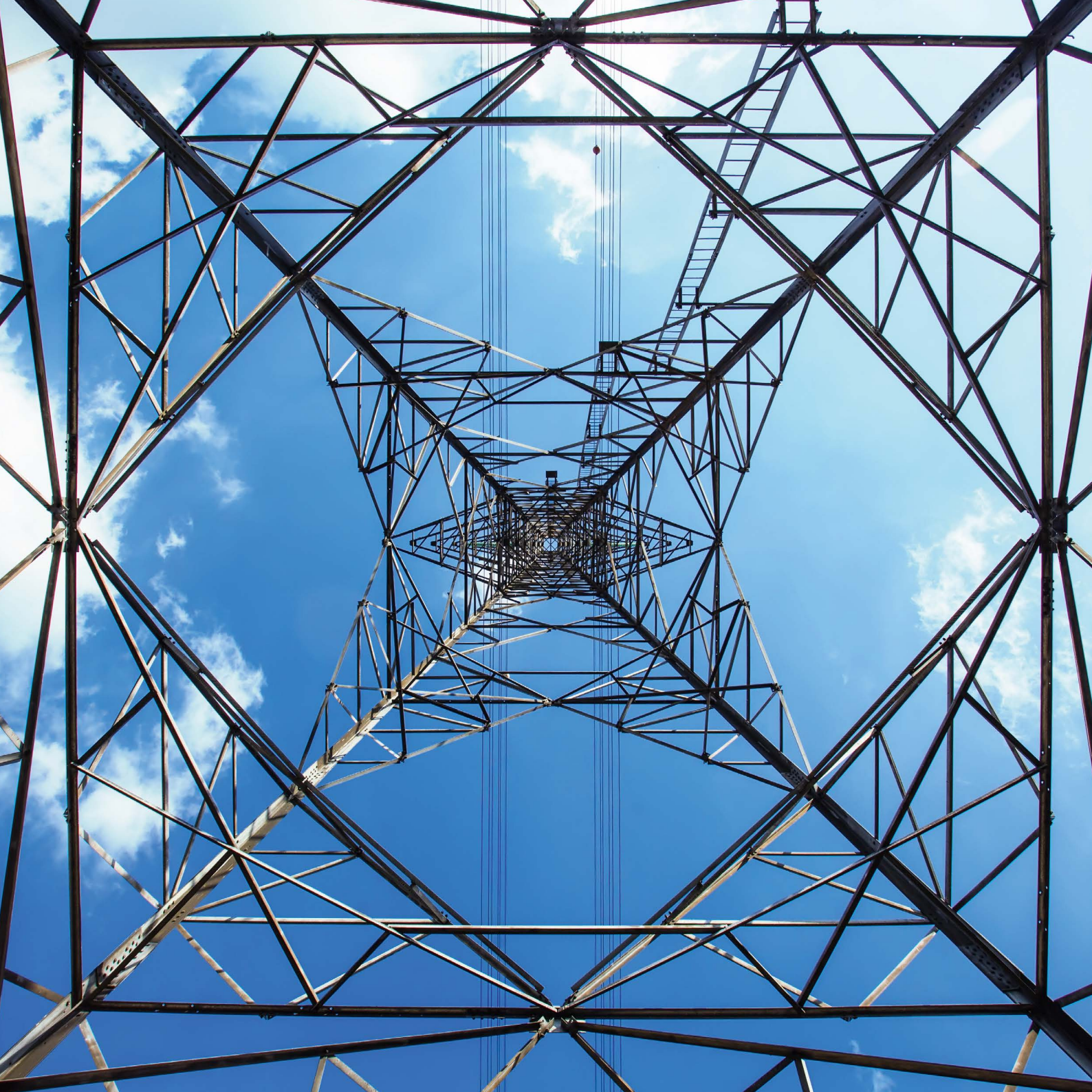


Cluster Decarbonisation in Industries

The Network for a Greenhouse Gas-Neutral Industrial Future

www.cluster-dekarbonisierung.de/en



“The path to a climate-neutral industrial future must be a shared journey.”



