ENVIRONMENTAL ACCOUNTS

SCOPE

The scope of the *Environmental Accounts* is consistent with the reporting scope of the *Sustainability Report* (*Consolidated Non-Financial Statement* pursuant to Legislative Decree no. 254/2016/NFS), as defined in the *Methodological Note*. The company Società Orvieto Ambiente Srl was established on 21 February 2023, operating in environmental services and the production of electricity from renewable sources, responsible for managing the plant hub at Orvieto (TR). As from 2023, the Environmental Accounts also present the information for Società Ecologica Sangro, starting from the 2022 figures, when it was acquired by the Group.
The water Companies in which Acea has an investment: Acque, Publiacqua and Umbra Acque - consolidated in the Financial Statements with the equity method - are marginally included in the Environmental Accounts and only relative to the aspects which are specifically signalled in the text. Please see the chapter *Water Company data sheets and overseas activities* (outside the scope of the NFS).[259]

The *Environmental Accounts*, integral part of the *Sustainability Report*, combines and presents systematically the information and environmental performance data of the principal Companies of the Group.
The data is divided into "product systems" pertaining to the energy, environment and water fields, according to the Life Cycle Assessment approach (standard ISO Series 14040), which assesses the entire life cycle of the systems.
The Report comprises **over 500 items and parameters monitored** which quantify the physical flows generated by the activities and some performance indicators.

For the three Areas — Energy, Environment, Water — the substances used by the Group over a three-year period — whether natural, like water, or not natural, like *chemicals*, renewable or not — the products, emissions, effluents and waste related to the activities managed are attributable to **producing and distributing energy**, for **collecting and distributing drinking water**, **treatment**, and all the processes associated with **waste management**, including **waste-to-energy**.
Every use of resources is reduced to a minimum in terms of quantity and every substance is selected carefully in terms of quality, safety and environmental sustainability.

PRODUCT SYSTEMS

ENERGY BUSINESS

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

ENVIRONMENT BUSINESS

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

WATER BUSINESS

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

The data are provided for the 2021-2023 three-year period and aggregated in three homogeneous categories:

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

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

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.

259 The Demap, Aquaser and Acea Innovation 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 BUSINESS

The financial statement data for the generation of electricity refer to **Acea Produzione, Ecogena, Acea Ambiente** – waste-to-energy (San Vittore del Lazio and Terni plants) and biogas production (Aprilia and Monterotondo Marittimo plants) - **Orvieto Ambiente, Deco** and **Ecologica Sangro** (production of biogas).

The data presented in the tables below reflect two perspectives. The first refers to an expanded reporting scope that includes the photovoltaic plants of Acea Produzione's operating subsidiary, even though they are not fully consolidated[260], and the second refers solely to the reporting scope associated with the NFS.

SUMMARY POWER GENERATION DATA, INCLUDING PHOTOVOLTAIC SUBSIDIARIES (*)	u. m.	2021	2022	2023	Δ% 2023/2022
total gross electricity produced	**GWh**	**1,015.56**	**948.94**	**1,047.37**	**10.4**
total net electricity produced	**GWh**	**938.68**	**870.52**	**967.27**	**11.1**
electricity from fossil fuels (thermoelectric)	*GWh*	*317.33 31.2% of total gross electricity*	*304.77 32.1% of total gross electricity*	*290.45 27.7% of total gross electricity*	*-4.7*
electricity from renewable sources (hydroelectric, photovoltaic, biodegradable portion of waste and biogas)	*GWh*	*698.22 68.8% of total gross electricity*	*644.17 67.9% of total gross electricity*	*756.93 72.1% of total gross electricity*	*17.5*

(*) Some figures for the 2021-2022 two year period have been restated following consolidation, specifically after the entry of Ecologica Sangro in the scope of consolidation with data from 2022.

SUMMARY POWER GENERATION DATA - NFS SCOPE (*)	u. m.	2021	2022	2023	Δ% 2023/2022
total gross electricity produced (1)= (5+10+13+16+22)	**GWh**	**1,015.56**	**850.51**	**933.35**	**9.7**
total net electricity produced (2) = (9+12+15+18+26)	**GWh**	**938.68**	**773.08**	**855.79**	**10.7**
from fossil fuels (thermoelectric) (7 + 0.53x 13$_{San\ Vittore\ del\ Lazio}$ +0.59x 13$_{Terni}$)	*GWh*	*317.33 31.2% of (1)*	*304.77 35.8% of (1)*	*290.45 31.1% of (1)*	*-4.7*
from renewable sources (hydroelectric, photovoltaic, biodegradable portion of waste and biogas) (6+10+0,47x13$_{San\ Vittore\ del\ Lazio}$+0,44 x 13$_{Terni}$ +16)	*GWh*	*698.22 68.8% of (1)*	*545.74 64.2% of (1)*	*642.91 68.9% of (1)*	*17.8*

(*) Certain figures for the 2021-2022 two year period have been restated following consolidation, specifically with the entry of Ecologica Sangro in the scope of consolidation.

SUMMARY THERMAL POWER GENERATION DATA	u. m.	2021	2022	2023	Δ% 2023/2022
gross thermal energy produced (3) = (19+22)	**GWh**	**121.94**	**105.29**	**100.60**	**-4.5**
net thermal energy produced (4) = (21+27) (*)	**GWh**	**95.42**	**79.81**	**73.98**	**-7.3**

(*) The figure for 2022 was restated following consolidation of item (20).

260 We refer, in particular, to KT 4 Srl, Solaria Real Estate Srl, Acea Sun Capital Srl, Trinovolt Srl, Marche Solar Srl, Fergas Solar Srl, Euroline 3 Srl, IFV Energy Srl, PF Power of Future Srl, JB Solar Srl, M2D Srl, PSL Srl, Solarplant Srl, and Acea Green Srl, which produce photovoltaic energy and left the scope of full consolidation in March 2022, following the transaction described in the *Methodological Note*, and **merged into AE Sun Capital**, a subsidiary of Acea Produzione. The plants in question produced 114.02 GWh in 2023.

BREAKDOWN OF POWER GENERATION DATA - NFS SCOPE (*)	u. m.	2021	2022	2023	Δ% 2023/2022
Acea production – hydroelectric and thermoelectric					
total gross electricity produced (5) = (6+7)	**GWh**	**542.44**	**450.18**	**533.35**	**18.5**
total gross hydroelectric energy (6)	**GWh**	**434.70**	**335.30**	**425.14**	**26.8**
A. Volta Castel Madama	*GWh*	*28.99*	*16.29*	*25.04*	*53.8*
G. Ferraris Mandela	*GWh*	*18.42*	*8.50*	*11.60*	*36.4*
G. Marconi Orte	*GWh*	*70.31*	*46.81*	*61.03*	*30.4*
Sant'Angelo	*GWh*	*146.11*	*91.52*	*156.76*	*71.3*
Salisano	*GWh*	*167.62*	*168.98*	*167.53*	*-0.9*
Other minor	*GWh*	*3.26*	*3.21*	*3.17*	*-0.9*
total gross thermoelectric energy (7)	**GWh**	**107.74**	**114.88**	**108.21**	**-5.8**
from diesel fuel - Montemartini power plant (*)	*GWh*	*1.65*	*2.21*	*0.67*	*-69.8*
from natural gas - Tor di Valle power plant - CAR	*GWh*	*106.09*	*112.67*	*107.54*	*-4.6*
total loss of electrical energy (8)	**GWh**	**13.21**	**12.93**	**12.31**	**-4.8**
self-consumption - hydroelectric plants	*GWh*	*2.19*	*1.95*	*1.85*	*-5.1*
self consumption thermoelectric plants (Tor di Valle, Montemartini)	*GWh*	*5.40*	*5.45*	*5.18*	*-5.0*
first processing losses	*GWh*	*5.63*	*5.53*	*5.29*	*-4.4*
total net electricity produced by Acea Produzione (9) = (5-8)	**GWh**	**529.23**	**437.25**	**521.03**	**19.2**
Acea Production and other Companies - photovoltaic					
gross photovoltaic electrical energy (10)	**GWh**	**78.61**	**13.51**	**20.38**	**50.8**
Acea Produzione	*GWh*	*9.66*	*13.51*	*20.38*	*50.8*
other PV Companies (**)	*GWh*	*68.95*	*-*	*-*	*-*
total electricity losses including own consumption (11)	**GWh**	**0.79**	**1.51**	**1.80**	**19.3**
Acea Produzione	*GWh*	*0.10*	*1.51*	*1.80*	*19.3*
other PV Companies (**)	*GWh*	*0.69*	*-*	*-*	*-*
net photovoltaic energy (12) = (10-11)	**GWh**	**77.82**	**12.01**	**18.59**	**54.8**
Acea Produzione	*GWh*	*9.57*	*12.01*	*18.59*	*54.8*
other PV Companies (**)	*GWh*	*68.26*	*-*	*-*	*-*
Acea Ambiente - waste-to-energy					
total gross electricity produced (13)	**GWh**	**356.41**	**337.08**	**320.48**	**-4.9**
San Vittore del Lazio plant	*GWh*	*267.74*	*251.26*	*249.70*	*-0.6*
Terni plant	*GWh*	*88.67*	*85.81*	*70.78*	*-17.5*
self consumption + losses from first processing (14)	**GWh**	**45.64**	**43.23**	**42.13**	**-2.5**
San Vittore del Lazio plant	*GWh*	*36.83*	*34.43*	*34.12*	*-0.9*
Terni plant	*GWh*	*8.81*	*8.79*	*8.01*	*-8.9*
total net electricity produced (15) = (13-14)	**GWh**	**310.77**	**293.85**	**278.34**	**-5.3**
Acea Ambiente, Orvieto Ambiente and Deco - biogas (***)					
total gross electricity produced from biogas (16)	**GWh**	**31.39**	**44.34**	**50.09**	**13.0**
Orvieto Ambiente hub	*GWh*	*13.99*	*12.67*	*16.58*	*30.9*
Aprilia plant	*GWh*	*12.32*	*15.04*	*15.12*	*0.5*
Monterotondo Marittimo plant	*GWh*	*5.07*	*5.95*	*6.25*	*5.0*
Deco sites	*GWh*	*-*	*2.84*	*1.38*	*-51.6*
Ecologica Sangro site	*GWh*	*-*	*7.84*	*10.76*	*37.2*
self consumption (17)	**GWh**	**15.43**	**16.77**	**17.72**	**5.7**
Orvieto Ambiente hub	*GWh*	*0.89*	*0.89*	*0.97*	*8.1*
Aprilia plant	*GWh*	*9.59*	*9.98*	*10.63*	*6.5*
Monterotondo Marittimo plant	*GWh*	*4.94*	*5.19*	*5.33*	*20.3*
Deco sites	*GWh*	*-*	*0.19*	*0.09*	*-51.4*
Ecologica Sangro site	*GWh*	*-*	*0.51*	*0.70*	*38.3*
total electricity transferred in network (18) = (16-17)	**GWh**	**15.96**	**27.58**	**32.27**	**17.4**

(*) The Montemartini power plant is maintained operational but in reserve mode.
(**) The figure for 2021 pertains to the PV Companies, which left the full consolidation scope in March 2022 due to the transaction described in *the Methodological Note*.
(**) Some data from 2022 was restated following the consolidation, and entry of Ecologica Sangro into the scope of consolidation.

BREAKDOWN OF GENERATION, DISTRIBUTION AND SALES DATA - THERMAL ENERGY	u. m.	2021	2022	2023	Δ% 2023/2022
Acea Produzione					
gross thermal energy produced Tor di Valle power station (19)	GWh_t	98.67	87.69	83.86	-4.4
total losses of thermal energy (20)	GWh_t	23.94	23.82	24.43	2.5
distribution losses	GWh_t	*20.37*	*21.49*	*21.13*	*-1.7*
production losses	GWh_t	*3.57*	*2.33*	*3.30*	*41.4*
net thermal energy sold (21) = (19-20)	GWh_t	74.73	63.87	59.43	-7.0
Ecogena					
gross electricity produced (22)	GWh	6.71	5.40	9.06	67.7
gross thermal energy produced (23)	GWh_t	23.27	17.60	16.74	-4.9
gross refrigeration energy produced (24)	GWh_f	11.07	11.60	11.60	-
total consumption (25)	GWh	5.46	5.88	6.84	16.3
self-consumed electricity	GWh	*1.82*	*3.00*	*3.60*	*20.3*
heat dissipated	GWh_t	*2.58*	*1.66*	*2.20*	*32.2*
refrigeration energy consumed	GWh_f	*1.06*	*1.22*	*1.03*	*-15.2*
net electricity (26)	GWh	4.88	2.41	5.46	126.7
net thermal energy (27)	GWh_t	20.69	15.94	14.55	-8.7
net refrigeration energy (28)	GWh_f	10.01	10.38	10.57	1.7

ELECTRICITY TRANSPORT AND SALES	u. m.	2021	2022	2023	Δ% 2023/2022
in Rome and Formello - summary data					
supply from Acea Group (29)	GWh	3.47	3.18	4.84	52.2
electricity from the market (30)	GWh	9,826.70	10,058.83	9,795.62	-2.6
from Single Buyer	GWh	*2,230.42*	*2,096.22*	*1,671.08*	*-20.3*
from importation	GWh	*78.56*	*77.71*	*76.93*	*-1.0*
from wholesalers + other producers	GWh	*7,517.72*	*7,884.90*	*8,047.61*	*2.1*
electricity requested by the network (31) = (29+30) = (32+33+34+35+36)	GWh	9,830.17	10,062.01	9,800.46	-2.6
distribution, transport and commercial losses (32)	GWh	*593.35 6.0% of (31)*	*653.62 6.5% of (31)*	*604.87 6.2% of (31)*	*-7.5*
uses for own transmission and distribution (33)	GWh	*30.71*	*28.94*	*27.88*	*-3.6*
net electricity transferred to third parties (34)	GWh	*102.19*	*103.49*	*102.76*	*-0.7*
net electricity conveyed from Acea to clients of the open market (35)	GWh	7,410.22	7,884.90	8,047.61	2.1
net electricity sold by Acea Energia to clients of the open market on distribution company grid (Areti)	GWh	*5,909.37*	*6,341.77*	*1,442.09*	*-77.3*
net electricity sold by other sellers to clients of the open market on distribution company grid (Areti)	GWh	*1,500.85*	*1,543.13*	*6,605.52*	*328.1*
net electricity sold to managed clients (36)	GWh	1,693.70	1,391.06	1,017.34	-26.9
net electricity sold by Acea Energia to managed clients (36A)	GWh	.	-	*1,016.80*	-
sale in Italy - summary data					
net electricity sold by Acea Energia on the open market – including sale on Rome (37)	GWh	6,074.57	5,985.69	5,368.72	-10.3
net electricity sold by Acea Energia in Italy (open market + managed) (38) = (36A)+(37)	GWh	7,768.27	7,376.75	6,385.52	-13.4

GAS SALES	u. m.	2021	2022	2023	Δ% 2023/2022
gas sold by Acea Energia in Italy (39)	MSm^3	174.68	170.40	175.07	2.7

PUBLIC LIGHTING	u. m.	2021	2022	2023	Δ% 2023/2022
luminous flux to Rome (40)	Mlumen	2,021	1,877	1,845	-1.7

CONTROLS AND MEASUREMENTS	u. m.	2021	2022	2023	Δ% 2023/2022
measurement and control activity (41)	**no.**	**420**	**226**	**230**	**1.8**
electro-magnetic field measurements	*no.*	*41*	*25*	*9*	*-64.0*
noise measurements	*no.*	*34*	*6*	*10*	*66.7*
PCB chemical analyses	*no.*	*69*	*25*	*25*	*-*
waste classification	*no.*	*23*	*48*	*38*	*-20.8*
transformer diagnostics	*no.*	*253*	*122*	*148*	*21.3*

PRODUCTS – ENVIRONMENT BUSINESS

Data refers to the plants of **Acea Ambiente, Orvieto Ambiente**[261]**, Acque Industriali, Berg, Deco and Ecologica Sangro sites**[262]. For Acea Ambiente, these are the three composting plants (located in Aprilia, Monterotondo Marittimo and Sabaudia), the chemical/physical and biological treatment plant for non-hazardous liquid waste, the Grasciano2 plant located in Notaresco and operated by Deco, and the treatment plant at Chiusi. For Orvieto Ambiente, this refer to the plant hub managing waste at Orvieto, comprising a landfill and composting plant. For Acque Industriali the data refers to the liquid waste disposal plants located in the Tuscan provinces of Pisa (Pontedera and Pisa-San Jacopo), Florence (Empoli-Pagnana) and Siena (Poggibonsi). Berg only has one facility where waste storage, disposal and treatment is carried out. The Waste Management Hub, owned by Deco, consists of the facilities from the landfills located at Casoni and Colle Cese [263]and a Mechanical Biological Treatment Plant (MBT).

