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(1569434979): *Potential of Solar Radiation and Wind Speed for Photovoltaic and Wind Power Hybrid Generation in Perlis, Northern Malaysia*



Property	Change Add	Value																
Conference and track		Fifth International Power Engineering and Optimization Conference - <i>Renewable Energy and Energy Efficiency</i>																
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Name	ID	Edit	Flag	Affiliation (edit for paper)	Email	Country	Register											
Muhammad Irwanto	606693			Universiti Malaysia Perlis	irwanto@unimap.edu.my	Malaysia												
Title	Only the chairs (peoco2011-chairs@edas.info) can edit	<i>Potential of Solar Radiation and Wind Speed for Photovoltaic and Wind Power Hybrid Generation in Perlis, Northern Malaysia</i>																
Abstract	Only the chairs (peoco2011-chairs@edas.info) can edit	This paper presents analysis of the solar radiation and wind speed characteristics in Perlis, Northern Malaysia for the year of 2006. The characteristics consist of daily and annual mean solar radiation and wind speed. Peak sun hours (PSHs) of the solar radiation and PV power generation capacity are analyzed. The Weibull distribution function is applied to analyze the wind speed characteristics and used to calculate the wind power generation potential. Potential of PV and wind power generation is observed and analyzed during 24 hours (9th March 2011). The result shows that the annual total solar radiation in Perlis is 1831.45 kWh/m ² which will generate a total electric energy of 237.7 kWh/m ² per year of PV module, if all the lands in Perlis were filled with horizontal PV panels, nearly 189,29 GWh of electricity could be produced per year. This shows the big potential of solar radiation for PV power generation in Perlis. Based on wind speed data, the probability density of 81.06% and its wind speed is 1.01 m/s, it is important to choose a suitable wind turbine for a wind power generation. Observation during 24 hours ((9th March 2011), for a 24 V PV and wind power hybrid generation, the PV array gives big potential and the wind power gives 10% of its total output voltage.																
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Keywords	Only the chairs (peooo2011- chairs@edas.info) can edit	solar radiation, wind speed, photovoltaic, hybrid system.								
Topics	Only the chairs (peooo2011- chairs@edas.info) can edit	Renewable Energy Applications								
Presenter(s)		Muhammad Irwanto (bio) 								
Registration		Muhammad Irwanto has registered and Ismail Musirin has paid for NRM1_Chair5:NRM1_Chair5  								
Session		S2-R2: <i>Parallel Session 2</i> from Mon, June 6, 2011 14:00 until 16:00 (5th paper) in Rebana 2 (15 min.)								
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Status		Published								
Final manuscript	Could upload until May 18, 2011 19:59:00 EDT.	<p>However, authors cannot upload: final deadline</p> <table border="1"> <thead> <tr> <th>Document (show)</th> <th>Pages</th> <th>File size</th> <th>Changed</th> </tr> </thead> <tbody> <tr> <td></td> <td>(148...147)</td> <td>753,845</td> <td>September 16, 2014 10:30:26 America/New_York</td> </tr> </tbody> </table> <p>bookmarks Bookmarks are not allowed. See EDAS FAQ. -</p>	Document (show)	Pages	File size	Changed		(148...147)	753,845	September 16, 2014 10:30:26 America/New_York
Document (show)	Pages	File size	Changed							
	(148...147)	753,845	September 16, 2014 10:30:26 America/New_York							

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Reviews

1 Review

Review 1 (Reviewer F)

Originality	Technical Contribution	Significance of Topic	Presentation	Recommendation
Strong Accept (10)	Strong Accept (10)	Strong Accept (10)	Strong Accept (10)	Strong Accept (10)

Contributions (What are the major issues addressed in the paper? Do you consider them important? Comment on the degree of novelty, creativity and technical depth in the paper.)

Potential of Solar Radiation and Wind Speed for Photovoltaic and Wind Power Hybrid Generation in Perlis, Northern Malaysia

Strengths (What are the major reasons to accept the paper? [Be brief.]

Good proposal

Detailed comments (Please provide detailed comments that will be helpful to the TPC for assessing the paper, as well as feedback to the authors. Refrain from repeating those already mentioned in other parts.)

Good paper