

# THE USE OF MATERIALS, ENERGY AND WATER



INCREASED ENERGY EFFICIENCY (ARETI AND THE WATER SEGMENT): APPROXIMATELY **6.9 GWh of savings/year** AND **2,300 t OF CO<sub>2</sub> EMISSIONS AVOIDED**



AROUND **425 GWh of electricity consumption** OF THE GROUP COMPANIES **from renewable energy** WITH GUARANTEE OF ORIGIN AND **142,800 t OF CO<sub>2</sub> EMISSIONS AVOIDED**

## CONSUMPTION OF MATERIALS

The main materials used in production processes differ according to the business sector. For the **Companies in the Environment segment**, the most important resources are **incoming waste for production of compost and electricity** (waste-to-energy from pulper waste and SRF). Thermoelectric plants, managed by **Acea Produzione**, use **fossil fuels (natural gas and gas oil)** for the **production of electricity**. For the electricity distribution process, managed by **Areti**, a primary component is sulphur hexafluoride

(SF<sub>6</sub>) used in medium and high-voltage plants for its high insulating capacity, which allows use of less space.

Meanwhile, **Companies in the water segment** use significant quantities of **chemical products**, which are essential for the management of processes, e.g. reagents for the production of drinking water, disinfection and purification of wastewater. Finally, **Acea Energia** and the water Companies responsible for the management of commercial aspects use **paper** for billing customers. Please see table no. 61 and the *Environmental Accounts* for details of resources used by each area.

TABLE NO. 61 – TYPE AND CONSUMPTION OF MATERIALS BY THE MAIN COMPANIES IN THE GROUP (2018-2020)

| materials                                  | u.m.                    | 2018     | 2019     | 2020     |
|--|-------------------------|----------|----------|----------|
| incoming waste for composting and landfill | t                       | 119,857  | 153,330  | 221,950  |
| pulper                                     | t                       | 99,971   | 94,092   | 90,215   |
| SRF  | t                       | 357,174  | 340,531  | 319,122  |
| methane                                    | Sm <sup>3</sup> x 1,000 | 21,420.2 | 23,703.0 | 23,495.6 |
| gas oil                                    | l                       | 230,350  | 574,405  | 587,028  |
| SF <sub>6</sub>                            | t                       | 21.7     | 21.9     | 22.3     |
| various chemicals of water Companies       | t                       | 11,672   | 15,652   | 16,964   |
| paper                                      | t                       | 336      | 356      | 352      |

**NOTE** Data on incoming waste includes waste sent for anaerobic and aerobic treatment at the Orvieto landfill and waste processed for the production of compost (sludge, green, OFMSW and other agrifood waste). Pulper and SRF for waste-to-energy are resources with a renewable component linked to the biodegradable fraction of the waste. In 2020, the renewable and biodegradable portions of pulper waste and SRF were approximately 42%. The data for chemicals and paper in the 2018-2019 two-year period have been updated with AdF consumption. The data for paper are related to the billing of the Companies Acea Energia, Acea Ato 2, Acea Ato 5, Gori, AdF and Gesesa.

## ENERGY CONSUMPTION

### THE GROUP'S ENERGY CONSUMPTION

**Total energy consumption**, both **direct and indirect**, is approximately **12,600 TJ**, with an increase of 2.7% compared to 2019, due primarily to greater energy use of biogas and SRF/pulper waste for waste-to-energy production. Indirect consumption was in line with 2019, with a slight increase of 0.3%. It is worth noting the **decrease of 9% in the percentage, out of the total input, of losses on the electricity distribution network**, attributable to electricity

transformation and transport phases, and the **reduction of 4.4% in consumption for public lighting**, correlated with the installation of LED technology (see table nos. 62 and 63).

It should also be highlighted that **electricity consumption of the principal Companies** connected to the distribution of drinking and non-drinking water, treatment, waste-management plants and consumption of facilities, **for a total of approximately 425 GWh, originate from renewable sources with a Guarantee of Origin**, corresponding to 57% of total consumption (Table no. 63).