It is noted that at **31.12.2023, certain plants were not operational**. Specifically: **the Sabaudia plant** has been inactive since 2020 (pending the revamping authorisation); the **Poggibonsi** plant has been inactive since June 2021 pending the release of a new authorisation;**the Pisa-San Jacopo plant** stopped operations in February 2020 and was decommissioned in July 2022, similarly to the **Pontedera** plant that was closed.

ORVIETO AMBIENTE HUB - INCOMING WASTE, DISPOSED OF AND RECOVERED	u. m.	2021	2022	2023	Δ% 2023/2022
total incoming waste (42) = (43+44)	**t**	**108,361**	**97,661**	**99,513**	**1.9**
waste sent for treatment (43)	**t**	**67,155**	**45,674**	**59,045**	**29.3**
waste sent to the anaerobic digester and aerobic treatment	*t*	*32,855*	*31,193*	*45,463*	*45.7*
sent for aerobic treatment or just shredding	*t*	*34,299*	*14,480*	*13,582*	*-6.2*
waste sent directly to landfill (44)	**t**	**41,207**	**51,988**	**40,468**	**-22.2**
waste sent to landfill after treatment (45)	**t**	**31,239**	**17,549**	**19,244**	**9.7**
waste recovered (46)	**t**	**52**	**28**	**23**	**-15.5**
quality compost (47)	**t**	**3,559**	**3,412**	**4,328**	**26.8**
reduction due to stabilisation (48) = (42–44+45+46+47)	**t**	**32,304**	**24,684**	**35,451**	**43.6**

DECO SITES - INCOMING WASTE, DISPOSED OF AND RECOVERED (*)	u. m.	2021	2022	2023	Δ% 2023/2022
total incoming waste (49) = (50+51)	**t**	**-**	**243,566**	**324,852**	**33.4**
waste entering the landfills (Casoni and Grasciano2) (50)	**t**	**-**	**1,924**	**72,565**	**-**
waste sent to MBT plant (51)	**t**	**-**	**241,642**	**252,286**	**4.4**
leaving the MBT plant and proceeding to recovery - SRF (52)	*t*	*-*	*96,093*	*95,869*	*-0.2*
leaving the MBT plant and proceeding to recovery - metals (53)	*t*		*4,121*	*4,101*	*-0.5*
waste leaving the MBT plant and proceeding to disposal (54)	*t*	*-*	*84,162*	*89,984*	*6.9*
reduction due to stabilisation (55) = (49-50+52+53+54)	**t**	**-**	**57,266**	**62,332**	**8.8**

(*) Sites owned and operated by Deco have been included in the reporting since 2022.

ECOLOGICA SANGRO - INCOMING AND DISPOSED WASTE	u. m.	2021	2022	2023	Δ% 2023/2022
total incoming waste sent to landfill (55B	**t**	**-**	**65,591**	**56,197**	**-14.3**

261 The company Società Orvieto Ambiente Srl was established on 21 February 2023 and is responsible for managing to plant hub at Orvieto (TR).

262 Ecologica Sangro entered the NFS scope as from 2023. Figures are included in the financial statements from 2022, when the Company became part of the Acea Group.

263 Exhausted landfill site, under post-operational management.

COMPOST PRODUCTION	u. m.	2021	2022	2023	Δ% 2023/2022
total incoming organic waste (56) = (57+58+59)	t	141,506.00	149,184.88	156,457.54	4.9
incoming sludge (57)	t	26,912.42	31,490.46	28,912.88	-8.2
Aprilia plant	t	*9,005.22*	*13,114.68*	*9,459.46*	*-27.9*
Monterotondo Marittimo plant	t	*17,907.20*	*18,375.78*	*19,453.42*	*5.9*
incoming green (58)	t	26,184.14	26,347.66	33,992.98	29.0
Aprilia plant	t	*14,529.62*	*15,799.06*	*18,408.10*	*16.5*
Monterotondo Marittimo plant	t	*11,654.52*	*10,548.60*	*15,584.88*	*47.7*
organic fraction of municipal solid waste and other agrifood waste (59)	t	88,409.44	91,346.76	93,551.68	2.4
Aprilia plant	t	*60,274.56*	*67,253.54*	*66,055.08*	*-1.8*
Monterotondo Marittimo plant	t	*28,134.88*	*24,093.22*	*27,496.60*	*14.1*
quality compost (60)	t	24,686.75	38,580.72	43,206.00	12.0
Aprilia plant (*)	t	*13,001.75*	*18,131.72*	*20,000.00*	*10.3*
Monterotondo Marittimo plant	t	*11,685.00*	*20,449.00*	*23,206.00*	*13.5*
non-compostable material for disposal (61)	t	11,813.09	5,768.53	5,220.84	-9.5
Aprilia plant	t	*7,365.30*	*2,476.90*	*1,354.04*	*-45.3*
Monterotondo Marittimo plants	t	*4,447.79*	*3,291.63*	*3,866.80*	*17.5*
reduction due to stabilisation (62) = (57+58-60-61) (*)	t	105,006.16	104,835.63	108,030.70	3.0

(*) The quantities of compost produced in 2022 were adjusted, as they had estimated for the previous report, and consequently also the figures relating to the reduction due to stabilisation.

LIQUID WASTE AND WASTE WATER DISPOSAL - CHIUSI PLANT	u. m.	2021	2022	2023	Δ% 2023/2022
liquid waste (63)	t	92,792	98,023	96,334	-1.7
waste water treated (64)	m^3	148,862	81,996	86,888	6.0

ANALYTICAL DETERMINATIONS ON WASTE AND ON QUALITY COMPOST	u. m.	2021	2022	2023	Δ% 2023/2022
total analytical determinations (65)	no.	125	211	259	22.7
analytical determinations on compost - Orvieto Ambiente plant	no.	*10*	*12*	*14*	*16.7*
analytical determinations on compost - Aprilia and Monterotondo Marittimo plants	no.	*48*	*64*	*75*	*17.2*
analytical determinations on waste - Orvieto Ambiente plant	no.	*67*	*65*	*79*	*21.5*
analytical determinations on waste - Deco and Ecologica Sangro sites	no.	*-*	*70*	*91*	*30.0*

LIQUID WASTE DISPOSAL AND INDUSTRIAL WATER TREATMENT (*)	u. m.	2021	2022	2023	Δ% 2023/2022
total incoming waste (66) = (67+68+69+70)	t	92,381.1	49,922.1	25,204.8	-49.5
incoming sludge (67)	t	24,520.8	8,741.9	2,362.4	-73.0
Pagnana plant	t	*10,574.5*	*5,681.3*	*2,362.4*	*-58.4*
Pontedera plant	t	*8,896.1*	*3,060.6*	*0.0*	*-*
Poggibonsi plant	t	*5,050.3*	*0.0*	*0.0*	*-*
San Jacopo plant	t	*0.0*	*0.0*	*0.0*	*-*
liquid waste (68)	t	10,649.9	7,774.0	7,275.8	-6.4
Pagnana plant	t	*3,832.0*	*4,129.0*	*7,275.8*	*76.2*
Pontedera plant	t	*6,817.9*	*3,645.0*	*0.0*	*-*
Sewage waste and others (69)	t	7,627.2	7,796.7	2,085.0	-73.3
Pagnana plant	t	*1,331.0*	*5,421.0*	*2,085.0*	*-61.5*
Pontedera plant	t	*6,156.4*	*2,375.7*	*0.0*	*-*
Poggibonsi plant	t	*139.8*	*0.0*	*0.0*	*-*
San Jacopo plant	t	*0.0*	*0.0*	*0.0*	*-*

leachate (70)	**t**	**49,583.2**	**25,609.5**	**13,481.6**	**-47.4**
Pagnana plant	*t*	*30,338.1*	*20,177.6*	*13,481.6*	*-33.2*
Pontedera plant	*t*	*19,245.1*	*5,431.9*	*0.0*	-
Poggibonsi plant	*t*	*353.7*	*0.0*	*0.0*	-
Ammonium sulphate produced (71)	**kg**	**219,670.0**	**139,040.0**	**22,000.0**	**-84.2**
Pagnana plant	*kg*	*141,930.0*	*84,260.0*	*22,000.0*	*-73.9*
Pontedera plant	*kg*	*77,740*	*54,780.0*	*0.0*	-

TREATED AND DISCHARGED WATER - INDUSTRIAL WATER	*u. m.*	*2021*	*2022*	*2023*	*D% 2023/2022*
Treated and discharged water (72)	**m^3**	**93,916**	**50,998**	**29,697**	**-41.8**
Pagnana plant	*m^3*	*55,655*	*41,730*	*29,697*	*-28.8*
Pontedera plant	*m^3*	*30,483*	*9,268*	*0*	-
Poggibonsi plant	*m^3*	*7,778*	*0*	*0*	-
San Jacopo plant	*m^3*	*0*	*0*	*0*	-

LIQUID WASTE AND SOLIDS DISPOSAL - BERG	*u. m.*	*2021*	*2022*	*2023*	*Δ% 2023/2022*
total incoming waste (73) = (74+75)	**t**	**133,090.69**	**93,689.15**	**131,879.89**	**40.8**
solid waste (74)	**t**	**226.32**	**123.80**	**61.16**	**-50.6**
liquid waste (75)	**t**	**132,864.37**	**93,565.35**	**131,818.73**	**40.9**

PRODUCTS – WATER BUSINESS

Water data **summarized at the national level** include water companies Acea OTA 2 and Acea OTA 5 (Lazio), Gesesa and Gori (Campania), Umbra Acque (Umbria), and 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 OTA 2, Acea OTA 5, Gesesa, Gori and AdF**. Regarding the water balances of other Group companies not in the NFS scope, see the chapter *Water companies data sheets and overseas activities*.
The loss assessment was conducted according to ARERA Resolution 917/17 R/IDR. In particular, ARERA procedures establish that water losses are calculated on the entire scope of the aqueduct system (and not only on the distribution network) and include apparent losses.

SUMMARY WATER DATA - NFS SCOPE (ACEA OTA 2, ACEA OTA 5, GESESA, GORI, ADF) AND MAIN SUBSIDIARIES (ACQUE, UMBRA ACQUE, PUBLIACQUA) (*)	*u. m.*	*2021*	*2022*	*2023*	*Δ% 2023/2022*
total drinking water collected from the environment or from other systems and fed into the aqueduct systems (76)	**Mm^3**	**1,317.3**	**1,282.9**	**1,273.8**	**-0.7**
total drinking water supplied and billed (77)	**Mm^3**	**633.2**	**624.2**	**630.0**	**0.9**
total drinking water leaving the system (78)	**Mm^3**	**740.2**	**737.3**	**736.1**	**-0.2**

(*) Some figures for 2022 have been updated following consolidation. Some 2023 items were estimated and will be consolidated in the months following publication.

SUMMARY WATER DATA OF THE COMPANIES OPERATING IN THE NFS SCOPE: ACEA OTA 2, ACEA OTA 5, GESESA, GORI, AND ADF (*)	*u. m.*	*2021*	*2022*	*2023*	*Δ% 2023/2022*
total drinking water collected from the environment or from other systems and fed into the aqueduct systems (79)	**Mm^3**	**1,039.7**	**1,009.6**	**1,004.5**	**-0.5**
total drinking water supplied and billed (80)	**Mm^3**	**482.0**	**472.2**	**480.4**	**1.7**
total drinking water leaving the system (81)	**Mm^3**	**574.0**	**571.8**	**571.4**	**-0.1**

(*) The figures for 2022 have been updated following consolidation. The 2023 figures are estimated and will be consolidated with the subsequent reporting.

SUMMARY WATER BALANCES NFS SCOPE (ACEA OTA 2, ACEA OTA 5, GESESA, GORI, ADF)(*)	u. m.	2021	2022	2023	Δ% 2023/2022
Acea Ato 2 for Ato 2 – central Lazio (Rome + municipalities acquired as at 31.12.2023)(**)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (82)	**Mm³**	**667.8**	**656.2**	**670.7**	**2.2**
surface (lakes and rivers)	*Mm³*	*0.0*	*0.0*	*3.5*	*-*
from wells	*Mm³*	*87.0*	*95.3*	*95.7*	*0.4*
from springs	*Mm³*	*575.1*	*555.5*	*564.1*	*1.5*
from other aqueduct systems	*Mm³*	*5.7*	*5.5*	*7.4*	*34.5*
total drinking water leaving the aqueduct system (83) = (84+85+86+87)	**Mm³**	**401.3**	**400.8**	**401.3**	**0.1**
total drinking water released and invoiced into the OTA 2 network (84)	**Mm³**	**331.6**	**323.8**	**332.1**	**2.6**
measured volume of water delivered to users	*Mm³*	*306.6*	*305.7*	*309.8*	*1.3*
volume consumed by users and not measured	*Mm³*	*25.0*	*18.1*	*22.3*	*23.2*
total drinking water authorised and not billed in the network (85)	**Mm³**	**21.9**	**29.2**	**31.6**	**8.2**
measured unbilled authorised consumption	*Mm³*	*0.5*	*0.3*	*0.1*	*-66.7*
unmeasured unbilled authorised consumption	*Mm³*	*21.4*	*28.9*	*31.5*	*9.0*
drinking water exported to other systems (86)	**Mm³**	**46.4**	**46.2**	**35.7**	**-22.7**
measured drinking water losses (87)	**Mm³**	**1.4**	**1.7**	**1.9**	**11.8**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (88)	**Mm³**	**266.5**	**255.4**	**269.4**	**5.5**
water loss percentages (89)	**%**	**39.9**	**38.9**	**40.2**	**3.3**
Acea Ato 5 for Ato 5 – Southern Lazio - Frosinone (86 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (90)	**Mm³**	**115.8**	**109.8**	**105.6**	**-3.8**
from wells	*Mm³*	*55.6*	*54.4*	*51.4*	*-5.5*
from springs	*Mm³*	*46.0*	*42.1*	*42.1*	*-0.1*
from other aqueduct systems	*Mm³*	*14.2*	*13.2*	*12.1*	*-8.3*
total drinking water leaving the aqueduct system (91) = (92+93+94)	**Mm³**	**38.8**	**39.1**	**38.2**	**-2.3**
total drinking water dispensed and billed in the network (92)	**Mm³**	**26.5**	**26.8**	**27.0**	**0.7**
measured volume of water delivered to users	*Mm³*	*19.4*	*24.7*	*25.9*	*4.9*
volume consumed by users and not measured	*Mm³*	*7.1*	*2.1*	*1.1*	*-47.6*
total drinking water authorised and not billed in the network (93)	**Mm³**	**6.9**	**7.1**	**7.1**	**-**
measured unbilled authorised consumption	*Mm³*	*0.0*	*0.0*	*0.0*	*-*
unmeasured unbilled authorised consumption	*Mm³*	*6.9*	*7.1*	*7.1*	*-*
drinking water exported to other systems (94)	**Mm³**	**5.4**	**5.1**	**4.12**	**-19.6**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (95)-	**Mm³**	**77.1**	**70.7**	**67.4**	**-4.7**
water loss percentages (96)-	**%**	**66.5**	**64.4**	**63.8**	**-0.9**
Gesesa – Sannita District Area[264], Benevento (21 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (97)	**Mm³**	**19.4**	**17.8**	**17.52**	**-1.7**
from wells	*Mm³*	*6.0*	*5.1*	*5.2*	*2.0*
from springs	*Mm³*	*3.2*	*2.4*	*2.4*	*0.0*
drinking water collected from other aqueduct systems	*Mm³*	*10.2*	*10.4*	*9.9*	*-4.8*
total drinking water leaving the aqueduct system (98) = (99+100+101)	**Mm³**	**8.2**	**7.9**	**7.7**	**-2.5**
total drinking water dispensed and billed in the network (99)	**Mm³**	**8.0**	**7.7**	**7.5**	**-2.6**
measured volume of water delivered to users	*Mm³*	*7.4*	*7.2*	*6.9*	*-4.2*
volume consumed by users and not measured	*Mm³*	*0.6*	*0.5*	*0.6*	*20.0*
total drinking water authorised and not billed in the network (100)	**Mm³**	**0.0**	**0.0**	**0.0**	**-**

