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Mr. Md. Shahriar Ahmed Chowdhury

Assistant Professor, Dept. of EEE & Director, CER

ROOM: 1006/1007/1008 PABX: 3320 Email: shahriar@eee.uiu.ac.bd shahriar@eee.uiu.ac.bd +8801812243581 * Home * Faculty Profiles

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Biography

Asst. Professor & Director â€“ Centre for Energy Research (CER)

Bio & Research Interest & Achivements

Md. Shahriar Ahmed Chowdhury, CEA, FIEB

Chairman, Center for Renewable Energy Services Ltd.**(CRESL) Director** , Centre for Energy Research **Assistant Professor** , Department of Electrical and Electronic Engineering United International University **Fields of Research Interest** 1.	Renewable Energy
2.	Photovoltaic Materials and Systems
3.	Power Systems and Power Electronics
4.	Energy Conversion and Electrical Machines
5.	Climate Change Mitigation
6	Energy Efficient and Low Carbon Technologies
Awards and Research Achievements 1. **United Nations Momentum for Change Award, 2016** : At UNFCC Climate Change Conference (COP 22) in Marrakech, Morocco for Develeopment of â€œSmart Solar Villageâ€œ which includes enery trading among the connected households with or without SHS. [Team Leader and Principal Investigator of the World Bank funded research project].

1. **InterSolar (Europe) Award, 2016** : In the category of â€œOutstanding Solar Projectsâ€œ in Munich, Germany.
2. **Education Leadership Award, 2018** : In the 7th World Education Congress at Mumbai, India for Excellence in Education, Leadership and Teaching in the field of Renewable Energy.
3. **Asian Photovoltaic Industry Association Award 2019** : for Academic contribution to the Solar PV Industry @Shanghai, China.
4. **IEEE- International Future Energy Challenge (IEEE-IFEC: 2009)** : Finalist project of the competition at Illinois Institute of Technology, Chicago, USA for the project Integrated Starter/Alternator-Motor Drive for Automotive

Applications)

5. **Inter University Innovation Project Award, 2016** : for the innovative project â€œSmart Solar Irrigation Systemâ€œ Organized by Ministrty of Power, Energy and Mineral Resources of Bangladesh, at â€œNational Power & Energy Week 2016â€œ
6. **Inter University Innovation Project Award, 2018** : for the innovative project â€œDemand Response Enabled Smart Gridâ€œOrganized by Ministrty of Power, Energy and Mineral Resources of Bangladesh, at â€œNational Power & Energy Week 2018â€œ
7. Development of a novel dry fabrication process steps for CIGS thin film solar cell with Indium Sulfide as buffer layer [2006]. This process enabled one of the highest performances in terms of efficiency for CIGS thin film solar cells at the time. [M.Sc. Thesis work at Centre for Solar Energy and Hydrogen Research, Stuttgart, Germany].

Membership in Professional Associations: * Member, The Association of Energy Engineers (AEE), USA * Fellow, The Institute of Engineers, Bangladesh (IEB) * Member of Expert Panel of IEC for Systems Evaluation Group (SEG 4) on â€œLow Voltage Direct Current Applications, Distribution and Safety for use in Developed and Developing Economies. * Member of the Executive Committee, Bangladesh Renewable Energy Society (BRES) * Member of the Executive Committee, Alumni Association of German Universities in Bangladesh (AAGUB)

Academic Qualifications

1.Master of Science (M.Sc.)

Degree | M.Sc. in Renewable Energy
Institution | Carl von Ossietzky University, Oldenburg, Germany
Session Attended | 2004 â€“ 06
Result | 1.7 (84.5% â€“ 89.5%) [**Highest in the post graduating class at the University**]
Research Project/ Thesis Title | Preparation and Characterization of Indium Sulfide Buffer Layer for CIGS [Cu(In,Ga)Se2] Thin Film Solar Cells.
2. Bachelor of Science (B.Sc.)

Degree | B.Sc. in Electrical and Electronic Engineering
Institution | Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Session attended | 1990/91 â€“ 1993/94

Employment Records

Name of Employer	United International University (www.uiu.ac.bd)
Duration	October, 2007 â€“ Till date (6 years)
Type of Profession	Research and Teaching
Position	Director, Centre for Energy Research (Since September, 2010) andAssistant Professor, Department of Electrical and Electronic Engineering
Responsibilities	Â· Established the Centre for Energy Research (www.cer.uiu.ac.bd) at the University focusing on renewable energy and energy efficiency research. CER is the certification authority for the equipments of the RERED (SHS) project of IDCOL. This project is funded by the World Bank, Asian Development Bank, IDB, KfW, GIZ, IDF, GEF.Â· Initiated a bi-yearly international conference on renewable energy (ICDRET- International Conference on the Developments in Renewable Energy Technology www.icdret.uiu.ac.bd). The first three events were held in 2009, 2012 and 2014. The fourth event will be held in 7-9th January, 2016. IEEE, PES is the technical Co-Sponsor. Â· Designed a Renewable Energy course for the final year students of Electrical and Electronic Engineering department (First RE course for the undergraduate level of EEE department in Bangladesh) Â· Teaching undergraduate courses on Renewable Energy, Power Plant Engineering, Energy Conversion, Electrical Machines, Power Systems and Power systems protection. Â· Supervised a student project for International Future Energy Challenge (IFEC-2009) organized by IEEE. The student team from UIU was one of the three finalists around the world to participate the final

	competition in Illinois Institute of Technology, Chicago, USA. Â· Organized an International Seminar â€œGerman Alumni Energy Expert Seminar for South and South-East Asian Countriesâ€. The seminar was participated by energy experts from south and south-east Asian countries along with the German experts in 5th â€“ 11th January, 2012. Â· Conducted research on Energy Efficiency, Renewable Energy resources and technologies, Supervised many B.Sc. in Engineering, final year thesis related to Renewable Energy and Energy Efficiency. Â· Development of a Solar PV minigrid laboratory at the University. The laboratory is sponsorship by World Bank and IDCOL.
2.	
Employer	University of Staffordshire, UK.
Duration	February- March, 2010 (2 months)
Profession	Research and training
Position	Academic Visitor
Responsibilities	Researches on Renewable Energy
3.	
Employer	University of Oldenburg, Germany (www.ppre.de)
Duration	April, 2009 â€“ July, 2009 (4 months)
Profession	Research and Teaching
Position	Guest Lecturer /Researcher, Post Graduate Program Renewable Energy
Responsibilities	Â· Responsible for conducting case study course on off grid electrification by Renewable Energy technologiesÂ· Laboratory course on solar home systemsÂ· Conducting research on Thin Film PV
4.	
Employer	Centre for Solar Energy and Hydrogen Research (www.zsw-bw.de), Stuttgart, Germany
Duration	August, 2005 â€“ March, 2006 (8 months)
Profession	Research
Position	Research Student and Research Associate
Responsibilities	Developing a dry fabrication process for the buffer layer of CIGS thin film solar cell.
5.	
Employer	Bangladesh Power Development Board (BPDB) (www.bpdb.gov.bd)
Duration	March, 2000 â€“ April, 2007 (7 years)
Profession	Engineering
Position	Assistant Engineer, Directorate of Program
Responsibilities	Â· Planning and design of power distribution systemsÂ· Preparation of annual development program of BPDB,Â· Assessment and monitoring of foreign aided development projects of BPDB Â· Co-ordination with the different donor agencies
6.	
Employer	Dhaka Electric Supply Authority (DESA)
Duration	August, 1997 â€“ February, 2000 (2.5 years)
Profession	Engineering
Position	Assistant Engineer, System Control and Grid Circle

Responsibilities	Â· Electric power distribution planning and load managementÂ· System control and protection, Grid substation maintenanceÂ· Supervisory Control and Data Acquisition (SCADA) system of DESA Â· Underground high voltage cable lying, cable fault detection and maintenance
1. **Countries of Work Experience:**	
* Bangladesh,	
* Germany,	
* UK,	
* Kenya,	

Consulting Experiences

(1)	**Name of assignment or project: Installation of a 7.4 MWP Solar Photovoltaic (PV) Grid-Connected Power Generation Plant at Kaptai Hydro Power Plant Site.Year: April, 2013 â€“ Till dateLocation: Kaptai Hydro Electric Plant Area, Chittagong hill tracts, Bangladesh Client/Sponsor: Bangladesh Power Development Board (BPDB) / Asian Development Bank (ADB) Major project features: Support BPDB in realizing a 7.4 MWp grid connected PV power plant Positions held : Team Leader (National) /Solar PV Expert Scope of the work: Â· Preparation of the Technical Specifications and Bidding Documents. Â· Support BPDB in the Bidding Process. Â· Supervision of the construction work. Â· Testing and Commissioning of the power plant**
(2)	**Name of assignment or project:** Installation of a **4.2 MWp** Off-Grid Solar-Diesel Hybrid Power System at Hatiya Island (2.2 MWp Solar PV, 2 MW Diesel generator and 5MWh of Li-ion battery).Year: April, 2013 â€“ Till dateLocation: Hatiya Island, Noakhali (on the southern part of Bangladesh) Client/Sponsor: Bangladesh Power Development Board (BPDB) / Asian Development Bank (ADB) Major project features: Support BPDB in realizing 4.2 MW off grid Wind-Solar PV-Diesel Hybrid power plant (2.2 MWp Solar PV + 2 MW Diesel generator + 5.5 MWh of Li-Ion battery). **Positions held** : Team Leader (National) /Solar PV Expert **Scope of the work:** Â· Preparation of Technical Specifications and Bidding Documents. Â· Support BPDB in the Bidding Process. Â· Supervision of the construction work. Â· Testing and Commissioning of the power plant.
(3)	**Name of assignment or project** : Consultancy Services for feasibility study of a **100 MW P** Grid connected Solar Photovoltic (PV) Power Generation Plant at Jaldhaka upazilla of Nilphamari district.**Year** : June, 2015 â€“ September, 2015Location: Bangladesh Client/Sponsor ATN Solutions Ltd. **Major project features:** The project aims to develop a feasibility study report to realize a 100 MWp grid tied Solar park at Jaldhaka upazilla of Nilphamari district. Positions held: Consultant **Scope of the work:** Â· Development of plant layout on the given land Â· Analysis and cost estimation of land and land development requirement; Â· Power evacuation system analysis and design; Â· BoQ of the system considering the state of the art technology; Â· Yield calculation using PV simulation software PVsyst (It includes month wise energy generation, Loss diagram over the whole year, Specific energy yield, Month wise performance ratio etc.); Â· Estimated cost of the power plant; Â·

