

**2011 2nd International Conference on Advances in Energy Engineering (ICAEE
2011)**

December 27-28, 2011, Bangkok , Thailand

Official Acceptance and Invited Letter

Thank you for your submission to ICAEE 2011. We are pleased to inform you that your paper

Paper id: 453

Title: Optimization of Current Total Harmonic Distortion on Three-Level Transformerless
Photovoltaic Inverter

Contact Author: I. Daut, M. Irwanto, Y.M. Irwan, N. Gomesh, N.S. Ahmad

Due to review of ICAEE 2011 Committees, your paper was accepted as a regular paper in ICAEE 2011. Your paper will be published by the international journal: Energy Procedia, ISSN: 1876-6102, which will be indexed in EI Compendex, ISI Proceedings (ISTP), Scopus. Please do take into account in the revision to further improve the English quality of your paper. The length of the paper should not exceed 6 pages without extra pages fees.

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Registration Fees: The registration will be opened in October, 1, 2011; you can download the registration form in the website and send us before October 20, 2011. Sorry for the so tight time.

We hope to see you in Bangkok, December, 2011.

Best

Program Committee of ICAEE 2011

2011-9-28




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ICAEE 2011 Submission 453

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Paper 453

Title:	Optimization of Current Total Harmonic Distortion on Three-Level Transformerless Photovoltaic Inverter
Submission:	
Author keywords:	Photovoltaic inverter Transformerless AC waveform Solar irradiance Temperature
EasyChair keyphrases:	full bridge inverter circuit (160), transformerless pv inverter (142), solar irradiance (130), maximum voltage angle (126), pv array output (95), pulse driver circuit (95), pulse wave (80), voltage angle (65), power factor correction (63), factor correction circuit (63), total harmonic distortion (63), maximum ac voltage angle (60), solar radiation (60), transformerless inverter (50), array output voltage (47), ac water pump (47), electrical energy (40), photovoltaic module electrical characteristic (40)
Abstract:	This paper presents a new topology of three-level transformerless photovoltaic (PV) inverter. It consists of three main circuits; they are a pulse driver circuit, a full bridge inverter circuit and a power factor correction circuit that have functions as production of pulse waves, to develop alternating current (AC) waveform and to stable voltage of PV array. The transformerless inverter is installed in front of Electrical Energy and Industrial Electronic Systems (EEIES) Cluster, Universiti Malaysia Perlis, Northern Malaysia. Its main energy source is a PV array that consists of three unit PV modules, each unit has 81 V, 60 W. In this research, optimization of current total harmonic distortion (CTHD) on AC three-level waveform transformerless PV inverter is developed and created by a microcontroller PIC16F627A-I/P with change maximum voltage angle of the AC three-level waveform from 200 to 1800. Resistive load of 30 W lamp and inductive load of 20 W water pump are applied to the transformerless PV inverter. The result shows that the less CTHD of 15.448% is obtained when the maximum voltage angle is 1340.

Time: Oct 01, 11:44 GMT

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