264 Previously known as OTA Calore Irpino. DGR 434 of 3 August 2022, amending Regional Law 14/2015.

drinking water exported to other systems (101)	**Mm³**	**0.1**	**0.1**	**0.2**	**-**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (102)	**Mm³**	**11.2**	**10.0**	**9.8**	**-2.0**
water loss percentages (103)	**%**	**57.8**	**55.9**	**55.9**	**-**
Gori – Sarnese-Vesuviano District (75 municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (104)	**Mm³**	**176.0**	**166.9**	**153.4**	**-8.1**
from wells	*Mm³*	*50.4*	*50.0*	*33.0*	*-34.0*
from springs	*Mm³*	*2.0*	*1.7*	*1.7*	*0.0*
drinking water collected from other aqueduct systems	*Mm³*	*123.6*	*115.2*	*118.7*	*3.0*
total drinking water leaving the aqueduct system (105) = (106+107+108)	**Mm³**	**88.7**	**87.0**	**87.6**	**0.7**
total drinking water dispensed and billed in the network (106)	**Mm³**	**87.2**	**85.3**	**85.5**	**0.2**
measured volume of water delivered to users	*Mm³*	*81.4*	*80.4*	*82.6*	*2.7*
volume consumed by users and not measured	*Mm³*	*5.7*	*4.9*	*2.9*	*-40.8*
total drinking water authorised and not billed in the network (107)	**Mm³**	**1.2**	**1.3**	**1.6**	**23.1**
measured unbilled authorised consumption	*Mm³*	*0.0*	*0.0*	*0.0*	*-*
unmeasured unbilled authorised consumption	*Mm³*	*1.2*	*1.3*	*1.6*	*23.1*
drinking water exported to other systems (108)	**Mm³**	**0.4**	**0.5**	**0.5**	**-**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (109)	**Mm³**	**87.3**	**79.9**	**65.8**	**-17.6**
water loss percentages (110)	**%**	**49.6**	**47.8**	**42.9**	**-10.3**
AdF - Optimal Territorial Conference 6 Ombrone (55 Municipalities)					
drinking water collected from the environment or from other systems and fed into the aqueduct systems (111)	**Mm³**	**60.7**	**58.9**	**57.3**	**-2.7**
surface water (***)	*Mm³*	*1.1*	*1.0*	*1.0*	*-*
from wells	*Mm³*	*17.4*	*18.2*	*17.2*	*-5.5*
from springs	*Mm³*	*41.6*	*38.9*	*38.5*	*-1.0*
from other aqueduct systems	*Mm³*	*0.6*	*0.7*	*0.6*	*-14.3*
total drinking water leaving the aqueduct system (112) = (113+114+115+116)	**Mm³**	**37.0**	**37.0**	**36.6**	**-1.1**
total drinking water dispensed and billed in the network (113)		**28.7**	**28.6**	**28.3**	**-1.1**
measured volume of water delivered to users	*Mm³*	*28.7*	*28.6*	*28.3*	*-1.0*
volume consumed by users and not measured	*Mm³*	*0.0*	*0.0*	*0.0*	*-*
total drinking water authorised and not billed in the network (114)	**Mm³**	**4.2**	**4.3**	**4.4**	**2.3**
measured unbilled authorised consumption	*Mm³*	*0.00*	*1.9*	*3.1*	*63.2*
unmeasured unbilled authorised consumption	*Mm³*	*4.2*	*2.4*	*1.3*	*-45.8*
drinking water exported to other systems (115)	**Mm³**	**1.7**	**1.6**	**1.3**	**-18.8**
measured drinking water losses (116)	**Mm³**	**2.4**	**2.5**	**2.6**	**4.0**
loss assessment according to ARERA Resolution 917/17 R/IDR					
water losses (117)	**Mm³**	**23.7**	**21.9**	**20.8**	**-5.0**
water loss percentages (118)	**%**	**39.0**	**37.2**	**36.2**	**-2.7**

(*) Some figures for 2022 have been updated following consolidation. The 2023 figures are estimated and will be consolidated with the subsequent reporting.
(**) 2023 data is consistent with the calculation method provided by the Tariff Data Collection Authority and also includes the recently acquired municipalities, in derogation for the achievement of the technical quality goals. 2021 and 2022, data does not include the recently acquired municipalities and the municipalities of Civitavecchia and Percile.`2022 and 2023 data may undergo slight changes following with audit and validation process by the control bodies.
(***) This is fresh water, apart from the 1% of the amount drawn from marine sources.

TOTAL WASTEWATER TREATED - NFS SCOPE (ACEA OTA 2, ACEA OTA 5, GESESA, GORI, ADF) AND MAIN SUBSIDIARIES (ACQUE, UMBRA ACQUE, PUBLIACQUA)	u. m.	2021	2022	2023	Δ% 2023/2022
waste water treated in the main treatment plants of the main Group companies in Italy (119) (*) (GRI 303-4)	Mm^3	980.9	939.6	978.5	4.1

(*) The 2021 figure for Publiacqua was restated following consolidation.

SUMMARY TOTAL WASTEWATER TREATED DATA - NFS SCOPE (ACEA OTA 2, ACEA OTA 5, GESESA, GORI, ADF)	u. m.	2021	2022	2023	Δ% 2023/2022
waste water treated in the principal treatment plants of Acea OTA 2, Acea OTA 5, Gesesa, Gori and AdF (120) (*)	Mm^3	778.7	759.2	798.3	5.1

(*) 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.	2021	2022	2023	Δ% 2023/2022
waste water treated in the main treatment plants (121)	Mm^3	516.4	510.2	515.3	1.0
Rome South	*Mm^3*	*290.1*	*287.2*	*282.7*	*-1.6*
Rome North	*Mm^3*	*88.5*	*90.0*	*95.0*	*5.5*
Rome East	*Mm^3*	*97.2*	*98.9*	*102.0*	*3.2*
Rome Ostia	*Mm^3*	*29.5*	*24.6*	*25.5*	*3.9*
CoBIS	*Mm^3*	*6.8*	*5.7*	*6.7*	*17.8*
Fregene	*Mm^3*	*4.2*	*3.9*	*3.4*	*-12.4*
other – Municipality of Rome	Mm^3	9.2	8.2	8.0	-2.8
other – outside the Municipality of Rome	Mm^3	75.9	71.1	80.6	13.5
total waste water treated by Acea Ato 2 (122)	Mm^3	601.5	589.5	603.9	2.5

WASTE WATER TREATED BY ACEA ATO 5	u. m.	2021	2022	2023	Δ% 2023/2022
waste water treated in the main treatment plants (123)	Mm^3	25.0	24.8	24.9	0.2

WASTE WATER TREATED BY GESESA	u. m.	2021	2022	2023	Δ% 2023/2022
waste water treated in the main treatment plants (124)	Mm^3	2.3	1.8	2.1	15.8

WASTE WATER TREATED BY GORI	u. m.	2021	2022	2023	Δ% 2023/2022
Total waste water treated (125)	Mm^3	124.0	117.5	142.0	20.9

WASTE WATER TREATED BY ADF	u. m.	2021	2022	2023	Δ% 2023/2022
waste water treated in the main treatment plants (126)	Mm^3	16.6	16.5	17.2	4.2
waste water treated in other plants	Mm^3	9.3	9.1	8.1	-10.9
total waste water treated by AdF (127)	Mm^3	25.9	25.6	25.3	-1.2

ANALYTICAL DETERMINATIONS ON DRINKING WATER AND WASTEWATER - NFS SCOPE (ACEA OTA 2, ACEA OTA 5, GESESA, GORI, ADF) AND MAIN SUBSIDIARIES (ACQUE, UMBRA ACQUE, PUBLIACQUA) (*)	u. m.	2021	2022	2023	Δ% 2023/2022
analytical determinations on total drinking water (128)	no.	1,449,341	1,537,655	1,531,812	-0.4
analytical determinations on total waste water - main Group Companies (129)	no.	478,361	514,724	550,276	6.9

(*) The 2022 figure for AdF was restated following consolidation.

ANALYTICAL DETERMINATIONS ON DRINKING WATER AND WASTEWATER OF OPERATING COMPANIES IN THE NFS SCOPE (ACEA OTA 2, ACEA OTA 5, GESESA, GORI, ADF) - SUMMARY DATA	u. m.	2021	2022	2023	Δ% 2023/2022
analytical determinations on drinking water of Acea OTA 2, Acea OTA 5, Gesesa, Gori and AdF (130)	no.	738,488	738,905	768,757	4.0
analytical determinations on waste water of Acea OTA 2, Acea OTA 5, Gori, Gesesa and AdF (131)	no.	274,478	299,995	337,970	12.7

(*) The 2022 figure for AdF was restated following consolidation.

ANALYTICAL DETERMINATIONS ACEA ATO 2	u. m.	2021	2022	2023	Δ% 2023/2022
analytical determinations on Acea Ato 2 drinking water (132)	no.	346,164	365,546	419,940	14.9
analytical determinations on Acea Ato 2 waste water (133)	no.	127,417	135,906	145,889	7.3

ANALYTICAL DETERMINATIONS ACEA ATO 5	u. m.	2021	2022	2023	Δ% 2023/2022
analytical determinations on Acea Ato 5 drinking water (134)	no.	105,430	107,420	119,229	11.0
analytical determinations on Acea Ato 5 waste water (135)	no.	40,636	67,810	88,803	31.0

GESESA ANALYTICAL DETERMINATIONS	u. m.	2021	2022	2023	Δ% 2023/2022
analytical determinations on Gesesa drinking water (136)	no.	11,955	12,307	11,639	-5.4
analytical determinations on Gesesa waste water (137)	no.	11,448	12,234	11,345	-7.3

GORI ANALYTICAL DETERMINATIONS	u. m.	2021	2022	2023	Δ% 2023/2022
analytical determinations on Gori drinking water (138)	no.	136,156	132,538	144,731	9.2
analytical determinations on Gori waste water (139)	no.	43,270	43,564	48,871	12.2

ADF ANALYTICAL DETERMINATIONS (*)	u. m.	2021	2022	2023	Δ% 2023/2022
analytical determinations on AdF drinking water (140)	no.	138,783	121,094	73,218	-39.5
analytical determinations on AdF waste water (141)	no.	51,707	40,481	43,062	6.4

(*) The 2022 figure for AdF was restated following consolidation.

RESOURCES USED - ENERGY BUSINESS

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

GENERATION, TRANSPORT AND SALE OF ELECTRICITY AND HEAT, PUBLIC LIGHTING	u. m.	2021	2022	2023	Δ% 2023/2022
natural gas					
electricity generation and heat (142) = (143+144)	Nm³ x 1,000	31,329	30,308	30,017	-1.0
thermoelectric and heat production (143)	Nm³ x 1,000	27,208	26,687	25,808	-3.3
Tor di Valle – high-efficiency cogeneration (CAR)	*Nm³ x 1,000*	*23,912*	*24,131*	*22,667*	*-6.1*
Ecogena Plants	*Nm³ x 1,000*	*3,296*	*2,557*	*3,141*	*22.8*
waste-to-energy (144)	Nm³ x 1,000	4,122	3,621	4,209	16.2
San Vittore del Lazio waste-to-energy plant	*Nm³ x 1,000*	*3,764*	*3,244*	*3,337*	*2.8*
Terni waste-to-energy plant	*Nm³ x 1,000*	*358*	*377*	*872*	*131.6*

diesel for thermoelectric generation					
Thermoelectric production (145)	**l x 1,000**	**707**	**937**	**310**	**-66.9**
Montemartini power plant	*l x 1,000*	*647*	*883*	*261*	*-70.5*
San Vittore del Lazio and Terni plants	*l x 1,000*	*60*	*54*	*49*	*-8.6*
RDF (Refuse-Derived Fuel) processed					
San Vittore del Lazio waste-to-energy plant (146)	**t x 1,000**	**307.391**	**289.550**	**294.174**	**1.6**
waste-to-energy paper mill pulper					
Terni waste-to-energy plant (147)	**t x 1,000**	**99.730**	**97.796**	**82.217**	**-15.9**
biogas for the production of electricity (*)					
composting and waste management plants (148)	**Nm^3 x 1,000**	**17,633**	**25,921**	**29,003**	**11.9**
Orvieto Ambiente plant	*Nm^3 x 1,000*	*9,131*	*8,462*	*10,144*	*19.9*
Aprilia plant	*Nm^3 x 1,000*	*6,090*	*7,013*	*7,104*	*1.3*
Monterotondo Marittimo plant	*Nm^3 x 1,000*	*2,411*	*2,646*	*2,824*	*6.7*
Deco sites	*Nm^3 x 1,000*	*-*	*2,086*	*1,045*	*-49.9*
Ecologica Sangro site	*Nm^3 x 1,000*	*-*	*5,714*	*7,885*	*38.0*
water (*)					
derivation from hydroelectric production (149)	**Mm^3**	**3,894**	**2,672**	**3,489**	**30.6**
process water (150)	**Mm^3**	**0.24**	**0.27**	**0.22**	**-18.5**
water for civilian/sanitary uses (151)	**Mm^3**	**0.33**	**0.31**	**0.31**	**-**
miscellaneous materials					
dielectric mineral oil in operation (152)	**t**	**10,122**	**10,215**	**10,083**	**-1.3**
dielectric mineral oil - reintegrations	t	1.19	1.34	0.54	-59.7
SF_6 in operation (153)	**t**	**22.87**	**22.81**	**22.97**	**0.7**
SF_6 -reintegrations	t	0.30	0.21	0.23	8.3
cooling fluids (HCFC type) in operation (154)	**t**	**1.78**	**1.78**	**1.65**	**-7.3**
cooling fluids (HCFC type) - reintegrations	t	0.00000	0.00050	0.00000	-
Miscellaneous chemicals (155)	**kg**	**10,898,850**	**11,315,365**	**10,074,060**	**-11.0**
sodium chloride	*kg*	*9,000*	*12,750*	*6,000*	*-52.9*
sodium hydroxide (caustic soda)	*kg*	*173,260*	*186,130*	*136,970*	*-26.4*
sodium bicarbonate	*kg*	*8,333,700*	*8,707,070*	*7,860,600*	*-9.7*
hydrochloric acid	*kg*	*219,480*	*236,970*	*201,660*	*-14.9*
ammonia solution	*kg*	*526,850*	*582,250*	*673,400*	*15.7*
activated carbon	*kg*	*673,040*	*668,120*	*539,020*	*-19.3*
carbamine	*kg*	*190,220*	*257,735*	*82,630*	*-67.9*
other (for TLR e waste-to-energy)	*kg*	*773,300*	*664,340*	*573,780*	*-13.6*
miscellaneous oils and greases/lubricants (156)	**kg**	**36,111**	**55,428**	**38,596**	**-30.4**
electricity (*)					
consumption for electrical distribution (157) = (32)	*GWh*	*593.35*	*653.62*	*604.87*	*-7.5*
consumption for electricity production (158) = (1)-(2)	*GWh*	*79.48*	*77.43*	*77.57*	*0.2*
consumption for offices (50% of the electricity consumed by the Parent Company) (159)	*GWh*	*5.38*	*5.47*	*5.00*	*-8.6*
other consumption (160)	*GWh*	*4.58*	*2.89*	*3.53*	*22.1*
other personal uses (161)	*GWh*	*30.71*	*28.94*	*27.88*	*-3.6*
total (162) = (157+158+159+160+161)	**GWh**	**710.90**	**768.35**	**718.86**	**-6.4**
public lighting					
consumption for Public Lighting (163)	**GWh**	**67.33**	**67.42**	**65.78**	**-2.4**

(*) Some figures for the 2021-2022 two year period have been restated following consolidation, and due to the entry of Ecologica Sangro in the scope of consolidation from 2022.

