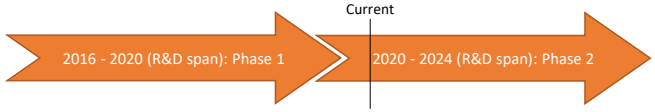
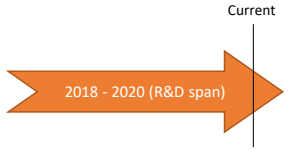
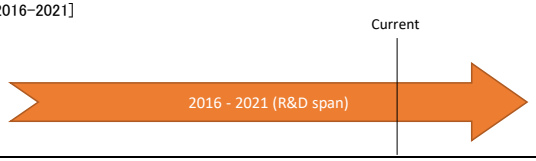
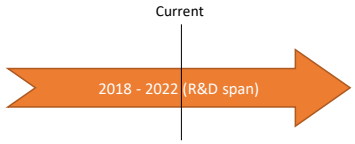
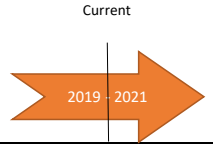
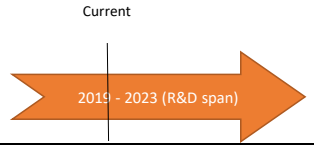
nstitute/Countr	Theme	Sub Theme	Related programs (with short summary)	Target / Goal Outcome	Lead person / Organization	Partnership (if any)	Related information
Fraunhofer/ Germany	CO2 reduction	Steel production	Carbon2Chem The Carbon2Chem project explores how smelter gases from steel production can be used to create valuable primary products for fuels, plastics, or fertilizers. The Carbon2Chem approach is expected to make 20 million tons of the German steel industry's annual CO2 emissions economically exploitable in future. This represents 10 percent of the annual CO2 emissions from German industrial processes and the manufacturing industry. [2016-2024] 	Pilot plant for demonstrating the integration of technology modules into a cross-industry network with the smelter. Production of hydrogen by means of water electrolysis using volatile renewable energies.	Dr.-Ing. Torsten Müller Fraunhofer UMSICHT	thyssenkrupp AG, BASF, Max Planck Institute for Chemical Energy Conversion and other partners from research and industry	https://www.umsicht.fraunhofer.de/de/presse-medien/pressemitteilungen/2019/carbon2chem-laboreinweihung.html https://www.fona.de/en/measures/funding-measures/carbon2chem-project.php
	Hydrogen	Industry and production	HYPOS - Hydrogen Power Storage & Solutions East Germany One of the ten innovation projects of the "2020 - Partnership for Innovation" funding initiative launched by the German Federal Ministry of Education and Research (BMBF). The objective of the project is the production, storage, distribution and broad application of green hydrogen in the chemical and refining industry, mobility and energy sectors. [2018-2020] 	Substituting the use of fossil fuels for hydrogen production	Michael Kraft Fraunhofer IMWS	HYPOS e.V. now has over 100 members throughout Germany	http://www.hypos-eastgermany.de/
	Hydrogen	Fuel Cells	DEKADE: novel catalyst systems, electrodes and membranes are developed for automotive fuel cell applications. [2017-2019] 	Making fuel cell drive systems competitive, especially for the automotive industry	Ulf Groos Fraunhofer ISE	National Research Council, University of British Columbia and Simon Fraser University, Vancouver (Canada))	https://www.imtek.de/forschung/projektuebersicht/projektuebersicht?projectId=10642
	CO2 reduction		SALCOS SALCOS® focuses on the primary avoidance of CO2 formation in the steel production process through research innovative process technologies. Specialists from a large German steel producer are working together with Fraunhofer Institutes and other partners on integrated the new technologies into smelting plants. [2017-2020] 	The goal is CO2-reduced steel production. With a step-by-step implementation of the technoplogy, a CO2 reduction of initially up to 50% is principally possible. If successful, the reduction could rise up to 85% in the future.	Dr. Matthias Jahn Fraunhofer IKTS	Salzgitter AG (German steel industry)	https://salcos.salzgitter-ag.com/
	Solar energy	PV	AtaMoS-TeC: photovoltaic technologies for harsh conditions [2017 – 2025] 	Develop photovoltaic technologies that adapt to the exceptional conditions of the Atacama Desert (high radiation; high average hours of sunshine; an arid climate; skies almost cloudless; Low ambient temperature) . Energy cost will be reduced to a target of 25 US$/MWh by the year 2025.	Contact: Sophia Köhler Fraunhofer Chile Research	SERC Chile (Solar Energy Research Center)	https://www.fraunhofer.cl/en/press/news/cset-news/atamos-tec-starts-construction-for-applied-research-outdoor.html

	Solar energy	CPV	CPV-India: Concentrator Photovoltaics Targeted for highly efficient power production in India [2016-2021] 	The main objective of the project is the installation and scientific evaluation of a 53 kW CPV system for power generation in India.	Dr. Gerald Siefer Fraunhofer ISE	NTCP NETRA (India)	https://www.ise.fraunhofer.de/de/forschungsprojekte/cpvindien.html
	Wind energy	Offshore	AFLOWT: Demonstration of high survivability cost competitive floating offshore wind (FOW) technology [2018-2022] 	Demonstrators for a floating platform that it is viable in offshore operation and cost-competitive.	M.Sc. Mareike Leimeister Fraunhofer IWES	Research institutions from Ireland, France, Netherlands	https://www.iwes.fraunhofer.de/de/forschungsprojekte/aktuelle-projekte/aflowt.html
	Energy Storage	Battery	ICON-Project: Solid State Battery [2019-2021] 	Development and battery cell production and produces the first prototypes.	Contact: Marie-Luise Righi Fraunhofer ISC	EMPA (Switzerland)	https://www.isc.fraunhofer.de/en/press-and-media/press-releases/solid-state-batteries-for-tomorrows-electric-cars.html
	Energy Storage	Battery	Research Fab Battery Cells [2019-2023] 	implementation of new battery cell concepts and the development of advanced production processes	Prof. Dr. Jens Tübke Fraunhofer ICT	University of Münster, RWTH Aachen University and 10 Fraunhofer Instituts	https://www.forschungsfertigung-batteriezelle.fraunhofer.de/en.html