

# Curriculum Vitae

## Dr Tshewang Lhendup

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### Professional Experience

- Dean, Academic Affairs since June 2015
- December 2014 to May 2015 – Lecturer, Renewable Energy, Department of Electrical Engineering, College of Science and Technology, Royal University of Bhutan, Phuentsholing, Bhutan.
- July 2009 to November 2013 – Tutor and research assistant, Department of Infrastructure Engineering, Melbourne School of Engineering, The University of Melbourne, Victoria, Australia.
- Jan 2006 to May 2009 – Head of Department, Department of Electrical Engineering, College of Science and Technology, Royal University of Bhutan, Phuentsholing, Bhutan. As a head, I was responsible for diversification of electrical engineering programme into electrical engineering and electronics and communication engineering.
- Jan 2000 to Dec 2005 – Associate Lecturer, Department of Electrical Engineering, College of Science and Technology, Royal University of Bhutan, Phuentsholing, Bhutan.
- July 1994 to Aug 1995 – Instructor, Department of Electrical Engineering, Royal Bhutan Polytechnic (now renamed as Jigme Namgyel Polytechnic), Dewathang, Bhutan.
- July 2005 to July 2008 – Member of Academic Board of Royal University of Bhutan, Thimphu, Bhutan.
- July 2005 to July 2008 – Secretary of Institute Academic Committee (IAC), College of Science and Technology, Royal University of Bhutan, Phuentsholing, Bhutan.
- July 2005 to May 2009 – Coordinator of Institute Research Committee (IRC), College of Science and Technology, Royal University of Bhutan, Phuentsholing, Bhutan.
- June 2007 to May 2009 – Editorial member of Royal University of Bhutan’s Research Journal, Journal of Research and Development, Published by the Royal University of Bhutan, Thimphu.
- Jan –Dec 2008 - Reviewer for Journal of Energy for Sustainable Development, Hydropower section.

### Educational Background

- PhD in Renewable Energy, The University of Melbourne, Victoria, Australia, (completed in July 2014 and conferred in March 2015).
- Master of Engineering Science (Energy Studies), February 2005, The University of Melbourne, Victoria, Australia.
- Bachelor of Engineering (Electrical and Electronics Engineering), May 1999, Regional Engineering College (now renamed as National Institute of Technology), Warangal, Andhra Pradesh, India.
- Diploma in Electrical Engineering, June 1994, Royal Bhutan Polytechnic (now renamed as Jigme Namgyel Polytechnic), Dewathang, Bhutan.

## **Scientific responsibilities**

- Started first Institute of Electrical and Electronics Engineers (IEEE) student branch in Bhutan.
- Counselor, IEEE student chapter.

## **Involvement in peer-reviewed international conferences**

- National coordinator of the International Seminar on Renewable Energy and Sustainable Development (RES2015), jointly organized by the World Energy and Environment Technology (WEENTECH), United Kingdom and the College of Science and Technology, Royal University of Bhutan, Thimphu from 15-17 June 2015.
- Session Chair of the Technical Session 7, International Seminar on Renewable Energy and Sustainable Development (RES2015), jointly organized by the World Energy and Environment Technology (WEENTECH), United Kingdom and the College of Science and Technology, Royal University of Bhutan, Thimphu from 15-17 June 2015.
- Keynote speaker at the IEEE International Conference on Computational Intelligence and Communication Technology (CIC2015), 13-14 February 2015, ABES engineering college, Ghaziabad, Uttar Pradesh, India.
- Session Chair of Power and Energy Track, IEEE International Conference on Computational Intelligence and Communication Technology (CIC2015), 13-14 February 2015, ABES engineering college, Ghaziabad, Uttar Pradesh, India.
- Session Chair of Engineering, Science and Technology Track, The 1<sup>st</sup> International Conference on Engineering, Science, Technology, Education and History-Gross National Happiness Through Engineering Education and Knowledge Transfer, August 21-22, 2014, organized by Jigme Namgyel Polytechnic, Dewathang, Bhutan and The Japan Society of Education for History of Technology at Thimphu, Bhutan.

