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(71)Name of Applicant :

1)Chitkara University

Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

2)Chitkara Innovation Incubator Foundation

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)AGARWAL, Ambuj Kumar

Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Chitkara University Institute of Engineering and Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

2)TIWARI, Raj Gaurang

Address of Applicant :Professor, Department of Computer Science and Engineering, Chitkara University Institute of Engineering and Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

3)GILL, Rupali

Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Chitkara University Institute of Engineering and Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

(57) Abstract :

The present disclosure relates to an assembly for (100) thermoelectric based dual power conditioning system. The assembly (100) is provided with housing (102) where a cooling generator module (104), a power generator module (106), a solar generator module (112), a processing unit (118) and an auxiliary storage module (114) are attached. The power generator module (106) is thermally coupled to the cooling generator module (104) to produce electricity based on the temperature gradient developed across it and store in the secondary storage unit (110). Additionally, the solar generator module (112) generates electricity based on solar energy and stores it in one or more auxiliary storage units (114, 114-a, 114-b). Moreover, the processing unit (118) regulates the power supplied by the auxiliary storage units (114, 114-a, 114-b) to the primary storage unit (108) coupled to the cooling generator module (104) and the secondary storage unit (110) through a switching means (116).

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