## **Grad Student Theses and Project Reports**

**Dec 2009** “PV Powered DC Fan for Developing countries (Lahore, Pakistan)”, ENEL 669, Kamran Malik, Muhammad Imran, Junaid ul Haque & Syed Azhar Iqbal

Dec 2009 “Design of Wind Power WLED Lighting System for Coastal Area Village of Pakistan”, ENEL 669, Muhammad Amer Rafiq, Athar Siraj, Naseer Mahmood & Muhammad Athar Siddiq

Dec 2009 “Thermo Electric Generation (TEG) for SSL System”, ENEL 669, Raed Altayawi, Kittinu Muayteng, Ibrahim Aljamaan

Dec 2009 “Pico Wind Turbine & Compressed Air Energy Storage”, ENEL 669, Ali Imtiaz, Vajiha Javed, Mina Kashani & Annu Alphia

Dec 2009 “PV Powered DC Fan for Developing World”, ENEL 669, Amin Farshidi

Dec 2009 “Thermoelectric Generators for Solid State Lighting”, ENEL 669, Arif AL Judi, Dyaa Jwad & Yekthan Hussain

Dec 2009 “Renewable Energy & Solid State Lighting for Developing World”, ENEL 669, Faiyaz Syed, Abdul Rauf, Tahir Naqash & Shahid Ahmad

Dec 2009 “Pico Wind Generator Constructed from Unwanted Personal Computer Components”, ENEL 669, Ken Anderson, Darko Stelkic & Humam Tamimi

Dec 2009 “Design & Implementation of a Replaceable LED Bulb with Excellent Thermal Cooling”, ENEL 669, Lu Lin, Zhaojun Shi & Jun Qi

Dec 2009 “PV Power DC Fan for Developing Countries (Pakistan)”, ENEL 669, Mohammed Imran, Junaid Ul Haque, Kamran Malick & Syed Azhar Iqbal

Dec 2009 “Design of Wind Power WLED Lighting System for Coastal Area Village of Pakistan”, ENEL 669, Muhammad Amer Rafiq, Athar Siraj, Naser Mahmood & Muhammad Athar Siddiq

Dec 2009 “Thermo Electric Generation (TEG) for SSL System”, ENEL 669, Raed Altayawi, Ibrahim Aljamaan & Kittinu Muayteng

Dec 2009 “Renewable Energy Situation in Bangladesh”, ENEL 669, Reaz Khan, Omar Sharif, Sabbir Zahed & Syed Noman

Dec 2009 “Thermal Cooling of SSL (Solid State Lighting) Batteries”, ENEL 669, Sanjeevan Solankurkar, Syed Saad Alam & Rina Rao

Dec 2009 “Geothermal Power for Lighting a Small Village”, ENEL 669, Saurabh S. Soman & Felix

Vincent

Dec 2009 “PV Powered DC Fan in the Developing World”, ENEL 669, Harmeen Bedi, Chukwuemeka Ihekwoaba & Subeg Gill

Dec 2009 “Renewable Energy and SSL For the Developing World”, ENEL 669, Todd Freeborn & Russell Bandura

Dec 2009 “Wind Power Lighting Project for Small Vicinity in Pasni, Pakistan”, ENEL 669, Zahid Khan, Irfan Virk & Mazhar

**Dec 2008** “Renewable Energy Powered LED Projector for Developing World”, ENEL 619.52 , Ling Ran & Hui Niu

Dec 2008 “Design and Analysis of PV Powered Cooling Fan for Africa”, ENEL 619.52, Jamal Seede,

Amir Ahmed Khan & Muhammad Azam Qureshi

Dec 2008 “Building a Pico Wind Turbine for Energy & Lighting for the Developing World”, ENEL 619.52, Daniel Way & Iman Omar

Dec 2008 “Design & Implementation of a Motion Sensor Activated SSL with Timed Progressive