Andreas Findeisen, Head of CDI Coordination office in the Competence Centre on Climate Change Mitigation in Energy-Intensive Industries (KEI)

The Cluster Decarbonisation in Industries brings all of the relevant actors together – from companies in the primary industries and research institutions to technical and consulting service providers.

With more than 100 CDI partners, we work together on solutions for the challenges facing industrial decarbonisation. Our goal is to create an industry- and sector-wide understanding of the situation, and to exploit synergies. Drawing on the know-how and wide-ranging expertise bundled in the cluster, we are actively powering the climate-neutral transformation of the manufacturing sector.

A handwritten signature in black ink, reading "Andreas Findeisen".

Hand-in-hand for a climate-friendly industry

The Cluster Decarbonisation in Industries (CDI) was founded in 2021 on the initiative of four Cottbus institutions to actively pave the way towards a climate-neutral industry. The initiators – the Brandenburg University of Technology (BTU) Cottbus-Senftenberg, the Institute of Low-Carbon Industrial Processes of the German Aerospace Center (DLR), the Fraunhofer Research Institution for Energy Infrastructures and Geothermal Systems IEG, and the Competence Centre on Climate Change Mitigation in Energy-Intensive Industries (KEI) – contribute the interdisciplinary skillsets required for this work. Since 2024, six industrial companies from the CDI group of partners are also contributing their expertise to the work of the cluster as an Advisory Board.

The network's interdisciplinary orientation facilitates the examination and interlinking of

the technical, economic and social aspects of decarbonisation. This enables the challenges and opportunities of industrial transformation to be identified in their entirety, and the development of innovative solution strategies is promoted and accelerated.

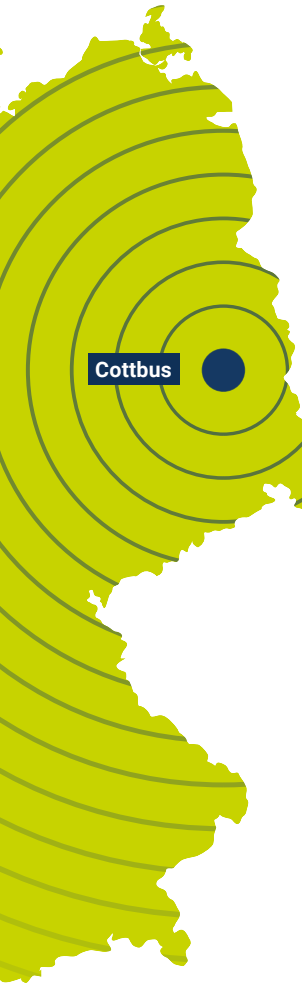
The initiators act as a steering committee in the CDI, developing the network into a central contact point for all actors in the decarbonisation process. In doing so, they are bundling extensive expertise for a climate-friendly industry at the joint location in Lusatia, while at the same time making an active contribution to the structural development of the region. The first point of contact for all cluster partners and stakeholders is the CDI Coordination Office, which is operated by the Competence Centre on Climate Change Mitigation in Energy-Intensive Industries (KEI).

Institute of Low-Carbon Industrial Processes of the German Aerospace Center (DLR)

“The DLR is currently working on solutions for an economically viable transformation of industrial and power station processes into low-carbon technologies. For this purpose, the institute is conducting research on sustainably generated process heat and alternatives for fossil fuels. By means of the formation of the cluster and especially the cooperation with the cluster partners, the future is developed through research, innovation and technology transfer.”

Prof. Dr. Uwe Riedel, Institute Director





Competence Centre on Climate Change Mitigation in Energy-Intensive Industries (KEI)

"The KEI is working with research institutions in Cottbus to actively promote solutions for a climate-neutral transformation in the cluster. As the operators of the CDI Coordination Office, we organise operational cooperation between partners, and steer activities within the nationwide German network – and beyond. The KEI advises on and promotes greenhouse gas mitigation, with a focus on energy-intensive manufacturing industries. Our interdisciplinary team also manages the Federal Fund for Industry and Climate Action."