The trends of **energy-consumption intensity indexes** are presented in table no. 64 and denote **improvements in energy efficiency**.

TABLE NO. 62 – DIRECT ENERGY CONSUMPTION OF THE MAIN COMPANIES IN THE GROUP (2018-2020) <sup>(\*)</sup>

|  | 2018              | 2019            | 2020              |
|--|-------------------|-----------------|-------------------|
| <b>ENERGY PER SOURCE</b>   | <b>TJ (GWh)</b>   |                 |                   |
| RDF/SRF and pulper waste (waste-to-energy) – non-renewable share   | 3,665.5 (1,018.2) | 3,283.0 (911.9) | 2,849.4 (791.5)   |
| biogas (100% renewable – waste management and water segment)   | 206.3 (57.3)      | 243.9 (67.7)    | 424.6 (117.9)     |
| SRF and pulper waste (waste-to-energy) – non-renewable share   | 3,875.6 (1,076.6) | 3,280.8 (911.3) | 3,859.1 (1,072.0) |
| methane (for electricity generation, district heating, processes, water area dryers and heating for offices) | 974.4 (270.7)     | 1,084.9 (301.4) | 1,066.9 (296.3)   |

**TABLE NO. 62 – DIRECT ENERGY CONSUMPTION OF THE MAIN COMPANIES IN THE GROUP (2018-2020)<sup>(\*)</sup> (continued)**

|  |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|
| LSC oil for process (disposal of Acque Industriali wastewater)         | 2.5 (0.7)                | 1.8 (0.5)                | 2.0 (0.6)                |
| PG (heating)   | 0.2 (0.1)                | 0.7 (0.2)                | 0.8 (0.2)                |
| gas oil (for electricity generation and other uses, composting plants) | 22.8 (6.3)               | 37.9 (10.5)              | 39.2 (10.9)              |
| petrol (road haulage)  | 3.2 (0.9)                | 3.8 (1.1)                | 7.1 (2.0)                |
| diesel (road haulage)  | 138.1 (38.4)             | 122.7 (34.1)             | 121.3 (33.7)             |
| <b>total</b>   | <b>8,888.6 (2,469.1)</b> | <b>8,059.5 (2,238.8)</b> | <b>8,370.3 (2,325.1)</b> |

(\*) The data for 2018 and 2019 have been restated to include the consumption of AdF and the Acque Industriali plants.

NOTE The energy produced by the Group plants and fed into the network is illustrated in the *Environmental Accounts (Products – Energy Segment)*.

**TABLE NO. 63 – INDIRECT ENERGY CONSUMPTION OF THE MAIN COMPANIES IN THE GROUP (2018-2020)<sup>(\*)</sup>**

| TYPES OF INDIRECT CONSUMPTION  | 2018                   | 2019                     | 2020                     |
|--|------------------------|--------------------------|--------------------------|
|  | TJ (GWh)               |                          |                          |
| electricity losses on the distribution networks and transport  | 1,204.6 (334.6)        | 1,188.4 (330.1)          | 982.8 (273.0)            |
| losses and self-consumption in the production of electricity   | 245.5 (68.2)           | 233.1 (64.8)             | 251.5 (69.9)             |
| losses of heat in the district heating network   | 104.1 (28.9)           | 109.7 (30.5)             | 99.8 (27.7)              |
| consumption for public lighting  | 302.3 (84.0)           | 252.3 (70.1)             | 241.1 (67.0)             |
| <b>consumption for production processes, distribution of electricity and thermal energy and public lighting</b>          | <b>1,251.7 (347.7)</b> | <b>1,783.8 (495.5)</b>   | <b>1,575.2 (437.5)</b>   |
| electricity consumption for waste management plants (**)   | 30.8 (8.6)             | 33.1 (9.2)               | 32.9 (9.1)               |
| electricity consumption for distribution of drinking water (***)   | 1,288.70 (358.0)       | 1,477.5 (410.4)          | 1,719.6 (477.7)          |
| electricity consumption for wastewater purification (***)  | 840.7 (233.5)          | 904.8 (251.3)            | 902.7 (250.7)            |
| consumption of electricity for the offices (**)  | 34.8 (9.7)             | 32.4 (9.0)               | 27.2 (7.5)               |
| <b>electricity consumption for other operating processes (Integrated Water Service, waste management, offices, etc.)</b> | <b>2,195.2 (609.8)</b> | <b>2,447.7 (679.9)</b>   | <b>2,682.4 (745.1)</b>   |
| <b>total indirect energy consumption</b>   | <b>4,051.5 (957.5)</b> | <b>4,231.3 (1,175.4)</b> | <b>4,257.6 (1,182.7)</b> |

