



## Country-specific Policy Recommendations: Belgium

### The Challenge

“Belgium’s energy policy is focused on transitioning to a low-carbon economy while ensuring energy security, low consumer costs, and market competition,” according to the IEA.<sup>1</sup> Historically, Belgium’s energy needs have been significantly covered by nuclear reactors, but a phase-out is underway, with the last reactor scheduled to close in 2025. During the RES4LIVE project, the ILVO pilot farm (a swine farm) in Merelbeke, Belgium implemented an array of renewable energy technologies, including heat pumps, photovoltaic thermal (PVT) panels, and smart energy control systems. The foundation of these recommendations are suggestions and observations from Belgian stakeholders during national workshops held on [January 2023](#), [February 2023](#), and [June 2024](#), in which the participants – who included farmers and technology developers – discussed the advantages, challenges, and experiences of ILVO’s investments.

### Industry/Technological Level

#### *Ease of Installation*

Ensuring that installation for renewable system is performed in a timely, quality, and cost-effective manner is a major hurdle for the Belgian renewables sector, particularly in the agricultural sector. This will be key for an increased uptake in renewable energy solutions in agricultural facilities. In Belgium, installation prices are high largely due to manpower (including installers, plumbers, and electricians). During the RES4LIVE project, for example, the initial quoted installation price for PVT panels in Belgium was more than double the quoted prices in Germany or Italy. This is mainly due to high demand for plumbers and electricians; the cost for materials was significantly lower than the cost of labour. [Plumbers in Belgium](#) are generally expensive, especially if new pipelines and systems have to be installed, meaning greater working hours and additional transportation costs. The high upfront costs of installation is a significant barrier to uptake in Belgium.

#### *Technical*

While heating from renewables remains relatively uncommon in Belgium, there is an emerging trend of integrating PV and heat pump technologies to heat homes or offices. This duo of technologies can meet the heating needs of farms, too, and was effective at ILVO. The Belgian national workshops also indicated that Belgian stakeholders believe that energy efficiency is key – total energy use per unit of

<sup>1</sup> <https://www.iea.org/countries/belgium>





farm output should be reduced as much as possible. Therefore, adapting buildings, combining renewable energy technologies, and implementing proper building standards (see PB07 **Policy Recommendations for Livestock Buildings**) will be key to increasing efficiency and reducing energy costs.

### Policy recommendations:

- *Increase ease of energy installation by reducing upfront costs of installation – mainly by increasing skilled technicians.*
- *Support the combination of RES technologies in an energy system – i.e. PV, PVT, and heat recovery systems.*
- *Reduce total energy use by making agricultural facilities more energy efficient – often through insulated buildings.*

### Governmental level

#### Legislative

In Belgium, most energy legislation is devolved to the country's three administrative regions (Flanders, Wallonia and Brussels Capital) including grid codes as well as focus areas and targets (which complicates the process of designing, installing, and certifying renewable energy systems) and subsidy levels, which means that income earned from a system in Brussels-Capital or Wallonia (which both use green certificates) may differ from the income from one installed in Flanders (which uses a quota system, ecological premium and a net-metering scheme<sup>2</sup>). This system of green certificates is reserved for the production of electricity from renewable sources, but not all types of renewables qualify. The generation of heat through renewable energy sources is promoted through a system of energy subsidies or investment assistance via a tax deduction for the company installing them. Flanders also works with limits on the kWh/m<sup>2</sup> and also integrates renewable energy in the calculations.<sup>3</sup> Funding is therefore based on these limits (or potential limits for installing new system). As of 2024, Belgium works with a "capacity tariff" on the grid costs, meaning that peak demand over 15 minutes will influence final bills. This could result in needing to spread out electricity demand to avoid these peaks, in livestock farms this could mean planning feeding times at different times instead of all at once.

<sup>2</sup> <http://www.res-legal.eu/search-by-country/belgium/#:~:text=In%20Belgium%20electricity%20from%20renewable,the%20federal%20level%20in%20Belgium.>

<sup>3</sup> <https://www.vlaanderen.be/epb-pedia/rekenmethode/rekenmethode-e-peil/epn-methode>





### Funding

Most national investment in RES technologies in Belgium is delivered via the aforementioned subsidies, but taxation is also used to influence private spending decisions. Recent changes to VAT (a Federal competence) have worked both to boost the uptake of renewables (in 2023, the government permanently reduced the value-added tax from 21% to 6% for newly installed photovoltaic modules, thermal panels, solar water heaters, and heat pumps<sup>4</sup>) and to slow down their growth (in 2021, the federal government introduced a "social electricity" measure aimed at subsidizing electricity costs for Belgium's poorest users).<sup>5,6</sup> The tax system should be reformed to better benefit renewable technologies rather than fossil fuels, and to favour efficiently used electricity over natural gas.<sup>7,8</sup>

### Policy recommendations:

- *Reform the energy tax system to favour renewable technologies*
- *Introduce tax exemptions/low interest rates for renewable system installations to offset high initial investment costs.*

### Socio-Economic Level

A striking challenge in the Belgian landscape for renewables – and therefore their integration into agricultural facilities – is the lack of trained personnel. Skilling (or reskilling) workers will be key to successfully installing and operating RES systems on livestock farms. A characteristic of Belgium's technicians is that they tend to work only with brands they know. This was made clear throughout the installation process at ILVO, where plumbers for heat pumps would only work with certain brands due to their tools. In ILVO, for example, technicians preferred Alpex instead of Geberit tubes as they were unsure if their tools were certified for Geberit. When dealing with refrigerants, technicians must be qualified as "certified tool technicians". This requirement, feels RES4LIVE, is too strict, reduces the pool of installers, and therefore increases the time waiting for installation. Instead, the rules should be relaxed on specific certifications for technicians.

Finally, a remaining hurdle in the agricultural sector is the perceived "reliability" of fossil fuels when compared to renewables. This perception is more prevalent in older farmers. To correct misperceptions, e.g. by pointing out that gas prices surged during the recovery from COVID19 and from Russia's invasion of Ukraine, public awareness campaigns are needed drawing attention to the resilience of energy

<sup>4</sup> <https://www.brusselstimes.com/427281/belgium-permanently-sets-vat-on-gas-and-electricity-at-6>

<sup>5</sup> <https://www.creg.be/sites/default/files/assets/Publications/Studies/F2289EN.pdf>

<sup>6</sup> <https://www.energytrend.com/news/20240326-46168.html>

<sup>7</sup> [https://dashboard.vreg.be/report/DMR\\_Prijzen\\_elektriciteit.html](https://dashboard.vreg.be/report/DMR_Prijzen_elektriciteit.html)

<sup>8</sup> [https://dashboard.vreg.be/report/DMR\\_Prijzen\\_gas.html](https://dashboard.vreg.be/report/DMR_Prijzen_gas.html)





derived from on-site or nearby sources . They should focus on the reliability, stability and efficiency of renewables.

#### **Policy recommendations:**

- *Support training, re-training, and cross-training skilled workers in disciplines relevant to the renewable energy sectors (plumbers, electricians, certified tool technicians, stability engineers, etc.)*
- *Stress the reliability and long-term efficacy of renewable energy systems.*