## **Awards/Fellowship**

- Best annual journal paper award for year 2014, Civil Discipline, Department of Infrastructure Engineering, Melbourne School of Engineering, The University of Melbourne, Victoria, Australia.
- Best postgraduate student paper at the Solar2010, the 48<sup>th</sup> AuSES Annual Conference, December 2010, Canberra, ACT, Australia
- Best presentation award at the annual postgraduate conference, October 2010, Department of Infrastructure Engineering, Melbourne School of Engineering, The University of Melbourne, Victoria, Australia.
- Australian Leadership Award Scholarship, May 2009-November 2013, The University of Melbourne, Victoria, Australia.
- Australian Development Scholarship, February 2003-March 2005, The University of Melbourne, Victoria, Australia.

## Research Funding Received

Title	Role	Period	Amount (US\$)	Source
Evaluation of 6 kW OFF grid and 5 kW grid-tied Solar PV systems	Chief investigator	Nov 2014-Dec 2015	3500.00	Royal University of Bhutan
Implementation of prototype micro-grid solar PV system for education, training and research at the College of Science and Technology	Coordinator	Nov 2013-Feb 2015	47700.00	Global Environment Facility/UNDP
Study on energy consumption pattern in domestic sector of Bhutan	Chief investigator	Jul 2008-Jun 2009	2000.00	Royal University of Bhutan
Study of voltage profile in distribution system in Bhutan	Co-investigator	Jul 2007-Jun 2008	2000.00	Royal University of Bhutan
Domestic electrical installation in Phuentsholing	Chief investigator	Jul 2006-Jun 2007	1900.00	Royal University of Bhutan
Evaluation of relevance of engineering curriculum to address Rural infrastructure education needs in Bhutan	Chief investigator	Jul 2006-Jun 2007	3500.00	Canadian International Development Agency

## International Membership

- IEEE professional member
- Australian Institute of Energy
- Australian Solar Energy Society

## Publications

### Peer Reviewed Journal

1. **Tshewang Lhendup**, Lu Aye and R. J. Fuller (2014), '*In-situ measurement of Borehole Thermal Properties in Melbourne*', Applied Thermal Energy, vol. 73, no.1, 285-293.
2. **Tshewang Lhendup**, Lu Aye and R. J. Fuller (2014), '*Thermal Charging of Boreholes*', Renewable Energy, vol. 67, no.7, 165-172.
3. **Tshewang Lhendup**, Lu Aye and R. J. Fuller (2012), '*Seasonal Coolth Storage System for Residential Buildings in Australia*', Journal of Central South University, vol.19, no.3, 740-747.
4. **Tshewang Lhendup**, Samten Lhundup and Tenzin Wangchuk (2010), '*Domestic energy consumption patterns in urban Bhutan*', Energy for Sustainable Development, vol 14, no.3, 134-142.
5. **Tshewang Lhendup** (2008) '*Rural Electrification in Bhutan and a Methodology for Evaluation of Distributed Generation System as an alternative Option for Rural Electrification*', Energy for Sustainable Development, vol.12, no.3, 13-24.
6. **Tshewang Lhendup** and Samten Lhundup (2007), '*Comparison of methodologies for generating a typical meteorological year (TMY)*', Energy for Sustainable Development, vol.11, no.3, 5-10.
7. **Tshewang Lhendup** (2005), '*Technical and financial evaluation of a solar dryer in Bhutan*', Energy for Sustainable Development, vol.9, no.4, 17-24.

8. **Tshewang Lhendup** and Roshan Chhetri (2007), '*A Survey on Domestic Electrical Installation in Phuentsholing*', Journal of Research and Development, Royal University of Bhutan, vol.1, no.1, 1-10.
9. **Tshewang Lhendup**, Nidup Dorji and Nima Dukpa (2007), '*A Survey of the Relevance of Engineering Curriculum to Address Rural Infrastructure Needs*', Journal of Research and Development, Royal University of Bhutan, vol.1, no.1, 95-104.