(\*) The figures for the two-year period 2018-2019 have been restated to include those of AdF and Acque Industriali to make them comparable.

(\*\*) Energy with G.O. certification (Guarantee of Origin).

(\*\*\*) Energy with G.O. certification (Guarantee of Origin) for 54%. The increased consumption of electricity in the 2019-2020 period is primarily due to an increase in consumption of the Company Gori, which in 2019 acquired the management of various plants previously managed by the Campania regional authority, as well as the low rainfall during the year.

**TABLE NO. 64 – ENERGY INTENSITY INDICES (2018-2020)**

| energy consumption intensity index   | u.m.               | 2018    | 2019    | 2020    |
|--|--------------------|---------|---------|---------|
| electricity consumed for public lighting per lamp (*)  | TJ/lamp            | 0.00134 | 0.00112 | 0.00106 |
| total electricity consumed by Acea Ato 2, Acea Ato 5, Gori, AdF and Gesesa/water issued by aqueduct systems (**)         | TJ/Mm <sup>3</sup> | 4.027   | 4.392   | 4.639   |
| electricity consumed by Acea Ato 2, Acea Ato 5, Gori, AdF and Gesesa for sewer service and treatment/water treated (***) | TJ/Mm <sup>3</sup> | 1.32    | 1.31    | 1.26    |

(\*) The decrease in the intensity index is due to the 4.4% reduction in consumption for public lighting, thanks to adoption of LED technology.

(\*\*) The increased consumption of electricity is primarily due to increases in consumption by Gori, which in 2019 acquired and launched management of plants previously controlled by the Campania regional authority.

(\*\*\*) The decrease in electricity consumed against wastewater treated is primarily due to the increase in wastewater treated by the Company Gori.

## ENERGY CONSUMPTION OUTSIDE OF THE GROUP

Since 2015, Acea has conducted **monitoring of the energy consumption outside the Group**, along the supply chain, requesting a representative panel of its suppliers to fill out a specific questionnaire. In December 2020 the questionnaire was sent to 79 suppliers, the principal parties in terms of value of orders for the year. Thanks to the results from 37 of those contacted (equal to 44% of the total Acea expenditure for the procurement of goods/services and works), the total energy consumption for all suppliers was estimated at approximately 150,662 GJ<sup>133</sup>. Since 2020, the questionnaire also included a specific section on water consumption (see the section *Attention to water consumption*, further on in the document).

## ENERGY SAVING

Ecogena is the appropriate body to develop the **energy efficiency initiatives of the Group Companies** and report their results to the Gestore dei Servizi Energetici (GSE) for the **awarding of Energy Efficiency Certificates (EECs)**. At 31/12/2020, a total of **8,508 EECs** had been obtained pursuant to the Ministerial Decree of 5 September 2011.

To make it possible for **Areti** to achieve its **energy savings** goal, the actions were focused on the purchase of EECs on the market managed by the electricity market operator (EMA) equal to **136,904 EECs** for 2020, to which is added the residual portion of the 2019 obligation equal to 48,947 EECs with respect to the initial 122,369 EECs, and the residual portion relating to the 2018 obligation equal to 10,102 EECs.