Jakob Flechtner, Director



Brandenburg University of Technology (BTU) Cottbus-Senftenberg

"The BTU combines basic and application-oriented research. Our area of expertise, the 'Decarbonisation and Transformation of Industry' is unique in the German academic landscape and makes a contribution to securing skilled workers in the area of climate action. Furthermore, the cluster also enables us to bundle our expertise and make a success of the complex transformation not only in research but also in the implementation and transformation of the economy and region for Lusatia, and create a model that is highly respected beyond the region and internationally."

Prof. Dr. Gesine Grande, President



Fraunhofer Research Institution for Energy Infrastructures and Geothermal Systems IEG

"Fraunhofer IEG conducts research on integrated energy infrastructures as well as transport and storage systems for carbon dioxide and hydrogen for a successful energy transition. With our systemic view and technological innovations in sector coupling, we promote the transformation of the energy systems. Together with the cluster and its partners, we bring integrated technologies and innovative business models to application and support Lusatia in transforming into a climate-neutral model region."

Prof. Dr. Mario Ragwitz, Institute Director



Promoting dialogue – modelling change

The Cluster Decarbonisation in Industries brings together experts from primary industries, research institutions and universities, as well as technical and consulting service providers, into a cross-sector network. Together, we work to develop innovative ideas for a successful transition to greenhouse gas-neutral manufacturing.

A central hub for the transfer of technology and knowledge

Our wide-ranging event formats are the cornerstone of our work. These events stimulate discussion processes on the complex issues found in decarbonisation, offer a platform for sharing ideas, and link knowledge with the technical, infrastructural, economic and social aspects of the industrial transformation. This active networking results in bridge-building across sectoral and industry boundaries. The high-intensity sharing of knowledge that we promote helps to

bundle competencies, generate synergies, and kick-start new and innovative ideas.

Dialogue platform for carbon-neutral manufacturing

Our work takes into account the entire value chain for energy-intensive industries. Discussions range from the technological requirements for production processes to the inclusion and utilisation of renewable energies, and the creation of green markets for industrial products. Social aspects, such as the availability of skilled employees and acceptance for the various transformational measures adopted, are also addressed in the cluster. This approach lets us identify the challenges and opportunities in transformation in their entirety, and accelerate the development of novel solution strategies.

Our topics – an overview



Infrastructure

Many of the new technologies for decarbonisation require large quantities of power and hydrogen, generated by renewable energy. Together with our partners, we are working on topics that address the efficient use of green energy, and the associated energy infrastructure, transportation and storage systems.



Green markets

We work closely with actors in industrial decarbonisation, advocating the creation of policymaking and regulatory environments that promote reductions in greenhouse gas emissions. These include the supply of renewable energy, providing funding for new technologies and business models, and the design and setup of 'green markets'.



Technologies

We support the search for advanced innovations and alternative production processes capable of driving a successful industrial transformation. Dialogue and knowledge transfer are used here to ensure that cross-sector technologies and novel business models can be established in practice.



Social acceptance and regulatory frameworks

The transformation of industry can be successful only if the necessary technological, infrastructural and regulatory measures go hand in hand with broad acceptance in the general population. We are working to ensure that the overall regulatory conditions are a good fit for the requirements of manufacturers while also strengthening social acceptance.

CDI events at a glance



Lusatia Expert Conference

Held in November, this annual conference brings experts from manufacturing, business and research to Lusatia, a region that is tackling structural change. Conference papers and panel discussions are used to present innovative ideas and projects, and to address new technologies, questions about energy infrastructure and the regulatory aspects of decarbonisation. The congress programme focuses on the basic materials sector in particular, including steel, chemicals, cement and other energy-intensive industries.



