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(71)Name of Applicant:

1) Dhanalakshmi Srinivasan Engineering College (Autonomous)

Address of Applicant :The Principal, Dhanalakshmi Srinivasan Engineering College (Autonomous) Thuraiyur Road, Perambalur, Tamil

Nadu- 621212. Perambalur -----

Name of Applicant: NA Address of Applicant : NA (72)Name of Inventor: 1)Dr.R.GOPI

Address of Applicant : Associate Professor, Department of Computer Science and Engineering, Dhanalakshmi Srinivasan Engineering College, Thuraiyur Road, Perambalur - 621212, Tamil Nadu. gopircse@gmail.com

Perambalur -----

2)Dr.SYED SABIR MOHAMMED

Address of Applicant : Associate Professor, Department of Computer Science and Engineering, Dhanalakshmi Srinivasan Engineering College, Thuraiyur Road, Perambalur - 621212, Tamil Nadu.

syedsabir_mohamed@yahoo.co.in Perambalur -----

3)Mr.V.GOKULAKRISHNAN

Address of Applicant : Assistant Professor, Department of Computer Science and Engineering, Dhanalakshmi Srinivasan Engineering College, Thuraiyur Road, Perambalur - 621212, Tamil Nadu.

gokul.dsec@gmail.com Perambalur -----

4)Mrs.S.R.SOWMIYA

Address of Applicant : Assistant Professor, Department of Computer Science and Engineering, Dhanalakshmi Srinivasan Engineering College, Thuraiyur Road, Perambalur - 621212, Tamil Nadu. jitgiri10@gmail.com

Perambalur -----

5)Mrs.T.GEETHA

Address of Applicant : Assistant Professor, Department of Computer Science and Engineering, Dhanalakshmi Srinivasan Engineering College, Thuraiyur Road, Perambalur - 621212, Tamil Nadu.

geetha.t@dsengg.ac.in Perambalur -----

6)Mrs.R.AARTHY

Address of Applicant : Assistant Professor, Department of Computer Science and Engineering, Dhanalakshmi Srinivasan Engineering College, Thuraiyur Road, Perambalur - 621212, Tamil Nadu.

r.aarthycse@gmail.com Perambalur -----

(57) Abstract:

The embodiments herein relates to a system (100) and method for AI-based intelligent load sharing in integrating renewable power plants in the existing network. The system (100) includes renewable energy sources based electricity generators (102 A-C), an electricity grid (104), and an AI controller module (106). The AI controller module (106) includes a RES A-C data collection module (302 A-C), a grid data collection module (304), a feedback module (312), a data processing & condition prediction module (306), a real-time decision making module (308), a relay controller activation module (310), and a model training & learning module (314). The AI controller module (106) that configured to access the renewable energy sources based on electricity generators (102 A-C) data and the electricity grid (104) data and it activates the relay controller modules (202 A-N). This system facilitates the maximum utilization of renewable energy-based electricity by optimum utilization of the existing electrical grid.

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