

How Votalia measures its avoided CO₂ emissions

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In light of the challenges posed by climate change, the transition to sustainable energy sources has become a priority. As a renewable energy producer, Votalia actively reduces CO₂ emissions into the atmosphere by taking practical steps towards the decarbonization of electricity. Lucie Perroys, Sustainability and ESG Data Analyst at Votalia, was involved in developing an innovative solution: an in-house tool that accurately measures the avoided CO₂ emissions. She shares her expertise with us.

Interview with Lucie Perroys, Sustainability & ESG Data Analyst

About Lucie

*"I joined Votalia 2 years ago after graduating from l'École des Mines d'Albi [Mines Albi School]. I first worked on the Green IT project for digital responsibility, and later joined the **Sustainability team**.*

*Since September 2021, I have held the position of **Sustainability & ESG Data Analyst**. My main role is calculating performance indicators related to the company's core Mission, including avoided CO₂ emissions."*

Measuring avoided CO₂ emissions: a priority for Votalia

*"Producing **renewable electricity** is Votalia's core business. This allows us to avoid CO₂ emissions by eliminating the need for carbon-based energy. It's therefore important to measure the positive impact of our actions on **climate change**", explains Lucie.*

*"**Calculating avoided emissions is a good indicator of how Votalia contributes to decarbonizing the electricity mix.**"*

Lucie Perroys Sustainability & ESG Data Analyst

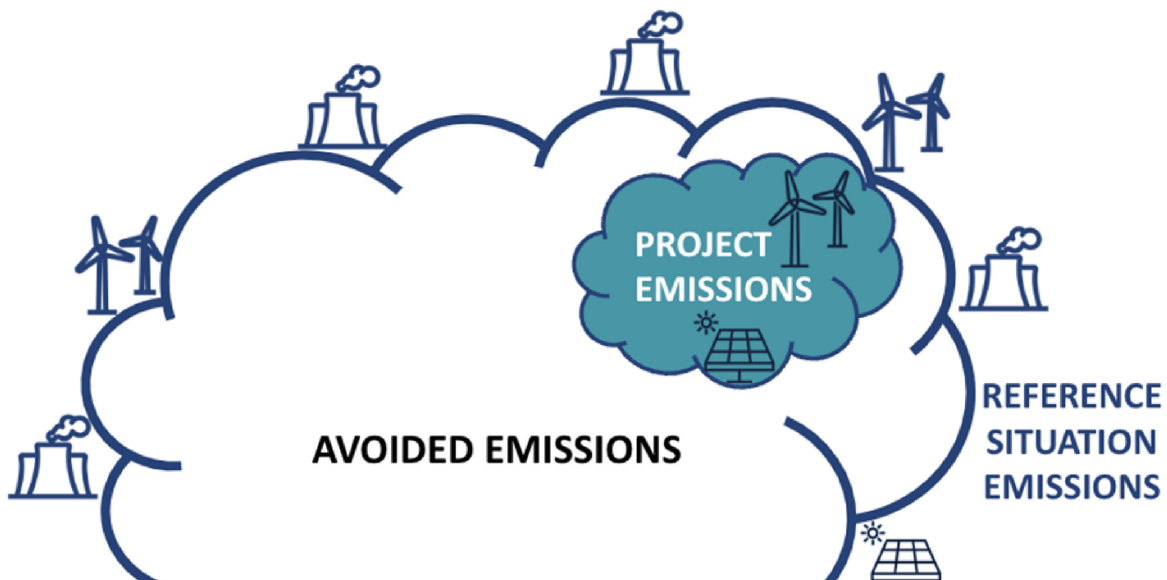
How do you measure avoided CO₂ emissions?

*"The measurement of avoided CO₂ emissions is based on a fairly simple principle. It involves distinguishing between emissions of a reference situation (where the energy we would use would be carbon-based energy produced by the country's other existing power plants) and the renewable energy project's **actual emissions**.*

*Each project's emissions are easily determined, since they are calculated directly in-house by our **Center of Expertise***

*The more complicated part is calculating the reference situation emissions! There are several ways to do this, but we use an internationally recognised methodology from the **Clean Development Mechanism (CDM)**. This was developed by the United Nations Framework Convention on Climate Change (UNFCCC)."*

Avoided CO₂ emissions = reference situation emissions - actual project emissions





Voltalia empowers its employees to calculate avoided CO₂ emissions

All Voltalia employees can access this **interactive**, user-friendly tool hosted by the company's Intranet. Now everyone can calculate the avoided emissions of a project.

It's intuitive to use. For each project, users select the **country** and **technology** (biomass, hydro, solar, or wind), enter the **annual production in MWh**, and the carbon intensity of the future power plant to get the result.

AVOIDED EMISSIONS TOOL

Click to refresh calculations

Country: ?

Technology: ?

Enter and then select annual produced energy (MWh) : ?

Do you know the Emission Factor of the project? ?

Enter emission factor ([kgCO₂eq/MWh]):

Avoided CO₂ emissions:
43 809 tCO₂eq/year

Carbon debt payback time:
1,43 years

Important to know:

Year of data: 2021

Reference situation used*: Operating Margin

*For biomass, reference situation: Average Emission Factor of No LCMR energies.

Why did you develop an in-house tool instead of using a service provider?

*"A key strength of the tool is that it gives us control over avoided emissions calculations. Our goal was to create a **unique methodology shared by the whole company**. We thought: we have all the skills and knowledge we'd need to build it, so let's do it."*

What is the added value of this tool for Voltalia?

*"At present, there is no single, internationally recognized methodology. This makes calculating avoided CO₂ emissions complex and challenging. With our tool, all Voltalia employees can calculate avoided emissions using the same methodology. We used to have a lot of non-alignment issues – different methodologies were used in different countries – but now we're all **aligned**."*

*Being **transparent about our methodology and sources** is a major goal for us. We have developed a [how-to sheet](#) which explains our methodology in simple terms, which also appears in our Statement of Non-Financial Performance Report."*

"Our tool for calculating avoided CO₂ emissions provides a single methodology for the entire Group. It has been reviewed and, most importantly, certified by an independent expert, ecodev."

Lucie Perroys Sustainability & ESG Data Analyst

In 2022, Voltalia produced 3.7 TWh of renewable energy, avoiding 1,436 kilotons of CO₂. What do you think about this result?

"It's encouraging, especially considering our 2027 target of 4,000 kilotons. It shows that Voltalia actively contributes to reducing CO₂ emissions by producing low-carbon energy."

*However, the ultimate goal for all renewable energy companies would be **zero avoided emissions**. This would mean the planet has reached a fully decarbonized mix. We're not there yet, but we're working on it!"*

These promising results are a testament to Voltalia's commitment to the decarbonization of electricity. In addition to its commitment to energy decarbonization, the Mission-Driven Company works to preserve biodiversity. It also contributes to sustainable development in various communities and regions. Interested in these actions?

[Discover Voltalia's Mission](#)