RESOURCES USED - ENVIRONMENT BUSINESS

The data refers to Acea Ambiente's three composting plants in Aprilia, Sabaudia and Monterotondo Marittimo, the waste management hub at Orvieto Ambiente, the Grasciano hub operated by Deco, sites owned by Deco, the Ecologia Sangro site (data from 2022), the Chiusi site, the Berg plant and the four Acque Industriali plants in Pagnana, Pontedera, Poggibonsi, and San Jacopo, which have partially ceased operations.

ORVIETO AMBIENTE HUB WASTE MANAGEMENT AND DECO AMD ECOLOGICA SANDRO SITES (*)	*u. m.*	*2021*	*2022*	*2023*	*Δ% 2023/2022*
miscellaneous chemicals (164)	t	77.2	64.6	64.5	-0.1
oils and lubricants (164a)	t	22.0	37.3	36.9	-1.1
electricity (165)	GWh	4.476	15.328	16.754	9.3
diesel (166)	l	262,762	278,843	252,850	-9.3
process water (167)	m^3	6,041	23,225	18,543	-20.2
water for civilian/sanitary uses (168)	m^3	1,055	3,250	2,921	-10.1

COMPOST PRODUCTION	*u. m.*	*2021*	*2022*	*2023*	*Δ% 2023/2022*
miscellaneous chemicals (composting plants of Aprilia and Monterotondo Marittimo) (169)	t	1,694.72	1,976.59	2,168.86	9.7
Oils and lubricants (169a)	t	3.9	14.4	18.2	26.7
electricity (composting plants of Aprilia, Monterotondo Marittimo and Sabaudia) (170)	GWh	2.266	0.874	0.755	-13.6
Diesel (composting plants of Aprilia and Monterotondo Marittimo) (171)	l x 1,000	286.31	320.57	352.85	10.1
process water (composting plants of Aprilia and Monterotondo Marittimo) (172)	m^3	35,337.0	37,591.6	43,408.3	15.5
water for civil use (composting plants of Aprilia and Monterotondo Marittimo) (173)	m^3	2,650	3,100	3,340	7.7

(*) The 2022 figures have been restated taking into consideration the data for Ecologica Sangro, which entered the scope from 2023, starting with 2022 data.

DISPOSAL OF INDUSTRIAL WASTE WATER (AI), BERG AND CHIUSI PLANTS (*)	*u. m.*	*2021*	*2022*	*2023*	*Δ% 2023/2022*
miscellaneous chemicals (AI plants, Berg and Chiusi plant) (174)	t	2,301.5	1,657.2	1,940.3	17.1
electricity (AI plants - Berg and Chiusi plant) (175)	GWh	3.023	2.702	2.415	-10.6
methane (AI and Berg plants) (176)	Sm^3	38,315	41,280	34,308	-16.9
diesel fuel (Berg and Chiusi plant) (177)	l	6,775	6,098	6,623	8.6
BTZ (Basso Tenore di Zolfo - Low Sulphur Content) combustible Oil (Pontedera plant) (178)	t	0.031	0.000	0.000	-
process water (AI plants - Berg and Chiusi plant) (179)	m^3	70,140	75,446	68,292	-9.5
water for civil use (AI plants - Berg and Chiusi plant) (180)	m^3	619	464	511	10.1

(*) Some 2022 figures have been adjusted after the final calculations.

RESOURCES USED - **WATER BUSINESS**

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 OTA 2, Acea OTA 5, Gesesa, Gori and AdF**.

COLLECTION, SUPPLY AND DISTRIBUTION OF DRINKING AND NON-DRINKING WATER (*)	u. m.	2021	2022	2023	Δ% 2023/2022
reagents for purification and disinfection (181)	**t**	**4,666.0**	**4,110.9**	**4,013.1**	**-2.4**
reagents for chemical analyses (182)	**t**	**1.55**	**1.69**	**1.56**	**-7.7**
gas for chemical analyses (183)	**MNm³**	**6.30**	**4.77**	**6.36**	**33.5**
cooling fluids (HCFC type) in operation (184) = (154)	**t**	**1.78**	**1.78**	**1.65**	**-7.3**
cooling fluids (HCFC type) - reintegrations	t	0.00000	0.00050	0.00000	-
total electricity consumed (185)	**GWh**	**447.21**	**453.71**	**415.79**	**-8.4**
water pumping plants (186)	*GWh*	*440.34*	*446.68*	*409.38*	*-8.4*
offices/personal use (50% of energy consumed by the Parent Company) (187) = (159)	*GWh*	*5.38*	*5.47*	*5.00*	*-8.6*
Acea Infrastructure offices (188)	*GWh*	*1.49*	*1.56*	*1.41*	*-9.5*
drinking water					
total drinking water consumed (189)	**Mm³**	**2.12**	**2.20**	**2.29**	**4.1**
civilian/sanitary uses	*Mm³*	*1.92*	*2.00*	*2.08*	*3.9*
offices (50% of the drinking water consumed by the Parent Company)	*Mm³*	*0.20*	*0.20*	*0.21*	*5.7*
non-drinking water					
total non-drinking water consumed (190) (**)	**Mm³**	**2.16**	**2.33**	**2.63**	**13.0**
process uses	*Mm³*	*2.16*	*2.33*	**2.63**	**13.0**

(*) Some figures for the 2021-2022 two-year period have been adjusted following consolidation.

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

WASTEWATER TREATMENT (*)	u. m.	2021	2022	2023	Δ% 2023/2022
miscellaneous materials and natural resources					
reagents for purification waste water (191)	**t**	**18,329**	**17,865**	**15,652**	**-12.4**
polyelectrolyte for sludge dehydration	*t*	*2,472*	*3,386*	*3,170*	*-6.4*
sodium hypochlorite for final disinfection	*t*	*4,244*	*3,328*	*2,922*	*-12.2*
ferric chloride for sludge dehydration	*t*	*1,008*	*1,046*	*702*	*-32.9*
aluminium polychloride	*t*	*132*	*161*	*47*	*-70.7*
peracetic acid	*t*	*5,382*	*4,752*	*4,240*	*-10.8*
other (anti-foaming etc.)	*t*	*5,091*	*5,193*	*4,572*	*-12.0*
reagent kit for on-site controls (192)	**no.**	**100,461**	**98,375**	**103,125**	**4.8**
oil and fat (193)	**t**	**18.5**	**18.6**	**9.0**	**-51.8**
electricity					
sewerage and purification (194)	**GWh**	**273.2**	**270.4**	**281.2**	**4.0**
fuels					
Methane for processes (dryers and other processes) (195)	**Nm³ x 1,000**	**3,527.2**	**3,706.4**	**3,583.0**	**-3.3**
diesel for processes and generators (196)	**lx1.000**	**69.0**	**146.2**	**128.7**	**-12.0**
petrol for processes and generators (197)	**lx1.000**	**3.4**	**3.8**	**3.2**	**-16.2**
biogas produced and consumed on site (198)	**Nm³ x 1,000**	**3,282.3**	**3,342.5**	**3,708.3**	**10.9**

(*) Some figures for the 2021-2022 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.	2021	2022	2023	Δ% 2023/2022
TRANSPORT (CAR FLEET)					
petrol (199)	**l x 1,000**	**562.1**	**886.7**	**1,046.9**	**18.1**
diesel (200)	**l x 1,000**	**3,452.1**	**3,356.3**	**3,367.9**	**0.3**
methane (201)	**Nm³x1,000**	**0.7**	**0.4**	**1.4**	**-**
LPG (202)	**l x 1,000**	**24.5**	**22.0**	**6.3**	**-71.1**
HEATING					
diesel (203)	**l x 1,000**	**0.0**	**0.0**	**0.0**	**-**
methane (204)	**Nm³ x 1000**	**408.4**	**335.9**	**352.3**	**4.9**
LPG (205)	**l x 1,000**	**25.9**	**26.0**	**21.3**	**-17.9**

(*) Some 2022 data has been adjusted with the inclusion of Ecologica Sangro data and following the final calculations.

EMISSIONS AND WASTE - ENERGY BUSINESS

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

ATMOSPHERIC EMISSIONS	u. m.	2021	2022	2023	Δ% 2023/2022
CO_2 (206) = (207+208+209+210+211) (*)	**t**	**394,109**	**394,601**	**347,041**	**-12.1**
Acea Produzione (207)	*t*	*53,551*	*56,781*	*50,815*	*-10.5*
Ecogena (208)		*7,829*	*5,191*	*6,110*	*17.7*
Areti and Acea Produzione – reintegrations of SF_6 (209)	*t*	*7,045*	*4,959*	*5,370*	*8.3*
HCFC replenishment (210)	*t*	*0.0*	*1.0*	*0.0*	*-*
waste-to-energy (211)	*t*	*325,684*	*327,670*	*284,746*	*-13.1*
NO_x (212) = (213+214)	**t**	**198.11**	**191.30**	**171.85**	**-10.2**
Acea Produzione (213)	*t*	*26.05*	*27.56*	*18.77*	*-31.9*
waste-to-energy (214)	*t*	*172.06*	*163.74*	*153.09*	*-6.5*
CO (215) = (216+217)	**t**	**7.68**	**5.95**	**5.16**	**-13.3**
Acea Produzione (216)	*t*	*4.13*	*2.90*	*2.89*	*-0.6*
waste-to-energy (217)	*t*	*3.55*	*3.05*	*2.28*	*-25.4*
SO_2 (218) = (219+220)	**t**	**1.60**	**1.51**	**1.03**	**-31.8**
Acea Produzione (219)	*t*	*0.02*	*0.03*	*0.01*	*-72.6*
waste-to-energy (220)	*t*	*1.57*	*1.48*	*1.02*	*-30.9*
powders (221) = (222+223)	**t**	**0.74**	**0.36**	**0.25**	**-30.4**
Acea Produzione (222)	*t*	*0.03*	*0.05*	*0.01*	*-72.4*
waste-to-energy (223)	*t*	*0.71*	*0.31*	*0.23*	*-24.0*
HCl (224)	**t**	**3.07**	**2.91**	**3.50**	**20.3**
HF (225)	**t**	**0.08**	**0.11**	**0.13**	**26.9**
organic carbon (226)	**t**	**0.58**	**0.52**	**0.55**	**5.9**

(*) Some figures for 2022 have been adjusted after the final calculations, in particular, the ETS data after certification.

OTHER EMISSIONS AND WASTE	u. m.	2021	2022	2023	Δ% 2023/2022
waste water treated (227)	Mm^3	0.0200	0.0252	0.0069	-72.5
electrical fields at 50 Hz	kV	monitored commitment to maintain the value below the legal limit			
magnetic fields at 50 Hz	μT	monitored commitment to maintain the value below the legal limit			
noise	dB	monitored commitment to maintain the value below the legal limit			
luminous flux dissipated	Mlumen	commitment to design the plants in order to limit to the utmost the emission value dissipated upwards			

WASTE	u. m.	2021	2022	2023	Δ% 2023/2022
hazardous waste - excluding waste-to-energy area (228)	t	1,705.0	2,025.5	1,080.8	-46.6
production energy own area	*t*	*1,704.4*	*2,025.2*	1,069.4	-47.2
proportion for the activities performed by the Parent Company (*)	*t*	*0.6*	*0.3*	*11.3*	-
hazardous waste from waste-to-energy (229)	t	64,672.5	69,624.4	67,726.7	-2.7
non-hazardous waste – excluding waste-to-energy area (230)	t	1,257.5	824.9	1,075.0	30.3
production own energy business	*t*	*1,223.4*	*793.9*	*1,044.8*	*31.6*
proportion for the activities performed by the Parent Company (**)	*t*	*34.1*	*31.0*	*30.2*	*-2.3*
non-hazardous waste from waste-to-energy (231)	t	28,092.9	24,196.4	17,492.3	-27.7

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

EMISSIONS AND WASTE - ENVIRONMENT BUSINESS

The data refer to Acea Ambiente's two composting plants located in Aprilia and in Monterotondo Marittimo, the waste management hub of Orvieto Ambiente and the sites owned and managed by Deco (including Grasciano2 owned by Acea Ambiente), the Cerratina plant managed by Ecologica Sangro, the Chiusi plant (Acea Ambiente), Berg, and Acque Industriali's four plants in Pagnana, Pontedera, Poggibonsi, and San Jacopo, which have been partly closed since 2022.

ORVIETO AMBIENTE WASTE HUB AND DECO SITES, ACEA AMBIENTE COMPOSTING PLANTS (*)	u. m.	2021	2022	2023	Δ% 2023/2022
hazardous waste Orvieto Ambiente hub (232)	t	12.3	12.5	10.9	-13.0
non-hazardous waste Orvieto Ambiente hub including leachate (233)	t	23,758.0	19,071.6	21,084.3	10.6
non-hazardous waste Deco and Ecologica Sangro sites (234)	t	-	18.0	21.3	18.7
non-hazardous waste Deco and Ecologica Sangro sites (235)	t	-	28,726.6	25,873.8	-9.9
hazardous waste - composting plants of Aprilia and Monterotondo Marittimo) (236)	t	221.2	38.0	27.0	-28.9
non-hazardous waste composting plants of Aprilia and Monterotondo Marittimo (237)	t	40,469.8	46,257.5	43,918.1	-5.1

(*) Some figures from the previous two-year period have been updated after the final calculations and following the inclusion of Ecologica Sangro data.

ATMOSPHERIC EMISSIONS – ORVIETO AMBIENTE HUB AND ACEA AMBIENTE COMPOSTING PLANTS	u. m.	2021	2022	2023	Δ% 2023/2022
CO_2 (238)	t	1,644	1,745	1,754	0.5
particles (239)	t	0.613	0.720	0.625	-13.2
total organic compounds (TOC) (240)	t	1.049	1.841	3.087	67.7
ammonia (241)	t	8.608	1.956	5.268	169.4
volatile inorganic compounds (SIV) (242)	t	0.420	0.544	2.420	344.9

ATMOSPHERIC EMISSIONS - DECO AND ECOLOGICA SANGRO SITES (*)	u. m.	2021	2022	2023	Δ% 2023/2022
CO_2 (243)	t	-	1.5	0.0	-
particles (244)	t	-	0.871	1.426	63.7
hydrochloric acid (245)	t	-	0.103	0.088	-15.2
hydrofluoric acid (246)	t	-	0.020	0.020	-
Hydrogen Sulphide (247)	t	-	0.015	0.019	25.8
SO_x (248)	t	-	0.359	0.430	19.8
NO_x (249)	t	-	15.904	19.503	22.6
CO (250)	t	-	4.574	4.939	8.0
Total Organic Carbon (TOC) (251)	t	-	1.998	1.034	-48.2
ammonia (252)	t	-	0.346	1.107	219.9
VOCs (253)	t	-	63.916	63.731	-0.3
Cd (254)	t	-	0.00007	0.00011	65.8
Hg (255)	t	-	0.00007	0.00007	3.6
heavy metals (256)	t	-	0.00245	0.00049	-80.0

(*) 2022 data has been updated to inclusion emission figures for Ecologica Sangro.