<sup>133</sup> The figure is obtained by readjusting the consumption of respondents relative to the total purchased during the year.

## ENERGY EFFICIENCY ACTIONS

In 2020, Acea launched **actions aimed at recovery of energy efficiency**, in particular at the headquarters and the **Companies of the operating segments of Water, Energy Infrastructure and Environment**. At the headquarters, works were completed for reconstruction of the balcony air-conditioning system, along with partial replacement of lighting systems with LED technology. Compartmentalization of the air-conditioning system of the Cedet headquarters was also performed. Consumption also decreased due to the health emergency.

For the **Water** segment, although numerous actions were taken to increase efficiency, as described below, there was a **10% increase in electricity consumption** compared to 2019, due primarily to low rainfall during the year, which led to an increase in consumption due to higher flow rates. The **energy efficiency measures** carried out by the Companies on ordinary activities **partly offset the overall increase in consumption**.

In this regard, **Acea Ato 2** achieved a **total savings of 6.7 TJ** (1.86 GWh) in 2020, against an expected annual energy savings target of 4.3 TJ (1.2 GWh). In particular, consumption has been reduced for energy used in the recovery of water losses in Roma, through significant measures taken to recover the resource, **with a saving of approximately 2.7 TJ** (0.74 GWh), and for the treatment section, **energy saved through efficiency measures was 4 TJ** (1.11 GWh), on the basis of optimisation works in the oxidation section of the Crocetta di Pomezia treatment plant and elimination of the two minor treatment plants (Sonnino and Colle Pisano). For **Acea Ato 5** increased efficiency, saving approximately **1.4 TJ** (0.38 GWh), was due to replacement of the pumps, inverter installation and upgrading of systems for the three well fields. **Gori**

implemented efficiency measures for a total saving of **9 TJ** (2.5 GWh), primarily due to new remote-control management methods and inverter installation. **AdF** increased efficiency for a saving of **2.7 TJ (0.7 GWh)** through the establishment of districts, management of pressure and searches for leaks, implementation of the “WPOM (Wastewater Pumps On-condition Maintenance)” project for maintenance in the sewerage segment, and the introduction of electric vehicles to its fleet.

For the **Environment** segment, activities to **increase energy efficiency** at the **San Vittore del Lazio plant** in 2020, involved the replacement of electric motors with new more efficient models, with works continuing in 2021, and at the **Terni waste-to-energy plant** inverters and new electric motors were installed that will increase efficiency for an annual saving of 220,000 kWh and increase plant production by approximately 4%, corresponding to approximately 3 GWh/year extra.

In the Networks segment, the Company **Areti** continued in 2020 **with works to increase efficiency** on the electricity distribution network managed, including:

- the use of **277 MV/LV transformers** with **very low losses**, which allowed a reduction in electricity consumption of 317 MWh;
- other **actions on the HV/MV/LV distribution network** aimed at optimising the structure of the MV network and adjustments for the HV and LV lines, for a total of 1,150 MWh saved.

Table no. 65 shows the types of actions and relative energy savings for Areti, for the last three years. In **2020**, the total **energy saving** was **5.4 TJ** (1.5 GWh) and approximately 500 tonnes of **CO<sub>2</sub> emissions were avoided**<sup>134</sup>.

**TABLE NO. 65 – ENERGY EFFICIENCY IN ARETI (2018-2020)**

| ENERGY SAVINGS ACHIEVED (GJ)  |        |       |       |
|---|--------|-------|-------|
| action  | 2018   | 2019  | 2020  |
| reduction in losses from the network  | 25,200 | 4,860 | 4,140 |
| of which reduction in losses through the purchase of new transformers                       | 1,112  | 1,454 | 1,141 |
| transformation of air conditioning and domestic hot water production system into heat pumps | 47     | 94    | 94    |