CDI Innovation Groups

Chaired by domain experts, these topic-specific working groups are used by CDI partners to discuss sectoral needs and requirements. Real-world measures are identified and then implemented as a shared activity – from studies and discussion papers to web-based tools. Innovation groups have been set up on the focus topics of 'Process heat', 'Acceptance', 'Global issues' and 'Regulation'. These groups meet either virtually or face-to-face up to three times a year. New innovation groups are formed when necessary.



CDI Summer Summit

The CDI Summer Summit is the cluster's annual networking meet-up. The primary focus of this event is sharing real-world experience among CDI partners as well as the collective analysis of case studies. Alongside a programme of presentations, collaborative workshops are another key aspect, which participants use to work on current issues encountered in industrial decarbonisation, developing solution paths under the guidance of domain experts. The event programme is rounded out by visits to industry partners and facility tours.



CDI Input

This format facilitates concentrated knowledge transfer in the fields of law, finance and insurance. In these one-hour online events, experts provide a concise package of information about important current topics, also taking questions from the audience in the form of a subsequent Q&A session. This is an on-demand event format that is exclusive to CDI partners.



For an overview of all dates, please refer to:
cluster-dekarbonisierung.de/events

What we stand for

> Our partners provide ideas and inspiration.

We assess the needs of our partners and then create tailor-made strategies that we can use with them to tackle the challenges of industrial decarbonisation together. These can include participative workshops, formats for knowledge transfer, factory tours and various working groups.

> We are knowledge brokers and thought leaders.

For stakeholders from business, policymaking and research, we provide studies, policy papers and interactive web tools that offer orientation on progress in the decarbonisation of manufacturing while highlighting potential for the future development of this topic area.

> CDI events form the creative core of our networking activities.

Our events focus on helping domain experts to achieve successful networking that facilitates the in-depth transfer of both knowledge and technologies. We make full use of innovative approaches that promote interaction while stimulating creative thought.



**Watch our film for more about the CDI
and its partners.**

www.cluster-dekarbonisierung.de/en/media



Our Partners

More than 100 partners contribute their expertise to the CDI network to ensure a climate-friendly and competitive industrial future. Members include national and international actors and corporations, as well as a large number of small and medium-sized enterprises.

CDI's international activities include:

- ✓ Strengthening the international visibility of the topic area of decarbonisation
- ✓ Establishing relationships with international clusters, businesses and research partners
- ✓ Exploring and facilitating access to new markets and global value chains
- ✓ Identifying global trends in decarbonisation solutions and policies
- ✓ Exchange of knowledge, technologies and experience in a national and international context



Get in touch with the CDI Coordination Office:
kontakt@cluster-dekarbonisierung.de

Publication details

Published by

Cluster Decarbonisation in Industries (CDI)
Competence Centre on Climate Change Mitigation in
Energy-Intensive Industries (KEI)

Karl-Liebknecht-Str. 33 | 03046 Cottbus
Phone: +49 355 478 89-134
Email: presse@cluster-dekarbonisierung.de
www.cluster-dekarbonisierung.de/en

Text and editing

KEI Communication
Responsibility: Nils Diezemann (Acting director)
Communication Climate Action

Design

Tinkerbelle GmbH, Berlin/Cologne

Print

WIRmachenDRUCK

Picture credits

pp. 1, 10: Erik Krüger, p. 2: istock/Neosiam,
p. 3: Svea Pietschmann, pp. 6, 8, 9 (l.): Rainer Weisflog,
pp. 9 (r.), 11: CDI

Last updated

August 2024

Contact



cluster-dekarbonisierung.de/en/contact

CDI Partners



cluster-dekarbonisierung.de/en/partners

LinkedIn



www.linkedin.com/showcase/cluster-dekarbonisierung-industrie/

As the operator of the CDI Coordination Office, the **Competence Centre on Climate Change Mitigation in Energy-Intensive Industries (KEI)** organises operational cooperation between partners and steers activities within the network. The KEI is a division of Zukunft – Umwelt – Gesellschaft (ZUG) gGmbH and operates on behalf of the (German) Federal Ministry for Economic Affairs and Climate Action (BMWK). Registered office: Robert Schuman Platz 3, 53175 Bonn



A division of

