall on the drinking water by the main Companies of the Acea Group. The figure is calculated.
116	Number of analytical determinations conducted overall on the waste water by the main Companies of the Acea Group. The figure is calculated.
117	Number of analytical determinations conducted overall on the drinking water by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa.
118	Number of analytical determinations conducted overall on the waste water by Acea Ato 2, Acea Ato 5, GORI, AdF and Gesesa.
119	Number of analytical determinations conducted overall on the drinking water by Acea Ato 2.
120	Number of analytical determinations conducted overall on the waste water by Acea Ato 2.
121	Number of analytical determinations conducted overall on the drinking water by Acea Ato 5.

122	Number of analytical determinations conducted overall on the waste water by Acea Ato 5.
123	Number of analytical determinations conducted overall on the drinking water by Gesesa.
124	Number of analytical determinations conducted overall on the waste water by Gesesa.
125	Number of analytical determinations conducted overall on the drinking water by GORI.
126	Number of analytical determinations conducted overall on the waste water by GORI.
127	Number of analytical determinations conducted overall on drinking water by Gesesa.
128	Number of analytical determinations conducted overall on waste water by Gesesa.

RESOURCES USED – ENERGY SEGMENT

item no.	explanation – comment
129 = 130 + 131	Total quantity of natural gas used to generate the electricity and heat at the Acea Produzione 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.
130	Total quantity of natural gas used in the Tor di Valle power plant.
131	Total quantity of natural gas used by waste-to-energy plants. The figure is measured with an uncertainty of about 2%.
132	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 $\pm 2\%$.
133	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 $\pm 1\%$.
134	Quantity of paper mill pulp sent to waste-to-energy in the Terni plant. The figure is measured with an uncertainty of $\pm 1\%$.
135	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 $\pm 1\%$.
136	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.
137	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.
138	Quantity of aqueduct water used by the Companies included in the energy segment, 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.
139	It represents the total quantity of dielectric mineral oil present in the primary and secondary substations. The figure also includes the amount of oil present in the Petersen coils installed in certain primary substations. The data related to the reintegrations is estimated. The total quantity of new dielectric mineral oil released into the production circuit (transformers, capacitors, storage deposits etc.) includes both the Areti and the Acea Produzione data. The figure is estimated.
140	It represents the total quantity of gaseous insulation (SF ₆) in the Areti 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.
141	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 segment and the water segment in equal parts (50%).
142	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.
143	Quantity of lubricating oils and fats used by Acea Produzione. The figure is measured with an uncertainty of $\pm 0.5\%$.
144	The figure matches Item 28.
145	Matches the difference between Items 1 and 2.
146	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.
147	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.

148	Other uses of the electricity in the energy segment. The figure is calculated.
149	Total electricity consumer by the product systems included in the energy area. The figure is calculated.
150	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 SEGMENT

item no.	explanation – comment
Orvieto plant	
151	Total chemical substances used at the Orvieto plant. The figure is calculated.
152	Electricity consumed in the Orvieto plant. The figure is measured with an uncertainty of $\pm 1\%$.
153	Total quantity of diesel consumed at the Orvieto plant. The figure is measured with an uncertainty of $\pm 2\%$.
154	Quantity of water consumed at the Orvieto plant. It is specified that this resource comes partly from roofs (rainwater) and partly from the riverbed (river water). The figure is estimated.
155	Quantity of water used for civilian purposes in the plant region of Orvieto. It is supplied by tanker trucks since the plant is not connected to the aqueduct. The figure is estimated.
Compost production	
156	Total chemical substances used at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The figure is calculated.
157	Electricity consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The figure is measured with an uncertainty of $\pm 1\%$.
158	Total quantity of diesel fuel consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The figure is measured with an uncertainty of $\pm 2\%$.
159	Quantity of biogas produced at the new Aprilia and Monterotondo plants. The final objective is to produce electricity. From 2020 production at Monterotondo and Aprilia has practically reached capacity. The figure is measured with an uncertainty of $\pm 1\%$.
160	Quantity of water consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The quantities of water recycled are included. The figure is estimated.
161	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	
162	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.
163	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 $\pm 1\%$.
164	Quantity of methane consumed at the Pagnana plant. The figure is measured with an uncertainty of $\pm 1\%$.
165	Amount of BTZ (Basso Tenore di Zolfo - Low Sulphur Content) combustible Oil at the Pontedera plant. The figure is measured with an uncertainty of $\pm 2\%$.
166	Amount of water consumed at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Bio Ecologia plant.
167	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.