Dimming”, ENEL 619.52 , Joel Minski & Zhigang Zhang

Dec 2008 “Design & Implementation of a Motion Sensor Activated SSL with Timed Progressive

Dimming”, ENEL 619.52, Karam Mohamed Abdel-Latef, Mohamed Fahmy & Abdel-Kader

Aner

Dec 2008 “Ultraviolet Disinfection of Water for Rural Environments Powered by Photovoltaic Modules”, ENEL 619.52, Kuljeet Singh Dhillow, Harish Pandey & Anwar Biswas

Dec 2008 “Mini - Hydro Turbine System for SSL in Rural Pakistan”, ENEL 619.52, Muhammad Athar Siddiq

Dec 2008 “Recovering Wasted Energy in Biomass Stove Using Thermo Electric Generator for SSL in Developing Regions”, ENEL 619.52, Nacer Benaifa & Siamak Zand

Dec 2008 LUTW – “Shine a New Light: White Light Emitting Diodes and the Social in Artificial Home

Lighting”, Kathrine Cagat, M.A. Thesis, Dept. of Anthropology, University College London,

U.K.

May 2008 LUTW – “Power Over Poverty – Sustainable Electricity for Rural Africa”, Zachary Williams,

Final Year Project Report, Seattle Pacific University, USA.

April 2008 LUTW – “Solar Powered Solid State Street Lighting Designed for the Developing World”, ENEL 698, University of Calgary, Arjuna Kodisinghe.

April 2008 LUTW – “Micro Financing of LUTW SSL Initiatives in Developing Countries”,

Development Studies 591, University of Calgary

Mar 2008 LUTW – “Supply chain and cost structure re: Solar Implementation in Africa”,

Honors 200 Class, California Polytechnic State University, San Luis Obispo,

USA

March 2008 LUTW – “Commercial Solid State Lighting Design for LUTW”, EVDS 685 Design

Group, University of Calgary, Christina Iacovino etc.

March 2008 LUTW – “Web site update …..”, COMS 451, University of Calgary, Jennifer Dubienski et al.

Feb 2008 LUTW – “Managing Technology and Innovation for the Base of the Pyramid”,

**Masters Thesis**, Vicky Lammens, Eindhoven University of Technology, The Netherlands.

**Dec 2007** LUTW – “A Pico-Hydro Design for The A.O. Wheeler Hut in the Canadian Rockies”, ENEL 619.52, University of Calgary, Mike Reynen.

Dec 2007 LUTW – “AC Driven Multi-Colored LED Bulb for Illumination in the Developing World”, ENEL 619.52, University of Calgary, Martin Barrera.

Dec 2007 LUTW – “Impacts of Micro Financed Solar Energy Supply in Tanzania”,

ENEL 619.52, University of Calgary, Juliane Kniebel-Hübner.

Dec 2007 LUTW – “Pedestrian River Bridge Solid State Lighting Design”, ENEL 619.52, University of Calgary, Amajit Chakraborti & Mohammed Alam.

Dec 2007 LUTW – “Photometric Design Simulation for Solid State Lighting in Rural Homes”, ENEL 619.52, University of Calgary, Babatola Ajayi & Zaheer Ahmad.

Dec 2007 LUTW – “Small Wind Powered Solid State Lighting System for Rural Pakistan”, ENEL 619.52, University of Calgary, Imran Shabbir & Imran Ahmed.

Aug 2007 LUTW – “Solid State Lighting in Developing Nations – Is There a Market for Solar Lighting in Africa?”, ENEL 619.52, University of Calgary, Candice Barnowsky & Mark Skovmose.

July 2007 LUTW – “A Lifecycle Approach to Sustainable Design – An Analysis of Illumination”,

Ken Robertson, EVDS, **M.Sc**. Thesis, University of Calgary, Canada.

June 2007 LUTW – “Luminous Output Decay of White LEDs – Experimental Results Updated”, Rodolfo Peon, Internal Report from LUTW SSL Lab.

