

BENEO ORAFTI TRUSTS FLEXCITY TO VALORIZE ITS TURBINE

Industry, Agri-food

The Oreya site of Beneo Orafti has decided to participate in the new market of the Belgian secondary reserve (aFRR) with its gas turbine and thanks to the Flexcity expertise. While creating a new revenue stream, this participation takes into account the site process to avoid any impacts on its activity.

| Beneo Orafti: an ambitious company

Beneo, part of the Südzucker group, produces functional ingredients principally dedicated to the agri-food industry.

The Beneo Oreya site is engaged in a long-term energy efficiency program. Their main target is being carbon neutral by 2050 and they have already achieved to reduce their CO² emissions by 40% since 2010. This engagement also led to an investment in a new gas turbine with heat recovery: they enable the electrical autonomy of the site and even the export of a part of its electrical power into the grid.

| Flexcity's solution

In this context of energy efforts, the innovative Flexcity solutions **optimize the Beneo Oreya electric installations** and make them participate in the support of the Belgian and European electric grid. From the Flexcity's analysis and thanks to its modularity, the gas turbine fulfilled the different criteria to be valorized by electrical flexibility services without impacting on the site process.

The valorization consists in a participation in the secondary reserve of the Belgian electrical grid, usually called **aFRR or R2**. The aFRR enables the balancing between the electrical supply and demand on the grid in case of electricity shortages but also of electricity surplus.



Beneo in Europe



Concerned installations:

Gas turbine with heat recovery

aFRR
(or R2)

Since
2020

For more details, contact Flexcity or Beneo Orafti Oreya through :
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Lien Van Schepdael, Technical Account Manager at Flexcity, next to the gas turbine of Beneo Orafti Oreya and with Guillaume Poncelet, Power Plant Engineer at Beneo.

Thanks to Flexcity's technology and market expertise, the Beneo Oreye gas turbine can be activated several times a day to produce less electricity for a few minutes. **These activations** help to relieve the electrical grid in case of electricity surplus and happen only when the turbine is available to produce less. The modern system of the heat recovery also plays a role by offsetting the electricity production loss and avoiding any impact on the industry process. Flexcity remunerates Beneo for making its own installation available for the needs of the electrical grid. The Oreye site benefits from a new revenue stream and could dedicate it to their energy efficiency program for instance.



To operate the activations, Flexcity equipped the gas turbine with a smart control system, the **Flexcity Box**. The box reduces the electricity production of the gas turbine, following a signal sent each 4 seconds during few minutes usually.

Secure connection
Ethernet, 4G
Interfaces
Modbus, TIC, pulse, P1,
analog and digital I/O

| Benefits: supplementary revenues that facilitate the energy transition

Beneo Orafti benefits from different aspects by participating to the Flexcity services:

- Optimization of the gas turbine: Flexcity analyzes the availability of the turbine to make it flexible.
- Creation of new revenues.
- Supplementary action added to Beneo energy efficiency program.
- Contribution to the Belgian and European balancing of the electrical grid.
- Support to the energy transition and inclusion of renewables.

Thus, Flexcity proposes to Beneo Orafti Oreye a new solution to reduce their energy costs and they now join forces to create the electrical grids of tomorrow.

 Flexcity website: <https://www.flexcity.energy/fr>

 Beneo website: <https://www.beneo.com/>

“ [...] When we invested in the new gas turbine, we naturally thought how to improve its profitability by participating in flexibility services.

Guillaume Poncelet, Power Plant Engineer à Beneo Orafti Oreye



REGION & CITY

Participating in flexibility services enables the industrial sites, such as Beneo, to play a new role for the national and European electrical grid.



PLANET

Flexcity uses its energy expertise to support the energy transition.



Flexcity has shown a keen interest and has been proactive to assist us for our first steps in the aFRR market.

*Guillaume Poncelet,
 Power Plant Engineer Beneo*