	Preparation of operating budget; A· Preparing Financial Model for the Project; Â· Financial and economic analysis of the Project. Â· Calculation of levelized cost of energy. Â· Risk and Risk mitigation plan for the project.
(4)	**Name of assignment or project** : Advisory /Consultancy Services for Installation of a **100 MW P** Grid connected Solar Photovoltic (PV) Power Generation Plant for Sena Kalyan Sangstha, SKS (Armed Forces Welfare Association).**Year** : December, 2015 â€“ Till dateLocation: Bangladesh Client/Sponsor: Sena Kalyan Sangstha, SKS (Armed Forces Welfare Association), RAOWA Complex (6th Floor), VIP Road , Mohakhali, Dhaka â€“ 1208, Bangladesh **Major project features:** The project aims to support Sena Kalyan Sangstha, SKS (Armed Forces Welfare Association) in realizing a 100 MWp Solar park at suitable location of Bangladesh. Positions held: Consultant **Scope of the work:** Â· Support SKS in choosing suitable location for development of a 100 MWp grid tied SPV project considering land, land development requirement, power evacuation system. Â· Conduct feasibility study; Â· Development of plant layout Â· Power evacuation system design; Â· Land and land development requirement; Â· BoQ of the system considering the state of the art technology; Â· Yield calculation using PV simulation software PVsyst (It includes month wise energy generation, Loss diagram over the whole year, Specific energy yield, Month wise performance ratio etc.); Â· Estimated cost of the power plant; Â· Preparation of operating budget; Â· Preparing Financial Model for the Project; Â· Financial and economic analysis of the Project. Â· Calculation of levelized cost of energy. Â· Risk and Risk mitigation plan for the project. Â· Development of the project proposal (according to the format of MoPEMR). Â· Support BGB in technical and tariff negotiation meetings with MoPEMR. Â· Organize the JV partner
(5)	**Name of assignment or project** : Consultancy Services for Installation of a **150 MW P** Grid connected Solar Photovoltic (PV) Power Generation Plant for Border Guard Bangladesh (BGB).**Year** : December, 2015 â€“ Till dateLocation: Bangladesh Client/Sponsor: Border Guard Bangladesh (BGB), Pilkhana, Dhaka. **Major project features:** The project aims to support Border Guard Bangladesh (BGB) in realizing a 100 MWp Solar park at suitable location of Bangladesh. Positions held: Consultant **Scope of the work:** Â· Support BGB in choosing suitable location for development of a 100 MWp [100+50] grid tied SPV project considering land, land development requirement, power evacuation system. Â· Conduct feasibility study; Â· Development of plant layout Â· Power evacuation system design; Â· Land and land development requirement; Â· BoQ of the system considering the state of the art technology; Â· Yield calculation using PV simulation software PVsyst (It includes month wise energy generation, Loss diagram over the whole year, Specific energy yield, Month wise performance ratio etc.); Â· Estimated cost of the power plant; Â· Preparation of operating budget; Â· Preparing Financial Model for the Project; Â· Financial and economic analysis of the Project. Â· Calculation of levelized cost of energy. Â· Risk and Risk mitigation plan for the project. Â· Development of the project proposal (according to the format of MoPEMR). Â· Support BGB in technical and tariff negotiation meetings with MoPEMR.
	Name of assignment or project : Consultancy Services for Installation of a **50 MW P** Grid connected Solar Photovoltic (PV) generation plant over the fisheries lakes of Fine Foods Ltd. at Chandupur, Katiadi, Kishoreganj for Biswas Solar Power Ltd..**Year** : January, 2016 â€“ Till dateLocation: Bangladesh Client/Sponsor:

(6)	Biswas Solar Park Ltd. (BSPL) New Market City Complex, 44/1 Rahim Square, New Market, Dhaka. **Major project features:** The project aims to support Biswas Solar Park Ltd. (BSPL) in realizing a 50 MWp Solar park over the fisheries lakes of Fine Foods Ltd. at Chandupur, Katiadi, Kishoreganj. Positions held: Consultant **Scope of the work:** Â· Support BSPL for development of a 50 MWp grid tied SPV project considering the topographic situation of land, land development requirement, power evacuation system. Â· Conduct feasibility study; Â· Development of plant layout Â· Power evacuation system design; Â· Land and land development requirement; Â· BoQ of the system considering the state of the art technology; Â· Yield calculation using PV simulation software PVsyst (It includes month wise energy generation, Loss diagram over the whole year, Specific energy yield, Month wise performance ratio etc.); Â· Estimated cost of the power plant; Â· Preparation of operating budget; Â· Preparing Financial Model for the Project; Â· Financial and economic analysis of the Project. Â· Calculation of levelized cost of energy. Â· Risk and Risk mitigation plan for the project. Â· Development of the project proposal (according to the format of MoPEMR). Â· Support BSPL in technical and tariff negotiation meetings with MoPEMR.
(7)	**Name of assignment or project** : Consultancy Services for Installation of a **8 MW P** Grid connected Solar Photovoltic (PV) Power Generation Plant at the roof of Tallu Spinning Mills Ltd.**Year** : January, 2016 â€“ Till dateLocation: Bangladesh Client/Sponsor: Tallu Spinning Mills Ltd. (TSML), House- 50, Road- 3, Gulshan-1, Dhaka-1212. **Major project features:** The project aims to support Tallu Spinning Mills Ltd. (TSML), in realizing a 8 MWp roof top grid tied solar system. Positions held: Consultant **Scope of the work:** Â· Support TSML in realizing a grid tied roof top solar PV system considering the nature, orientation and tilt of the spinning mills roof. Â· Conduct feasibility study; Â· Development of plant layout Â· Power evacuation system design; Â· Land and land development requirement; Â· BoQ of the system considering the state of the art technology; Â· Yield calculation using PV simulation software PVsyst (It includes month wise energy generation, Loss diagram over the whole year, Specific energy yield, Month wise performance ratio etc.), considering the orientation and tilt of the roof; Â· Estimated cost of the power plant; Â· Preparation of operating budget; Â· Preparing Financial Model for the Project; Â· Financial and economic analysis of the Project. Â· Calculation of levelized cost of energy. Â· Risk and Risk mitigation plan for the project. Â· Development of the project proposal (according to the format of MoPEMR). Support BGB in technical and tariff negotiation meetings with MoPEMR.
(8)	Name of assignment or project: Advisory services for preparing technical, commercial and financial proposal to bid for Dhorola 30 MW (AC) Solar Park at the bank of river Dhorola, Kurigram, BangladeshYear: January, 2014 â€“ April, 2014Location: Bangladesh Client/Sponsor: IDCOL / Acorn Infrastructure Services Limited (AISL) Major project features: The project aims to support Acorn Infrastructure Services Limited (AISL) for bidding process in realizing a 30 MW (AC) Solar park at the bank of river Dhorola, Kurigram, Bangladesh. Positions held: Renewable Energy Expert **Scope of the work:** Â· Prepare conceptual and basic design and drawing; Â· Review of detail design and suggest modifications; Â· Review of warranty clauses of the equipment and services; Â· Review of the plant operation and monitoring concept; Â· Review of Bill of Quantity; Â· Review of tender documents including draft project agreements; Â· Support in sourcing and evaluation of Operating Member, EPC contractor and suppliers; Â· Assist in negotiation of draft agreements; Â· Participate in meetings with

	different stakeholders; and Â· Prepare technical proposal and supporting documents, as per requirements of the bid documents. Â· Assist in finalization of EPC and supply contracts; Â· Review and recommend on LTSA (Long Term Service Agreement); Â· Preparation of O&M plan including yearly operating budget,
(9)	**Name of assignment or project** : Consultancy Services for Installation of a **12 MW P** Grid connected Solar Photovoltic (PV) Power Generation Plant at Tetulia in Panchagarh District.**Year** : September, 2014 â€“ Till dateLocation: Bangladesh Client/Sponsor: GETCO Limited **Major project features:** The project aims to support GETCO Limited in realizing a 12 MWp Solar park at Tetulia under Panchagarh district. Positions held: Technical Consultant (Team Leader) **Scope of the work:** Â· Feasibility study; Â· Land and land development requirement; Â· Evacuation system design; Â· BoQ of the system considering the state of the art technology; Â· Yield calculation using PV simulation software PVsyst (It includes month wise energy generation, Loss diagram over the whole year, Specific energy yield, Month wise performance ratio etc.); Â· Estimated cost of the power plant; Â· Preparation of operating budget; Â· Preparing Financial Model for the Project; Â· Financial and economic analysis of the Project. Â· Conducting financial viability study in various adverse scenarios. Â· Calculation of levelized cost of energy. Â· Risk and Risk mitigation plan for the project. Â· Development of the project proposal (according to the format of MoPEMR);
(10)	**Name of assignment or project** : Consultancy Services for Installation of a **30 MW P** Grid connected Solar Photovoltic (PV) Power Generation Plant at Mutukpur, Gangachara, Rangpur.**Year** : October, 2014 â€“ Till dateLocation: Bangladesh Client/Sponsor: Ananda Agro Farm Ltd. **Major project features:** The project aims to support Ananda Agro Farm Ltd. in realizing a 30 MWp Solar park at Mutukpur, Gangachara, Rangpur. Positions held: Technical Consultant (Team Leader) **Scope of the work:** Â· Feasibility study; Â· Land and land development requirement; Â· Evacuation system design; Â· BoQ of the system considering the state of the art technology; Â· Yield calculation using PV simulation software PVsyst (It includes month wise energy generation, Loss diagram over the whole year, Specific energy yield, Month wise performance ratio etc.); Â· Estimated cost of the power plant; Â· Preparation of operating budget; Â· Preparing Financial Model for the Project; Â· Financial and economic analysis of the Project. Â· Conducting financial viability study in various adverse scenarios. Â· Calculation of levelized cost of energy. Â· Risk and Risk mitigation plan for the project. Â· Development of the project proposal (according to the format of MoPEMR);
(11)	**Name of assignment or project** : Consultancy Services for Installation of a **12 MW P** Grid connected Solar Photovoltic (PV) Power Generation Plant at Tetulia, Panchagarh..**Year** : May, 2015 â€“ Till dateLocation: Bangladesh **Client/Sponsor:** Parasol Energy Limited (5, Mohakhali C/A (7th Floor), Dhaka, Bangladesh) **Major project features:** The project aims to support Parasol Energy Limited in realizing a 12 MWP Grid connected Solar Photovoltic (PV) Power Generation Plant at Tetulia, Panchagarh. Positions held: Technical Consultant (Team Leader) **Scope of the work:** Â· Feasibility study; Â· Land and land development requirement; Â· Evacuation system design; Â· BoQ of the system considering the state of the art technology; Â· Yield calculation using PV simulation software PVsyst (It includes month wise energy generation, Loss diagram over the whole year, Specific energy yield, Month wise