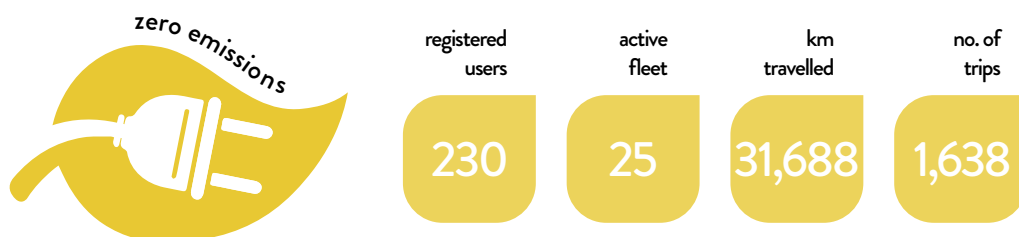
In 2020, **consumption for public lighting fell to about 67 GWh** (241 TJ) (70 GWh and 252 TJ in 2019), particularly due to the installation of **LED lamps**: from 191,200 in 2018 to 207,870 in 2020, out of a total of 226,635 lamps.

A further positive contribution was provided by the **25 electric vehicles** already in use in 2019 by the Company’s staff in the context of a car-sharing scheme (Renault ZOE cars). 100 electric Renault Kangoo cars were also purchased, destined for 24-hour

personal work use, of which 20 were already in use at the end of 2020.

Areti monitored distances travelled, recording a total of 53,100 km in 2020, consumption of approximately 8 MWh and a net saving of 5,300 kg of CO<sub>2</sub> related to the absence of use of diesel-powered vehicles. Analysing the data for car-sharing electric vehicles only, the number of journeys and kilometres travelled are presented in chart no. 55.

**CHART NO. 55 – CAR SHARING DATA (2020)** (\*)



(\*) The chart refers to the ZOE model cars in the car-sharing scheme. It does not include Renault Kangoo vehicles assigned individually.

<sup>134</sup> Calculations for estimation of CO<sub>2</sub> emissions avoided in the entire section *Relations with the environment* have been carried out using the 2020 Terna location-based conversion factor, equal to 0.336 tonnes of CO<sub>2</sub>/MWh. In the Sustainability Plan reporting, the same estimate is made using the 2019 conversion factor, in line with the calculation for definition of the 2024 target.

The Company **Acea Ato 2** will also soon be equipped with electric vehicles, for personnel involved in operation of treatment plants: in 2020 there was a call for tenders for the supply of **15 electric box trucks**. For recharging of the vehicles, the Company Ecogena has been contracted for the supply and installation of 11 recharging stations within the sites of the Roma Sud, Ostia, Roma Nord, Roma Est and Cobis treatment plants. Installation began in December 2020 and will be completed in the first two months of 2021.

## ATTENTION TO THE USE OF WATER RESOURCES

The Group promotes rationalisation of water resources, **also along the supply chain**, raising awareness amongst suppliers through use of a questionnaire (see also the section *Energy consumption outside of the Group*, under *Energy consumption*), which requests reporting of water withdrawal, amongst other aspects (see info. box for details).

**The main water intake of the Group** is related to **production processes**, such as the production of thermal energy at the Tor di Valle plant, that of electricity at the waste-to-energy plants and the production of compost. Water resources are used in treatment processes, for the dehydration of sludge, cleaning of sections, backwashing fine grilles and anaerobic digestion sectors. Furthermore, water is also used in laboratory activities, albeit in small quantities.

The overall increase in water intake in 2020 was primarily due to **improved reporting of industrial and civil water consumption, including reuse**, equal to 515,000 m<sup>3</sup> in 2020, for Companies in the water sector and in particular for Acea Ato 5, Gori and Gesesa. In this regard, in 2020 **a project was launched** coordinated by the Sustainability Planning and Reporting Unit of the Parent Company, **aimed at sharing the experiences of the different Companies in the water segment**, in order to define harmonised methodologies for monitoring of water intake, discharge and consumption, also on the basis of developments in the relevant GRI Standards. The project

will continue over the next two years, progressively broadening to also include Operating Companies in other segments.