CHIUSI WASTE PLANT	u. m.	2021	2022	2023	Δ% 2023/2022
hazardous waste Chiusi plant (257)	t	5.7	5.6	4.3	-23.8
non-hazardous waste Chiusi plant (258)	t	6,330.6	6,192.5	5,780.0	-6.7

ATMOSPHERIC EMISSIONS - CHIUSI PLANT	u. m.	2021	2022	2023	Δ% 2023/2022
CO_2 (259)	t	2.3	1.8	9.5	-

BERG'S WASTE	u. m.	2021	2022	2023	Δ% 2023/2022
hazardous waste (260)	t	613.7	407.1	413.8	1.6
non-hazardous waste (261)	t	2,526.9	2,179.6	1,505.8	-30.9

ATMOSPHERIC EMISSIONS – BERG	u. m.	2021	2022	2023	Δ% 2023/2022
CO_2 (262)	t	15.7	14.5	6.4	-55.9
particles (263)	t	0.037	0.033	0.030	-8.3
organic carbon (264)	t	0.747	0.673	0.774	15.0
hydrogen sulphide and mercaptans (265)	t	0.001	0.011	0.025	131.9
ammonia (266)	t	0.076	0.062	0.029	-53.9

INDUSTRIAL WASTE WATER	u. m.	2021	2022	2023	Δ% 2023/2022
hazardous waste Pagnana plant (267)	t	0.35	0.00	0.50	-
non-hazardous waste of Pagnana, Pontedera, Poggibonsi and San Jacopo (268)	t	1,470.5	618.5	344.8	-44.2

ATMOSPHERIC EMISSIONS – INDUSTRIAL WATER	u. m.	2021	2022	2023	Δ% 2023/2022
CO_2 (269)	t	229.6	143.4	34.8	-75.7
Hydrogen Sulphide (270)	t	0.015	0.015	0.001	-93.3
ammonia (271)	t	0.011	0.002	0.007	204.3

EMISSIONS AND WASTE - WATER BUSINESS

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

WASTE PRODUCED (*)	u. m.	2021	2022	2023	Δ% 2023/2022
specific process waste from treatment of waste water (**)					
total purification sludge (272) = (273+274+275+276+277)	**t**	**152,979**	**160,244**	**154,903**	**-3.3**
Acea Ato 2 purification sludge (273)	*t*	*66,605*	*63,229*	*58,456*	*-7.5*
Acea Ato 5 purification sludge (274)	*t*	*13,803*	*12,474*	*8,260*	*-33.8*
Gesesa purification sludge (275)	*t*	*699*	*940*	*1,132*	*20.4*
Gori purification sludge (276)	*t*	*65,635*	*78,703*	*78,205*	*-0.6*
AdF purification sludge (277)	*t*	*6,238*	*4,898*	*8,850*	*80.7*
total sand and slabs from purification (278) = (279+280+281+282+283)	**t**	**14,203**	**15,468**	**18,153**	**17.4**
Acea Ato 2 sand and slabs (279)	*t*	*8,359*	*9,095*	*11,413*	*25.5*
Acea Ato 5 sand and slabs (280)	*t*	*225*	*176*	*108*	*-38.6*
Gesesa sand and slabs (281)	*t*	*10*	*66*	*110*	*65.3*
Gori sand and slabs (282)	*t*	*4,597*	*5,235*	*5,355*	*2.3*
AdF sand and slabs (283)	*t*	*1,012*	*896*	*1,167*	*30.3*
other waste from treatment (284)					
other Acea Ato 2	*t*	*1,957*	*1,614*	*1,867*	*15.7*
other Acea Ato 5	*t*	*5,441*	*4,305*	*4,528*	*5.2*
other Gesesa	*t*	*0*	*0*	*0*	*-*
other Gori	*t*	*148*	*166*	*97*	*-41.8*
other AdF	*t*	*0*	*0*	*0*	*-*
extra process waste					
total hazardous waste (285) = (286+287+288+289+290+291)	**t**	**309.5**	**174.0**	**187.8**	**7.9**
Acea Infrastructure (286)	*t*	*16.6*	*16.6*	*18.4*	*11.0*
Acea Ato 2 (287)	*t*	*188.9*	*127.5*	*126.6*	*-0.7*
Acea Ato 5 (288)	*t*	*0.4*	*1.2*	*0.2*	*-80.5*
Gori (289)	*t*	*51.0*	*19.3*	*16.8*	*-13.0*
AdF (290)	*t*	*52.0*	*9.1*	*14.4*	*58.7*
Proportion for the activities performed by the Parent Company (291) (***)	*t*	*0.59*	*0.27*	*11.35*	*-*
total non-hazardous waste (292) = (293+294+295+296+297+298)	**t**	**1,728**	**1,647**	**3,171**	**92.6**
Acea Ato 2 and Acea Infrastructure (293)	*t*	*1,039*	*1,258*	*2,796*	*122.2*
Acea Ato 5 (294)	*t*	*26*	*44*	*28*	*-37.0*
Gesesa (295)	*t*	*0*	*0*	*0*	*-*
Gori (296)	*t*	*129*	*87*	*126*	*43.9*
AdF (297)	*t*	*499*	*226*	*191*	*-15.4*
Proportion for the activities performed by the Parent Company (298) (***)	*t*	*34*	*31*	*30*	*-2.3*
other emissions and waste					
CO_2 from dryers and generators (299)	**t**	**7,478**	**8,152**	**7,876**	**-3.4**
CO_2 from HCFC replenishment (300)	**t**	**0.0**	**1.0**	**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 2022 figures have been updated after the final calculations.
(**) All 2023 process waste is non-hazardous apart from 35 t of contaminated waste from the waste oil produced by Gori.
(***) The portion is equal to 50% of the waste produced by the Parent Company.

THE EMISSIONS OF CARBON DIOXIDE FROM TRANSPORT AND PACKAGING

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

GROUP COMPANIES (*)	u. m.	2021	2022	2023	D% 2023/2022
transport					
CO_2 (301)	**t**	**10,533**	**11,077**	**11,460**	**3.5**
heating					
CO_2 (302)	**t**	**881**	**758**	**792**	**4.5**

(*) Some 2022 figures have been restated following consolidation and from the inclusion of Ecologica Sangro in the NFS scope.

ENVIRONMENTAL SUSTAINABILITY PERFORMANCE – ENERGY BUSINESS

Environmental Key Performance Indicators.

INDICATOR	u. m.	2021	2022	2023
energy used for the processes (*)				
A consumption in the distribution of electricity	**TJoule (GWh)**	1,112.0 (308.9)	1,015.5 (282.1)	963.3 (267.6)
B consumption in the production of electricity		276.8 (76.9)	278.8 (77.4)	279.2 (77.6)
C heat lost in the district heating network		86.2 (23.9)	85.8 (23.8)	87.9 (24.4)
D consumption for public lighting		242.4 (67.3)	242.7 (67.4)	236.8 (65.8)
E Environment Business consumption		35.2 (9.8)	68.1 (18.9)	71.7 (19.9)
F water distribution		1,590.9 (441.1)	1,613.7 (448.2)	1,478.9 (410.8)
G water purification		983.7 (273.3)	973.4 (270.4)	1,012.4 (281.2)
H electricity for offices		38.7 (10.8)	39.4 (10.9)	36.0 (10.0)
I consumption for heating offices		15.6 (4.3)	13.3 (3.7)	13.0 (3.6)
L water business dryer consumption		129.7 (36.0)	140.7 (39.1)	133.6 (37.1)
M layoffs		143.2 (39.8)	150.0 (41.7)	155.3 (43.1)
total consumption = indirect consumption + consumption through mobility + heating		**4,653.9 (1,292.7)**	**4,621.4 (1,283.7)**	**4,468.2 (1,241.2)**
EMISSIONS, EFFLUENTS AND WASTE				
Greenhouse gas emissions (CO_2)	**t**	**414,893**	**416,495**	**368,973**
SO_2, NO_x emissions and other significant gases by type from the Energy Business				
NO_x	**t**	**198.11**	**191.30**	**171.85**
CO	**t**	**7.68**	**5.95**	**5.16**
SO_2	**t**	**1.60**	**1.51**	**1.03**
NO_x/thermoelectric production	**g/kWh**	**0.42**	**0.42**	**0.39**

Co_2/thermoelectric$_2$/thermoelectric production	**g/kWh**	**822**	**852**	**781**
CO_2/Acea Produzione thermoelectric production	**g/kWh**	**497**	**494**	**470**
CO_2/thermoelectric production including Acea Produzione thermal energy	**g/kWh**	**265**	**266**	**259**
CO_2/total Acea Produzione production, including thermal energy (**)	**g/kWh**	**74**	**87**	**68**
Co_2/total$_2$/total gross production (**)	**g/kWh**	**381**	**410**	**326**
CO_2/total gross production including thermal energy (**)	**g/kWh**	**338**	**368**	**295**
SO_2/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	**%**	**40.3**	**40.3**	**40.6**
Tor di Valle power plant (electrical performance cogeneration only)		40.6	40.7	40.7
Montemartini power plant		26.3	25.7	26.3
gross average thermoelectric production out included thermal energy recovered		**70.1**	**67.6**	**69.6**
gross average performance hydroelectric production		**82.4**	**83.5**	**81.3**
gross average hydroelectric production		**74.0**	**72.5**	**73.0**
gross average thermoelectric production, including recovered thermal energy		**80.1**	**80.2**	**79.4**
performance of the electrical production process - waste-to-energy plants				
San Vittore in Lazio				
SRF produced/gross energy produced	kt/GWh	1.148	1.152	1.178
gross performance SRF conversion into electricity	**kWh/kg SRF**	**0.87**	**0.87**	**0.85**
electrical efficiency	**%**	**20.2**	**19.6**	**19.5**
total waste produced/hours worked	t/h	3.28	3.56	3.25
Terni				
gross performance Pulper conversion into electricity	**kWh/kg pulper waste**	**0.89**	**0.88**	**0.86**
electrical efficiency	**%**	**11.4**	**9.1**	**9.1**
total waste produced/hours worked	t/h	1.7	1.6	1.6
performance of the electrical production process - photovoltaic energy				
average efficiency photovoltaic modules	**%**	**14.0**	**14.0**	**14.0**
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	**%**	**47.0**	**49.3**	**50.0**
public lighting illumination efficiency	**Lumen/kWh**	**30.0**	**27.8**	**28.0**
average performance of installed lamps (total lighting flow/total electrical power)	**Lumen/W**	**127.8** (15,809 kW)	**117.0** (16,037 kW)	**117.8** (15,661 kW)
specific consumption per lamp (kWh/no. lamps)	**kWh/no. lamps**	**295.77** (227,635)	**291.44** (231,347)	**283.11** (232,334)
percentage of roads illuminated	**% (km of roads illuminated/ total km of roads)**	**89.6** (6,368/7,110)	**89.1** (6,461/7,252)	**89.6** (6,500/7,252)
reintegrations of SF6/km electricity distribution network	**kg/km**	**0.0094**	**0.0065**	**0.0065**
total loss of electrical energy (***)	**% energy requested**	**6.0**	**6.5**	**6.2**

(*) The figures for the previous two-year period have been updated for data consolidation.
(**) The denominator also includes PV energy produced by the subsidiary and is not fully consolidated.
(***) The total losses of electricity include: transformation losses, transport losses and commercial losses, these last due to fraud and incorrect readings.

ENVIRONMENTAL SUSTAINABILITY PERFORMANCE – WATER BUSINESS

Environmental Key Performance Indicators.

INDICATOR (*)	u. m.	2021	2022	2023
WATER SERVICE				
Energy consumption on water delivered and billed				
total electricity consumption in MWh/total water delivered and billed in Mm^3	MWh/Mm^3	1.48	1.52	1.44
carbon footprint				
total CO_2/m^3 of water supplied (integrated water service) (**)	$kgCO_2/m^3$	0.47	0.48	0.45
CO_2/m^3 of water supplied (water distribution process)	$kgCO_2/m^3$	0.29	0.30	0.27
CO_2/m^3 of water treated (purification process)	$kgCO_2/m^3$	0.11	0.11	0.11
PRODUCT: DRINKING WATER				
Acea Ato 2 network				
specific electricity consumption per input in the water network (***)	kWh/m^3	0.263	0.282	0.243
intensity of the checks on drinking water distributed	$No./Mm^3$	863	912	1,046
drinking water additive index	g/m^3	9.2	8.3	8.2
Acea Ato 5 network				
specific electricity consumption per input in the water network (***)	kWh/m^3	0.486	0.537	0.516
intensity of the checks on drinking water distributed	$No./Mm^3$	2,721	2,746	3,118
drinking water additive index	g/m^3	7.1	7.1	6.9
Gesesa network				
specific electricity consumption per input in the water network (***)	kWh/m^3	0.476	0.497	0.529
intensity of the checks on drinking water distributed	$No./Mm^3$	1,462	1,568	1,507
drinking water additive index	g/m^3	4.4	6.7	6.8
Gori network				
specific electricity consumption per input in the water network (***)	kWh/m^3	0.955	0.973	0.999
intensity of the checks on drinking water distributed	$No./Mm^3$	1,534	1,523	1,653
drinking water additive index	g/m^3	2.5	1.5	1.6
AdF network				
specific electricity consumption per input in the water network (***)	kWh/m^3	0.476	0.503	0.484
intensity of the checks on drinking water distributed	$No./Mm^3$	3,751	3,274	2,001
drinking water additive index	g/m^3	11.8	9.1	7.8
SERVICE: WASTE WATER TREATMENT				
Acea Ato 2				
sludge disposed of	t	66,605	63,229	58,456
sand and slabs removed	t	8,359	9,095	11,413
COD input	t	143,568	162,320	169,799
COD removed	t	127,527	146,599	153,898
efficiency of COD removal	%	89	90	91
SST input	t	91,904	99,998	109,875
SST removed	t	84,461	95,285	105,233
efficiency of SST removal	%	92	95	96
efficiency of BOD removal	%	90	93	94
total N input (as $NH_4 + NO_2 + NO_3$ + organic)	t	15,611	15,567	15,693
total N removed	t	11,649	11,408	11,733
efficiency of N removal	%	75	73	75
Acea Ato 2 waste water additivation index	g/m^3	20.1	19.2	17.5
Acea Ato 2 specific consumption of electricity by purification process (****)	kWh/m^3	0.286	0.293	0.290
Acea Ato 5				
sludge disposed of	t	13,803	12,474	8,260
sand and slabs removed	t	225	176	108
COD input	t	11,382	10,598	8,318
COD removed	t	10,457	9,776	7,182

efficiency of COD removal	%	92	92	86
total N input	t	922	836	783
total N removed	t	610	631	574
efficiency of N removal (NH_4^+)	%	66	75	73
SST input	t	6,167	6,795	4,408
SST removed	t	5,854	6,584	4,188
efficiency of SST removal	%	95	97	95
Acea Ato 5 additivation index	g/m³	28.8	33.9	26.5
Acea Ato 5 specific consumption of electricity by purification process (****)	kWh/m³	0.570	0.528	0.548
Gesesa				
sludge disposed of	t	699	940	1,132
sand and slabs removed	t	10	66	110
COD input	t	366	325	342
COD removed	t	341	293	313
efficiency of COD removal	%	93	90	91
total N input	t	13	22	18
total N removed	t	9	10	10
efficiency of N removal (NH_4^+)	%	72	45	57
SST input	t	28	25	26
SST removed	t	22	16.94	17
efficiency of SST removal	%	78	67	66
Gori additive index	g/m³	47.3	48.0	43.1
Gesesa specific consumption of electricity by purification process (****)	kWh/m³	0.958	1.120	0.976
Gori				
sludge disposed of	t	65,635	78,703	78,205
sand and slabs removed	t	4,597	5,235	5,355
COD input	t	44,206	44,821	51,947
COD removed	t	42,314	42,073	49,537
efficiency of COD removal	%	96	94	95
total N input	t	4,519	3,098	3,957
total N removed	t	4,303	2,923	3,739
efficiency of N removal (NH_4^+)	%	95	94	94
SST input	t	17,118	19,984	30,577
SST removed	t	14,717	17,756	27,751
efficiency of SST removal	%	86	89	93
Gori additivation index	g/m³	34.7	38.5	24.9
Gori specific consumption of electricity by purification process (****)	kWh/m³	0.464	0.466	0.431
AdF				
sludge disposed of	t	6,238	4,898	8,850
sand and slabs removed	t	1,012	896	1,167
COD input	t	7,377	8,215	8,299
COD removed	t	6,792	7,561	7,688
efficiency of COD removal	%	92	92	93
total N input	t	889	860	890
total N removed	t	628	701	648
efficiency of N removal (NH_4^+)	%	82	82	82
SST input	t	3,303	3,469	4,082
SST removed	t	3,107	3,264	3,836
efficiency of SST removal	%	94	94	94
AdF additive index	g/m³	75.7	108.5	44.4
AdF specific consumption of electricity by purification process (****)	kWh/m³	0.946	0.971	1.043

(*) Some figures for the 2021-2022 two-year period have been adjusted following consolidation.
(**) These are emissions defined as "Scope 2", in other words resulting from the consumption of electricity by the water Companies in question.
(***) The indicator is calculated as the ratio of electricity used for the water segment to water withdrawn from the environment and other systems and fed into the aqueduct system.
(****)The 'indicator is calculated as the ratio of electricity used for the purification plant and sewerage segment to the total of treated wastewater.