	performance ratio etc.); A· Estimated cost of the power plant; A· Preparation of operating budget; Â· Preparing Financial Model for the Project; Â· Financial and economic analysis of the Project. Â· Conducting financial viability study in various adverse scenarios. Â· Calculation of levelized cost of energy. Â· Risk and Risk mitigation plan for the project. Â· Development of the project proposal (according to the format of MoPEMR);
(12)	Name of assignment or project: Consultancy Services for Feasibility Study for a 7.6 MWp Grid Connected Solar PV Power Plant at SirajganjYear: March, 2015 â€“ May, 2015Location: Sirajganj, Bangladesh Client/Sponsor: North West Power Generation Company Limited (http://www.nwpgcl.org.bd) Major project features: Feasibility Study for a 8.0 MWp or above Grid Connected Solar PV Power Plant at Sirajganj **Positions held** : Consultant **Scope of the work:** Â· Feasibility study for development of a grid connected solar PV power plant at Sirajgonj Â· Brief description of the selected site. Â· Land and land development requirement [North-West Power Generation Company Limited needs to provide the topographic survey report of the area]. Â· Civil construction requirement. Â· Technology options and best suitable technology considering the site location and grid system. Â· Major equipment required for installation of the solar PV system. Â· Description and requirement of power evacuation system. Â· BoQ of the system considering the state of the art technology. Â· Analysis of the solar radiation data of the location Â· Yield calculation using PV simulation software (It includes month wise energy generation, Loss diagram over the whole year, Specific energy yield, Month wise performance ratio etc.). Â· Estimated cost of the project. Â· Preparation of operating budget Â· Preparing Financial Model for the project Â· Calculation of levelized tariff. Â· Risk and Risk mitigation plan for the project.
(13)	Name of assignment or project: Consultancy Services for development of Tender document, Evaluation of bids, supervision installation, testing and commissioning of a 7.6 MWp Grid Connected Solar PV Power Plant at SirajganjYear: October, 2015 â€“ Till date.Location: Sirajganj, Bangladesh Client/Sponsor: North West Power Generation Company Limited (http://www.nwpgcl.org.bd) Major project features: development of Tender document, Evaluation of bids, supervision installation, testing and commissioning **Positions held** : Consultant **Scope of the work:** Â· Prepare the tender document according to ADB guideline Â· Preparation of evaluation matrix Â· Supervision of evaluation of bids Â· Review the contract document for selected EPC Â· Participate the contract negotiation Â· Supervise the installation and commissioning of the plant
(14)	Name of assignment or project: Integration of Solar PV systems (BIPV) in the 30 storied Bangladesh bank (Central Bank of Bangladesh) head office building [Approximately 650 kWp]Year: February, 2013 â€“ Till dateLocation: Dhaka, Bangladesh Client/Sponsor: Dhaka University of Engineering and Technology (DUET) / Bangladesh Bank Major project features: Feasibility study and Design of Solar PV systems for Bangladesh Bank head office building (30 storied). **Positions held** : Team Leader **Scope of the work:** Â· Feasibility study of solar faÃ§ade in Bangladesh bank head office building (30 storied) Â· Prepare the concept, technical design and specifications of the equipment Â· Preparation of bid document
	Name of assignment or project: Development of Solar-Diesel Hybrid Minigrids for off grid area electrificationFinancier: Infrastructure

(15)	Development Company Limited (IDCOL)Major project features: Design, supervision of construction, testing and commissioning solar mini-grid to provide electric power in off-grid rural areas. Positions held: Consultant (Team leader) Activities Performed: Â· Load estimation of the project Â· Design and sizing of the solar PV-Diesel hybrid system. Â· Transmission, Distribution, Control, Monitoring and Protection system design. Â· Development of Financial model of the project Â· Monitoring and Supervision of construction, installation and commissioning work Â· Development of O&M plan and supervision after project commissioning.
SN.	Capacity *(kWp)*
i. 1.	141
ii. 2.	141
iii. 3.	158.25
iv. 4.	177
v. 5.	148.5
vi. 6.	187.5
vii. 7.	247
viii. 8.	162
ix. 9.	240
x. 10.	162
xi. 11.	200
Email: info@intracogroup.com	On going(May, 2015 â€“ Till date)
xii.	210
xiii. 12.	200
xiv.	240
xv.	137.5
xvi.	200
xvii. 14.	200
xviii.	240
xix.	240
xx.	210
(16)	Name of assignment or project: Solar-diesel Hybrid Power System Solution for 40 Off-grid Telecom Base Transceiver Stations (BTSs) Sites of Orascom Telecom Bangladesh Limited (BanglaLink)(Second largest mobile phone operator in Banngladesh).Year: January, 2014 â€“ Till dateLocation: Bangladesh Client/Sponsor: Engreen Limited (EL), Dhaka, Bangladesh (http://engreen.com.bd/) Major project features: Review of design and inspection of the installation of solar-diesel hybrid system to provide power to the off grid BTSs. Positions held: Independent Consultant **Activities Performed:** Monitoring and evaluation of the design, the quality of the Projectâ€™s construction, Installation, commissioning and post construction operation.

(17)	Name of assignment or project: Solar-diesel Hybrid Power System Solution for 72 Off-grid Telecom Base Transceiver Stations (BTSs) Sites of Grameen Phone Ltd. (Largest mobile phone operator in Bangladesh)Year: 5 January, 2011 â€“ 31 July, 2011Location: Bangladesh Client/Sponsor: InGen Technology Limited, Dhaka, Bangladesh (http://www.ingenbd.com) Major project features: Review of design and inspection of the installation of solar-diesel hybrid system to provide power to the off grid BTSs. Positions held: Independent Consultant **Activities Performed:** Monitoring and evaluation of the design, the quality of the Projectâ€™s construction, Installation, commissioning and post construction operation.
(18)	Name of assignment or project: Solar-diesel Hybrid Power System Solution for 10 Off-grid Telecom Base Transceiver Stations (BTSs) Sites of Grameen Phone Ltd. (Largest mobile phone operator in Bangladesh)Year: 1st December, 2011 â€“ 31 July, 2012Location: Bangladesh Client/Sponsor: Japan Solartech (Bangladesh) Limited (JSBL), R-7, H-3, Block- F, Banani, Dhaka- 1213, Bangladesh Major project features: Review of design and inspection of the installation of solar-diesel hybrid system to provide power to the off grid BTSs. Positions held: Independent Consultant Activities Performed: Monitoring and evaluation of the design, the quality of the Projectâ€™s construction, Installation, commissioning and post construction operation.
(19)	Name of assignment or project: Piloting and Evaluation of Solar DC Nano Grid ConceptYear: October, 2014 â€“ March, 2015Location: Bangladesh Client/Sponsor: GIZ [Partner: University of Applied Science, Ulm, Germany and Solar Energy Research Institute of Singapore (SERIS), National University of Singapore (NUS)] Major project features: Develop and implement of DC solar nano-grid for rural electrification in Bangladesh. **Positions held** : Investigator **Scope of the work:** Â· Development and implementation 4 DC solar nano grids in off grid areas of Bangladesh. Â· Evaluate the potential of DC solar nano grids to cover basic energy needs substantially. Â· Implementation and evaluation of different business models and technology concept in order to find the most promising model.
(20)	Name of assignment or project: **Solar Nano-Grids: An appropriate solution for meeting community energy needs?** Year: 2013-2016Location: Bangladesh and Kenya Client/Sponsor: EPSRC, UK [EPSRC Ref. EP/L002612/1] [Partner: Loughborough University, UK and University of Oxford, UK] Major project features: Develop and implement of solar nano grid model for rural electrification in Bangladesh and Kenya. **Positions held** : Researcher
(21)	Name of assignment or project: Development of a Solar PV DC mini grid laboratoryYear: October, 2013 â€“ Till dateLocation: Bangladesh Client/Sponsor: World Bank / IDCOL Major project features: The project aims to develop a solar mini-grid laboratory in the University campus **Positions held** : Project Director **Scope of the work:** Â· Research, study and development of DC solar minigrids for rural electrification. Â· Develop the switchgear, protection and safety schemes for DC power supply, DC distribution systems and DC loads. Â· Development of a laboratory setup for a 10 kWp prototype DC solar minigrid.
(22)	Name of assignment or project: Testing of PV panels under IDCOL SHS program.Year: June, 2013 â€“ February, 2014Location: Bangladesh Client/Sponsor: IDCOL / World Bank Major project features: The project aims to analyze the performance of solar

