Asja Group



- biogas
- biomethane
- wind
- photovoltaics
- energy efficiency

current worldwide presence



12 plants

Operating, under construction and development

biogas

130 MW 52 plants built 22 currently operating

Leader in Italiy first to realize a CDM project

Gold Standard Certification

wind

127 MW 11 wind farms built 10 currently operating First in Italy to install Vestas V117 Turbines

photovoltaic

12 MW 15 plants built

microcogeneration

200+ installed TOTEMs 3,000 mq manufacturing plant

Note 1: Organic Fraction of Municipal Solid Waste

biogas biomethane wind photovoltaics energy efficiency .



Asja operates also

abroad: - in Brazil;

- in China;

- in Colombia.



Asja was founded on January 9, 1995 from the idea of transforming waste into resource through energy enhancement of biogas. Since then...



we went abroad to Argentina, Brazil, China, Colombia (and not only) facing, among the first, the difficult challenge of the Kyoto protocol





we diversified our business in sectors such as wind (2001), photovoltaic (2004), energy efficiency (2013), micro cogeneration (the 2015 TOTEM challenge) and biomethane production from OFMSW (2018)











During this time we have: produced

7.000.000

MWh of green energy (annual consumption per 9.400.000 people) saved

11.400.000

Oil barrels (fulfillment of the needs of 1.400.000 people in one year) avoided

18.000.000

Tons of CO₂

(quantity absorbed by a forest larger than the surface of Lazio region)



Asja is a member of...

Elettricità Futura

The main association that represents and protects large and small companies, operating in the Italian electricity generation sector and producing both renewable and conventional power. Its members supply more than 70% of the electricity consumed in Italy.

Agostino Re Rebaudengo is its president and he is also vice president of Confindustria Energia.





and...















In 2018 Asja entered the London Stock Exchange Group's international Elite project.



renewable electric energy



from wind, photovoltaic and landfill biogas plants

Energy efficiency and distributed generation



with TOTEM's line-up of products: micro cogenerators -CHP, gas heat pumps - GHP and control units for energy saving - ECO

circular economy



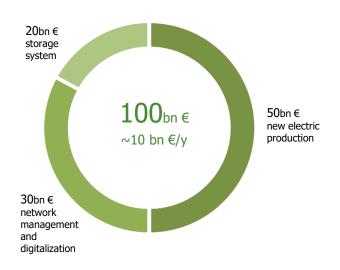
Through OFMSW treatment plants for the production renewable energy (biomethane/electric energy) and quality compost



...and amount of investments 2021-2030

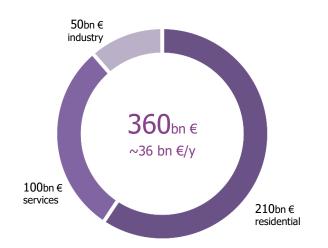
70% of Green power in 2030 over the 38% of 2020

renewable electric energy



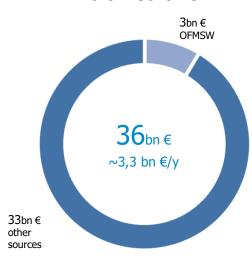
58% of savings on final consumption compared to 24% in 2020

energy efficiency



14% of biomethane into the gas grid compared to 1% in 2020

biomethane







wind



New wind plants for 100 MW

photovoltaic



New solar plants for 20 MW

biogas



New landfill biogas plants for 30 MW









Asja for energy efficiency produces:

- the high-performance TOTEM micro-cogeneration system CHP;
- the gas heat pump TOTEM GHP;
- the smart system for efficient management of energy and water TOTEM ECO.

TOTEM CHP is a micro-cogenerator system fueled by natural gas/biomethane/LPG that generates heat and electricity at high efficiency.







TOTEM GHP is a gas heat pump that extracts renewable energy from the air to produce heat in the form of hot water (up to 75°).







TOTEM ECO is an Energy and Water Management System where energy and water consumption are efficiently managed and optimized.