**Dec 2006** LUTW – “Outdoor Solid State Lighting for Sports, Pathways & Roads”, ENEL 619.52,

University of Calgary, Gordon McKinlay.

Dec 2006 LUTW – “Small Scale Bio Fuel Cell for Solid State Lighting of a Rural Village”, ENEL 619.52, University of Calgary, Hussain Gaser.

Dec 2006 LUTW – “Pico Hydro Electrical Generation System for Solid State Lighting in the Developing World”, ENEL 619.52, University of Calgary, Muhammad Yahya & Liaqat Ali.

# Dec 2006 LUTW – “High Brightness WLED Driver & Dimmer Circuit Design”, ENEL 619.52, University of Calgary, Arjuna Kodisinghe & Philip Lo.

# Dec 2006 LUTW – “Pico Wind Turbine System for Solid State Lighting”, ENEL 619.52, University of Calgary, Javier Lopez.

## Sept 2006 LUTW – “Biomass Energy for Rural Electrification: An Analysis of Small Scale

## Implementations”, Ganesh Doluweerawatta Gamage**, MSc Thesis**, University of Calgary,

## Canada.

## April 2006 LUTW – “Design and Testing of a Hybrid Flame/LED Lantern”, Rashaad Sader, **MSc Thesis**, University of Calgary, Canada.

March 2006 LUTW – “Solid State Home Lighting Systems – A Brighter Option for the Developing World”, Rodolfo Peón Anaya, **MSc Thesis**, University of Calgary, Canada.

**Dec 2005** LUTW – “Biomass Gasification Technique for Electrical Power Generation – A Case Study: Village of 50 Households in Northern Iraq (Kurdistan) to be Lit by Solid State Lighting”, ENEL 619.52, University of Calgary, Hussain Bierk.

Dec 2005 LUTW – “Profile of a Peruvian Lighting Project”, ENEL 619.52, University of Calgary,

Andrew Zakaluzny.

Dec 2005 LUTW – “Solid State Lighting System Design for Orphanage in Zaduo, Tibet”, ENEL 619.52, University of Calgary, Martin Frena.

Dec 2005 LUTW – “Shadowing Report: Light Up The World Foundation, ACTN 465, University of Calgary, Brian Hill.

## April 2005 LUTW – “The Social and Economic Impacts of Bringing Electricity to Sri Lanka”,

STAS 341, University of Calgary, Mark Chambers

April 2005 LUTW – “Lighting Up The World: Examining the Sociological Realities Involved in Translating Compassion from the Ideal to the Real”, Sociology 401.19, University of Calgary, Dominika Boczula and Heidi Rohr.

April 2005 LUTW – “Solid State Lighting System Design Using Solar Individual Charging System”, ENEL 619.52, University of Calgary, Win Myint.

April 2005 LUTW – “WLED Lighting For Developing World Project – Light up a Village with Pico Hydro”, ENEL 619.52, University of Calgary, Shahid Iqbal.

April 2005 LUTW – “Wind Electricity Generation - Feasibility Study For Barag Village, Pakistan”, ENEL 619.52, University of Calgary, Hassan Nasir

April 2005 LUTW – “Electric Power Generation with Biomass Gasification Based Fuel and Providing Solid State Lighting System to a Model Village of 50 House Holds”, ENEL 619.52, University of Calgary, Babar Sulehria.

April 2005 LUTW – “Solar Powered LED Lighting for Cabins at Pioneer Ranch”, ENEL 619.52, University of Calgary, Graham Nelson.

April 2005 LUTW – “Pedal Powered Solid State Lighting System For Toba Village, Pakistan”, ENEL 619.52, University of Calgary, Imran Hamid.

**Dec 2004** LUTW – “Feasibility Study of Thermoelectric Power Generation for Solid State Lighting”, ENEL 599 Research Project, University of Calgary, Laura Dunphy.

