

Project Fact Sheet

Project Title	Flexible refrigeration supply systems against the background of increasing decarbonisation (FlexBlue)
Keywords	flexibility, industrial processes, system efficiency, refrigeration supply

Project Details

Project Start	2024	Duration	3 Years
Grant Scheme	7th Energy Research Programme		
Funding Authority	Federal Ministry for Economic Affairs and Climate Action	Project ID	03EN6035G
Project Budget	320,314.96 €		
Project Leader	Prof. Dr.-Ing. Uwe Holzhammer		
Contact Person	Martin Stöckl		

Project Partners

Fraunhofer UMSICHT, Karlsruher Institut für Technologie (KIT), FZI Forschungszentrum Informatik, SK Verbundenergie (SKVE), Rütgers, kraftBoxx

Description

Against the background of accelerating the energy transition, the FlexBlue project aims to bring together relevant actors in the flexibilization value chain in the refrigeration sector in order to address the remaining obstacles to the flexibilization of refrigeration supply systems and to reduce them as far as possible.

To this end, the project is divided into four sub-projects A to D. In subproject A, two demonstrators are to be set up, operated, measured, and evaluated in real operating environments. In subproject B, the operational interfaces between the various actors in the flexibilization value chain are to be clarified and the dampening influence of the interface design on the flexibility potential to be realized is to be evaluated. In subproject C, the transfer of knowledge and actor activation are to be promoted. In subproject D, barriers to subsequent transferability are to be removed by developing scalable methods and schemes that are cost-effective and easy to implement - both in terms of technical design and with regard to the economic efficiency of different refrigeration applications in different application contexts.

Technische Hochschule Ingolstadt, Institute for new Energy Systems, oversees sub-project B, where it is working on the characterization and modelling of operational actor interfaces within the process chain with a focus on the electric power industry, in particular along the cold chain for dairy products.