

Power Electronics Region

(PE:Region)

— cross-border application-oriented innovation within power electronics

PE:Region
Power Electronics Innovation

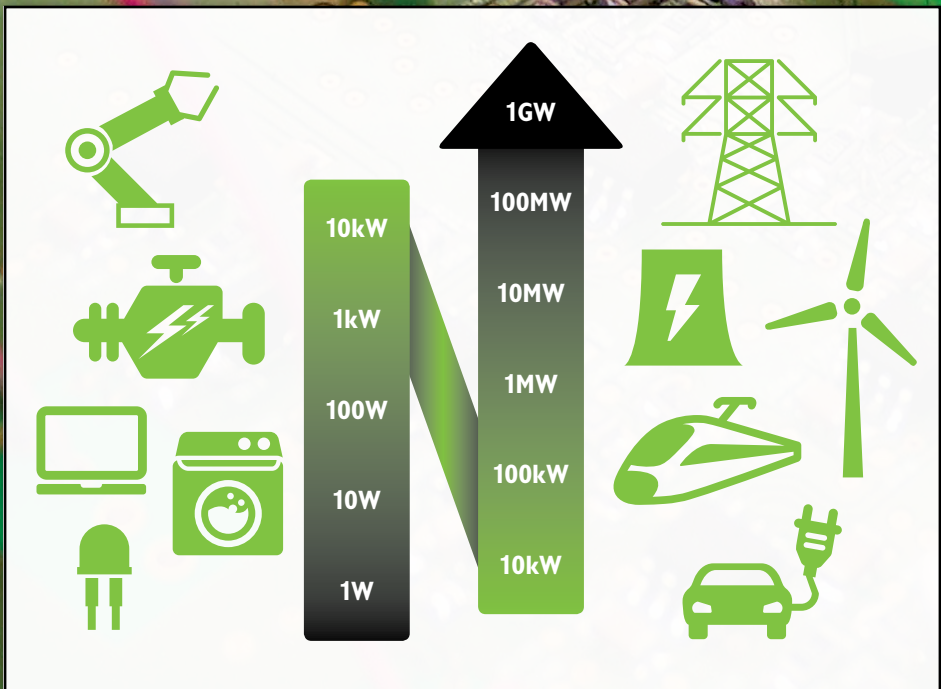
Electrification of energy systems

Power electronics is a cross-cutting technology applied for efficient control and conversion of electric power in a large number of applications within electronic equipment, home appliances, transport, industrial production, and energy generation. In future energy systems, power electronics is a key technology for enabling large-scale renewable energy production and storage, as well as for integration of the electricity into the grid. Furthermore, to obtain energy efficiency required to reduce the global energy consumption as much as possible, optimized power electronics technology is needed.

Therefore, a growing demand for innovative power electronics products and solutions is expected due to electrification of the energy systems and higher demands for energy efficiency.

A strong power electronics region

The PE:Region project targets a continued leading role for the Danish-German cross-border region in development and production of innovative power electronics components and systems. This implies robust, reliable and energy efficient products to growing markets where regional companies have strong positions in the value chains of renewable energy, variable speed drives, control and regulation of electric energy, and green mobility.



Thus, a focused cross-border region initiative related to excellence and innovation in power electronics will provide synergies and a stronger basis for the future Danish-German position in power electronics manufacturing.

Knowledge and business

With the aim to enhance regional economic growth and employment, the two-fold objective is:

- **Innovation for efficient electric power conversion:** Improve application-oriented cross-border capabilities for innovative power electronics research and product development.

- **Frameworks for power electronics manufacturing:** Develop competencies, establish networks, raise awareness about the regional importance of power electronics, and support business development within important value-creating and knowledge-based international markets.

The PE:Region main results are increased application-oriented and innovative power electronics research and development activities of the cross-border region, as well as improved frameworks for manufacturing. This supports a leading regional role within the power electronics industry.

W.P. 4: Innovation for efficient electric power conversion

PE technologies
(small/large)

Intelligence,
reliability, efficiency

PE Systems
(small/large)

Value chain focus:

- a) Renewable energy generation, grid integration and storage – wind and sun
- b) Variable speed drives for efficient control of motors
- c) Control and regulation of electric energy
- d) Green mobility

Frameworks for PE:

- Competence development
- Networking activities
- Laboratory and test facilities
- Awareness raising
- Innovation project development
- Monitoring of market trends

W.P. 3: Improved frameworks for
PE manufacturing

W.P. 2: Communication

W.P. 1: Project management

Would you like to know more?
www.pe-region.eu

Lead partner



Syddansk Universitet (SDU)
Mads Clausen Institutet (MCI)
Alsion 2, 6400 Sønderborg, Denmark

Partners with financial involvement



Kiel University
Christian-Albrechts-Universität zu Kiel

Christian-Albrechts-Universität zu Kiel (CAU)
Chair of Power Electronics
Kaiserstraße 2, 24143 Kiel, Germany



FACHHOCHSCHULE KIEL
University of Applied Sciences

Fachhochschule Kiel (FH-Kiel)
Institut für Mechatronik
Grenzstraße 5, 24149 Kiel, Germany

Forschungs- und Entwicklungszentrum
Fachhochschule Kiel GmbH (FuE FH Kiel GmbH)
Schwentinestraße 24, 24149 Kiel, Germany



Wirtschaftsförderung und Technologietransfer
Schleswig-Holstein GmbH (WTSH)
Lorentzendam 24, 24103 Kiel, Germany



Syddansk Universitet (SDU)
Mærsk Mc-Kinney Møller Institutet (MMMI)
Campusvej 55, DK-5230 Odense M, Denmark



Sønderborg Vækstråd (SV)
Stenager 2, DK-6400 Sønderborg, Denmark

Network partners

CLEAN, IHK Flensburg, Fraunhofer ISIT, URS, and a number of regional Danish and German companies.



Interreg
Deutschland - Danmark



PE:Region er finansieret af Interreg Deutschland-Danmark med midler fra Den Europæiske Fond for Regionaludvikling. Læs mere om Interreg Deutschland-Danmark på www.interreg5a.eu – PE:Region wird gefördert durch Interreg Deutschland-Danmark mit Mitteln des Europäischen Fonds für regionale Entwicklung. Erfahren Sie mehr über Interreg Deutschland-Danmark unter www.interreg5a.eu