ENVIRONMENTAL SUSTAINABILITY PERFORMANCE – ENVIRONMENT BUSINESS

Environmental Key Performance Indicators.

INDICATOR (*)	u. m.	2021	2022	2023
non-hazardous waste disposed in landfill/total incoming waste	t/t	0.67	0.34	0.39
waste disposed of in landfill/energy consumed net of photovoltaic energy	t/MWh	16.19	8.94	11.25
compost produced/incoming waste	t/t	0.11	0.17	0.19
compost produced/consumed electrical energy	kg/kWh	4.19	9.07	9.76
consumed electrical energy/incoming waste in the Pagnana plant	kWh/kg	0.005	0.006	0.008
consumed electrical energy/incoming waste in the Berg plant	kWh/kg	0.009	0.012	0.009
consumed electrical energy/incoming liquid waste in the Chiusi plant	kg/kWh	0.01	0.01	0.01
chemicals used/incoming waste at the Pagnana plant	kg/t	7.04	9.65	5.55
chemicals used/incoming waste Berg	kg/t	7.38	8.61	11.69
chemicals consumed/incoming waste in the Chiusi plant	kg/t	4.97	3.80	2.69
recovered water (reintegration or first rain)/total water consumed for Environment Business	m^3/m^3	0.36	0.36	0.34

(*) Some 2022 figures have been restated following consolidation.

ENVIRONMENTAL COMPLIANCE

INDICATOR	u. m.	2021	2022	2023
COMPLIANCE - NFS SCOPE (ACEA OTA 2, ACEA OTA 5, GESESA, GORI, ADF) AND MAIN SUBSIDIARIES (ACQUE, UMBRA ACQUE, PUBLIACQUA)				
non-conformities related to rules/agreements of an environmental nature	no.	230	96	53
penalties paid for non-conformities related to rules/agreements of an environmental nature	€	388,094	389,549	196,139
COMPLIANCE WITH COMPANY IN NFS SCOPE				
penalties paid for non-conformities related to rules/agreements of an environmental nature	€	249,562	272,494	136,831
significant (*)	€	n/a	136,700	33,413
non-conformities related to rules/agreements of an environmental nature	no.	186	56	38
significant (*)	no.	n/a	6	2

(*) These are fines above €10,000. Data for 2021 is not available as it was not previously collected.

EXPLANATORY NOTES TO THE ENVIRONMENTAL ACCOUNTS

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

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

The numerical data have been divided into the three categories:

- estimated;
- calculated;
- measured.

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

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

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

ADDITIONAL INFORMATION ON THE NUMERICAL DATA PROVIDED IN THE ENVIRONMENTAL ACCOUNTS

PRODUCTS – ENERGY BUSINESS

item no.	explanation – comment
1	Gross total energy produced by Acea Ambiente and Acea Produzione. From 2022, the figure is net of PV production from the Subsidiary. The figure is calculated.
2	Electricity produced net of the losses due to just the production phase. From 2022, the figure is net of PV production from the Subsidiary. The figure is calculated.
3	Total gross thermal energy. The sum of Acea Produzione and Ecogena's thermal energy. The figure is calculated.
4	Total thermal energy produced, net of losses. The figure is calculated.
5	Total electricity produced, inclusive of the losses, by the Acea Produzione power plants. Includes thermoelectric and hydro- electric energy. The figure is measured with an uncertainty of less than ± 0.5%.
6	Total gross hydroelectric energy. The figure is calculated.
7	Total gross thermoelectric energy. The figure is calculated.
8	Losses of electricity attributable to just the production phase of the Acea Produzione power plants. Includes: the self-consumption (thermal and hydro) and the losses of initial transformation. The figure is measured with an uncertainty of less than ± 0.5%.
9	Electricity produced by the Acea Produzione power plants net of the losses. The figure is calculated.
10	Gross energy produced by photovoltaic installations. From 2022, the figure is net of PV production from the Subsidiary. The figure is measured with an uncertainty of less than ± 0.5%.
11	Total losses during photovoltaic generating phase, due in particular to joule effect (dissipation during heating) in the equipment. Estimated figure.
12	Net photovoltaic electricity made available by the generating installations. From 2022, the figure is net of PV production from the Subsidiary. The figure is calculated.
13	Electricity produced by the Waste-to-Energy installations: waste-to-energy of San Vittore del Lazio and waste-to-energy of Terni of Acea Ambiente. We wish to specify that the fuel used in the two installations (SRF – solid recovered fuel – for San Vittore del Lazio and paper mill pulp for the Terni plant) is composed of both biodegradable organic material, neutral on the balance of the CO_2, and by non-biodegradable organic substance (plastic, resins, etc.). In 2023, the renewable share for the San Vittore del Lazio plant was equal to 46.6%, the Terni incinerator share to 43.6%.
14	Self-consumption of the two waste-to-energy plants of San Vittore del Lazio and Terni and initial transformation losses. The figure is measured with an uncertainty of less than ± 0.5%.
15	Electricity produced by the two waste-to-energy plants of San Vittore del Lazio and Terni, net of the self-consumption and initial transformation losses. The figure is calculated.
16	Electrical energy produced from biogas by the waste management plant at Orvieto Ambiente and the two composting plants in Aprilia and Monterotondo Marittimo (Acea Ambiente) and the Deco sites (owned and operated). The figure is calculated.

17	Self-consumption of biogas production plants, including small dissipations. The figure is measured with an uncertainty of less than ± 5%.
18	Net electricity produced from biogas and transferred to the network. The figure is measured with an uncertainty of less than ± 5%.
19	Thermal energy produced in the cogeneration plant of Tor di Valle including losses. The figure is measured with an uncertainty of ± 2%, near the delivery piping of the generators.
20	Losses of thermal energy of the district heating systems, due to: thermal dissipation, losses on the network, technical releases for maintenance operations, thermal reintegrations of the heat accumulation systems. The figure is calculated as the difference between the thermal energy produced and that actually supplied to the clients (invoiced).
21	Net thermal energy supplied to final clients. The figure, calculated, is obtained from the consumption invoiced.
22	Gross electricity produced by Ecogena plants. The Prepo facility was returned as of June 2022 due to assignment of the contract. The figure is calculated.
23	Gross thermal energy produced by Ecogena plants. The Prepo facility was returned as of June 2022 due to assignment of the contract. The figure is calculated.
24	Gross refrigeration energy produced by Ecogena plants. The figure is calculated.
25	Total self-consumption from Ecogena plants. The figure is calculated.
26	Electricity fed into the grid by Ecogena plants. A portion of the electrical output included in self-consumption is used to produce the other thermal carriers or for power plant operations. The figure is calculated.
27	Net thermal energy produced by Ecogena plants. The figure is calculated.
28	Net refrigeration energy produced by Ecogena plants. The figure is calculated.
29	Electricity supplied to Acea Produzione to Acea Energy with inter-Group exchange. The figure is marginal as a result of the choice made by the Acea Group to sell the electricity produced in Borsa (Stock Exchange) or through bilateral agreements.
30	Electricity supplied by the Single Purchaser and Market, including the amount imported subject to recalculation in relation to the ARERA DCO 492/2019/R/eel. The figure is measured with an uncertainty of ± 0.5%.
31	Energy requested on the electrical distribution network of Rome and Formello by all the client connected (open market + managed service). The figure is estimated.
32	Losses of electricity that occur during the distribution and transmission phase. They are attributable to: losses of transformation and transport, fraud and incorrect measurements. The figure is estimated.
33	Personal use of electricity for the implementation of the distribution activities. The figure is estimated.
34	This is electricity sold to distribution companies. The figure is measured with an uncertainty of ± 0.5%.
35	Total net electricity conveyed to final clients of the open market connected to the electrical distribution network of Rome and Formello. Includes both the quota of electricity sold by Acea Energia, and that sold by other operators active on the open market. The figure is measured with an uncertainty of ± 5% according to Standard CEI 13-4.
36	Net electricity transferred to managed final clients. The decrease is the result of the progressive passage of managed service clients to the open market. In other words, it is a direct consequence of the deregulation process of the electricity market in effect in Italy since 1999 (Italian Legislative Decree no. 79/99). The figure is estimated based on the consumption invoiced.
36 A	Net electricity sold by Acea Energia to managed clients. "Non-domestic" clients (microbusiness clients) are excluded after March 2023. The figure is estimated.
37	Net electricity sold by Acea ENERGIA on the open market nationally. The figure is estimated.
38	Net electricity sold by Acea nationally on the open market and the standard service. The figure is calculated.
39	Natural gas sold by Acea on the national market. The figure is calculated.
40	Luminous flux supplied by the Public Lighting system in Rome. The figure, calculated, is the product of the number of lamps installed and the relative value of "rated" luminous flux.
41	Total number of measurements/controls performed in favour of the energy business, in particular, of Acea Produzione and Areti. The figure is calculated as the sum of the individual determinations carried out by the competent laboratories.

PRODUTS –ENVIRONMENT BUSINESS

item no.	**explanation – comment**
42	Total incoming waste. They are the quantities arriving at the Orvieto Ambiente plant which include: unsorted municipal solid waste, organic fraction, green, non-hazardous industrial waste. The figure is calculated.

43	Waste partly sent for shredding only, partly just for aerobic treatment, partly both to the anaerobic digester and the aerobic treatment. The figure is calculated.
44	Waste disposed directly in landfill. The figure is measured with an uncertainty of ± 1%.
45	Waste disposed of in landfill after treatment. The figure is measured with an uncertainty of ± 1%.
46	Waste recovered and not sent to landfill. It is glass, paper and cardboard, iron and plastic. The figure is calculated.
47	Compost produced at the Orvieto Ambiente hub. Thanks to the combination of the anaerobic and aerobic processes, the product is Quality Compost. The figure is measured with an uncertainty of ± 1%.
48	Reduction due to stabilisation. This represents the loss of mass due to the natural transformations of the material and the loss of water through evaporation. The figure is calculated.
49	Total waste entering Deco sites: some directly to Casoni landfills (owned by Deco) and Grasciano2 landfills (owned by Acea Ambiente from 2022), some to the mechanical biological treatment plant. The figure is calculated.
50	Waste disposed of directly in landfills (Casoni and Grasciano2). The increase in 2023 results from the reopening of the Grasciano 2 landfill and the incoming waste from January of the same year. The figure is calculated.
51	Waste entering the Deco's mechanical biological treatment (MBT) plant. The figure is measured with an uncertainty of ± 1%.
52, 53.54	Waste that is sent for recovery or disposal at third-party sites after treatment. In 2023, Deco sites produced 95,869 tonnes of SRF, of which 53% was used at foreign cement plants and 47% at waste-to-energy plants in Italy. The figure is measured with an uncertainty of ± 1%.
55	Reduction due to stabilisation. This represents the loss of mass due to the natural transformations of the material and the loss of water through evaporation. The figure is calculated.
55 B	Incoming waste to Cerratina plant, landfill for non-hazardous waste. The figure is measured with an uncertainty of ± 1%.
56	Total incoming organic waste. They are the amounts arriving at the plants of Aprilia and Monterotondo Marittimo, which include: sludge, green and organic fraction. The figure is calculated.
57	Incoming sludge. It is the quantity of sludge entering the composting plants of Aprilia and Monterotondo Marittimo. The figure is measured with an uncertainty of ± 1%.
58	Incoming green. It is the quantity of green matter coming from the parks, woods or other areas arriving at the plants of Aprilia and Monterotondo Marittimo. The figure is measured with an uncertainty of ± 1%.
59	Organic fraction of municipal solid waste (OFMSW) entering the composting plant of Aprilia and OFMSW and other agrifood waste arriving at the Monterotondo Marittimo plant. The figure is calculated.
60	Quality Compost. It is the quantity of quality compost produced at the Aprilia and Monterotondo Marittimo plants. The compost estimate for the current year is based on the quantities transported daily for maturation or to the final storage areas. Due to process losses, at the time of sale the compost may be less than estimated. Compost production over the last two years at Monterotondo Marittimo was higher mainly due to the introduction of a new, higher-performance screening machine than the one used in previous years.
61	Non-compostable material for disposal. It is the non-biodegradable material (for example plastics) which is separated from the compostable material sent for disposal. The figure is measured with an uncertainty of ± 1%.
62	Reduction due to stabilisation. This represents the loss of mass due to the natural transformations of the material and the loss of water through evaporation. The figure is calculated. To note that the FSC waste classified under code EER 191210 and sent for energy recovery from the Aprilia plant is not included in item 61; consequently item 62 is indicative.
63	Liquid waste. Represents the quantity of incoming liquid waste. to the Chiusi plant (and, up until mid-2021, the plant at Buonconvento). The intermediated waste, for 718 tonnes in 2023, was not included. The figure is measured with an uncertainty of ± 1%.
64	Total wastewater treated by the Chiusi plant (and up until May 2021, also by the Buonconvento site). In 2022, the figure was significantly reduced as the management of the Buonconvento site was taken over by AdF, a Group Company in the industrial sector. The figure is measured with an uncertainty of ± 1%.
65	Total analytical determinations. These are all the analytical measurements made at the Orvieto Ambiente hub, Aprilia, Monterotondo Marittimo and Deco sites. The figure is calculated.
66	Total incoming waste. These are the amounts arriving at Acque Industriali's plants at Pagnana, Pontedera, Poggibonsi and San Jacopo. The figure is calculated. Since June 2021, operations at the Poggibonsi plant have been suspended pending the issuance of a new IEA. Since February 2020, operations at the San Jacopo plant have been suspended pending the determination of further interventions on the plant. The Pontedera site discontinued operations in 2022. Due to these factors, the incoming tonnage for 2022 were drastically reduced.

67	Incoming sludge. Represents the quantity of incoming sludge at Acque Industriali's plants at Pagnana, Pontedera, Poggibonsi and San Jacopo. Due to the closure of the Pontedera site in July 2022 and the suspension of the Poggibonsi site in the same year, quantities have decreased. At the Pagnana site, quantities have been drastically reduced to preserve the wastewater output quality. Once accepted and implemented, an ongoing project involving minor plant modifications at Pontedera will enable waste with higher pollutant loads than at present to be processed while maintaining the quality of the final discharge. The figure is measured with an uncertainty of ± 1%.
68	Liquid waste. Represents the quantity of liquid waste coming into the Pagnana and Pontedera plants. The figure is calculated.
69	Sewage and other waste. Represents the quantity of sewage and other non-hazardous waste. The figure is calculated.
70	Leachate Represents the quantity of leachate coming into the Pagnana and Pontedera plants. The figure is measured with an uncertainty of ± 1%.
71	Ammonium Sulphate produced. Represents the quantity of quality of Ammonium Sulphate produced at the Pagnana and Pontedera plants. The figure is estimated.
72	Treated water before discharge at Acque Industriali facilities. These also include water that is consumed for industrial and/or civil use inasmuch as there are no distinct meters before discharge. The figure is calculated.
73	Total incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.
74	Solid incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.
75	Liquid incoming waste. They are the quantities arriving at the Berg plant. The figure is calculated.