	panels used into the IDCOL SHS program (WBâ€™s RERED program) Positions held: Team Leader **Scope of the work:** Â· Analyze the performance of solar panels used in the IDCOL SHS program
(23)	Name of assignment or project: Technical Audit of the Solar Home Systems (SHS) ProgramYear: April/2011 â€“ July/2012 (2nd assignment)June/2008 â€“ March/2009 (1st assignment) Location: Bangladesh Client/Sponsor: Infrastructure Development Company Limited / The World Bank Major project features: Investigate the technical quality of the Solar Home systems (SHS) of IDCOLâ€™s RERED project and recommendation for proper specifications. RERED project is jointly funded by the World Bank (WB), Global Environment Facility (GEF), kfW, Asian Development Bank (ADB) and Islamic Development Bank (IDB). Positions held: Team Leader **Activities Performed:** Â· Surveying the field performance of solar home systems (200 SHS in 5 different geographically distributed area of Bangladesh) Â· Sampling the performance of the SHS components from the manufacturers production line Â· Investigating the causes of malfunction of the components through laboratory testing Â· Recommendation for proper specifications of the SHS components and quality control
(24)	Name of assignment or project: Supporting Implementation of Bangladesh Climate Change Strategy and Action Plan (TA8084 BAN: Subproject 2)-1 (42478-023)Year: August, 2013 â€“ Till date Location: Bangladesh Client/Sponsor: Asian Development Bank (ADB)/ AFC (Germany)/ BCAS **Major project features:** The project aims to strengthen country capacity for climate-resilient development and low-carbon growth. **Positions held** : Mitigation Specialist (National) **Scope of the work:** Â· Feasibility study and development of DPP for a **100 MWp** Grid connected solar PV power plant at Sonagazi, Feni. Â· Assess the resource allocation for climate change (both mitigation and adaptation) and disaster risk management activities in Bangladesh, and suggest ways to optimize the use of these resources; Â· Review the experiences and lessons learned on the integration and coordination of climate change adaptation, mitigation and disaster risk management of other countries in the region, including the adoption of legal and economic instruments; Â· Critically review relevant sectoral policy (e.g. energy policy, renewable energy policy, coal policy, etc.) and analyze the gap and recommend for incorporation of climate change issues in specific areas and issues; Â· Develop a latest GHG inventory (2010) and emission factor for energy sector; Â· Develop full technical proposal (DPP/TPP) relevant to mitigation sectors prioritized under prioritization plan of subproject 1; Â· Cross sectoral analysis of mitigation assessments and options to formulate a composite mitigation assessment and mitigation action plan that will be included in the Mitigation Assessment Report and National Action Plan to Mitigate GHG Emissions; Assess technology needs particularly the Identification of technology needs for emission reduction and energy efficiency modalities to acquire and absorb them, design, evaluate and host projects. Also to identify the existing barriers for introduction of new technologies (info, funds, legislation etc.); Â· Feasibility study and development of a DPP (Development Project Proposal) for a 100 MWP grid connected solar PV power generation plant at Sonagazi, Feni. Â· Identify additional studies (and resources) that may be undertaken during project implementation; Â· Formulate NAMA and strengthen local government private sectors and NGOs by implementing cleaner production energy efficiency and standardization and labelling approach;

(25)	Name of assignment or project: Formulation of the Bangladesh Delta Plan 2100Year: September, 2014 â€“ April, 2016Location: Bangladesh Client/Sponsor: Government of Netherland / Government of Bangladesh (Ministry of Planning) **Major project features:** The project aims to develop longer term holistic and integrated planning for a Bangladesh Delta Plan (BDP) Positions held: Power Sector / Renewable Energy Expert (National) **Scope of the work:** Â· The Bangladesh Delta Plan 2100 will serve as umbrella that will integrate all sector plans and policies with long term perspectives. It will change the individual sector approach of project planning and implementation to a multi-lateral coordinated approach. This plan will be linked to short term plans such as Five Year Plans, Vision 2021,and other planning processes. Â· Develop the baseline study for power sector Â· Report on the historical development of power sector. Â· Report on the short term and midterm planning of Bangladesh government on power sector Â· Development of mid term and long term demand scenarios Â· Development of short, medium and long term primary fuel scenarios for power sector Â· Report on the potential challenges to achieve the short, medium and long term power sector planning and scenarios.
(26)	Name of assignment or project: Bangladesh Energy and Carbon Emissions Modeling for 2050Year: September, 2013 â€“ December, 2014Location: Bangladesh Client/Sponsor: Department of Energy and Climate Change, UK / Cardiff University, UK Major project features: The project aims to develop national 2050 energy and carbon emissions scenario for Bangladesh. **Positions held** : Co-Investigator **Scope of the work:** Â· Develop energy and carbon emissions scenario for Bangladesh on the timescale from now until 2050, considering energy demand from representative sectors and energy technologies, as well as key economic indicators that can be used as levers/parameters. Â· Produce an Excel based spreadsheet (as found for the UK 2050 calculator) Â· Produce an interactive web tool based on the Excel spreadsheet
(27)	
# Name of assignment or project: Bangladesh Power System Expansion and Efficiency Improvement Program, Preparation of Tranche 2 [BAN 42378]	
Year: April, 2013 â€“ December, 2013 Location: Bangladesh Client/Sponsor: Power Cell / Asian Development Bank (ADB) Major project features: Assess the technical, financial and economic feasibility of using of solar power for irrigation water pumping in Bangladesh. **Position held** : Solar Power Specialist (National) **Scope of the work:** Â· Assess the national level power and diesel subsidies at present and forecast the subsidies for next 20 years, in collaboration with the Power Economist. Â· Examine the savings of government subsidy on irrigation water pumps and feasibility of using such savings to finance solar irrigation water pumps, taking into consideration of cost of solar powered irrigation pumps, in collaboration with the Economist and the Financial Specialist. Â· Review the information on existing pilot solar power irrigation schemes to examine the	

technical, financial, economic feasibility and success or failures of the pilot schemes. Â· Identify the reasons, if the pilot schemes have failed, for such failures and recommend remedial measures. Â· Undertake community and relevant civil society consultations to develop a suitable business model for solar power irrigation and design a suitable payment mechanism to recover part of the costs Â· Develop a strategy for mainstreaming solar powered irrigation pumps in Bangladesh. Â· As a part of the implementation of the solar irrigation strategy, prepare an extended pilot project as a component of the ensuing project. Â· Prepare the final project report consisting of information needed for ADB to bring the investment proposal for its Board consideration; Â· The relevant sections of the ADBâ€™s Report and Recommendation of the President (RRP) for the ensuing project.	
(28)	Name of assignment or project: Monitoring and Assessment, Advisory and Reporting for the JICA Renewable Energy Development Project (REDP)Year: January, 2015 â€“ December, 2017Location: Bangladesh Client/Sponsor: Infrastructure Development Company Limited (IDCOL) & Japan International Cooperation Agency (JICA) Major project features: Provide Support IDCOL for Implementation of JICA funded Renewable Energy Development Project (REDP). Positions held: Engineer and Renewable Energy Expert. Scope of the work: Â· Monitoring and Assessment of the Project Activities Â· Technological and business environment advisory on appraisal of potential subprojects, mainly for Solar Irrigation Pump Component, Solar Mini-Grid Component, Gasification of Biomass Component and Biogas Power Generation Components Â· Support for Environmental and Social Considerations Reporting
(29)	Name of assignment or project: Bangladesh Off-grid Energy Sector AssessmentYear: March, 2013 â€“ September, 2013Location: Bangladesh Client/Sponsor: Dr. Fouzul Kabir Khan (For IFC, the World Bank Group) Major project features: Detail market assessment for off-grid solar program in Bangladesh under the Lighting Asia Program. **Positions held** : Renewable Energy Expert **Scope of the work:** Assist the lead author in Â· Assessing solar PV cost (at different size and level) and market trends in Bangladesh Â· Assessing current market status for the smaller solar systems Â· Assessing current market status for mini grid systems in Bangladesh Â· Assessing anchor customers for the sustainability of mini grid operations in Bangladesh Â· Identifying currently available incentives for private sector to participate in the renewable business in Bangladesh. Â· Proposing IFC interventions to address market barriers/gaps to facilitate sustainable private sector growth in renewable business in Bangladesh.
(30)	Name of assignment or project: Value Chain Analysis for market development and dissemination of Pico PV (Solar Lantern).Year: November, 2014 â€“ February, 2015Location: Bangladesh Client/Sponsor: GIZ Major project features: Supply / value chain mapping and analytical study of general off-grid lighting products in Bangladesh. Positions held: Subject matter expert. Scope of the work: Â· **Ascertain the prevalence of the most common lighting options.** Â· **Carry out a baseline study to collect information on**

	the importers, distributors/wholesalers and retailers/ re-sellers active in the chain Â· Provide detailed value chain scenarios and distribution channel analysis. Â· Map the off-grid products value chain Â· Determine the key constraints and challenges that would be encountered in optimizing the current supply chain
(31)	Name of assignment or project: Feasibility Study to Provide Energy to Poor Rural Households with Renewable Energy TechnologyYear: 3 September, 2011 â€“ 31 October, 2011Location: Bangladesh Client/Sponsor: Deutsche Gesellschaft fÃ¼r Internationale Zusammenarbeit *(_GIZ)* GmbH, House- 10C, Road- 90, Gulshan 2, Dhaka- 1212, Bangladesh Major project features: Assessing the present energy supply in the rural off grid island of Bangladesh and propose sustainable energy solution with renewable energy technology. Positions held: Consultant **Activities Performed:** Â· Assessing the present energy supply situation of the target area, Â· Conduct brief survey in the target village on energy needs, Energy technologies presently employed, Â· Money spend on energy services, Â· Explore the willingness of the rural poor people to accept the new technologies (ICS and PV based lighting), Â· Develop a first draft of strategies for improved energy supply for cooking and lighting purpose at household and if applicable, community level, Â· Refine the strategies for improved energy supply, prepare related cost estimates, Â· Propose an implementation plan for strategies developed, Â· Prepare a risk assessment of the proposed energy supply strategies with respect to sustainable operation
(32)	Name of assignment or project: Testing and certification of Solar Home System equipments/components.Year: October, 2010 â€“ Till dateLocation: Bangladesh Client/Sponsor: Solar Home System (SHS) equipment manufacturers/suppliers Major project features: Testing the SHS equipment for compliance with the standard Positions held: Team Leader (Director) Activities Performed: Centre for Energy Research (CER) is the certification authority of the SHS components to be used in IDCOLâ€™s RERED Project. CER certifies the technical compliance of the SHS equipment in Bangladesh. Director of CER is responsible for the testing and certification of the SHS equipment. So far CER has tested more than 230 SHS equipment.
(33)	Name of assignment or project: International Conference on the Developments in Renewable Energy Technology (ICDRET), [A bi-yearly conference on Renewable Energy]Year: December, 2009; January, 2012 and May, 2014 [Next Event will be in December, 2016]Location: Bangladesh Major project features: Initiating and Organizing a bi-yearly International Conference on Renewable Energy. [www.icdret.uiu.ac.bd] Positions held: Organizing Co-Chair **Activities Performed:** Â· Organizing the international conference Â· Editing the Conference Proceedings Â· Reviewing the research papers, Â· Organizing the Sponsors, Co-sponsors, Resource persons and Reviewers
(34)	Name of assignment or project: German Alumni Energy Expert Seminar for South and South-East Asian CountriesYear: 5 January, 2012 â€“ 11 January, 2012Location: Bangladesh Client/Sponsor: Federal Ministry for Economic Cooperation and Development (BMZ), Germany Major project features: Share the knowledge and experience among the south and south east Asian energy experts Positions held: Team Leader **Activities Performed:** To organize the German Alumni Energy Expert Seminar for South and South-East Asian Countries in Dhaka, Bangladesh [Project cost â,¬ 50,000.00]
	Name of assignment or project: Training of Trainers (TOT) Program on SHSYear: 2008 â€“ Till dateLocation: Bangladesh Client/Sponsor:

