

ELECTRIC DRIVES TECHNOLOGIES IN INDUSTRIAL AND MOBILE APPLICATIONS

**28 AUGUST 2018, 09:30-15:30,
DANFOSS DRIVES, ULSNÆS 1, 6300 GRÅSTEN**

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

BACKGROUND – ELECTRIC DRIVES OF GROWING IMPORTANCE IN INDUSTRIAL AND MOBILE APPLICATIONS



- Increasing electrification of the energy systems in response to the global climate challenges
- Markets for electric drives are stimulated by electrification and the need for energy efficient, reliable and intelligent solutions
- Strong regional positions within the electric drives industry sector:
 - *Components for electric drives*
 - *Industrial applications*
 - *Mobile applications*
- Further German-Danish and Scandinavian business opportunities exist

PURPOSE OF SEMINAR



1. Overview of electric drives technologies and business development
2. Insights in present research work
3. Examples of drives technology application
4. Networking possibility

PE:REGION – PROJECT PERIOD, BUDGET AND PARTNERS

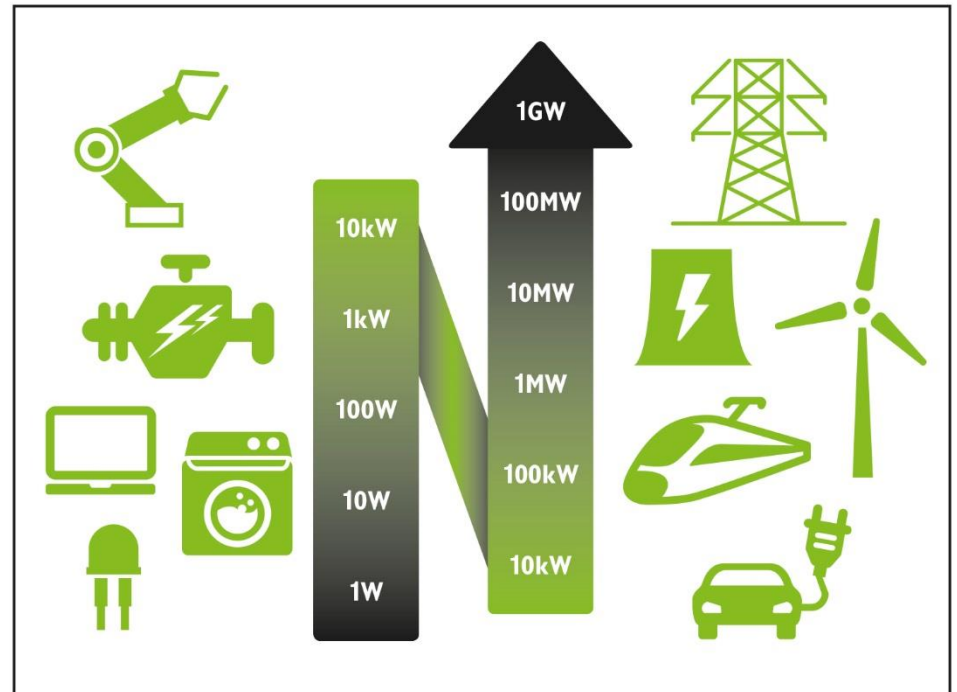


- Period: 01-01-2016 to 31-12-2019 (4 years)
- Program: Interreg 5A, Syddansk Vækstforum
- Budget: 4,243 million Euro gross budget; 2,546 million Euro Interreg grant (60%); plus 20% grant to Danish partners (3,527 mio. DKK)
- Financial partners: SDU-MCI, SDU-MMMI, CAU, FH Kiel, FuE FH Kiel GmbH, WTSH, Sønderborg Vækstråd
- Network partners: Companies, clusters, business development organisations

PE:REGION – POWER ELECTRONICS AND ITS REGIONAL BUSINESS IMPORTANCE



- Efficient control and conversion of electric power in the whole energy value chain
- Important industry in Southern Denmark, Schleswig-Holstein and Hamburg



PE:REGION OBJECTIVES – KNOWLEDGE AND BUSINESS



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:
 - assist in development of competencies,
 - establish networks,
 - raise awareness about the regional importance of PE,
 - support business development

Future perspective for power electronics collaboration – from PE:Region project activities, over establishment of a Danish-German cross-border PE-Region Platform, towards a strong PE-Region North collaboration on research, innovation and business development



PE:Region – project activities on PE framework conditions, research and demonstrators

PE-Region Platform – establishment of Danish-German cross-border platform for innovation on energy efficient PE. Including novel research and demonstrators, with exploitation of digitalization potentials

PE-Region North – vision of a future strong collaboration on PE research, innovation and business development in a geographically broader Northern European hub for PE

09:30	Welcome	Niels Gade, Danfoss Drives
09:35	Introduction to seminar and the PE:Region project	Gustav Nebel, Sønderborg Vækstråd
09:45	Electrical Drives research at Lappeenranta University of Technology	Olli Pyrhönen, LUT School of Energy Systems
10:25	Coffee break	
10:50	Market tendencies within industrial and mobile applications	Mette Nordstrøm Simonsen, Danfoss Silicon Power GmbH
11:20	Next steps in research on energy efficient power conversion	Morten Nymand, SDU
11:45	Low harmonic and thermal stress control of power converters for electric drives	Marco Liserre, CAU
12:10	Lunch	
12:50	Danfoss Power Solutions Electrification Journey (EDITRON)	Thorsten Boger, Danfoss Power Solutions GmbH
13:15	Automotive application: Modern auxiliary motors in electric utility vehicles	Henning Brodersen, MOTEG GmbH
13:40	Decentral Drives in Industrial Applications	Daniel Reichenbecher, Nord Drivesystems, Bargteheide
14:05	Coffee break	
14:35	Reliability centred maintenance in Drives applications	Jörg Dannehl, Danfoss Drives
15:00	Modeling and implementation of actuator parameters	Jeppe Bastholm, Linak
15:25	Closing remarks, conclusions and future perspectives	Kasper Paasch, SDU
Optional		
15:30	Visit to Danfoss Drives manufacturing facilities	