



# PERPIGNAN MÉDITERRANÉE MÉTROPOLE: CARBON NEUTRALITY FOR WATER AND WASTEWATER SERVICES

Municipal

*The circular economy is a great opportunity to strengthen the local economy, because it generates territorial innovation through the promotion of new sectors and non relocatable activities. The Urban Authority of Perpignan Méditerranée Métropole has made it a strategic focus for energy transition within its territory.*

## | The challenge

Faced with the current challenges of reducing greenhouse gas emissions and dependence on fossil resources, Perpignan Méditerranée Métropole's Urban Authority and Veolia have been working since 2012 to reduce emissions, including the recovery of biogas from the digestion of sludge from the wastewater treatment plant, within the Positive Energy Territory Approach.

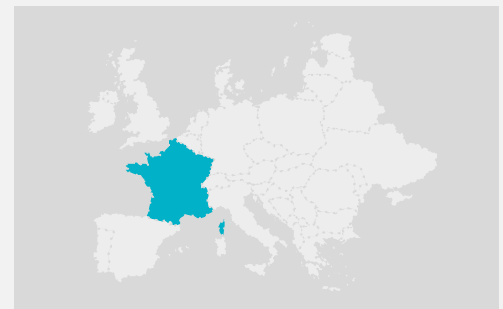
## | Veolia's solution

Recover biogas from digestion of sludge produced by the Perpignan treatment plant by introducing it into the City's gas distribution network.

In addition to this system, Veolia is deploying its Energido process on the wastewater treatment plant's anaerobic digestion process, which recovers heat from the treated wastewater to preheat the sewage sludge.

This anaerobic digestion unit has therefore been used to heat the equivalent of 1200 Perpignan households with renewable gas since September 2018.

The simultaneous use of two energy production facilities, based on wastewater and sewage sludge, is a first in France, demonstrating Veolia's ability to meet the environmental challenge proposed by Perpignan Méditerranée Métropole thanks to proven technical and operational know-how.



Perpignan, France



### Contract Facts:

Duration: 12 years

Type: PPP

**2,743 T**

CO<sub>2</sub>-eq emitted  
in 2020

Carbon  
neutrality  
target

**22% reduction in emissions from  
2012-2020  
(reduction of 45% with avoided  
emissions)**



## | Actions implemented & benefits

In addition to these innovations, in order to meet its "carbon neutrality" objective for water production and distribution and wastewater collection and treatment services, Veolia has implemented three complementary actions for mitigation:

### Reduction, as priority number 1:

- Water savings to reduce pumping and related emissions: control of consumption thanks to remote reading, network instrumentation and asset management of connections to limit leaks.
- Installation of new high-efficiency motors on rotating machines; installation of variable speed drives on pumps, less energy-hungry.
- Reduction in mileage through travel planning, use of 2 electric vehicles.
- Precise regulation of the aeration of the wastewater treatment plant with the Amonit® process.
- Change in aeration booster technology.
- Purchase of 2 recycling high-pressure sewer-cleaning trucks: reduction in drinking water consumption for wastewater cleaning and reduced travel.

### Substitution:

- Installation of solar panels on new buildings.
- Recovery of biogas into biomethane.
- New microalgae cultivation project with skylights in partnership with the local company Nénuphar. The recovery of gaseous CO<sub>2</sub> into organic matter via microalgae and cyanobacteria transforms an industrial process residue into a resource with high added value.

### Offsetting, as a final measure, with co-benefits of biodiversity, solidarity, resilience

To absorb the balance of CO<sub>2</sub>-eq of water and wastewater services after reduction and substitution:

- GOLD STANDARD-certified **partnership actions**: ceramic water filters in Cambodia, mini-digesters in Vietnam (without coal or deforestation to heat water) since 2012, with Nexus carbon for development.
- **Sustainable and well thought-out management of the Haut Vallespir forest (Pyrénées Orientales)** since 2015, with the Centre National de la Propriété Forestière (National Centre for Forest Property): maintenance of future trees, chestnut, beech, oak (at a rate of 1500 tonnes: 15 ha over 3 years, 100 T CO<sub>2</sub>-eq per ha).



*We are very happy to have made a mark with this pioneering partnership with a committed local authority in the government-sponsored environmental forum, the "Grenelle de l'Environnement", for Perpignan Méditerranée Métropole: effective carbon neutrality of the water and wastewater services since 2013 and achievements such as the production and injection of biomethane, etc., which are beneficial for the local authority and for Veolia.*

*Jean-François Lluch, Regional Director*



#### REGIONS & CITIES

Water: 956 km of networks;  
18 production facilities and 12 reservoirs;  
Wastewater services: 3 decontamination facilities and 622 km of wastewater system networks.



#### PLANET

83%: Index of the progress of the water resource protection approach.



#### WOMEN & MEN

156,000 people supplied with water and wastewater services.