(35)	Infrastructure Development Company Limited (IDCOL) Major project features: Provide training to the technical persons of the SHS installers. [So far completed 10 batches and trained more than 300 technical persons of IDCOLâ€™s partner organization (NGOs)] Positions held: Resource Person Activities Performed: Conduct training for the engineers of the Partner Organizations (POs) of IDCOL on SHS systems and components. These trainers later on train up the technical persons of the POs for the proper operation and maintenance of the SHS. Training includes: Â· Properties and characteristics of SHS components (Solar Panel, battery, charge controllers and different loads), Â· operation and maintenance schemes of SHS Â· Optimized sizing of PV systems
(36)	Name of assignment or project: Solar Technician Training ProgramYear: December, 2012 â€“ Till dateLocation: Bangladesh Client/Sponsor: Infrastructure Development Company Limited (IDCOL) Major project features: Provide training to the technical persons of the Partner Organizations of IDCOL [So far completed 8 batches and trained more than 200 technicians] Positions held: Project director of the Training Program Activities Performed: Conduct training for the Technicians of the Partner Organizations (POs) of IDCOL on SHS systems, components, installation, maintenance and safety issues. Training includes: Â· Properties and characteristics of SHS components (Solar Panel, battery, charge controllers and different loads), Â· Operation and maintenance schemes of SHS Â· Optimized sizing of PV systems Â· Safety issues
(37)	Name of assignment or project: Supervision of construction, installation and commissioning of solar PV assembling plantYear: January , 2011- April, 2012Location: Dhaka, Bangladesh. Client/Sponsor: Radiant Alliance Limited, East Coast Centre, SW (G)-8, Gulshan Avenue, Dhaka. Major project features: Supervision of construction, installation and commissioning of solar PV assembling plant Positions held: Independent Engineer Activities Performed: Supervise construction, installation and commissioning of PV assembling plant, Evaluate the performance of the assembled PV panels also assess the plant performance and reliability.
(38)	Name of assignment or project: Consulting services for Design/Review of Solar BTS project and Solar panel assembling plantYear: October, 2010 â€“ December, 2010Location: Bangladesh Client/Sponsor: Keystone Business Support Company Limited, Dhaka, Bangladesh (www.keystone-bsc.com) Major project features: Design/Review of Solar BTS project and Solar panel assembling plant Positions held: Team Leader Activities Performed: To assist Keystone in the following areas: A1. Design / review of Solar BTS projects A2. Design / review of Solar panel assembly plant projects B. To provide in-house training on renewable energy engineering related to task A1 and A2 for the engineers of Keystone.
(39)	Name of assignment or project: Appraisal of the conceptual and technical design of solar PV assembling plantYear: July, 2010 â€“ September, 2010Location: Dhaka, Bangladesh. Client/Sponsor: Photon Power Limited, Electro Solar Limited, Radiant Alliance Limited (RAL) and Maxtech Limited Major project features: Positions held: Consultant Activities Performed: Review and comment on the technology, fundamental plant layout, design, drawing, diagram and overall quality of selected solar PV module manufacturing plants (These four companies were selected by IDCOL to receive funding for establishing PV manufacturing plants in Bangladesh). The work also includes appraisal of the quality of the raw materials, cost and milestone schedules of the plant. It was also required to

	provide a comparative analysis of the technical competencies of the four submitted proposals
(40)	Name of assignment or project: Evaluation of proposals of prospective investor(s) for solar PV manufacturing/assembling plant in Bangladesh.Year: February, 2010 â€“ June, 2010Location: Bangladesh Client/Sponsor: Infrastructure Development Company Limited (IDCOL), Dhaka, Bangladesh. Major project features: Evaluation of the proposals for establishing Solar PV assembling plant in Bangladesh. Positions held: Consultant Activities Performed: Evaluation of technical and financial aspects of proposals for setting up solar PV manufacturing/assembling plant(s) in Bangladesh. After the evaluation 4 proposals out of 22 were awarded for financing.
(41)	Name of assignment or project: Consulting services for collection of exhibits for galleries of National Museum of Science and TechnologyYear: February, 2010- June, 2011Location: Bangladesh Client/Sponsor: National Museum of Science and Technology, Ministry of Science and Information & Communication Technology, Dhaka, Bangladesh. Major project features: Technical specification preparation and evaluation of the proposals of the bidders. Positions held: Member (Electrical) Activities Performed: Â· Prepare the technical specifications of the foreign exhibits Â· Evaluation of the submitted proposals/bidders
(42)	Name of assignment or project: Performance Analysis of CIGS solar PanelYear: February, 2009Location: Bangladesh Client/Sponsor: Rahim Afrooz Renewable Energy Limited, Dhaka, Bangladesh). Major project features: Performance analysis of solar PV panels. Positions held: Team Leader Activities Performed: Performance Analysis of CIGS Solar panel to detect the reason for underperformance of a lot of solar panels supplied by Centennial Solar, Canada.
(43)	Name of assignment or project: Design of a microcontroller based solar charge controllerYear: April, 2009 â€“ June, 2009Location: Bangladesh Client/Sponsor: Easy Electronics, H- 27/Ka, Rd.- 2, PC Culture Housing, Dhaka- 1207, Bangladesh. Major project features: Design and development of high efficient solar electronics. Positions held: Team Leader Activities Performed: Design of a microcontroller based charge controller for Solar Home Systems.
(44)	Name of assignment or project: Feasibility study to set up a battery manufacturing industry in BangladeshYear: 22 August, 2011 â€“ 7 September, 2011Location: Bangladesh Client/Sponsor: IRG Development Services Ltd. Level 5, Nakshi Homes, 6/1/A Topkhana Road, Segunbagicha, Dhaka- 1000, Bangladesh Major project features: Market study for a battery manufacturing industry. Positions held: Team Leader Activities Performed: Present demand and consumption by sector, present production in Bangladesh including list of manufacturers and their capacity, total volume and country of exports and imports of raw materials and finished batteries, customs and tax structure, 10 years projection of consumption and production in Bangladesh
(45)	Name of assignment or project: Establishment of the Centre for Energy Research at the United International University.Year: September, 2010 â€“ till dateLocation: Bangladesh Client/Sponsor: United International University Major project features: Conducting researches on renewable energy and energy efficiency.. Positions held: Director /Team Leader Activities Performed: Â· CER is the certification authority for the equipments of the RERED project (SHS

	based rural electrification program) of IDCOL. This project is funded by the World Bank, Asian Development Bank, IDB, KfW, GIZ, IDF and GEF. Â· CER regularly organizes training and short courses on Renewable energy and energy efficiency.
(46)	**Name of assignment or project:** Designed a Renewable Energy Course for the final year students of Electrical and Electronic Engineering department (First RE course for the undergraduate level of EEE department in Bangladesh)Year: October, 2007.Location: Bangladesh Client/Sponsor: United International University, Bangladesh Positions held: Team Leader Major project features: Design and development of a Renewable Energy course. The course contains the basics of energy systems, energy meteorology, physics of renewable energy, renewable energy resource assessment, basic renewable energy conversion technology and energy storage.
### Scholarships/ Awards/ Grants	
(1) World Bank / IDCOL research grant	1. Development of Solar Minigrid and Nano grid laboratory at United International University Rooftop (Awarded: November, 2014)2. Development of Solar PV based ferry boat (Awarded: June, 2015)3. Development and demonstration of solar PV based DC nano grids (Awarded: June, 2015)
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(2) GIZ (Germany) research grant	Development and installation (Pilot) of DC solar Nano grids for rural electrification in Bangladesh (Awarded: October, 2014)
(3) EPSRC (UK) research grant	Development and Implementation of Solar DC Nano grid in Kenya and Bangladesh (Awarded: January, 2014)
(3) DAAD (Germany)grant	To participate in(a) International Conference on â€œRenewable Energy 2030 â€“ Expertsâ€™ Visionâ€ as a session chair on â€œSolar Energyâ€ in Uni Oldenburg, Germany (01 â€“ 02 October 2012)(b) Panel discussion on â€œGerman Higher Educational Co-operationâ€ in Berlin (26 September, 2012) and (c) Workshop on â€œRegional Challenges and Possible Solutions for Future Energy Supplyâ€ in Hanse-Wissenschaftskolleg (*HWK*) Institute for Advanced Study, Delmenhorst, Germany (28 â€“ 29 September, 2012). (d) Visit to The Potsdam Institute for Climate Impact Research (PIK), Potsdam, Germany.
(4) Federal Ministry of Economic Cooperation and Development (BMZ), (Germany) grant	To organize an international seminar â€œGerman Alumni Energy Expert Seminar for South and South-East Asian Countriesâ€. The seminar was held in Dhaka, Bangladesh from 5th to 11th January, 2012 (Grant amount â‚¬ 50,000.00)
(5) DAAD (Germany)grant	To participate in the Solar Shift Photovoltaic Summer School on Solar Technology Applications for Rural developments organized by Centre for Renewable Energy, University of Freiburg, Germany (31.05.2011 â€“ 07.06.2011) and visit to the The Fraunhofer Institute for Solar Energy Systems.
(6) USAID grant	To participate in the South Asia Regional Initiative for Energy Partnership Program and to participation in the 2nd IEEE Conference on Sustainable Energy Technologies in Kandy, Sri Lanka (04.12.2010 â€“ 11.12.2010)

