

THY-MARCINELLE

Thy-Marcinelle valorizes its demand response potential with Flexcity Steel industry

Thanks to demand response services, important industrial processes can be valorized. It's the case of Thy-Marcinelle: they have engaged themselves with Flexcity to create new profitable and environmental opportunities for its site.

| Context

Thy-Marcinelle evolves in the steel industry, especially in the “recycled” or “secondary” steel. It has been a part of the Italian Riva group since 1989. Thy-Marcinelle produces approximately 800 000 tonnes of steel per year and **caters more than 32% of the Belgian market for electric furnace steel production.**

Eager to guarantee sustainable management in an industry still often considered as polluting, Thy-Marcinelle created a policy based on:

- an atmospheric pollution reduction
- important use of the water transports (standing for 70% of Thy-Marcinelle trips).
- a water consumption reduction: cooling waters in their installations runs in a closed loop.
- steel recycling: via an electrical channel, a circular economy approach which reduces the energy consumption of 74% and enables the revalorisation of all sub-products.

These projects stand for a sustainable management of the natural and energy resources, while being always challenged by a continuous improvement of the processes.



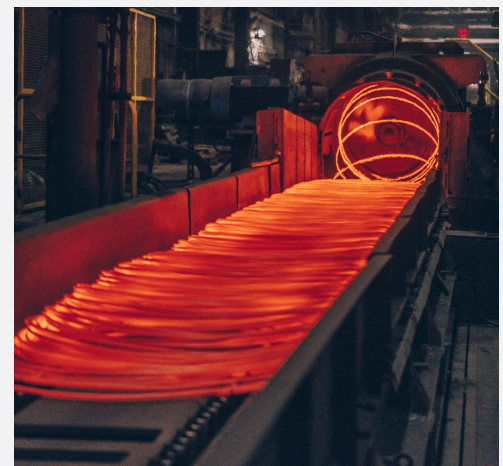
Charleroi, Belgium



Concerned assets:
**mill & electric
furnace**

Since 2020

Offered service:
mFRR (R3)



| Flexcity's solution

Thy-Marcinelle is an important energy consumer. Flexcity proposed to use this electrical consumption as a grid support and a new revenue stream.

Thy-Marcinelle can indeed modulate its electrical site consumption by mostly reducing the arc furnace and mill consumptions. Thy-Marcinelle now participates in the Belgian tertiary reserve (called R3 or mFRR) and lightens the grid pressure in case of lack of electricity.

These occasional activations comply with the technical constraints on site. Flexcity valorizes these power modulations based on a rigorous analysis of its data. Thanks to its expertise, Flexcity determines the available flexible volume, the availability moments and the conditions of its offer on the market.

Before all, Flexcity respects its partner's process et and its operational constraints to avoid any disturbance of its activity. Thy-Marcinelle also receives a remuneration to offer its electrical consumption reduction, while operating a new services according to its requirements of process improvements.

Flexcity equipped the stie with a smart control system, the **Flexcity box**. This box enables to follow an electrical consumption, its real-time availability and to activate the consumption reduction of the mill and the arc furnace.



| The benefits

- Generation of supplementary revenues for the site.
- A new project for Thy-Marcinelle to improve its processes.
- Contribution to the energy supply security in Belgium and Europe.
- Support to the energy transition and to the integration of renewables.



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



Participating in the electrical flexibility enables the flexible sites to play a new role in the European electrical grid by supporting them.



FLEXCITY BOX
Secured connection
Ethernet, 4G
Interfaces

*Modbus, TIC, pulse, P1,
analog and digital I/O*



Flexcity team was very available to detail its offer and to adapt to the operational reality of Thy-Marcinelle.



David Valenti, General Manager of Thy-Marcinelle