

Aquiris optimizes its installations thanks to Flexcity's services

Tertiary, Water treatment

The water treatment plant Aquiris uses different electrical installations to ensure its activities. By engaging with Flexcity, Aquiris optimizes and valorizes its own site.

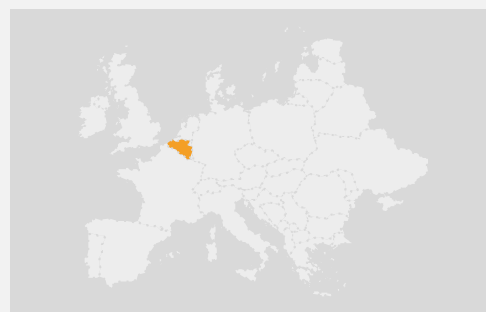
| Context

Each year, Aquiris treats 110 million cubic meters of wastewater. This makes it the largest wastewater treatment plant in Belgium.

To answer its own modernization goals, the station invested in green electricity production which now covers 30% of its electricity consumption. This green electricity comes from a fleet of photovoltaic panels (with more than 10 000 panels), a cogeneration unit using the biogas produced during sludge digestion and a hydraulic turbine recovering the potential energy from the water at the end of the treatment.

| Flexcity's solution

By incentivizing to adopt an energy efficiency approach, Flexcity enables the optimization of the Aquiris electrical installations while making them support the Belgian and European grid. Aquiris support the Belgian grid by producing more electricity in case of shortage or, on the contrary, producing less electricity when the grid has a surplus.



Brussels, Belgium



Concerned assets:
**Backup generators
and cogeneration**

Participate in flexible services
since 2019

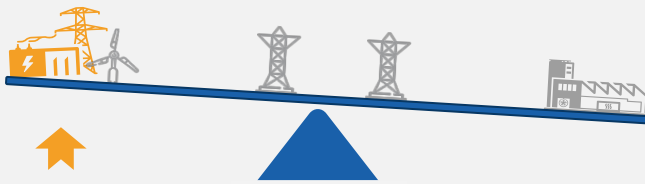
18 000 MWh

Yearly electricity production of Aquiris



Backup generators valorization

Aquiris' backup generators ensure the energy supply of the site in case of electricity shortage. Used in very rare occasions, these groups are available most of the time. This availability is used by Flexcity to support the Belgian electrical grid in participating to the tertiary reserve (also called mFRR or R3) when the grid cruelly lacks electricity.



Aquiris increases the production of its groups to supply the grid.

Few rare times in the year and for few minutes, the groups start and erase a part of the electricity consumption on site, lightening the pressure puts on the grid. They are considered as “**activated**”.



Activating backup generators enables the integration of renewables in the national energy mix. Indeed, starting groups balances and securizes the intermittent and unpredictable renewable supplies.



Cogeneration valorization

Aquiris' biogas cogeneration supplies the electricity and heat of its site. Mostly running at its maximal power, this cogeneration owns a flexible potential to participate in the secondary reserve of the Belgian electrical grid (also called aFRR or R2).

Aquiris reduced the production of its cogeneration to lighten the grid.



The cogeneration power is reduced several times a day during few minutes on average. Reducing its production helps to lighten the grid when it has an electricity surplus (electricity production > elec. consumption).



Gas storage tanks on site enable the storage of the already produced biogas when the cogeneration reduces its power.

Flexcity's expertise

Aquiris and Flexcity identified and has valorized the flexible power of its different installations. Thanks to its technologies and its market knowledge, Flexcity can adapt to the operational constraints of Aquiris and valorizes its installations in the suitable reserve at the appropriate moment.



FLEXCITY BOX

Secured connection

Ethernet, 4G

Interfaces

Modbus, TIC, pulse, P1,
analogue et digital I/O

Flexcity equipped Aquiris' installations with a smart control system called the Flexcity Box. The groups and the cogeneration are automatically activated.

| Aquiris' benefices

- Support the balance of the Belgian and European grid.
- Generation of supplementary revenues each year.
- Optimization of the cogeneration which supports the grid at key-moments in addition to supplying energy and heat to the site.
- Optimization of the backup generators, mostly unused and costly.
- Support to the ecological transition, to the energy transition and to the renewables



Flexcity: <https://www.flexcity.energy/en>