PRODUCTS – WATER BUSINESS

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

95	Water losses - Acea Ato 5 network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
96	Acea Ato 5 water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
97,98,99,100,101	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by Gesesa.
102	Water leaks - Gesesa network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
103	Gesesa water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
104,105,106,107,108	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by Gori.
109	Water leaks - Gori network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
110	Gori water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
111,112,113,114,115	Respectively: quantity of water collected from the environment and fed into the aqueduct system, leaving the system, supplied and billed, authorised and not billed, exported to other aqueduct systems, by AdF.
116	Total AdF drinking water losses. The figure is measured with an uncertainty of ± 3%
117	Water losses - Acea AdF network. This is the amount of water lost in the network distribution, calculated as the water collected from the environment or from other systems and fed into the network, from which the total water leaving the aqueduct system is subtracted.
118	AdF water losses as a percentage is equal to the value of water losses expressed as a percentage of the total withdrawn. They correspond to item M1b of ARERA Resolution 917/17 R/IDR.
119	Total treated waste water in the main treatment plants of the following water Companies of the Group: Acea Ato 2, Acea Ato 5, Gesesa, Gori, AdF, Umbra Acque, Publiacqua, Acque. The figure is calculated.
120	Total amount of waste water treated in the main treatment plants of the water companies in the NFS scope: Acea Ato 2, Acea Ato 5, Gori AdF and Gesesa.
121	Total waste water sent to the principal treatment plants of Acea Ato 2 and treated. The total figure is calculated.
122	Total waste water send to the treatment plants and treated by Acea Ato 2, including the quantities treated in the small plants of the municipalities of Rome and in those outside the municipalities of Rome. The total figure is calculated.
123	Total waste water sent to the main treatment plants and treated by Acea Ato 5. The figure is calculated.
124	Estimated amount of waste water, for the first time in 2020, used and treated in the main treatment plants of Gesesa and treated. The estimate is based on the value of invoicing; in 2020 the first flow meters were installed, but not all the necessary meters are available.
125	Total amount of waste water sent to the main treatment plants of Gori and treated. The substantial increase in the quantities treated in the last few years is linked to the management transfer of several treatment plants from the Campania region. In particular, two large treatment plants were transferred in 2021. The total figure is calculated.
126	Total amount of wastewater sent to the main treatment plants with PE > 10,000 and treated by AdF.
127	Total amount of waste water used in treatment plants and treated by AdF, including the quantities treated in minor plants.
128	Number of analytical determinations conducted overall on the drinking water by the main Companies of the Acea Group. The figure is calculated.
129	Number of analytical determinations conducted overall on the waste water by the main Companies of the Acea Group. The figure is calculated.
130	Number of analytical determinations conducted overall on the drinking water by Acea Ato 2, Acea Ato 5, Gori, AdF and Gesesa.
131	Number of analytical determinations conducted overall on the waste water by Acea Ato 2, Acea Ato 5, Gori, AdF and Gesesa.

132	Number of analytical determinations conducted overall on the drinking water by Acea Ato 2.
133	Number of analytical determinations conducted overall on the waste water by Acea Ato 2.
134	Number of analytical determinations conducted overall on the drinking water by Acea Ato 5.
135	Number of analytical determinations conducted overall on the waste water by Acea Ato 5.
136	Number of analytical determinations conducted overall on the drinking water by Gesesa.
137	Number of analytical determinations conducted overall on the waste water by Gesesa.
138	Number of analytical determinations conducted overall on the drinking water by Gori.
139	Number of analytical determinations conducted overall on the waste water by Gori.
140	Number of analytical determinations conducted overall on drinking water by Gesesa.
141	Number of analytical determinations conducted overall on waste water by Gesesa.

RESOURCES USED - ENERGY BUSINESS

item no.	explanation – comment
142	Total quantity of natural gas used to generate the electricity and heat at the Acea Produzione and Ecogena plants and at the waste-to-energy plants of Acea Ambiente. The figures expressed in Normal cubic metres (volume at 0°C and 1 Atm), is measured with an uncertainty of ± 0.5%. Estimated figure.
143	Total amount of natural gas used in the Tor di Valle power plant and the Ecogena plants. The figure is calculated.
144	Total quantity of natural gas used by waste-to-energy plants. The increase in 2023 is attributable to a generator fault during November, which resulted in emergency operations. The figure is measured with an uncertainty of ± 2%.
145	Total quantity of diesel used to generate electricity at the Montemartini power plant (turbogas) and for operations at the waste-to-energy plants of Terni and, for a small part, of San Vittore del Lazio. The consumption of the Montemartini power plant is significant during those years when the power plant produces more electricity in order to fulfil the normal scheduled periodic tests, and to conduct extraordinary maintenance. A lower number of technical tests was carried out in 2023. The figure is measured with an uncertainty of ± 2%.
146	Quantity of RDF (Refuse-Derived Fuel) sent for waste-to-energy processing in the San Vittore del Lazio plant. The figure is measured with an uncertainty of ± 1%.
147	Quantity of paper mill pulp sent to waste-to-energy in the Terni plant. The figure is measured with an uncertainty of ± 1%.
148	Amount of biogas produced for the purpose of producing electrical energy. A minimal part is not used and burned in a flame. The figure is measured with an uncertainty of ± 1%.
149	Total water derived from surface resources and aqueducts (as in the case of the hydroelectric power plant of Salisano) for the production of hydroelectric energy. The figure is calculated.
150	Total quantity of water used in the industrial processes. The various contributions are due to: reintegration for losses in the district heating network; various uses in the waste-to-energy plants of San Vittore del Lazio and Terni (of water from aqueducts, wells and recovery of first and second rain recovery). The figure is calculated as the sum of the various contributions.
151	Quantity of aqueduct water used by the Companies included in the energy business, for civilian/sanitary uses. It is consumption of Acea Produzione and Areti of the waste-to-energy plants and 50% of the consumption of the Holding Company. The figure, calculated, refers to the consumption invoiced.
152	This is the total amount of dielectric mineral oil in Areti's primary and secondary substations, including the amount of oil in the Petersen coils installed in some primary substations. From 2022 on, the published data will include the volumes of dielectric oil in Acea Produzione's facilities over a three-year period. The figure is estimated. Areti and Acea Produzione reinstatement figures are estimated.
153	This is the total amount of gaseous insulation (SF_6) in the Areti and Acea Produzione plants. The figure is estimated. The figure referred to the reintegrations, also estimated, represents the total quantity of SF_6 released ex-novo into the production circuit during the year.
154	It represents the total quantity of cooling fluids in operation. The reintegrations represent the quantity of cooling fluids used for the maintenance of the air-conditioning equipment, during which the gas in operation is recovered and replaced with the new one. The data refer to the previous year compared to the year as they are based on ISPRA annual statements following the publication of the *Sustainability Report*. Both figures are calculated by attributing all the gas supplied overall by the Parent Company to the energy business and the water business in equal parts (50%).

155	Total chemical substances used in the electrical and thermal generating process in the Acea Produzione power plants and the waste-to-energy plants of Acea Ambiente. The figure is calculated.
156	Quantity of lubricating oils and fats used by Acea Produzione and the Terni waste-to-energy plant. The figure is measured with an uncertainty of ± 0.5%.
157	The figure matches Item 28.
158	Matches the difference between Items 1 and 2.
159	Electricity consumed by the processes not directly connected to the production phase (offices). The figure is calculated at 50% of the electricity consumed overall by the parent company. The remaining 50% is attributed as consumption to the water business.
160	Consumption of electricity at other sites and plants, including the consumption of the waste-to-energy plants (Terni and San Vittore del Lazio). The figure is estimated.
161	Other uses of the electricity in the energy business. The figure is calculated.
162	Total electricity consumer by the product systems included in the energy business. The figure is calculated.
163	Total electricity consumed for public lighting in the municipality of Rome. The figure is calculated based on the consistencies of the installations in operation during the year.

RESOURCES USED - ENVIRONMENT BUSINESS

item no.	**explanation – comment**
Orvieto Ambiente hub and Deco sites	
164	Total chemical substances used at the Orvieto Ambiente hub and Deco sites. The figure is calculated.
164a	Amount of hydraulic oils and lubricants used mainly for power generation units at the Orvieto Ambiente hub and Deco sites. The data is measured with an uncertainty of ±0.5%.
165	Electricity consumed at the Orvieto Ambiente plant and Deco sites. The considerable increase in 2022 is due to Deco entering the NFS scope. The figure is measured with an uncertainty of ±1%.
166	Total amount of diesel consumed used at the Orvieto Ambiente plant and Deco sites. The data is measured with an uncertainty of ±2%.
167	Total water consumed at the Orvieto Ambiente plant and Deco sites. It is specified that, for the Orvieto Ambiente plant, this resource comes partly from roofs (rainwater) and partly from the riverbed (river water). For Deco sites, this is a surface resource provided by the Consorzio di Bonifica. The figure is impacted from the entry of the Deco sites since 2022. Estimated data.
168	Amount of water used for civilian purposes by the Orvieto Ambiente hub and at Deco sites. It is supplied by tanker trucks for the Orvieto Ambiente plants, since the hub is not connected to the aqueduct. The 2022 figure is affected by the civilian consumption of Deco sites, which were added in the year. Estimated data.
Compost Production	
169	Total chemical substances used at the Aprilia and Monterotondo Marittimo plants. The figure is calculated.
169a	Amount of engine oils, hydraulic oils and lubricants used at the Aprilia and Monterotondo Marittimo plants.
170	Electricity consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The significant decrease in 2022 is primarily attributable to a change in the plant configuration at the Aprilia site and, in particular, optimising the administration of the anaerobic digester. The figure is measured with an uncertainty of ± 1%.
171	Total quantity of diesel fuel consumed at the Aprilia, Monterotondo Marittimo and Sabaudia plants. The figure is measured with an uncertainty of ± 2%.
172	Quantity of water consumed at the Aprilia and Monterotondo Marittimo plants. The quantities of water recycled are included. The figure is estimated.
173	Quantity of water used for civil purposes at the composting plants of Aprilia and Monterotondo Marittimo. The value is partially estimated.
Liquid waste disposal and Industrial Water treatment at Berg and the Chiusi plant	
174	Total chemical substances used at Acque Industriali's plants in Pagnana, Pontedera and Poggibonsi, at Berg and the Chiusi plant (Acea Ambiente). Any fluctuations that may be evident in the figure from one year to the next depend on the chemical composition of incoming waste. Greater chemical complexity can require a greater consumption of chemicals for treatment prior to disposal. The figure is calculated.
175	Electricity consumed at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Chiusi plant. The figure is measured with an uncertainty of ± 1%.

176	Amount of methane consumed at Acque Industriali's Pagnana plant and at Berg. The figure is measured with an uncertainty of ± 1%.
177	Amount of diesel fuel consumed at the Berg and Chiusi plants. The figure is calculated.
178	Amount of BTZ (Basso Tenore di Zolfo - Low Sulphur Content) combustible Oil at the Pontedera plant. The figure is measured with an uncertainty of ± 2%. In August 2021, the LSC boiler was replaced with a new LPG boiler.
178 A	Amount of LPG consumed by the boiler at the Pontedera plant. The figure is measured with an uncertainty of ± 2%.
179	Amount of water consumed at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Chiusi plant. The figure is calculated.
180	Amount of water used for civil purposes at Acque Industriali's plants in Pagnana, Pontedera, Poggibonsi and San Jacopo, and at Berg and the Chiusi plant. The figure is calculated.

RESOURCES USED - WATER BUSINESS

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

196	Amount of diesel used in the purification and other (for example in the Ostia desiccator of Acea Ato 2 processes and for water, sewage and purification generators). The figure is measured with an uncertainty of ± 2%.
197	Quantity of petrol used in purification processes and generators. The figure is measured with an uncertainty of ± 2%.
198	Amount of biogas produced and consumed on site, excluding amounts burned in the flare. The figure is measured with an uncertainty of ± 2%.

FUELS USED BY THE GROUP (TRANSPORT AND HEATING)

item no.	explanation – comment
199	Total amount of petrol used for the main Companies of the Acea Group car fleet. The data come from the calculations of the Group's Energy managers. After two years marked by the COVID emergency, the increase in 2022 is primarily the result of increased operations. The 2023 Defra conversion factor was used to convert units of volume (litres) to units of mass (kg).
200	Total amount of diesel used for the main Companies of the Acea Group car fleet. The data come from the calculations of the Group's Energy managers. The 2023 Defra conversion factor was used to convert units of volume (litres) to units of mass (kg). The figure includes the fuel consumed by Aquaser's vehicles.
201	Total amount of methane used for the main Companies of the Acea Group car fleet. The data comes from the calculations of the Group's Energy managers. The 2023 Defra conversion factor was used to convert units of mass (kg) to units of volume (m^3).
202	Total amount of LPG (Liquefied Petroleum Gas) used for the main Companies of the Acea Group car fleet. The 2023 Defra conversion factor was used to convert units of volume (litres) to units of mass (kg).
203	Total quantity of diesel used for heating work areas and for the supply of the generators. The figure is measured with an uncertainty of ± 0.5%.
204	Total quantity of natural gas used for heating the work spaces. The increase in 2023 is attributable to the higher consumption at the Piazzale Ostiense head office, with the increased work activity. The figure is measured with an uncertainty of ± 0.5%.
205	Total quantity of LPG (Liquefied Petroleum Gas) used to heat the work spaces. The figure is measured with an uncertainty of ± 0.5%.

EMISSIONS AND WASTE –ENERGY BUSINESS

item no.	explanation – comment
206	Total quantity of carbon dioxide released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and from the waste-to-energy process of SRF and pulper. Includes the equivalent CO_2 estimated on the basis of the replenishment of SF6 and HCFC refrigerants. Estimated figure.
207	Quantity of carbon dioxide released into the atmosphere by the Acea Produzione power plants. The figure for the year preceding reporting is corrected in the year of publication, after ETS certification. The figure is calculated in accordance with current legislation.
208	Quantity of carbon dioxide released into the atmosphere by the Ecogena plants. The figure is calculated.
209	Quantity of equivalent CO_2 estimated based on the of SF6 replenishment, considering that 1 t of this gas has a heating power 23,500 times that of the CO_2 (source: GHG Protocol - IPCC Fifth Assessment Report).
210	Quantity of equivalent CO_2 estimated on the basis of refrigerant fluid replenishments (HCFCs), considering that 1 t of gas has a heating capacity of about 700-2,500 times that of CO_2. The value depends on the specific type of gas (source: GHG Protocol - IPCC Fifth Assessment Report; for gas mixtures the factor is calculated on the primary source). Half of the emissions are allocated to the energy business and half to the water business, as is the case for the quantities of refrigerant fluids (HCFCs). The figure coincides with item No. 282.
211	Quantity of carbon dioxide released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure for 2021 was recorded following the issue of the ETS certificate. The figure is measured.
212	Total quantity of nitrogen oxides (NO + NO_2) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels, and from SRF and waste-to-energy processes. Their presence in traces of the emissions is due to undesired secondary reactions which occur at high temperature between the nitrogen and the oxygen of the air. The figure is calculated.

