

TRANS PED

TRANSFORMING CITIES
THROUGH POSITIVE
ENERGY DISTRICTS

The Abattoir site is a huge industrial slaughterhouse area in the middle of Brussels that is currently being redeveloped. It is a living lab of sustainability where commercial activities, living, working, leisure, and education meet. Fuelled by locally generated renewable energy, rainwater harvesting, and a unique emphasis on human connections and neighbourhood integration, Abattoir has already become a key hub for start-ups in the food industry, answering the need for fresh and safe food in urban areas.

ABATTOIR

POSITIVE ENERGY DISTRICT PROFILE

📍 LOCATION	ANDERLECHT (BRUSSELS CAPITAL REGION) BELGIUM
📏 SIZE	10.5 HA
⚙️ FUNCTION	MIXED-USE: COMMERCIAL, RESIDENTIAL, INDUSTRIAL, AGRICULTURAL AND CULTURAL
🏗️ TYPE	NEW BUILD AND RETROFIT
🕒 DURATION	START DATE: 2007 END DATE: N.A
📊 STATUS	15% CONSTRUCTED 25% IN DEVELOPMENT 60% IN PLANNING
🌐 WEBSITE	WWW.ABATTOIR.BE



ENERGY HIGHLIGHTS

PV POWER STATION

The Abattoir site is home to Europe's largest urban PV installation: 10,800 units in total. 5,000 solar panels were already in place before an additional 5,808 solar panels, covering more than 12,000 m² and producing an estimated 1,653 MWh/year, were installed on the main market hall.

HEAT RECOVERY

Abattoir is strategically using on-site surplus heat, such as from the cooling installations of the slaughterhouse, for other uses, e.g., for urban farming and soon for a swimming pool. Test drillings for geothermal energy have been successful and the first realisation phase is the next step.

ENERGY AS A SERVICE

Providing locally generated renewable energy to its vendors is a key activity for site operations.

OTHER ENERGY-RELATED IMPACTS

URBAN FARMING

Abattoir offers what urban farming needs: power, heat, water, and space. The project wants to continue developing local power farming activities where the production of food and energy are combined and reinforce one another. Insight into the energy flows and digitalisation are key for this.

CIRCULARITY

Different material and energy flows come together in Abattoir, resulting in opportunities to create synergies which help to close these loops.

AN URBAN PROJECT

Abattoir is situated in a very dense and diverse urban environment, both in terms of physical space as well as residents.

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PROJECT SETUP

For its size, the Abattoir site has a unique structure: it is run and managed by just one company. Abattoir NV is the landowner's service company in charge of almost every aspect of the project. Its activities include the construction, maintenance, and management of buildings, production & distribution of energy, and environmental management, but also organising markets & events, and cleaning the premises. Supporting Abattoir NV are highly specialised experts, providing the project with specific support and insights.

DUSS (Developing Urban Sustainable Society) is assisting the development of Abattoir's sustainability programme, which is integrated into every aspect of its activities.

Several vendors run the site's food production and urban agriculture activities. Cultureghem develops a broad range of sociocultural and community-building activities, while the Kotmet project is in charge of developing shops, student housing, apartments and common areas.

OPPORTUNITIES

LOCAL ENERGY HUB

Abattoir focuses on developing substantial renewable energy generation on site. Not only can it provide all the energy required for the various operations on-site, but due to its unique location in the centre of Brussels, it has the potential to become an energy hub for a much larger neighbourhood area.

SOCIAL HUB

Cultureghem is an NGO active at the Abattoir site, deeply rooted within the local neighbourhood. Its numerous community-building activities have already created lots of trust and it will become a key stakeholder to disseminate PED opportunities in the neighbourhood.

ENERGY METABOLISM

Strategically attracting businesses with a specific profile to the Abattoir site has the potential to valorise certain local waste streams, such as organic waste, water, excess heat, etc.

CHALLENGES

GOVERNANCE STRUCTURE

While Abattoir's unique governance structure in private hands enables fast decision-making, developing the area towards a PED and, in particular, developing energy service company services requires specific structures and expertise.

BUSINESS ASPECTS

To achieve PED goals of energy efficiency, generation and flexibility, the project must develop a viable business model and provide upfront financing in order to install the new infrastructure required to distribute heat and electricity in the neighbourhood.