(7) EU Erasmus Mundus(eLink) Scholarship	For Academic Visitor at the University of Staffordshire, UK. (February- March, 2010)
(8) IEEE, USA grant	To participate in the International Future Energy Challenge 2009 workshop in Washington DC, USA (February, 2009) and in the final competition in Illinois Institute of technology in Chicago, USA (July, 2009)
(9) DAAD (Germany)grant	Research grant for research and study on Thin Film PV in University of Oldenburg, Germany (April â€“July, 2009)
(10) DAAD (Germany)grant	To participate Summer School â€œApplied Solar Technology in Developing Countriesâ€ organized by Uni Oldenburg, Germany (09.06.2010 â€“ 11.06.2010)
(11) DAAD (Germany)grant	To participate in the International Photovoltaic Summer School organized by PPRE, Uni Oldenburg, Germany (28.08.2006 â€“ 02.09.2006), Participate in the 21st PVSEC and Visit to the Q-Cells manufacturing plant in Thalheim, Germany.
(12) DAAD (Germany)Scholarship	Scholarship for M.Sc. studies in Renewable Energy (PPRE) at the University of Oldenburg, Germany (August, 2004 â€“ January, 2006).
### Trainings and Professional Developments	
(1).Training Seminars on	

Organizer	AEE Bangladesh Chapter and USAID- CCEB
Venue	CCEB, House No. 14,Road No. 1, Gulshan, Dhaka, Bangladesh
Duration	Â· 4 days (3rd to 6th December, 2014.
Major fields	Certified Energy Auditor (CEA) Certification Course.
(2).Training Seminars on Solar PV systems	
Organizer	SMA Solar Academy
Venue	SMA Solar Academy, Niestetal, Germany
Duration	Â· 10 days (18th to 27th March, 2013).
Major fields	â€œPlanning and design of small, medium and large On Grid and Off Grid PV power plantsâ€, â€œInverters for small, medium and large PV power plantsâ€, â€œVisualization, remote access and communication for small, medium and large PV power plantsâ€.
(3).Summer school on â€œWater, Energy and Sanitation in Urban and Decentralized Regionsâ€.	
Organizer	German Academic Exchange Services (DAAD) and University of Oldenburg, Germany.
Venue	University of Oldenburg, Germany
Duration	14 days (30th March to 12th April, 2013).

(4).Biogas compact course and workshop	
Organizer	Netherlands Development Organisation (SNV) and University of Oldenburg.
Venue	University of Oldenburg, Germany
Duration	5 days (3rd to 7th April, 2013)
(5).International Conference on â€œMicro Perspectives of Decentralized Energy Supplyâ€	
Organizer	Micro Energy, Technical University of Berlin.
Venue	Technical University of Berlin, Berlin, Germany.
Duration	3 days (27th February to 1st March, 2013).
(6).Workshop on â€œRegional Challenges and Possible Solutions for Future Energy Supplyâ€	
Organizer	University of Oldenburg and Hanse-Wissenschaftskolleg (*HWK*) Institute for Advanced Study, Germany
Venue	Hanse-Wissenschaftskolleg (*HWK*) Institute for Advanced Study, Delmenhorst, Germany
Duration	2 days (28 â€“ 29 September, 2012)
Major fields	Regional Challenges for future energy supply and possible sustainable solution emphasizing on climate change mitigation.
(7). Executive exchange from SARI/E countries to participate in the Second IEEE International Conference on Sustainable Energy Technology and knowledge exchange among the energy experts of South Asian region.	
Organizer	Organized by: IEEE Singapore sectionCoordinated by: United States Energy Association (USEA)Funded by: U.S. agency for International Development (USAID) South Aisa Regional Initiative for Energy (SARI/Energy)
Venue	Kandy, Sri Lanka
Duration	5 days (06.12.2010 â€“10.12.2010)
Major fields	Promote regional cooperation and information exchange on sustainable energy practices, particularly utilizing renewable energy, Gain knowledge of the implementation of sustainable energy technologies and practices, Increased awareness of the importance of sustainable energy technologies due to the depletion and rising cost of non-renewable energy resources, energy security, its access, and environmental impacts of energy usage
(8). German Alumni Energy Expert seminar for south and south-east Asian countries	
Organizer	German Academic Exchange Service, University of Oldenburg, Germany, University of Flensburg, Germany and Centre for Energy Research, United International University

Venue	Dhaka, Bangladesh
Duration	7 days (5th â€“ 11th January, 2012)
Major Fields	Solar PV technology and systems, Solar Thermal, Biomass and biogas, Wind,Socio-economic aspects of RE; Policy and guide line for RE; Policy, Status and progress of RE in south and south-east Asian region.
(9). Solar Shift Photovoltaic Summer School on Solar Technology Applications for Rural Developments (2011)	
Organizer	Centre for Renewable Energy, University of Freiburg and Fraunhofer institute for Solar Energy (ISE), Germany
Venue	Freiburg, Germany
Duration	7 days (31.05.2011 â€“ 07.06.2011)
Major fields	Photovoltaics, design, implementation and maintenance of off grid rural electrification, Solar water heating, Solar space heating and cooling, solar driven food drying, solar thermal and photovoltaic desalination for decentralized production of drinking water: technical, economic, ecologic and social aspects, Analysis of aspects for financing and funding of projects in developing countries, visit to *Fraunhofer Institute* for *Solar* Energy Systems ISE, Wind parks and Biomass gasification based power generation.
(10). Wind Power Project Development: Practical Approaches to Launching Sustainable Wind Projects, Working Meeting for Stakeholders	
Organizer	U.S. agency for International Development (USAID) South Asian Regional Initiative for Energy (SARI/Energy)Knowledge Partner: Asian Development Bank (ADB)
Venue	The Westin, Dhaka, Bangladesh
Duration	2 days (18.10.2011 â€“19.10.2010)
Major fields	Â· Build the technical capacity of wind power stakeholders in the practical aspects and steps involved in the development of a wind power project.Â· Providing focused inputs on Wind Resource Assessment, energy calculation, PPA/EPC/O&M contracting, turbine selection and warranty, site engineering, economic modeling and project financing.Â· Developing an approach to understand the risks involved in Wind Power Projects and ways to mitigate while appraising the projects
(11).InterSolar Exhibition and Conference (2009, 2010, 2011, 2015)	
Organizer	Solar Promotion GmbH (participation was funded by German Academic Exchange Services- DAAD, GIZ)
Venue	Munich Trade Fair Centre, Munich Germany
Duration	3 days each (08â€“10th June, 2009; 09 â€“ 11th June, 2010 and 8-10th June, 2011)
Major fields	Worldâ€™s largest exhibition of solar industry (Technology, Processes and systems related to Solar Photovoltaics and Solar

Major fields	Processes and systems related to Solar Photovoltaics and Solar Thermal Energy) along with the related conferences.
(12). 2 nd Symposium on â€œSmall PV-Applications: Rural Electrification and Commercial Useâ€	
Organizer	East Bavarian Technology Transfer-Institute (OTTI), Germany
Venue	University of Applied Sciences, Ulm, Germany
Duration	2 days (06 â€“ 07 June, 2011)
Major fields	Small PV Technology, Application and Financing
(13). Symposium on â€œSmall PV-Applications: Rural Electrification and Commercial Useâ€	
Organizer	East Bavarian Technology Transfer-Institute (OTTI), Germany
Venue	University of Applied Sciences, Ulm, Germany
Duration	2 days (25 â€“ 26 May, 2009)
Major fields	Small PV Technology, Application and Financing
(14). Teachers Training Program	
Organizer	EU Erasmus Mundus (eLink) Academic Project
Venue	Faculty of Computing, Engineering and Technology, University of Staffordshire, UK
Duration	Two Months (28th January â€“ 27th March, 2010)
Major fields	Renewable Energy resource assessment
(15). Final competition of the IEEE International Future Energy Challenge (IFEC-2009)	
Organizer	Institute of Electrical and Electronics Engineers- Power Electronics Society (IEEE-PES) and the Power Sources Manufacturing Association (PSMA), USA.
Venue	Illinois Institute of Technology, Chicago, USA
Duration	Two Days (17-18th July, 2009)
Major fields	Power electronics & machine control systems(Integrated Starter/Alternator-Motor Drive for Automotive Applications)
(16). International Photovoltaic Summer School (2006)	
Organizer	Postgraduate Program Renewable Energy, University of Oldenburg, Germany
Venue	Oldenburg, Germany
Duration	5 days (28.08.2006 â€“ 02.09.2006)
	Photovoltaics â€“ Technology and Application; PV system analysis,

Major fields	performance and simulation; PV applications in developing countries: Issues and Challenges, Satellite based monitoring of PV systems; Trends of solar cell material research, System research towards PV applications, Political and economic aspects of PV, Industrial visit to Q-Cell production line (largest solar cell manufacturer at the time).
(17).Workshop on IEEE International Future Energy Challenge (IFEC-2009)	
Organizer	Institute of Electrical and Electronics Engineers Power Electronics Society (IEEE-PES) and the Power Sources Manufacturing Association (PSMA), USA.
Venue	Marriott Wardmann Park Hotel, Washington DC, USA
Duration	One Day (14th February, 2009)
Major fields	Power electronics and machine control system
(18).21 st European Photovoltaic Solar Energy Conference and Exhibition	
Organizer	European PVSEC
Venue	Dresden, Germany
Duration	5 days (04.09.2006 â€“ 08.09.2006)
Major fields	State of the art Technology, Research, development and demonstration of PV projects; PV applications; PV markets, products and services; Present day PV issues.
(19).Workshop on â€œRegional Challenges and Possible Solutions for Future Energy Supplyâ€	
Organizer	University of Oldenburg, Germany and Hanse-Wissenschaftskolleg (*HWK*) Institute for Advanced Study, Delmenhorst, Germany (28 â€“ 29 September, 2012).
Venue	Hanse-Wissenschaftskolleg (*HWK*) Institute for Advanced Study, Delmenhorst, Germany
Duration	2 days (28 â€“ 29 September, 2012).
Major fields	Challenges and possible solutions for sustainable future energy supply
(20).Research work on CIGS Thin Film Solar Cell Fabrication Process	
Organizer	Centre for Solar Energy and Hydrogen Research (ZSW)
Venue	Stuttgart, Germany
Duration	8 Months (March/2005 â€“ April/2005, August, 2005 â€“ March, 2006)
Major fields	CIGS thin film solar cell fabrication process steps, Preparation and optimization of In2S3 buffer layer by physical vapor deposition method. Different characterization methods of solar cells, Characterization of thin film by SEM, XRD, XPS, Ramon Spectroscopy

