

THE CLUSTER TWEED, SUSTAINABLE ENERGY CLUSTER, IS A WALLOON ORGANIZATION INCLUDING ONE HUNDRED ENTERPRISES ACTIVE IN THE SECTOR OF SUSTAINABLE ENERGY.



The Business Cluster plays a major role in business development in the « **sustainable energy** » areas :

- renewable energy sources (biomass-energy, PV, smart grids, storage, windturbines, ...)
- the implementation of processes allowing to achieve energy savings, energy efficiency and greenhouse gas reduction including CO₂ , in industry and in the tertiary sector
- the development of products for the same effects, for industry, the tertiary sector or individuals (« green » products and services)

To promote investments in the production and exploitation of sustainable energy, the Cluster TWEED is organized according to the main following **axes** :

- The networking of stakeholders through the organization of conferences, networking events, visits to companies...
- The technical support to the drawing up of investment / R&D projects in the sector
- The promotion of the skills of the cluster members, especially during missions/trade fairs abroad
- The implementation of a technology watch
- The organization of « project groups » comprising enterprises with complementary skills in order to meet regional or European calls for tenders and provide comprehensive solutions to customers in industrial-scale projects
- The drawing up of market studies and economic and technological analyses on sustainable energy

TWEED MEMBERS

TWEED has more than 100 members, including 80% of enterprises. The members of TWEED are enterprises with a registered office and/or an operating site in the Walloon Region (or in the Brussels Region) active in the « sustainable energy » area, in all sectors.

There are enterprises such as equipment assemblers, components manufacturers, energy producers but also services enterprises, design offices, CO₂ certificates traders or training centres, research centres, university services and other public partners.



Portal ReWallonia

SKILLS MAPPING

Cluster TWEED present the portal « REWallonia.be » (or « Renewable Energy Wallonia ») which gives access to all its stakeholder mappings: to date, it is more than 400 actors that have been identified / listed in different parts of the value chains (engineering, components manufacturing, R&D, operations and maintenance, recycling, ...), that is to say more than 80 players for windturbine, 70 for PV, 90 for biomass-energy, 65 for geothermal and solar thermal, 65 for smart grids and 65 for energy storage).



The objectives of the maps produced by TWEED for nearly 5 years are many: promoting actors of renewable sectors, diagnose areas, identify the strengths and weaknesses of the Walloon / Brussels actors and the opportunities and threats of the sectors, analyse the needs or the challenges of technological innovation, ...

Achieving these mappings of actors, where each organization has a record with skills / strengths / references and updated contact information, is a great way to stimulate the implementation of investment and R&D projects in these sectors, but also a tool to promote skills internationally, eg used at major fairs / exhibitions.

Already several success stories can be credited to the achievement of these techniques directories: identification of subcontractors specialized in the windturbine sector, conducting a mission to Denmark with the 'software' actors of windturbine identified in our studies, identification of R&D expertise in the PV solar sector and promoting them at an international conference in Sweden, attendance in the biggest shows of the concerned sectors in order to highlight some segments of the value chains (eg at Pollutec in the field of sewage sludge), ...



This interactive tool is doomed to be updated over time and Walloon and Brussels companies not yet listed and eager to showcase their skills in these sectors will be invited to join.





Flux50 is the **membership organization that helps Flanders gain international recognition as a Smart Energy Region**. Flux50 facilitates cross-sector collaboration between energy, IT and building companies to enhance the competitiveness of the Flemish smart energy industry in the transition towards low carbon systems.

Flux50 helps Flemish players bring innovative and fully integrated **energy products and – services to three segments of the international market:**

- energy-efficient industry,
- sustainable communities and cities and
- smart homes.

Therefore we set up and coordinate **living labs in five ‘innovator zones’:**

- (1) energy harbors,
- (2) microgrids,
- (3) multi-energy solutions at district level,
- (4) energy cloud platforms and
- (5) intelligent renovation.

Flux50 brings together **more than 120 relevant players from industry, academia and government** and provides them with:

- project support,
- (international) networking & matchmaking opportunities and
- a knowledge-sharing platform.

Project in the picture: the biggest CO2-neutral smart grid in Europe

On January 18th, the Green Energy Park Zellik – a joint project of UZ Brussel, VUB and Flux50 - was launched. This immense CO2-neutral smart grid – Europe’s largest – will serve as a test-ground for innovative energy systems and electric mobility. It will also provide energy to 72 companies located at the research park Zellik.

Green Energy Park Zellik is the only living lab in Europe to integrate an electric and a thermal grid. Three feasibility studies focus on the electric microgrid: (1) CO2-neutral grid, (2) battery to grid and (3) vehicle to grid. The first study investigates for example the implications of building a microgrid in an existing environment. This is an interesting case since the Green Energy Park wants to integrate the buildings of the research park Zellik. The microgrid will also be an excellent test-lab for batteries and electric mobility. Two other feasibility studies are related to the thermal grid: (4) green datacenter and (5) thermal grid. The 6th and final feasibility study is an atypical one: experimental operating room in UZ Brussel that can be used as a test-lab to identify the best energy system for specific needs.



KEY POINTS FOR BELGIUM

- **Renewable energy target** : 13% by 2020
- **Today (2018)** : 6,4% in Flanders, almost 13% of renewable energy in final consumption of Wallonia
- **Major sectors** :
 - Biomass-energy (most important renewable energy, for electricity or heat production)
 - Energy Efficiency : industry agreement in industry for CO₂ emissions reduction and energy efficiency improvement
 - Photovoltaic panels (boom in 2014 thanks to generous government subsidies)
 - Smart grids (lot of companies with ICT solutions)
 - Windturbines (new co-operative investment systems to develop the market ; skills in maintenance, software, monitoring, optimisation...)
- **Nuclear** : phase-out of Belgium's nuclear power stations (2025) and establishment of an energy transition pact (development of energy efficiency and renewable energy)
- **Innovation & hot topics in energy:**
 - Local energy communities with microgrid and district heating
 - DC networks on residential and district level
 - Energy cloud platform with digital applications (IoT/Data mining, ...)
 - Flexibility in the residential market
 - Power to gas, power to fuel / hydrogen
 - Solar energy for building integration and concentrated power
 - Smart cities and e-mobility
 - Storage
 - Waste heat recovery in industrial harbor environment
- **General strenghts of Belgium** :
 - strong R&D capabilities in all sectors (9 big universities, lot of R&D centers with strong know-how in energy),
 - accessibility (center of Europe, good quality of logistics,...),
 - technical know-how, sense of sharing (collaborations...),
 - quality of life...not just beers & chocolate !



LOOKING FOR

- ➔ assistance to get business opportunities
- ➔ business partners
- ➔ work place or welcoming offices

YES, I WANT A NEW STAMP ON MY ICN PASSPORT !

I'll use **Flux50 / TWEED** offices, attend their activities as a member and meet their key business contacts!

