

# CPC COOPERATIVE PATENT CLASSIFICATION

## Y GENERAL TAGGING OF NEW TECHNOLOGICAL DEVELOPMENTS; GENERAL 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

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

## Y02E

- 60/60
  - Arrangements for transfer of electric power between 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