Nov 2004 LUTW – “2004 Social Impact Assessment/Project Evaluation of LUTW’s Sri Lanka Projects”, Seth Leon, **Dalhousie University**, Canada.

Sept 2004 LUTW - “Building a Microenterprise Business Model for the Introduction of Solid State Lighting into Developing Countries”, Michael Arthurs, **M.Sc Thesis**., Cranfield University at Silsoe, England.

June 2004 LUTW - “Technical and Economic Optimization of Village Electrification Stystems”, Stewart

Craine, **M.Eng. Thesis**, Curtain University of Technology, Australia.

April 2004 LUTW **–** “Pilot Project to Bring Solid State Lighting to an Off-Grid Community in British

Columbia, Canada – A Partnership between the Light Up The World Foundation, The Pembina Institute, and the Xeni Gwet’in First Nation”, **Development Studies 591**, Research Project, University of Calgary, Sept 2003 to Apr 2004.

**Dec 2003** LUTW – “Preparing an Action Plan for Networking with UN Organisations and the World Bank for Light Up The World Foundation”, **Development Studies 591**, Research Project, University of Calgary, Sept 2003 to Dec 2003.

### Dec 2003 LUTW – “Possibilities and Practice of Carbon Emissions Trading Arrangements (CETA) for Light Up The World”, Development Studies 591, Research Project, University of Calgary, Sept 2003 to Dec 2003.

Dec 2003 LUTW – “Light Up The World Social Impact Assessment Toolkit”, **Development Studies 591**, Group Practicum Research Project, University of Calgary, Sept 2003 to Dec 2003.

Dec 2003 LUTW – “An Initial Design Proposal Regarding Income Generation for the Light Up The World Foundation”, **Environmental Design 685**, Design Clinic Group Research Project, University of Calgary, Sept 2003 to Dec 2003.

Nov 2003 LUTW – “Data Logger for Remote Nepali Villages”, 4th year project in Electrical Engineering, **Simon Fraser University**. Sept 2002 to Nov 2003.

Jan 2003 **SPARC Proposal** – **New Zealand** 2003 Expedition to Nepal. This includes the Solid State

Lighting of a number of homes in the Khumbu Valley area using LUTW technology.

Jan 2003 LUTW - Report on battery technologies for LUTW by UofC Chemistry MSc Student, Joe

Melton.

**May 2002** LUTW – **Design of Hardware for Rapid Charging of Supercapacitors**, 4th year project in

Electrical and Computer Engineering, University of Calgary. January 2002 to May 2002.

May 2002 LUTW – **White LED Lighting from a Supercapacitor**, 4th year project in Electrical and

Computer Engineering, University of Calgary. January 2002 to May 2002.

Apr 2002 LUTW – “The Role of Non-Government Organizations in Development: Light Up The World as a Constructive Development Tool”, **Development Studies**, Group Project Research Report,

University of Calgary, January 2002 to April 2002.

Apr 2002 LUTW – **Sustainable Development** – The LUTW Foundation, Chemical Engineering Research Project, University of Calgary, January 2002 to April 2002.

April 2002 LUTW – **WLED Global Lantern**, 4th year project in Electrical and Computer Engineering,

University of Calgary, Canada. September 2001 to April 2002.

May 2002 LUTW – **Characterization of a Supercapacitor**, 4th year project in Electrical and Computer

Engineering, University of Calgary, Canada. January 2002 to May 2002.

**Apr 2001** LUTW – **Pico Hydro Generator**, 4th year project in Electrical and Mechanical Engineering,

University of Calgary, Canada. September 2000 to April 2001.

**Apr 2000** LUTW – **Nepal Light Project Pico Wind Generator**, 4th year project in Electrical and

Mechanical Engineering, University of Calgary, Canada. September 1999 to April 2000.

**July 1999** LUTW - **Field Study Regarding feasibility of WLED Home Lighting in Nepal**, 1999