

Internship: Simultaneity Analysis

For: (Master's) student in Sustainable Energy Technology / Engineering Systems

Start: September 2025

Do you want to contribute to making the built environment more sustainable?

At **Biltin**, you'll work on smart, practical solutions that really make a difference. Together with companies, you're helping to build the future. This internship focuses on **grid congestion**.

How can you make a building's mechanical installation more sustainable *without* putting additional strain on the electricity grid?

In our project on grid congestion, we're exploring smart ways to heat buildings comfortably and sustainably—without increasing the load on the power grid. This is becoming increasingly important, as more and more areas are facing **grid congestion**: the electricity network becomes overloaded, especially when many devices are used simultaneously.

Your task

In this assignment, you'll investigate how heat demand and electricity consumption occur simultaneously in collective buildings (such as apartment complexes or office buildings). By analyzing **simultaneity**, you can come up with smart solutions to prevent energy consumption peaks.

For example: when everyone uses hot water and appliances at the same time, this causes a peak load on the grid. But if you understand when these peaks occur, you can smartly control systems or temporarily store energy. This makes the building more sustainable and better prepared for grid congestion.

An internship at Biltin? Smart choice.

Biltin is a collaboration between the companies **Hanzestrohm, Breman, Van der Sluis**, and the **Energy Transition research group at Windesheim University of Applied Sciences**. At Biltin, you're not working on something for "someday"—you're working on **real innovations** in construction and technology. You'll be part of projects that will make a difference in the field, alongside companies that value your fresh perspective.

You'll work on this assignment from Biltin's location at **Perron038**. It's easily accessible by public transport, equipped with several test labs you can work in, and it's the place where **knowledge meets practice**.

What's in it for you?

- Work on current sustainability and technical challenges
- Get to know multiple companies in construction and installation technology
- Access to test labs and smart solutions
- A valuable addition to your CV and a **paid internship**
- A great workplace in an inspiring location near **Zwolle train station**

Interested or want to apply directly?

Send your contact information, a short motivation, and (optionally) your LinkedIn profile to us via info@biltin.nl.

If you need further information from UT, you can contact **Prof. Dr. Ir. Mina Shahi** (m.shahi@utwente.nl)