RESOURCES USED – WATER SEGMENT

item no.	explanation – comment
168	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.
169	Total quantity of chemical reagents used by the Company Acea Elaborasi to carry out the official duties, namely the analytical checks for the Companies of the Acea Group. The figure is measured.
170	Total volume of pure gases for analysis, used by Acea Elaborasi. The figure is measured.
171	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 segment and the water segment in equal parts (50%).

172	Total energy consumed in the water area. The figure is calculated.
173	Electricity used for the drinking water and non-potable water pumping stations. The figure is measured with an uncertainty of $\pm 1\%$.
174	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.
175	Electricity used by Acea Elabiori. 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.
176	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.
176 A	Quantity of water for process uses in Acea Ato 2 and Acea Ato 5. From 2021, only 1.4% of the quantity produced by Acea Ato 5 is drinking water; the remaining amount is water recovered from treatment plants. The figure is calculated.
177	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.
178	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.
179	Total quantity of lubricating oil and fat used for the equipment of the water area (pumps, centrifuges, motors etc.). The figure is calculated.
180	Electricity used to run the waste water treatment plants and to operate the sewerage network. The figure is measured with an uncertainty of $\pm 1\%$.
181	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 $\pm 2\%$.
182	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 $\pm 2\%$.
183	Quantity of petrol used in purification processes and generators. The figure is measured with an uncertainty of $\pm 2\%$.
184	Quantity of biogas produced and consumed on site. The figure is measured with an uncertainty of $\pm 2\%$.

FUELS USED BY THE GROUP (TRANSPORT AND HEATING)

item no.	explanation – comment
185	Total amount of petrol used for the main Companies of the Acea Group car fleet. Since 2019 the data comes from the calculations of the Group's Energy managers. In 2020, the increase is mainly due to the increase of the number of petrol powered vehicles in GORI and to the increase in consumption in Acea Ato 2. For the conversions from the unit of volume (litres) to that of mass (kg) a density value of 0.73 kg/l was used (source: Defra, conversion factors 2020).
186	Total amount of diesel used for the main Companies of the Acea Group car fleet. Since 2019 the data comes from the calculations of the Group's Energy managers. For the conversions from the unit of volume (litres) to that of mass (kg) a density value of 0.84 kg/l was used (source: Defra, conversion factors 2020). The figure includes the fuel consumed by Aquaser's vehicles.
186 B	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.
187	Total amount of LPG (Liquefied Petroleum Gas) used for the main Companies of the Acea Group car fleet. For the conversions from the unit of volume (litres) to that of mass (kg) a density value of 0.55 kg/l was used.
188	Total quantity of diesel used for heating work areas and for the supply of the generators. The figure is measured with an uncertainty of $\pm 0.5\%$.
189	Total quantity of natural gas used for heating the work spaces. The figure is measured with an uncertainty of $\pm 0.5\%$.
190	Total quantity of LPG (Liquefied Petroleum Gas) used to heat the work spaces. The figure is measured with an uncertainty of $\pm 0.5\%$.

EMISSIONS AND WASTE – ENERGY SEGMENT

item no.	explanation – comment
191	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.
192	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.

193	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).
194	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 segment and half to the water segment, as is the case for the quantities of refrigerant fluids (HCFCs). The figure coincides with item No. 249. For 2021, the figure is zero as there were no reintegrations in the year.
195	Quantity of carbon dioxide released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure for 2020 was recorded following the issue of the ETS certificate. The figure is measured.
196	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.
197	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.
198	Quantity of nitrogen oxides (NO + NO ₂) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
199	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.
200	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.
201	Quantity of carbon oxide (CO) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
202	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.
203	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.
204	Quantity of sulphur dioxide (SO ₂) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
205	Total quantity of powders (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.
206	Quantity of powders released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
207	Quantity of powders released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
208	Quantity of hydrochloric acid (HCl) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
209	Quantity of hydrofluoric acid (HF) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
210	Quantity of organic carbon released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
211	Total quantity of waste water, treated, resulting from the thermoelectric energy production activities. The figure is measured with an uncertainty of $\pm 2\%$.
212	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 2020 figure decreased due to the Covid-19 pandemic and in particular because no HV/MV transformers were changed. The figure is measured with an uncertainty of $\pm 2\%$.
213	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 $\pm 2\%$.
214	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 $\pm 2\%$.
215	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 SEGMENT

