



Aalborg, December 2015

## Engineering Firm Makes AAU Prototype Into 3-in-1 Device

A North Jutland engineering company will develop a prototype from Aalborg University into a smart, new 3-in-1 instrument that makes it easier to test power electronics components for use in the energy industry.

With [InnoBooster](#) support from the Innovation Fund, [PowerCon](#), a Hadsund company with 15 employees, is now making a bright idea from a group of AAU researchers into an industrially usable device. PowerCon is already developing technology that converts energy from wind turbines and other renewable sources to stable electricity in the grid.

- This is a bit of a chance for us because there is nothing quite comparable on the market. But there was great interest in the prototype from 30-40 potential industry customers when, along with researchers from AAU, we showed it at a big power electronics fair in Germany earlier this year. So we believe in it, says Peter Castberg Knudsen, engineer and business developer at PowerCon.

The idea for the TPT, or Triple Pulse Tester, stems from research at the strategic research center for Intelligent Efficient Power Electronics (IEPE). Ionut Trintis, Assistant Professor at the Department of Energy Technology and one of the creators, provides a brief and precise description of what it can do:

- It's a machine that can measure everything.

The measurements provide precise information on module voltage, current and power loss and thus also on the quality of the components tested. Today, this type of testing is done manually with a combination of several expensive measuring instruments. In future, it could be done automatically. The prototype from AAU has shown that this is possible.

- When it becomes easier to use than the existing solutions, it can also expand the user base and the market. A product that frees up resources will always be more interesting for businesses. But first we need to penetrate the market, so it's important to design it so that it's competitively priced, says Peter Castberg Knudsen, PowerCon.

### License agreement – and mutual trust

PowerCon and Aalborg University employees are now partnering to do just that. The parties have signed a license agreement that pays Aalborg University for the initial work and ties the AAU researchers to further work with testing and quality assurance on the upcoming product.

Is your power built in harmony?  
Test your devices!

Minimize costly replacements  
Characterize, Optimize, Verify and Monitor



*Rigorous testing and accurate readings can prevent components from giving out and breaking down. This was the focus of PowerCon and AAU at the joint presentation of the upcoming device to the energy industry.*



*Peter Castberg Knudsen, PowerCon.*



- But the trust between us and AAU means more than the actual contract. It's also about the fact that we want to support the work the university does in our field, emphasizes Peter C. Knudsen.

Energy professor Stig Munk-Nielsen of AAU who is director of the IEPE Research Center and is also involved in the TPT device, is pleased with arrangement:

- It's important for us to have access to the engineers in the industry because they provide input to our research. At the same time, they and the businesses they're employed in can take our ideas and turn them into products that provide benefits and creates jobs.

A large part of the work behind the Triple Pulse Tester has been done by engineer and software programmer Thomas Poulsen in connection with his master's thesis at the Department of Energy Technology that he completed earlier this year. He is now employed in the North Jutland technology company 2operate.

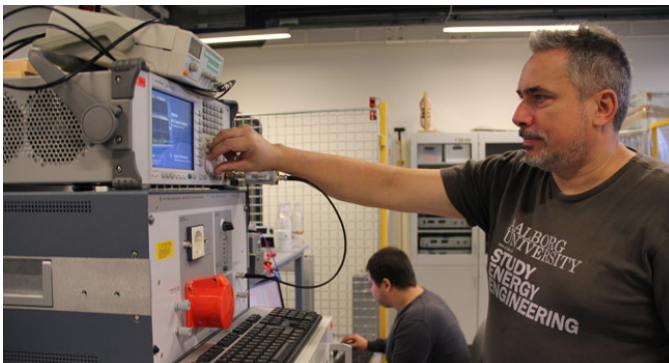
In addition to [the Innovation Fund](#), [the Obel Family Foundation](#) is supporting the research.

#### Further information

- Peter Castberg Knudsen, Engineer, PowerCon (Business Development), Tel.: +45 2782 8683
- Allan Holm Jørgensen, Engineer, PowerCon (Electrical Design), Tel.: +45 2835 2052
- [Stig Munk-Nielsen](#), Professor, [Department of Energy Technology](#) and [IEPE](#), AAU, Tel.: +45 9940 9242
- [Lars Halkjær](#), Special Consultant (Technology Transfer Manager), AAU, Tel.: +45 9940 7343



*There was great interest from industry when PowerCon and AAU presented the prototype in Germany. In six years they expect to be showing a finished product.*



*The research and prototype from the Department of Energy Technology labs will become a new product that can simplify testing components for renewable energy production.*