It should in any case be noted that the greater consumption was recorded during the year at the Monterotondo Marittimo plant, fully operational in 2020.

The **Companies in the Environment segment** limit the consumption of drinking water, **mainly using water from wells**. In addition, **rainwater recovery systems** are active at the **San Vittore del Lazio, Orvieto, Aprilia and Terni** plants, and **since 2019** the latter has **two rainwater collection tanks** equipped with a filtration system and storage tanks. The **Aprilia composting plant** has a **system for the treatment of residual water from waste awaiting processing** for reuse in production processes, and exclusively for industrial uses (e.g. washing vehicles). Water collected from the first 5 mm of water from each rainfall event is also reused following treatment within the two collection tanks, through sedimentation and oil removal. At the **San Vittore del Lazio waste-to-energy plant**, rainwater is used in the production of demineralised water, after treatment in a specific chemical-physical plant, and is completely reused in the process, without discharge.

Finally, the **Orvieto plant hub collects rainwater** through the roofs of some buildings, **keeps it in underground storage tanks** and then **uses it in the compost maturation and storage phases**.

Thanks to the presence of these solutions at the plants, the volume of water recovered from the Environment Operations was around **38,200 m<sup>3</sup>**.

In order to reuse water from treatment processes and minimise consumption of drinking water, in 2020, the Company **Acea Ato 2** completed works for **modernisation of the industrial water network** (non-drinking water) for the treatment plants of Roma Sud, Roma Nord and Cobis, while similar activities are underway for the plants of Roma Est and Ostia. Finally, with the aim of promoting **reuse of purified wastewater** in the Integrated Water Service, at the Cobis treatment plant sections were completed for refinement of treated water, for its reuse for non-drinking-water purposes. The authorisation process is in progress.

**Group water intake** associated with industrial processes and civil uses is presented in table no. 66.

**TABLE NO. 66 – WATER INTAKE OF THE GROUP'S MAIN COMPANIES (2018-2020)**

|   | 2018 (*)                | 2019 (*)     | 2020         |
|---|-------------------------|--------------|--------------|
| <b>type of intake</b>   | <b>(Mm<sup>3</sup>)</b> |              |              |
| <b>industrial processes</b> (district heating, thermoelectric generation, Ambiente plants, Water companies) | <b>0.351</b>            | <b>0.358</b> | <b>0.828</b> |
| of which aqueduct (**)  | 0.243                   | 0.236        | 0.240        |
| of which well   | 0.055                   | 0.071        | 0.070        |
| of which river water (***)  | 0.003                   | 0.003        | 0.003        |
| of which recovered water  | 0.050                   | 0.048        | 0.515        |
| <b>water consumption for civil use (****)</b>   | <b>1.735</b>            | <b>2.071</b> | <b>2.633</b> |
| <b>total water consumption</b>  | <b>2.086</b>            | <b>2.429</b> | <b>3.460</b> |

**NOTE** Intake of freshwater occurs in areas at potential risk of water stress, as defined by the *Aqueduct Water Risk Atlas*, the map drawn up by the World Resources Institute (WRI).

(\*) The volumes for 2018 and 2019 have been restated and include data for AdF and Acque Industriali.

(\*\*) This item includes water transported by tankers to the Aprilia site (approximately 760 m<sup>3</sup> in 2020).

(\*\*\*) Consumption refers exclusively to the withdrawal from the Paglia river near the Orvieto composting plant.

(\*\*\*\*) Civil consumption derives from: aqueduct (99.9%), well and tankers.