Note 1: Compared to separate heat and power production; Note 2: Compared to a Class 6 condensing boiler; Note 3: Compared to ex ante situation. Consumptions are intended of energy and water.





In operation (4)









Under construction (4)









Under development (4)



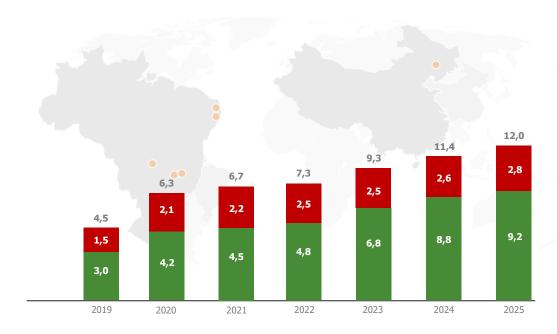








landfill biogas in Brazil and China



Gross Profit 2018-2021 (milions of Euro)



Asja has an historical presence in China (2006) and it is the third operator in development in **Brazil** (2009), where the electricity production from landfill biogas shows excellent prospects.

Following the launch of new initiatives in recent years, Asja is already counted among the top players of reference for this technology in the Brazilian market.

The gross profit generated over the last four years by landfill biogas plants abroad is significantly growing both in China (installation of more performing engines) and in Brazil (Sabarà, Joao Pessoa e Jaboatao).

The trend has accelerated in 2020 thanks to all plants working at full capacity and the enhancement of restaurant waste at the Shenyang plant (China).

This trend will continue in 2021 with the launch of the new Sabarà GD plant (Brazil).



Asja's projects benefits

Green project	Green Principle	Social and environmental benefits	Main SDGs	
OFMSW biomethane plant.	Circular economy and sustainable management of waste; Pollution control and prevention; Clean transportation.	Solid waste collection; Climate change mitigation; Reduction of fossil sources use.	Clean and accessible energy	7 MEDITALISMS
			Decent jobs and economic growth	8 DECENT WORK AND DOWNERS
Plants powered by renewable sources (wind, solar, biomass).	Renewable energy; Pollution control and prevention.	Reduction of fossil sources use; Climate change mitigation; Pollution reduction.	Industry, innovation and infrastructure	9 MUSTEY INFORMING MAN MAY ASSOCIATED
			Sustainable cities and communities	11 SUSTAINABLE CITIES AND COMMUNITIES
Microcogenerators (TOTEM) and energy efficiency solutions.	Energy efficiency.	Reduction of fossil sources use; Pollution reduction.	Responsable consumption and production	12 RESPONSIBLE OR CONSIDERATION AND PRODUCTION
			Fight against climate change	13 CLIMATE ACTION
SUSTAIN DEVELO G	NABLE MARKET WAS A STATE OF THE		Life on Earth	15 or



Asja's financial report has been certified by EY from 2005 to 2019 and by BDO since 2020.

Since more than 20 years all Asja's operating plants and corporate processes have been certified by RINA certification institution:

ISO 9001 - Quality: company process optimization to ensure an everincreasing fulfilment of client requirements.

ISO 14001 - Environment: commitment based on awareness and respect for the environment.

ISO 45001 - Safety: ongoing improvement in the protection of workers health and safety.

231 Organization and Management Model: an effective document that include dedicated procedures against Crimes relating to Safety, Hygiene and Health at work, Environmental Crimes, Crimes against the Public Administration, Corporate Crimes, Tax Crimes, Receiving and Self-Laundering and IT Crimes.

Control Model and ERP integrated system: a permanent supervision of activities and processes profitability according to the ABC (Activity Based Costing) method through the use of innovative and in Cloud platforms (Qlik Sense) and the employment of an integrated accounting management software ERP Alyante.

SOA Certificate OG1-IIIBIS, OG9-V, OG11-IIIBIS, OG12-V, OS14-**VIII:** company's ability to execute public works in tendering processes.



green energy efficiency by asja

www.asja.energy | www.totem.energy