## **CPC COOPERATIVE PATENT CLASSIFICATION**

**GENERAL TAGGING OF NEW TECHNOLOGICAL DEVELOPMENTS; GENERAL** Y TAGGING OF CROSS-SECTIONAL TECHNOLOGIES SPANNING OVER SEVERAL SECTIONS OF THE IPC; TECHNICAL SUBJECTS COVERED BY FORMER USPC **CROSS-REFERENCE ART COLLECTIONS [XRACs] AND DIGESTS** (NOTES omitted)

## **Y02** TECHNOLOGIES OR APPLICATIONS FOR MITIGATION OR ADAPTATION AGAINST CLIMATE CHANGE (NOTES omitted)

## **Y02E REDUCTION OF GREENHOUSE GAS [GHG] EMISSIONS, RELATED TO ENERGY GENERATION, TRANSMISSION OR DISTRIBUTION**

10/00	Energy generation through renewable energy sources	20/30	• Technologies for a more efficient combustion or heat usage
10/10	. Geothermal energy	20/32	• Direct CO <sub>2</sub> mitigation
10/20	• Hydro energy	20/34	• Indirect CO <sub>2</sub> mitigation, i.e. by acting on non
10/30	• Energy from the sea, e.g. using wave energy or		CO <sub>2</sub> directly related matters of the process, e.g. pre-
	salinity gradient		heating or heat recovery
10/40	• Solar thermal energy, e.g. solar towers	30/00	Energy generation of nuclear origin
10/44	Heat exchange systems	30/10	Nuclear fusion reactors
10/46	Conversion of thermal power into mechanical	30/30	<ul> <li>Nuclear fission reactors</li> </ul>
	power, e.g. Rankine, Stirling or solar thermal		
10/17	engines	40/00	Technologies for an efficient electrical power
10/47	Mountings or tracking		generation, transmission or distribution
10/50	• Photovoltaic [PV] energy	40/10	• Flexible AC transmission systems [FACTS]
10/52	• PV systems with concentrators	40/20	• Active power filtering [APF]
10/541	CuInSe2 material PV cells	40/30	Reactive power compensation
10/542	• Dye sensitized solar cells	40/40	Arrangements for reducing harmonics
10/543	Solar cells from Group II-VI materials	40/50	• Arrangements for eliminating or reducing
10/544	Solar cells from Group III-V materials	10/10	asymmetry in polyphase networks
10/545	Microcrystalline silicon PV cells	40/60	• Superconducting electric elements or equipment;
10/546	Polycrystalline silicon PV cells		Power systems integrating superconducting
10/547	Monocrystalline silicon PV cells	40/70	elements or equipment
10/548	Amorphous silicon PV cells	40/70	<ul> <li>Smart grids as climate change mitigation technology in the energy generation sector</li> </ul>
10/549	• Organic PV cells		in the energy generation sector
10/56	<ul> <li>Power conversion systems, e.g. maximum power point trackers</li> </ul>	50/00	Technologies for the production of fuel of non- fossil origin
10/60	• Thermal-PV hybrids	50/10	• Biofuels, e.g. bio-diesel
10/70	. Wind energy	50/30	• Fuel from waste, e.g. synthetic alcohol or diesel
10/72	• • Wind turbines with rotation axis in wind direction	60.000	
10/727	• • Offshore wind turbines	60/00	Enabling technologies; Technologies with a
10/728	• • Onshore wind turbines		potential or indirect contribution to GHG emissions mitigation
10/74	• Wind turbines with rotation axis perpendicular to	60/10	• Energy storage using batteries
	the wind direction	60/13	Energy storage using capacitors
10/76	. Power conversion electric or electronic aspects	60/13	Thermal energy storage
20/00	Combustion technologies with mitigation potential	60/14	<ul> <li>Mechanical energy storage, e.g. flywheels or</li> </ul>
20/12	• Heat utilisation in combustion or incineration of	00/10	pressurised fluids
20/12	waste	60/30	Hydrogen technology
20/14	• Combined heat and power generation [CHP]	60/32	Hydrogen storage
20/16	• Combined cycle power plant [CCPP], or combined	60/32	Hydrogen distribution
	cycle gas turbine [CCGT]	60/36	Hydrogen production from non-carbon containing
20/18	• Integrated gasification combined cycle [IGCC],	00/00	sources, e.g. by water electrolysis
	e.g. combined with carbon capture and storage [CCS]	60/50	• • Fuel cells

## Y02E

. Arrangements for transfer of electric power betweer	
AC networks or generators via a high voltage DC	
link [HVCD]	

70/00 Other energy conversion or management systems reducing GHG emissions

70/30 • Systems combining energy storage with energy generation of non-fossil origin