## WATER INTAKE OF PANEL OF SUPPLIERS MONITORED

To raise awareness along the supply chain of the importance of safeguarding water resources, the Sustainability Planning & Reporting Unit, with the support of the Procurement and Logistics function, asked a panel of suppliers, for the first time in 2020 and on an experimental basis, to also provide data on water intake, divided by process and civil uses. **33 suppliers** out of 79 suppliers invited to re-

plied to the section on water resources, corresponding 40% of the total expenditure of the Acea Group for procurements of goods, services and labour. Water intake by suppliers in 2020 equalled 14,344 m<sup>3</sup>, divided into 9,543 m<sup>3</sup> for industrial uses and 4,802 m<sup>3</sup> for civil uses. The intention is to proceed with this activity, monitoring data and continuing to raise awareness around the issue.

**Discharges of water intake** occur within **authorised** and **closely controlled processes**. For example, at the **Terni waste-to-energy plant**, residual water from production processes is **first treated by internal treatment plants**, before being discharged into public sewerage. Water used in the waste-to-energy process at the San Vittore del Lazio plant, instead, is collected and stored in special underground tanks and disposed of as waste, as it may contain components that make it unsuitable for normal discharge.

Discharge into surface water bodies occurs only under exceptional circumstances, i.e. in the event of rainwater in excess of the first 5 mm of water from each rainfall event that is greater than the quantities reused internally, and in 2020 there were no such

events. Wastewater from toilet facilities of production lines and offices are collected in septic tanks and subsequently sent for disposal. Sewage from the headquarters is instead collected and transferred in an “Imhoff tank” with a sub-irrigation system for clarified material into the soil, which came into operation in 2020. Water intake for industrial uses in activities connected to the integrated water service, and in particular water treatment, **undergoes the same treatment as waters transported via public sewerage**, i.e. it is retreated at the head of the treatment plant and sent to the locations described in the section *Sewerage service and treatment system*, in the chapter *Water segment*. All civil water intake from the aqueduct ends up directly in the public sewer system.

## EMISSIONS



CONTINUOUS ANALYSIS OF WASTE-TO-ENERGY EMISSIONS: **values of pollutants significantly lower than legal limits**



**improvement in intensity index for emissions (SCOPE 2) FROM NETWORK LOSSES AGAINST TOTAL ELECTRICITY DISTRIBUTED: 0.0093 t/MWh**

## ATMOSPHERIC EMISSIONS

**Atmospheric emissions from Acea plants** are constantly monitored. Plants are managed according to the UNI EN ISO 14001 and UNI EN ISO 45001/OHSAS 18001:2007 standards. Waste-to-energy plants are also **registered under the European EMAS III scheme**, extended until 2021.

With regard to the most significant macro-pollutants connected with the main production processes of Acea Ambiente and Acea Produzione plants, see the summary data in table no. 67. Data, monitored through Continuous Emissions Monitoring Systems (CEMSs), is in line with the values for previous years, with the exception of SO<sub>x</sub> emissions, which increased due to a greater concentration in the pulper waste sent for combustion. The values are nevertheless very low.

**TABLE NO. 67 – ENVIRONMENTAL INDICATORS: CO<sub>2</sub> EMISSIONS, GREENHOUSE GAS INTENSITY INDICES AND VEHICLE EMISSIONS (2018-2020)**

|                                | 2018       | 2019   | 2020   |
|--------------------------------|------------|--------|--------|
| <b>emissions</b>               | <b>(t)</b> |        |        |
| CO                             | 6.38       | 7.02   | 8.34   |
| NO <sub>x</sub>                | 189.40     | 188.19 | 190.67 |
| SO <sub>x</sub>                | 0.16       | 0.33   | 0.90   |
| particles (particulate matter) | 0.50       | 0.60   | 0.60   |

**NOTE** The emissions refer to the plants of Acea Ambiente – waste-to-energy and Acea Produzione.

In detail, in the **waste-to-energy plants**, monitoring is carried out by means of fixed and mobile stations that **sample and analyse the fumes coming out of the chimneys, measuring**

**concentrations** for numerous parameters that are periodically checked by internal personnel and certified by qualified external laboratories. Again in 2020, the **values of the main**