Sector: Sustainable Energy

Areas of Intervention & Priorities 2021-2027

Areas of Intervention	Priorities
7.1 Energy Efficiency and Conservation	7.1.1 Energy efficiency and conservation technologies, systems and processes in industry
	7.1.2 Energy efficiency and conservation technologies, systems and processes in buildings
	(e.g. waste heat recovery/use, heat and power co-generation, heat pumps, renewable energy source (RES) and energy storage applications, computational techniques to improve energy efficiency, hybrid systems – applicable to both the above priorities)
7.2 Renewable Energy	7.2.1 Renewable energy technologies and systems for power generation, including hybrid systems
	7.2.2 Renewable energy technologies and systems for heat/cooling energy production
	7.2.3 Renewable energy offshore/floating technologies and systems for power generation
	7.2.4 Technologies applied to existing thermal engines substituting conventional fuels with renewable fuels for energy production
7.3 Energy Storage	7.3.1 Mechanical energy storage technologies and systems
	7.3.2 Electrical energy storage technologies and systems (super-capacitors, superconductive magnetic energy storage)
	7.3.3 Thermal energy storage technologies and systems
	7.3.4 Electrochemical energy storage technologies and systems (e.g. conventional batteries, flow batteries)
	7.3.5 Chemical energy storage technologies and systems
7.4 Hydrogen and Carbon-neutral Fuel Technologies and Systems	7.4.1 Hydrogen production, storage, purification, compression
	7.4.2 Hydrogen distribution systems (natural gas pipelines, hydrogen pipelines, refueling stations)
	7.4.3 Hydrogen-using technologies for energy production in industry, transport, stationary applications (e.g fuel cells)
	7.4.4 Horizontal actions (safety, regulations, education, public awareness, etc.)
	7.4.5 Green hydrogen pilot projects
	7.4.6 Other carbon-neutral fuels and their uses (air/sea/road/rail transport)
7.5 Smart Grids – Demand Response – Decentralized Production	7.5.1 Applications for smart grid, metering device, storage, individual and aggregated demand response services and technologies, and well as to increase renewable energy penetration towards efficient, reliable and secure transmission and distribution systems
	7.5.2 Distributed generation and energy storage unit applications in autonomous grids and micro-grids

	7.5.3 Blockchain technology in the energy sector and, specifically, in distributed generation, storage and consumption. Clearing and market-interface platforms
7.6 Fossil Fuels – Impact Mitigation	7.6.1 CO2 capture, utilization, storage and transmission technologies and systems
	7.6.2 Technologies and systems applied to existing fossil fuel combustion plants using fuel with a significantly lower carbon footprint
	7.6.3 Innovative low-impact fuel production processes
7.7 Smart Communities / Low-energy and Near-zero Emission Cities	7.7.1 Final customer interconnection and interaction technologies, systems and methods for renewable energy co-generation (RES communities) or power co-generation (citizen energy communities-CEC), for smart management, storage, self-consumption and selling of generated energy, and/or for electric vehicle charging services
	7.7.2 Energy and resource conservation technologies and systems, and emission reduction technologies and systems at the community and city levels
7.8 Energy and Transport	7.8.1 Energy and shipping: use of low carbon footprint fuels (including green power) in shipping and related infrastructures in ports and onboard
	7.8.2 Energy and shipping: pilot actions onboard the ships and/or at port/port facilities level (e.g. conversion of an existing ship to hybrid electric-diesel or/and hydrogen operation, conversion of a ferry to electric or/and RES hydrogen operation, green energy management and storage systems for ports, ferries and marinas, as well as energy efficiency improvement systems)
	7.8.3 Energy and road, railway and air transport: use of low-carbon footprint fuels in road, railway and air transport and related infrastructures (e.g. development of advanced biofuels and biogas for transport use derived by raw materials listed in Annex IX, Part A of Directive 2018/2001
	7.8.4 Energy and road, railway and air transport: pilot actions (e.g. implementing electromobility in islands, refueling stations for trains)
7.9 Energy and Agricultural Sector / Environment	7.9.1 Technologies and systems for energy production from locally sourced biomass, agricultural and livestock residues, recovered materials from industries, bioliquids, biological resources, waste/scrap
	7.9.2 Renewable energy and energy management technologies and systems in water treatment plants (desalination)
	7.9.3 Pilot actions (e.g. deployment of agro-photovoltaics for power generation and increased crop yield)
	7.9.4 Renewable energy and energy conservation technologies in agricultural and livestock farms
7.10 Other Interdisciplinary Interventions	7.10.1 Pilot actions for RES and energy conservation/efficiency in tourism regions (e.g. hybrid solutions to cover heat/cooling and power needs).
	7.10.2 Novel materials for buildings: innovative construction materials and technologies promoting recycling, innovative thermal insulation systems for

	buildings with improved thermal performances, innovative thermal insulation system without fossil-derived materials
	7.10.3 Novel materials and production methods, solar thermal system parts for cost reduction and incorporation in integrated systems
	7.10.4 Innovative ICT applications in energy management (e.g. use of IoT, smart networks, blockchain technology, artificial intelligence, machine learning)