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)

Y02B   **CLIMATE CHANGE MITIGATION TECHNOLOGIES RELATED TO BUILDINGS, e.g. HOUSING, HOUSE APPLIANCES OR RELATED END-USER APPLICATIONS**

10/00   **Integration of renewable energy sources in buildings**
10/10   . Photovoltaic [PV]
10/20   . Solar thermal
10/30   . Wind power
10/40   . Geothermal heat-pumps
10/50   . Hydropower in dwellings
10/70   . Hybrid systems, e.g. uninterruptible or back-up power supplies integrating renewable energies

20/00   **Energy efficient lighting technologies, e.g. halogen lamps or gas discharge lamps**
20/30   . Semiconductor lamps, e.g. solid state lamps [SSL] light emitting diodes [LED] or organic LED [OLED]
20/40   . Control techniques providing energy savings, e.g. smart controller or presence detection
20/72   . in street lighting

30/00   **Energy efficient heating, ventilation or air conditioning [HVAC]**
30/12   . Hot water central heating systems using heat pumps
30/13   . Hot air central heating systems using heat pumps
30/17   . District heating
30/18   . Domestic hot-water supply systems using recuperated or waste heat
30/52   . Heat recovery pumps, i.e. heat pump based systems or units able to transfer the thermal energy from one area of the premises or part of the facilities to a different one, improving the overall efficiency
30/54   . Free-cooling systems
30/56   . Heat recovery units
30/62   . Absorption based systems
30/625   . . combined with heat or power generation [CHP], e.g. trigeneration
30/70   . Efficient control or regulation technologies, e.g. for control of refrigerant flow, motor or heating
30/90   . Passive houses; Double facade technology

40/00   **Technologies aiming at improving the efficiency of home appliances, e.g. induction cooking or efficient technologies for refrigerators, freezers or dish washers**
40/18   . using renewables, e.g. solar cooking stoves, furnaces or solar heating

50/00   **Energy efficient technologies in elevators, escalators and moving walkways, e.g. energy saving or recuperation technologies**

70/00   **Technologies for an efficient end-user side electric power management and consumption**
70/10   . Technologies improving the efficiency by using switched-mode power supplies [SMPS], i.e. efficient power electronics conversion e.g. power factor correction or reduction of losses in power supplies or efficient standby modes
70/30   . Systems integrating technologies related to power network operation and communication or information technologies for improving the carbon footprint of the management of residential or tertiary loads, i.e. smart grids as climate change mitigation technology in the buildings sector, including also the last stages of power distribution and the control, monitoring or operating management systems at local level
70/3225   . . Demand response systems, e.g. load shedding, peak shaving
70/34   . . Smart metering supporting the carbon neutral operation of end-user applications in buildings

80/00   **Architectural or constructional elements improving the thermal performance of buildings**
80/10   . Insulation, e.g. vacuum or aerogel insulation
80/22   . Glazing, e.g. vaccum glazing
80/32   . Roof garden systems

90/00   **Enabling technologies or technologies with a potential or indirect contribution to GHG emissions mitigation**
90/10   . Applications of fuel cells in buildings
90/20   . Smart grids as enabling technology in buildings sector (smart grids supporting the management or operation of end-user stationary applications in general, or like technologies with no associated climate change mitigation effect Y04S 20/00)