(21). International Seminar on Solar Photovoltaic Systems, An alternate solution for growing demand	
Organizer	Kathmandu University, Nepal and Alternative Energy Promotion Center,
Venue	Kathmandu, Nepal
Duration	2 days (11th â€“ 12th December, 2011)
Major Fields	Solar photovoltaic technology, Solar thermal technology for electrical power generation, Solar PV system components- batteries, inverters, charge controllers, lamp, grid connected, standalone, hybrid systems, Building intregrated photovoltaic systems, Solar PV system monitoring and control systems, Solar PV systems planning and policies, Socio-economic impact of solar PV systems, Solar PV systems marketing and dissemination
(22).Workshop on Intercultural Communication â€“ an Opportunity to Solve Conflicts?	
Organizer	German Academic Exchange Service (DAAD) and STUBE, University Hildesheim, Germany
Venue	Hildesheim, Germany
Duration	3 days (17.12.2004 â€“ 19.12.2004)
Major fields	Cause of intercultural conflicts and way to overcome it
(23). Short course on â€œProject Finance Vis-Ã -vis Corporate Financeâ€	
Organizer	Association of National Development Finance Institutions in Member Countries of the Islamic Development Bank (ADFIMI) and Infrastructure Development Company Limited (IDCOL).
Venue	Pan Pacific Sonargaon Hotel, Dhaka, Bangladesh
Duration	3 days (19 â€“ 21 November, 2012)
Major fields	Overview of Project Finance, Sources and types of Finance, Project Agreements, Financial Modeling (Purpose, architecture, concepts and development), Credit enhancement, Security and Finance documents, Legal terms, layered finance.
(24). Short course on â€œFinancial Modelingâ€	
Organizer	Infrastructure Development Company Limited.
Venue	Best Western La Vinci Hotel, Dhaka, Bangladesh
Duration	Two Days (27 â€“ 28 June, 2012)
Major fields	Mechanics of preparation of price proposal for various projects, methodology for evaluating price proposals submitted by various bidders and negotiation of project agreements, Participate in loan negotiations and draw up financial covenants for loan agreements, Construct financial model

(25). Workshop on Geospatial Toolkit for Renewable Energy Resource Assessment	
Organizer	NREL, USAID, GTZ and Ministry of Power Energy and Mineral Resource,Government of Bangladesh.
Venue	DPDC building, Dhaka, Bangladesh
Duration	Two Days (8 â€“ 9th August, 2010)
Major fields	Renewable energy data, geospatial toolkit training, Solar and Wind monitoring and resource assessment.
(26).Workshop on â€œClimate Change : Impact and Carbon Trading (CDM)â€	
Organizer	Climate Change Cell, Department of Environment, Ministry of Environment and forest, Government of Bangladesh.
Venue	Bon Bhaban, Agargoan, Dhaka
Duration	One Day (18th November, 2009)
Major fields	Global Warming, Climate Change, CDM
(27). 2 st International Conference on the Developments in Renewable Energy Technology (ICDRET)	
Organizer	United International University and German International Co-operation (GIZ), Dhaka, Bangladesh
Venue	Dhaka, Bangladesh
Duration	3 days (5th â€“ 7th January, 2012)
Major Fields	Solar PV technology and application, Solar thermal, Biomass and biogas, Wind, Mini and micro-hydro, Tidal, Wave, sea or river current energy, Geothermal and other RETs, Socio- economic aspects of Renewable Energy
(28). 1 st International Conference on the Developments in Renewable Energy Technology (ICDRET)	
Organizer	United International University and German International Co-operation (GIZ), Dhaka, Bangladesh
Venue	Dhaka, Bangladesh
Duration	3 days (17th â€“ 19th December, 2009)
Major Fields	Solar PV technology and application, Solar thermal, Biomass and biogas, Wind, Mini and micro-hydro, Tidal, Wave, sea or river current energy, Geothermal and other RETs, Socio- economic aspects of Renewable Energy
(29).Total Quality Management (TQM)	
Organizer	Bangladesh Power Development Board
Venue	Regional Training Centre, Tongi, Gazipur

Duration	10 days (17â€“26th February, 2004)
Major fields	Total Quality Management
(30).Distribution Engineering	
Organizer	Distribution Training Centre (DTC), Bangladesh Power Development Board
Venue	Khulna, Bangladesh
Duration	2 weeks (16.11.2002 â€“ 28.11.2002)
Major fields	Power Distribution Planning and Design, Load Management, Load Flow, Supervisory Control and Data Acquisition (SCADA), Distribution Fault Analysis
(31).Management Development and Rural Economy	
Organizer	Bangladesh Academy for Rural Development (BARD)
Venue	Comilla, Bangladesh
Duration	1 week (12â€“17th May, 2001)
Major fields	Leadership, Entrepreneurship, Rural Economy, Rural Development, Co-operatives
(32).Management Training Program	
Organizer	Bangladesh Institute of Management (BIM)
Venue	Dhaka, Bangladesh
Duration	1 week (05 â€“ 10th May, 2001)
Major fields	Personnel Management, Project Management and Evaluation, Operational Management
(32).Induction Training of BPDB	
Organizer	Bangladesh Power Development Board (BPDB)
Venue	Engineering Academy, BPDB, Kaptai, Bangladesh and RTC, BPDB, Tongi
Duration	12 weeks (11th Feb â€“ 22nd March, 2001)
Major fields	Power Stations, Power Transmission and Distribution, High Voltage Switchgear and Protection, Power Transformer, Power Fault Analysis and Detection, Load Management, Energy Economics, Generation, Transmission and Distribution Planning and Design
### Publications	
Book Chapter:	
1. **Shahriar A. Chowdhury** , Shakila Aziz, Sebastian Groh, The Case for Solar Diesel Hybrid Minigrid in Bangladesh: Design Considerations, Decentralized Solutions for Developing Economies: Addressing Energy Poverty through Innovation, Springer Proceedings in Energy, 2015, ISBN 978-3-319-	

15963-8.	

Journal Papers: 1. **Shahriar A Chowdhury** , Monjur Mourshed, Raiyan Kabir, Moududuł Islam, Tanvir Morshed, M. Rezwan Khan, Mohammad N Patwary, *Technical appraisal of solar home systems in Bangladesh: a field investigation* , Journal of Renewable Energy, Vol. 36 (2), Pages- 772- 778, Feb 2011. 2. **Shahriar Ahmed Chowdhury** , Shakila Aziz, Sebastian Groh, Hannes Kirchhoff, Walter Leal Filho, Off-grid Rural Area Electrification through Solar-diesel Hybrid Minigrids in Bangladesh: Resources Efficient Design Principles in Practice, Journal of Cleaner Production, Vol. 95, Pages 194â€“202, May 2015. 3. **Shahriar A. Chowdhury** , Monjur Mourshed, Off-grid electrification with solar home systems: An appraisal of the

quality of components, Energy for Sustainable Development, Submitted. 1. Groh, S., Philipp D., Edlefsen Lasch, B., Kirchhoff, H. , Islam, D., Khan M.R., **Chowdhury, S.,** Kammen, D.M., The Battle of Edison and Westinghouse Revisited: Contrasting AC and DC micro-grids for rural electrification. Environmental Science and Technology. Submitted.

Conference Proceedings: 1. Spiering, S.,**Chowdhury,** D. Hariskos, A. Eicke, and M. Powalla: *Evaporated Indium Sulfide as Buffer Layer in Cu(In,Ga)Se 2 Based Solar Cells* , Proceedings of the 21st European Photovoltaic Solar Energy Conference and Exhibition (PVSEC), 2006, Dresden, Germany. 2. Konrad Blum, **Shahriar A. Chowdhury** , S. Samsundar: *Reflection on Challenges of Research and Capacity Building in the Field of Photovoltaics from a Regional Perspective* , Proceedings of the 21st European Photovoltaic Solar Energy Conference and Exhibition, Dresden, Germany, pp. 1847, September 4-8, 2006. 3. **Chowdhury, S**.: *CIGS Thin Film Solar Cell and Its Buffer Layer, Proceedings of the* Alumni Summer School: Photovoltaics, Oldenburg, Germany. 2006. 4. **Shahriar A. Chowdhury** : *Potentials and Prospects of CIGS Thin Film Solar Cell,* Postgraduate Program Renewable Energy Newsletter, , Vol.- 27, pp. 65- 69, Oldenburg, Germany, 2007. 5. **Shahriar A. Chowdhury** : *Integration of Renewable Energy in Electrical Engineering Education: The BangladeshPerspective* , *Postgraduate Program Renewable Energy Newsletter, Oldenburg, Germany, Vol.- 28, pp. 47- 54, 2008* 6. **Shahriar A.** Chowdhury, S. M. Raiyan Kabir, S. M. Moududuł Islam, Shakila Aziz, Monjur Mourshed, Konrad Blum, Hans-Gerhard Holtorf: *Technical Issues of Solar Home Systems in Rural Bangladesh: A Post-installation Survey* , Proceedings of the Symposium of Small PV-Applications, Ulm, Germany, 2009. 7. **Shahriar A. Chowdhury** , A.T.M. Golam Sarwar, M. Rezwan Khan, *Optimized Solar Home System Package Design: Bangladesh Perspective* , Proceedings of the IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp. 148-152, December 2009. 8. **Shahriar A. Chowdhury** , Vishwajit Roy, Shakila Aziz, *Renewable Energy Usage in the Telecommunication Sector of Bangladesh: Prospect and Progress* , Proceedings of the IEEE International Conference on the Developments in Renewable Energy Technology pp. 234-238, December 2009. 9. **Shahriar A. Chowdhury** , S. M. Raiyan Kabir, S. M. Moududuł Islam, A.T.M. Golam Sarwar, Radwanul Hasan Siddique: *Performance of Solar Home Systems in Rural Bangladesh* , Proceedings of the IEEE International Conference on the Developments in Renewable Energy Technology, pp. 143-147, December 2009. 10. **Shahriar A. Chowdhury** , S. M. Raiyan Kabir, S. M. Moududuł Islam, *Technical Appraisal of Solar Home System Equipments in Bangladesh* , Proceedings of the International Conference on the Developments in Renewable Energy Technology (ICDRETâ€™09), (Technical Cosponsored by IEEE), Dhaka, Bangladesh, pp. 153-157, December 17-19, 2009, 11. Shakila Aziz, **Shahriar A. Chowdhury** , Hirak Al-Hammad, *Marketing and Financing of Solar Home Systems in Bangladesh: Assessment of Success* , Proceedings of the IEEE International Conference on the Developments in

