

Veolia Water France reduces its electric consumption when the grid is under stress and participates to the security of the French power supply

Thanks to Flexcity's expertise, the Water activity of Veolia France valorizes the electric flexibility of hundreds of sites by operating storage capacity and natural inertia of drinking water and wastewater treatment processes.

| Context

Veolia is one of the global leaders of water management. In France, Veolia operates more than 5 000 wastewater treatment and drinking water plants for communities and industries. Power consumption represents a major part of their operational costs. Each of these sites owns electric installation, pumps, motors, compressors, etc.

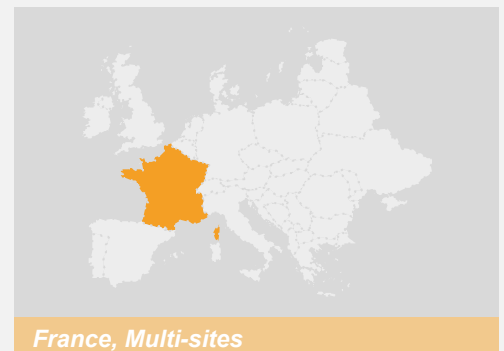
Wastewater collection or drinking water distribution networks often include important upstream or downstream storage capacities. Biotreatment processes also have natural inertia. Veolia is able to modulate the starts and stops of its electric installations while guaranteeing treatment quality.

| The solution of Flexcity

Since 2014, hundreds of Veolia sites have participated in electric flexibility mechanisms thanks to Flexcity.

Flexcity aggregates the flexible consumption capacities of the sites and proposes them to the French transmission system operator, RTE, or on the electricity markets.

Proposals dedicated to the water sector has been co-created to address the specific needs of each site: drinking water production, pumping stations, wastewater treatment plants, etc.



France, Multi-sites



Concerned installations:

Pumps, motors and suppressors

Hundreds of participating sites

Drinking water and wastewater treatment plants





By installing smart control systems or developing communication with existing teleprocessing systems, **Flexcity is able to send activation signals to its flexible capacities** to support RTE when there is pressure put on the grid. After receipt of the signal, **the participating sites have to react within a few minutes or several hours to slow down specific treatment processes during 1 or 2 hours.**

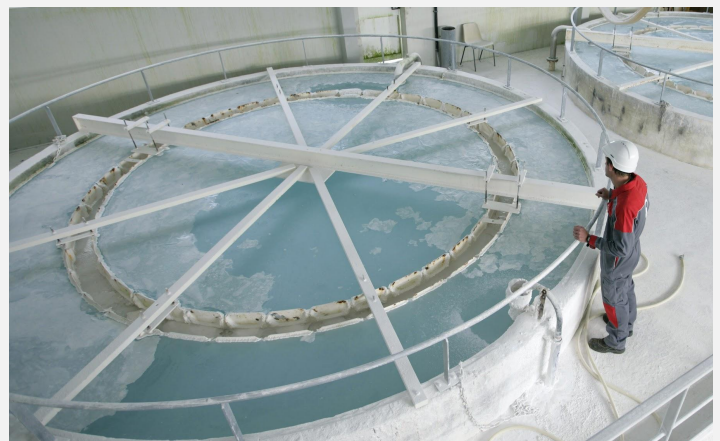
Drinking water or water distribution sites will typically stop one or more pumps and use their inertia linked to storage capacities as long as it has no impacts on

the quality of their services. Wastewater treatment plants will limit or delay the aeration cycles of their biotreatment basins. **These adaptations don't impact the water quality.**

Operators on site and automatic control systems receive an alert the day before, then a confirmation the day of the activation before their flexible capacities are activated in order to sufficiently anticipate the reduction of the treatment processes.

The activation is entirely automated et doesn't need any intervention. **The priority is the correct operation of the sites.** Each site can be unavailable for an activation at any time and can get back to their normal activities according to their operational parameters (filling level of their tanks, oxygen rate in the water, etc.).

Flexcity takes over the activations of the sites according to their specific operational constraints, enabling sites which would not be available to be balanced by the others. The quality of services is guaranteed and the consequent remuneration is optimized.



| Benefits

- Optimization of the electricity bill in a context of increasing energy prices.
- Active participation in the security of the power supply.
- Contribution to the energy transition and to the development of intermittent renewables by decarbonizing the balancing mechanism of the power grid.



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

“ We have worked with Flexcity since 2014. Flexcity has brought its expertise on energy markets, has understood our industrial processes and has been proactive to enable the Water Activity of Veolia France to participate in securing the power supply and in reducing the French carbon impact. **”**

Anne du Crest,
Operations director, Water Activity at Veolia France

FLEXCITY BOX

Flexcity equipped Veolia Water sites with a smart control system called the Flexcity Box.

Secured connection
Ethernet, 4G

Interfaces
Pulse, digital contacts, analogue, Modbus



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