



SPAQuE AND RENEWABLE ENERGIES

As a major contributor to the economic and sustainable development of Wallonia, SPAQuE has always expressed a particular interest in renewable energies. After the use of landfill biogas as energy (producing electricity and heat), the use of "green" fuel for intensive-use vehicles and the planting of miscanthus, SPAQuE has begun to consider the question of solar energy.

So, since 2015, SPAQuE has been equipping former rehabilitated landfill sites with photovoltaic panels to produce electricity.

Depending on the quantities produced, this energy is either used on site to supply the landfill facilities (pumps, motors, degassing networks, etc.), or sold and fed back into the local power grid.

The former landfill sites are unusable for any other construction project and extremely conducive to photovoltaic panels' installations, but also wind turbines. A project is also under study at SPAQuE.

A PHOTOVOLTAIC PLANT MEASURING 2.5 HECTARES

Number of photovoltaic panels

3,844

Power

1 MWc (or 1,000 kWc)

Annual production

1,047 MWh (= average consumption of
300 households)

Cost

1,489,676 € ex.VAT

SAFEA IN LA LOUVIÈRE (1,000 KWC)

The construction of the first SPAQ \mathcal{E} photovoltaic plant began in May 2016 on the former "SAFEA" rehabilitated landfill site in La Louvière. This former slag heap had more than 300,000 m³ of industrial waste between 1980 and 1990. This part of the site was rehabilitated by SPAQ \mathcal{E} between 2008 and 2011 as soon as rehabilitation of the factory area was complete (2005 to 2007).

3,844 panels have therefore been installed over 2.5 hectares, on the flat part of the containment dome. Various infrastructural works have also been undertaken : a road has been built, trenches have been dug in order to route the cables, a technical container and a high-voltage cabin as well as fences, cameras and alarms have been installed.

All the electricity that is produced by the plant will be sold and fed directly back into the ORES power grid.



A WIND TURBINE AND NEW PANELS PROJECT

NOUVEAUX ATELIERS MÉCANIQUES IN MORLANWELZ (750 kWc)



In 2018, SPAQ ϵ E has constructed a second photovoltaic plant on the old slag heap of the "Nouveaux Ateliers Mécaniques" site ("NAM") in Morlanwelz. The "wasteland" part of this site was rehabilitated by SPAQ ϵ E between 2008 and 2011. While the "landfill" part of the site was rehabilitated between February and December 2013.

It is on this area that 2,777 photovoltaic panels have been installed (see areas highlighted in red in the above photo). Like on the "SAFEA" site, the plant is equipped with a road, a technical container, a high-voltage cabin, surveillance cameras, fences and alarms. The electricity that is produced is also sold and fed directly back into the ORES power grid.

Number of photovoltaic panels
2,777

Power
750 kWc

Annual production
750 MWh (= consumption of 215 households)

Cost
1,000,000 € ex.VAT

CHAMP DES 7 ÂNES IN FROIDCHAPELLE (2 MW)

SPAQ ϵ E will apply for a permit to construct a wind turbine on the "Champ des 7 ânes" site, also known as "Centre d'enfouissement technique d'Erpion" (engineered landfill site), in Froidchapelle, for which SPAQ ϵ E is currently providing provisional rehabilitation. With a mast height of 100 meters and a rotor diameter also measuring 100 meters, this wind turbine is expected to peak at 150 meters in height. It will complement the nearby fleet of 16 wind turbines, while remaining electrically independent.

Number of turbines

1

Power
2 MW

Annual production
4,650 MWh (= consumption of 1,330 households)

Cost
3,100,000 € ex.VAT



ISNES LANDFILL SITE IN GEMBLoux (5.5 kWc)



About twenty photovoltaic panels have been installed on the roof of the Isnes landfill facilities in Gembloux. These panels are used to supply power to the turbine motors, degassing networks, pumps, etc.

Number of photovoltaic panels
20

Power
5.5 kWc

Annual production
5,500 MWh (= consumption of one and a half household)

Cost (estimation)
10,000 € ex.VAT

TWO LANDFILL SITES ALREADY EQUIPPED BY SPAQ_uE

MELLERY LANDFILL SITE (5 KWC)

SPAQ_uE has begun its solar energy adventure in November 2015 on the old Mellery landfill site in Villers-la-Ville. Twenty panels were installed on the roof of one of the buildings of this site that has been rehabilitated by SPAQ_uE from 1991 to 1995. Now they partly supply the various facilities of the landfill site : pumps, motors, degassing networks, purification plants, etc.

Number of photovoltaic panels

20

Power

5 kWc

Annual production

5,000 kWh (= consumption of one and a half household)

Cost

9,328 € ex.VAT

HENSIES LANDFILL SITE (10 KWC)

Number of photovoltaic panels

37

Power

10 kWc

Annual production

10 MWh (= consumption of three households)

Cost

21,325 € ex.VAT

In the spring of 2016, SPAQ_uE installed 37 photovoltaic panels on the former Hensies landfill site, rehabilitated in 1999. They are placed on the ground on a paved area, and supply electricity to some of the various landfill facilities such as pumps, motors, a degassing network, etc.

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