213	Total quantity of nitrogen oxides ($NO + NO_2$) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
214	Quantity of nitrogen oxides ($NO + NO_2$) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
215	Total quantity of carbon oxide (CO) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and the waste-to-energy process. The existence of the pollutant in the emissions is due to incomplete fuel reaction and represents a symptom of deterioration in the performance of the combustion reaction. The figure is calculated.
216	Total quantity of carbon oxide (CO) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
217	Quantity of carbon oxide (CO) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
218	Total quantity of sulphur dioxide (SO_2) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels and from the waste-to-energy process of SRF and paper mill pulp. The use of methane and diesel with low sulphur con- tent in the power plants enables this type of emission to be contained. The figure is calculated.
219	Quantity of sulphur oxide (SO_2) released into the atmosphere as a result of generating thermoelectric energy from fossil fuels in the Acea Produzione power plants. The figure is calculated.
220	Quantity of sulphur dioxide (SO_2) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
221	Total quantity of 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.
222	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.
223	Quantity of powders released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
224	Quantity of hydrochloric acid (HCl) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
225	Quantity of hydrofluoric acid (HF) released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
226	Quantity of organic carbon released into the atmosphere by the Acea Ambiente waste-to-energy plants. The figure is calculated.
227	Total quantity of waste water, treated, resulting from the thermoelectric energy production activities. The figure is measured with an uncertainty of ± 2%.
228	Total quantity of hazardous waste (pursuant to Italian Legislative Decree no. 152/06) disposed of by the main Companies of the Group excluding the waste-to-energy area. The figure is measured with an uncertainty of ± 2%.
229	Hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the waste-to-energy area. It is essentially light ashes and slag resulting from the incineration processes. The figure is measured with an uncertainty of ± 2%.
230	Total quantity of non-hazardous waste (pursuant to Italian Legislative Decree no. 152/06) disposed of by the main Companies of the Group excluding the waste-to-energy area. The figure is measured with an uncertainty of ± 2%.
231	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the waste-to-energy area. It is essentially heavy ashes and slag resulting from the incineration processes. The figure is measured with an uncertainty of ± 2%.

EMISSIONS AND WASTE – ENVIRONMENT BUSINESS

item no.	explanation – comment
232	Hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Orvieto Ambiente plant. The figure is measured with an uncertainty of ± 2%.
233	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Orvieto Ambiente plant. The figure is measured with an uncertainty of ± 2%.
234	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Deco sites. The figure is measured with an uncertainty of ± 2%.
235	Non-hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Deco sites. The figure is measured with an uncertainty of ± 2%.
236	Hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Aprilia and Monterotondo Marittimo plants. The increase is due to the almost fully operational restart of the Monterotondo Marittimo and Aprilia plants. The figure is calculated.

237	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Aprilia and Monterotondo Marittimo plants. The increase is due to the almost fully operational restart of the Monterotondo Marittimo and Aprilia plants. The figure is calculated.
238	CO_2 emissions from the composting plants and Orvieto Ambiente hub 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 ± 2%.
239, 240, 241, 242	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 in SIV and SOV data in 2023 is not due to a different mix of waster coming into the Monterotondo Marittimo plant; the legal limits were nonetheless fully complied with. The data is calculated starting from the measurement of the concentrations.
243	CO_2 emissions from the Deco and Ecologica Sangro sites related to fuel consumption. The figure is calculated.
244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256	These are dust, hydrochloric acid, hydrofluoric acid, hydrogen sulphide, SOx, NOx, CO, TOC, ammonia, VOCs, Cd, Hg and heavy metals emitted at the Deco and Ecologica Sangro sites. The values in mg/l of all plants are well below official limits. The data is calculated starting from the measurement of the concentrations.
257	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Chiusi plant. The figure is measured with an uncertainty of ± 2%.
258	Non-hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Chiusi plant. The figure is measured with an uncertainty of ± 2%.
259	Emissions of CO_2 from the Chiusi plant. The figure is calculated.
260	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Berg plant. The figure is measured with an uncertainty of ± 2%.
261	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Berg plant. The figure is measured with an uncertainty of ± 2%.
262	CO_2 emissions related to the Berg plant. The figure is calculated.
263	Dust emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
264	Organic carbon emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
265	Hydrogen sulphide and mercaptans emitted by the Berg plant. The data is calculated starting from the measurement of the concentrations.
266	Ammonia emissions from the Berg plant. The data is calculated starting from the measurement of the concentrations.
267	Hazardous waste (pursuant to Italian Legislative Decree No. 152/06) produced by the Pagnana plant. The figure is calculated.
268	Non-hazardous waste (pursuant to Legislative Decree no. 152/06) produced by the Pagnana, Pontedera, Poggibonsi and San Jacopo plants. The figure is calculated.
269	Emissions of CO_2 of the Acque Industriali plants relate to the consumption of fuels. The figure has come down significantly in 2023 because Pagnana is the only operational plant. The figure is calculated.
270	Hydrogen Sulphide emissions from the Pagnana and Pontedera plants. The data is estimated taking into account the maximum value that can be recorded in the plant.
271	Ammonia emissions at the Pagnana and Pontedera Plants. The data is estimated taking into account the maximum value that can be recorded in the plant.

EMISSIONS AND WASTE –WATER BUSINESS

item no.	explanation – comment
272	Total quantity of purification sludge disposed of by Acea Ato 2, Acea Ato 5, Gori, Gesesa and AdF. Non-hazardous waste. The figure is measured with an uncertainty of ± 2%.
273	Total quantity of purification sludge disposed of by Acea Ato 2. The figure is measured with an uncertainty of ± 2%.
274	Total quantity of purification sludge disposed of by Acea Ato 5. The figure is measured with an uncertainty of ± 2%.
275	Total quantity of purification sludge disposed of by Gesesa. The figure is measured with an uncertainty of ± 2%.
276	Total quantity of purification sludge disposed of by Gori. The strong increase in the quantities produced n the three-year period is due to the progressive transfer to Gori of the management of treatment plants previously managed by the Campania Region. The figure is measured with an uncertainty of ± 2%.
277	Total quantity of purification sludge disposed of by AdF. The increase in 2023 is due to criminal proceedings at the urban wastewater treatment plant called IDL S. Giovanni in Loc. Pianetto in the Municipality of Grosseto: from January 2023, AdF stopped hydrolysis treatment and restored aerobic treatment, as had been done in the past. This was in the context of criminal proceedings, where the Preliminary Investigations Judge ordered the preventative seizure of only the areas intended for the surplus transfer of sludge. Investigations are still ongoing. ADF complied with all the prescriptions issued by the Judicial Authorities and Administrative Authorities. The figure is measured with an uncertainty of ± 2%.

278	Total quantity of sand and slabs disposed of by Acea Ato 2, Acea Ato 5, Gori, Gesesa and AdF. The figure is measured with an uncertainty of ± 2%.
279	Total quantity of sand and slabs disposed of by Acea Ato 2. The figure is measured with an uncertainty of ± 2%.
280	Total quantity of sand and slabs disposed of by Acea Ato 5. The figure is measured with an uncertainty of ± 2%.
281	Total quantity of sand and slabs disposed of by Gesesa. The figure is measured with an uncertainty of ± 2%.
282	Total quantity of sand and slabs disposed of by Gori. The increase in the quantities produced is due to the progressive transfer to Gori of the management of treatment plants previously managed by the Campania Region. The figure is measured with an uncertainty of ± 2%.
283	Total quantity of sand and slabs disposed of by AdF. The figure is calculated.
284	Amount of other process waste, excluding sludge, sand and slabs. The figure is measured with an uncertainty of ± 2%.
285	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) including that disposed of by Acea Ato 2, Acea Infrastructure, Acea Ato 5, and a portion of waste produced by the Parent Company (attributed in equal parts to the energy and water segments). The figure is calculated**.**
286	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Infrastructure. The figure is measured with an uncertainty of ± 2%.
287	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 2. The figure is measured with an uncertainty of ± 2%.
288	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 5. The figure is measured with an uncertainty of ± 2%.
289	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Gori. The figure is measured with an uncertainty of ± 2%.
290	Total quantity of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by AdF. A hydrolysis system activated in 2021 as a way to reduce treatment sludge volumes was deactivated in 2023 for technical reasons, bringing the volumes produced to the previous levels. The figure is measured with an uncertainty of ± 2%.
291	Proportion of hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the Parent Company and attributed to the water business. The same proportion was attributed to the energy business.
292	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) including that disposed of by Acea Ato 2, Acea Ato 5, Gori Gesesa and AdF, and a portion of waste produced by the Parent Company (attributed in equal parts to the energy and water segments). The figure is calculated**.**
293	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 2 and Acea Infrastructure. The figure is calculated.
294	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Acea Ato 5. The figure is estimated.
295	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Gesesa. The figure is estimated.
296	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by Gori. The figure is estimated.
297	Total quantity of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by AdF. The data are derived from direct measurements.
298	Proportion of non-hazardous waste (pursuant to Legislative Decree no. 152/06) disposed of by the Parent Company and attributed to the water business. The same proportion was attributed to the energy business.
299	Total amount of carbon dioxide emitted by dryers and generators. The figures are calculated using the consumption of fuel and the emission coefficients (MATTM data).
300	Quantity of equivalent CO_2 estimated on the basis of refrigerant fluid replenishments (HCFCs), considering that 1 t of gas has a heating capacity of about 700-2,500 times that of CO_2. The value depends on the specific type of gas (source: GHG Protocol - IPCC Fifth Assessment Report; for gas mixtures the factor is calculated on the primary source). Half of the emissions are allocated to the energy business and half to the water business, as is the case for the quantities of refrigerant fluids (HCFCs). The figure coincides with item No. 194. For 2021 and 2023, the figure is zero as there were no reintegrations in the year.

CO_2 EMISSIONS FROM TRANSPORT AND HEATING

item no.	explanation – comment
301	Total quantity of carbon dioxide issued by the motor pool of the Acea Group. The three-year figure is calculated using the consumption of fuel and the emission coefficients (ISPRA 2023). The figure is calculated.
302	Total quantity of carbon dioxide emitted by the systems used to air-condition the work spaces. The slight increase in 2023 is attributable to increased methane consumption due to higher work activity at the head office. The figure is calculated.

OPINION LETTER OF THE INDEPENDENT AUDITOR

Independent auditor's report on the consolidated non-financial statement

Pursuant to article 3, paragraph 10, of Legislative Decree No. 254/2016 and article 5 of CONSOB regulation No. 20267 of January 2018

To the Board of Directors of Acea SpA

Pursuant to article 3, paragraph 10, of Legislative Decree No. 254 of 30 December 2016 (the "Decree") and article 5, paragraph 1 g), of CONSOB Regulation No. 20267/2018, we have undertaken a limited assurance engagement on the "Sustainability Report" (Consolidated Non-Financial Statement pursuant to Legislative Decree No. 254/2016, prepared in accordance with GRI standards) of Acea SpA and its subsidiaries (hereinafter the "Group") for the year ended 31 December 2023 prepared in accordance with article 4 of the Decree and approved by the Board of Directors on 5 March 2024 (the "NFS").

Our review does not extend to the information set out in the section titled "Information required by the European Taxonomy" of the Group's NFS, required by article 8 of European Regulation 2020/852.

Responsibilities of the Directors and the Board of Statutory Auditors for the NFS

The Directors are responsible for the preparation of the NFS in accordance with articles 3 and 4 of the Decree and with the "Global Reporting Initiative Sustainability Reporting Standards" defined in 2016 and updated to 2021, by the GRI - Global Reporting Initiative (the "GRI Standards"), which they identified as the reporting standard.

The Directors are also responsible, in the terms prescribed by law, for such internal control as they determine is necessary to enable the preparation of a NFS that is free from material misstatement, whether due to fraud or error.

Moreover, the Directors are responsible for identifying the content of the NFS, within the matters mentioned in article 3, paragraph 1, of the Decree, considering the activities and characteristics of the Group and to the extent necessary for an understanding of the Group's activities, development, performance and related impacts.

Finally, the Directors are responsible for defining the business and organisational model of the Group and, with reference to the matters identified and reported in the NFS, for the policies adopted by the Group and for identifying and managing the risks generated and/or faced by the latter.

The Board of Statutory Auditors is responsible for overseeing, in the terms prescribed by law, compliance with the Decree.

PricewaterhouseCoopers SpA

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Auditor's Independence and Quality Control

We are independent in accordance with the principles of ethics and independence set out in the International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code) issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. In the period this engagement refers to our firm applied International Standard on Quality Control 1 (ISQC Italia 1) and, accordingly, maintained a comprehensive system of quality control including policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Auditor's responsibilities

Our responsibility is to express a limited assurance conclusion, based on the procedures we have performed, regarding the compliance of the NFS with the Decree and the GRI Standards. We conducted our engagement in accordance with *International Standard on Assurance Engagements 3000 (Revised) – Assurance Engagements Other than Audits or Reviews of Historical Financial Information* (hereinafter "ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. That standard requires that we plan and perform procedures to obtain limited assurance about whether the NFS is free from material misstatement. Therefore, the procedures performed were less in extent than for a reasonable assurance engagement conducted in accordance with ISAE 3000 Revised, and, consequently, do not provide us with a sufficient level of assurance that we have become aware of all significant facts and circumstances that might be identified in a reasonable assurance engagement.

The procedures performed on the NFS were based on our professional judgement and included inquiries, mainly of personnel of the Company responsible for the preparation of the information presented in the NFS, inspection of documents, recalculations and other procedures designed to obtain evidence considered useful.

In detail, we performed the following procedures*:*

1 analysis of the relevant matters reported in the NFS in relation to the activities and characteristics of the Group, in order to assess the reasonableness of the selection process used, in accordance with article 3 of the Decree and with the reporting standard adopted;
2 analysis and assessment of the criteria used to identify the consolidation perimeter, in order to assess their compliance with the Decree;
3 comparison of the financial information and data reported in the NFS with the information and data reported in the Group's consolidated financial statements*;*
4 understanding of the following matters:

   (a) business and organisational model of the Group with reference to the management of the matters specified by article 3 of the Decree;
   (b) policies adopted by the Group with reference to the matters specified by article 3 of the Decree, actual results and related key performance indicators;
   (c) key risks generated and/or faced by the Group with reference to the matters specified in article 3 of the Decree.

   With reference to those matters, we compared the information obtained with the information presented in the NFS and carried out the procedures described under item 5 a) below.

5 understanding of the processes underlying the preparation, collection and management of the significant qualitative and quantitative information included in the NFS.

In detail, we held meetings and interviews with the management of Acea SpA and we performed limited analyses of documentary evidence, to gather information about the processes and procedures for the collection, consolidation, processing and submission of the non-financial information and data to the function responsible for the preparation of the NFS.

Moreover, for material information, considering the activities and characteristics of the Group:

- at a parent level,
  - (a) with reference to the qualitative information included in the NFS, and in particular to the business model, the policies adopted and the main risks, we carried out interviews and acquired supporting documentation to verify its consistency with available evidence;
  - (b) with reference to quantitative information, we performed analytical procedures as well as limited tests, in order to assess, on a sample basis, the accuracy of consolidation of the information.
- for the following companies, Acea SpA, Acea ATO 2 SpA, Acea Ambiente Srl and Deco SpA which we selected on the basis of their activities, their contribution to the key performance indicators at a consolidated level and their location, we carried out site visits during which we met local management and gathered supporting documentation regarding the correct application of the procedures and calculation methods used for the indicators.

Conclusions

Based on the procedures performed, nothing has come to our attention that causes us to believe that the NFS of the Acea Group for the year ended 31 December 2023 is not prepared, in all significant respects, in accordance with articles 3 and 4 of the Decree and with the GRI Standards.

Our conclusion above does not extend to the information set out in the paragraph titled “Information required by the European Taxonomy” of the Group’s NFS required by article 8 of Regulation (EU) 2020/852.

Rome, 21 March 2024

PricewaterhouseCoopers SpA

Signed by

Luigi Necci
(Partner)

Paolo Bersani
(Authorized signatory)

This report has been translated from the Italian original solely for the convenience of international readers. We have not performed any controls on the NFS 2023 translation.

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Photos taken by Acea Group employees for the Acea Photo Contest

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