item no.	explanation – comment
216	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.
217	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.
218	Hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Orvieto plant. The figure is measured with an uncertainty of $\pm 2\%$.
219	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Orvieto plant. The figure is measured with an uncertainty of $\pm 2\%$.
220	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Bio Ecologia plant. The figure is measured with an uncertainty of $\pm 2\%$.
221	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 $\pm 2\%$.
222	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 $\pm 2\%$.
223, 224, 225, 226	They are powders, Total Organic Compounds (COT), ammonia and volatile inorganic substances (SIV) 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.
227	CO ₂ emissions from the Bio Ecologia plant. The figure is calculated.
228	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Pagnana plant. The figure is calculated.
229	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Pagnana, Pontedera, Poggibonsi and San Jacopo plants. The figure is calculated.
230	Emissions of CO ₂ of the Pagnana and Pontedera plants relate to the consumption of fuels. The figure is calculated.
231	Hydrogen Sulphide emissions from the Pagnana and Pontedera plants. The Pagnana figure is measured. The Pontedera figure is estimated taking into account the maximum value that can be recorded in the plant.
232	Ammonia emissions at the Pagnana and Pontedera Plants. The Pagnana figure is measured. The Pontedera figure is estimated taking into account the maximum value that can be recorded in the plant.
233	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Berg plant. The figure is measured with an uncertainty of $\pm 2\%$.
234	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Berg plant. The figure is measured with an uncertainty of $\pm 2\%$.
235	Emissioni di CO ₂ emissions related to the Berg plant. The figure is calculated.
236	Dust emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
237	Organic carbon emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
238	Hydrogen sulphide and mercaptans emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
239	Ammonia emissions from the Berg plant. The data is calculated starting from the measurement of the concentrations.

EMISSIONS AND WASTE – WATER SEGMENT

item no.	explanation – comment
240	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 $\pm 2\%$.
241	Total quantity of purification sludge disposed of by Acea Ato 2. The figure is measured with an uncertainty of $\pm 2\%$.
242	Total quantity of purification sludge disposed of by Acea Ato 5. The figure is measured with an uncertainty of $\pm 2\%$.
243	Total quantity of purification sludge disposed of by GORI. The strong increase in the quantities produced since 2019 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 $\pm 2\%$.
244	Total quantity of purification sludge disposed of by Gesesa. The figure is measured with an uncertainty of $\pm 2\%$.

245	Total quantity of purification sludge disposed of by AdF. The figure is measured with an uncertainty of $\pm 2\%$.
246	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 $\pm 2\%$.
247	Total quantity of sand and slabs disposed of by Acea Ato 2. The figure is measured with an uncertainty of $\pm 2\%$.
248	Total quantity of sand and slabs disposed of by Acea Ato 5. The figure is measured with an uncertainty of $\pm 2\%$.
249	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 $\pm 2\%$.
250	Total quantity of sand and slabs disposed of by Gesesa. The figure is measured with an uncertainty of $\pm 2\%$.
251	Total quantity of sand and slabs disposed of by AdF. The figure is calculated.
252	Amount of other process waste, excluding sludge, sand and slabs. The figure is measured with an uncertainty of $\pm 2\%$.
253	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.
254	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Elabiori. The figure is measured with an uncertainty of $\pm 2\%$.
255	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 $\pm 2\%$.
256	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 $\pm 2\%$.
257	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by GORI. The figure is measured with an uncertainty of $\pm 2\%$.
258	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by AdF. The figure is measured with an uncertainty of $\pm 2\%$.
259	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 segment.
260	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.
261	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 2 and Acea Elabiori. 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.
262	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 5. The figure is estimated.
263	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by GORI. The figure is estimated.
264	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Gesesa. The figure is estimated.
265	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by AdF. The figure is estimated.
266	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 segment.
267	Total amount of carbon dioxide emitted by dryers and generators. The figures are calculated using the consumption of fuel and the emission coefficients (ISPRA data).
268	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 segment and half to the water segment, 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
269	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 2021). The figure is calculated.
270	Total quantity of carbon dioxide emitted by the systems used to air-condition the work spaces. The figure is calculated.