### Peer Reviewed Conference

10. Yeshe Seldon, Ugyen Penjor, Kabi Raj Puri and **Tshewang Lhendup** (2015), 'Performance Analysis of an Off-grid and Grid-tied Solar Photo Voltaic System in Bhutan', International Seminar on Renewable Energy and Sustainable Development (RES2015), 15-17 June 2015, jointly organized by the World Energy and Environment Technology (WEENTECH), United Kingdom and the College of Science and Technology, Royal University of Bhutan, Thimphu, Bhutan.
11. Ash Bahadur Subba, Pelden Chodon, Tenzin Drukpa, V Jayachandran and **Tshewang Lhendup** (2015), 'Residential Electricity Use Load Profile Using Monthly Electricity Consumption', International Seminar on Renewable Energy and Sustainable Development (RES2015), 15-17 June 2015, jointly organized by the World Energy and Environment Technology (WEENTECH), United Kingdom and the College of Science and Technology, Royal University of Bhutan, Thimphu, Bhutan.
12. **Tshewang Lhendup**, Sima Das, Tempa Tshering, Ugyen Penjor, Dechen Choden Pelden Chodon and Cheku Dorji (2015), 'Status of Energy Consumption and Energy Efficiency Schemes in Bhutan's Domestic Sector', IEEE International Conference on Computational Intelligence and Communication Technology (CICIT-2015), 13-14 February 2015, ABES engineering college, Ghaziabad, Uttar Pradesh, India.
13. Yangchen Dolkar, Dawa Jamtsho, Rozal Adhikari, Tshering Wangdi, Sonam Dorji, **Tshewang Lhendup** and Pema Lhamo (2015), 'System Design and Performance Analysis of a Grid-Tied Solar PV Power System in Bhutan', IEEE International Conference on Computational Intelligence and Communication Technology (CICIT-2015), 13-14 February 2015, ABES engineering college, Ghaziabad, Uttar Pradesh, India.
14. **Tshewang Lhendup** (2014), '*Ground-coupled Heating and Cooling in Bhutan*', The 1<sup>st</sup> International Conference on Engineering, Science, Technology, Education and History-Gross National Happiness Through Engineering Education and Knowledge Transfer, August 21-22, 2014, organized by Jigme Namgyel Polytechnic, Dewathang, Bhutan and The Japan Society of Education for History of Technology at Thimphu, Bhutan.
15. Pema Lhamo, Pelden Chodon, Jigme Zangpo and **Tshewang Lhendup** (2014), '*Women in Higher Engineering Education in Bhutan*', The 1<sup>st</sup> International Conference on Engineering, Science, Technology, Education and History-Gross National Happiness Through Engineering Education and Knowledge Transfer, August 21-22, 2014, organized by Jigme Namgyel Polytechnic, Dewathang, Bhutan and The Japan Society of Education for History of Technology at Thimphu, Bhutan.
16. **Tshewang Lhendup**, Lu Aye and R. J. Fuller (2014), '*Performance Analysis of Ground-coupled Heat Pump Integrated with Unglazed Solar Collector*', Solar 2014: The 52<sup>nd</sup> Annual Conference of the Australian Solar Council, 8-9 May 2014, Melbourne, Australia.

17. **Tshewang Lhendup**, Lu Aye and R. J. Fuller (2013), '*Thermal Charging of Boreholes*', International Conference on Renewable Energy for Sustainable Development and Decarbonisation, World Renewable Energy Congress, Australia, 14-18 July 2013, Murdoch University, Western Australia.
18. **Tshewang Lhendup**, Lu Aye and R. J. Fuller (2012), '*Experimental Study of Coolth Charging of an Inter-seasonal Underground Thermal Storage*', Solar2012, the 50<sup>th</sup> Australian Solar Energy Society Annual Conference, 6-7 December 2012, Swinburne University of Technology, Melbourne, Australia.
19. **Tshewang Lhendup**, Lu Aye and R. J. Fuller (2011), '*Seasonal Coolth Storage System for Residential Buildings in Australia*', World Renewable Energy Asia Regional Congress and International Conference on Sustainable Development in Building and Environment - WREC-Asia & SuDBE 2011, Chongqing, China 28-31 October 2011.
20. Livesley, S. J., Lu Aye, D. Hes, A. Dawkins, **Tshewang Lhendup**, M Caffin and N. S. Williams (2011), '*Trees provide energy saving benefits to adjacent buildings for a small water cost*', State of Australian Cities National Conference, Melbourne, Australia, 29 November – 2 December, 2011.
21. Lu Aye, Tuan Ngo, **Tshewang Lhendup** and Bob Fuller (2010), '*Ground Source Cooling in Hanoi*', International Conference on Sustainable Built Environments – The State of the Art, 13 and 14 December 2010, Kandy, Sri Lanka.
22. **Tshewang Lhendup**, Lu Aye and R. J. Fuller (2010), '*Simulation of a Ground-coupled Heat Pump Combined with Solar Collectors*', Solar2010, the 48<sup>th</sup> AuSES Annual Conference, 1-3 December 2010, Canberra, ACT, Australia.
23. **Tshewang Lhendup**, Lu Aye and R. J. Fuller (2010), '*A Review of Ground-Coupled solar Heat Pump with Underground Thermal Energy Storage System*', The 2<sup>nd</sup> AUN/SEED-Net Regional Conference on New/Renewable Energy, Faculty of Engineering, Burapha University, Thailand, January 21-22, 2010.
24. **Tshewang Lhendup** (2008), '*Alternative Methodology for Evaluating Distributed Generation System for Rural Electrification in Bhutan*', Renewable Energy Asia 2008 – An International Conference & 4<sup>th</sup> Sustainable Energy and Environment Forum Meeting, December 11-13, 2008, Indian Institute of Technology, New Delhi, India, pp 145-151.
25. R. J. Fuller, **Tshewang Lhendup** and Lu Aye (2005), '*Technical and financial evaluation of a solar dryer in Bhutan*', Solar 2005, Renewable Energy for a Sustainable Future - A challenge for a post carbon world, Proceedings of the 43<sup>rd</sup> Annual conference of Australian and New Zealand Solar Energy Society, 28-30 November 2005, Dunedin.
26. **Tshewang Lhendup** and Om Kafley (2008) '*Engineering Education in Bhutan and its Relevance in Rural Infrastructure Development – A Case Study*', International Journal HIT Transaction on ECCN, ISSN: 0973-6875, vol.2, no.6 April – June 2008, pp 313-322, Haldia Institute of Technology, West Bengal, India.
27. **Tshewang Lhendup** (2005) '*Computer Simulation of a Solar Dryer in Bhutan*', Building our Institutional futures, Proceedings of Rinpung Experiment IX, June 2005, Centre for Educational Research and Development, pp 57-70, National Institute of Education, The Royal University of Bhutan, Paro, Bhutan.

### **Poster Presentation at National Conference**

28. **Tshewang Lhendup** (2010) '*Inter-seasonal thermal storage*', Australian Institute of Energy Postgraduate Student Energy Award, The All-Energy Exhibition and Conference, 6-7 October 2010, Melbourne Convention and Exhibition Centre, Melbourne, Australia.

29. **Tshewang Lhendup** (2012) '*Inter-seasonal thermal storage*', Australian Institute of Energy Postgraduate Student Energy Award, The All-Energy Exhibition and Conference, 10-12 October 2012, Melbourne Convention and Exhibition Centre, Melbourne, Australia.

### **Local Conference**

30. **Tshewang Lhendup** (2009) '*Ground-coupled solar heat pump*', Annual postgraduate conference, Department of Infrastructure Engineering, The University of Melbourne, Victoria, Australia.
31. **Tshewang Lhendup** (2010) '*Inter-seasonal thermal storage*', Annual postgraduate conference, Department of Infrastructure Engineering, The University of Melbourne, Victoria, Australia.
32. **Tshewang Lhendup** (2011) '*Inter-seasonal thermal storage*', Annual postgraduate conference, Department of Infrastructure Engineering, The University of Melbourne, Victoria, Australia.
33. **Tshewang Lhendup** (2012) '*Coolth charging of inter-seasonal underground thermal storage*', Annual postgraduate conference, Department of Infrastructure Engineering, The University of Melbourne, Victoria, Australia.

I hereby declare that the above information furnished by me is true to the best of my knowledge.

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