Renewable Energy Technology, pp. 34-37, December 17-19, 2009. 1. Shakila Aziz, **Shahriar A. Chowdhury** , *Carbon Trading and the Clean Development Mechanism: An Opportunity for Bangladesh* , Proceedings of the IEEE International Conference on the Developments in Renewable Energy Technology, pp. 133-138, December 17-19, 2009. 2. Hans-Gerhard Holtorf, **Shahriar A. Chowdhury** , Shakila Aziz, Hans-Peter Gallenberger, *Brunnstein HÃ¼tte: An Eco Friendly Off Grid Alpine Hut* , Proceedings of the IEEE International Conference on the Developments in Renewable Energy Technology pp. 124-128, December 17-19, 2009, 3. M. Formanul Islam,Shakila Aziz, **Shahriar A. Chowdhury** : *Renewable Energy Initiatives by Infrastructure Development Company Limited in Bangladesh* , Proceedings of the IEEE International Conference on the Developments in Renewable Energy Technology pp. 202-206, December 17-19, 2009, 4. Shamsun Nahar, A.T.M. Golam Sarwar and **Shahriar A. Chowdhury** , *A Theoretical Analysis of Optimizing Solar Irradiance: Bangladesh Perspective* , Proceedings of the IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp. 161-164, December 17-19, 2009. 5. Zunaid Baten, Emran Md. Amin, Anika Sharin, Raisul Islam and **Shahriar A. Chowdhury** , *Renewable Energy Scenario of Bangladesh: Physical Perspective* , Proceedings of the IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp. 225-229, December 17-19, 2009, 6. Shahedul Amin, Kazy Fayeen Shariar, Md. Riyasat Azim and **Shahriar A. Chowdhury** , *The potential of generating energy from Solid Waste Materials in Bangladesh* , Proceedings of the IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh. pp. 139-144, December 17-19, 2009, 7. **Shahriar A. Chowdhury** , Shakila Aziz, Mahfuzur Rahman , Status of SHS Dissemination in Bangladesh: Experience with Technology, Financing and Quality Control , Proceedings of the 2nd Symposium of Small PV-Applications, Ulm, Germany, pp. 82 â€“ 87 , June 6-7 , 2011 8. Shahrear Mahmud, **Shahriar A. Chowdhury** , SEPIC Based Low Cost MPPT Charge Controller for Small Solar PV Systems, Proceedings of the 2nd Symposium of Small PV-Applications, Ulm, Germany, pp. 149 -155, June 6-7 , 2011. 9. **Shahriar Ahmed Chowdhury** , Shakila Aziz, Solar-Diesel Hybrid Energy Model for Base Transceiver Station (BTS) of Mobile Operators, Proceedings of the Second IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp.252- 257, January, 2012 10. Shakila Aziz, **Shahriar Ahmed**

Chowdhury , A Real Options Approach to Evaluating the Profitability of Photovoltaic based Mini-Grids in Bangladesh, Proceedings of the Second IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp.226- 230, January, 2012. 11. Rezwan Khan, **Shahriar A. Chowdhury** , Md. Fayyaz Khan, Reduced Battery Sizing in a Solar Home System with Respect to the Night Load and Solar Panel Size, Proceedings of the Second IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp.248 â€“ 251, January, 2012. 12. Shakila Aziz, **Shahriar Ahmed Chowdhury** , The Potential for CDM Financing in the Tannery Industry of Bangladesh, Proceedings of the Second IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp.401- 404, January, 2012. 13. Ajmiri Sabrina Khan, **Shahriar Ahmed Chowdhury** , GHG Emission Reduction and Global Warming Adaptation Initiatives by UNFCCC, Proceedings of the Second IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp.405- 410, January, 2012. 14. Shakila Aziz, **Shahriar Ahmed Chowdhury** , A Description of Human Resource Development in the Solar Home System Industry in Bangladesh, Proceedings of the Second IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp.384-387, January, 2012. 15. Ajmiri Sabrina Khan, **Shahriar Ahmed Chowdhury** , Potential of Energy from Tannery Waste in Bangladesh, Proceedings of the Second IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp.107- 111, January, 2012. 16. Tanzila Hosna Alam, **Shahriar Ahmed Chowdhury** , Solar Cooking and Its Prospects in Bangladesh, Proceedings of the Second IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp.206- 209, January, 2012. 17. Asif Ahsan, **Shahriar Ahmed Chowdhury** , Feasibility Study of Utilizing Biogas from Urban Waste, Proceedings of the Second IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, pp.112- 115, January, 2012. 18. **Shahriar Ahmed Chowdhury** , Performance of SHS in Bangladesh: Findings of a Technical Audit, Proceedings of the 2nd International Conference on Micro Perspective for Decentralized Energy Supply, Berlin, Germany, Feb. 27 â€“ Mar. 1, 2013. 19. Mahmud Ibrahim, **Shahriar Ahmed Chowdhury** , High Efficient LED Light Driver Circuit with Temperature Compensation for SHS, Proceedings of the third IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, January, 2014. 20. ASM Mominul Hasan, **Shahriar Ahmed Chowdhury** , Solar Diesel Hybrid Mini-Grid Design Considerations: Bangladesh Perspective, Proceedings of the third IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, January, 2014. 21. **Shahriar Ahmed Chowdhury** , Shakila Aziz, Off-grid Rural Area Electrification by Solar-Diesel Hybrid Mini-grid in Bangladesh: Design Consideration, Proceedings of the symposium of â€œInnovating Energy Access for Remote Areas: Discovering Untapped Resourcesâ€, University of California at Berkeley, USA, April, 2014. 22. **Shahriar Ahmed Chodhury** , A.S.M. Mominul Hasan, Hannes Kirchhoffs, Sebastian Groh, Solar DC grids for Rural Electrification, Proceedings of the third International Conference on the Micro Perspectives for Decentralized Energy Supply, Bangalore, April 23 -25, 2015. 23. Mahmud Ibrahim, **Shahriar Ahmed Chowdhury** , Development of a Compact DC-DC Converter with Solar Charge Controller for Solar DC Nano Grid System, Proceedings of the third International Conference on the Micro Perspectives for Decentralized Energy Supply, Bangalore, April 23 -25, 2015. 24. Timothy Walsh, Sebastian Groh, **Shahriar A. Chowdhury** , Hannes Kiurchhoffs, Daniel Ciganovic, Peter Adelmann, Solar DC Nano Grids- A Promising Low Cost Approach to Village Electrification, Proceedings of the third International Conference on the Micro Perspectives for Decentralized Energy Supply, Bangalore, April 23 -25, 2015. 25. **Shahriar A. Chowdhury** , Al Jumlat Ahmed, Progress and Challenges of Solar PV Market in Bangladesh, 4th Symposium of Small PV Application- Rural Electrification and Commercial Use, Munich, Germany, June 9-10, 2015. 26. Mahmud Ibrahim, Shahriar Ahmed Chowdhury, M. Fayyaz Khan, Design and implementation of a Micro Controller Based Portable Solar Charge Controller Tester, Proceedings of the third IEEE International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh, January, 2016.

Others

Entrepreneurial and Business Management Experiences Founding Director | Director and founding partner of omeca, an educational institution, which prepares students for the university level admission exams (since 1991)

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Founding Director | Established Centre for Energy Research at United International University to facilitate researches on Renewable energy and energy efficiency (since 1991)

Co-Chair | International Conference on the Developments in Renewable Energy Technology (ICDRET). Initiate the bi-yearly conference on Renewable Energy. So far,3 events were successfully conducted with the support from International organizations, like: IFC, GIZ, IEEE, DAAD etc.

Other Experiences and Activities Organizing Co-Chairman and member of Technical Committee | 1st, 2nd and 3rd International Conference on the Developments in Renewable Energy Technology (ICDRET), 2009, 2012 and 2014 Dhaka, Bangladesh

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Student Representative | General Secretary, Shahid Smriti Hall Studentsâ€™ Union, Bangladesh University of Engineering and Technology (BUET) [Session 1999 â€“ 2000]

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Moderator | United International University Science and Engineering Club [Session 2008- â€™09].

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Reviewer | i. Journal of Electrical Engineering, Institute of Engineers (IEB), Dhaka, Bangladesh.ii. International Conference on â€œRenewable Energy 2030 â€“ Expertsâ€™ Visionsâ€ Oldenburg, Germany, 01-02 October, 2012iii. International Conference on the Developments in Renewable Energy Technology, Dhaka, Bangladesh (1st, 2nd & 3rd events in 2009, 2012 & 2014).

Key Note / Invited Speeches in International Events 1. 7th Chinese Renewable Energy Conference and Exhibtion, Wuxi, China, November, 2015, on â€œThe Practical Challenges and Solutions to PV Development in Bangladeshâ€ 2. Asia Clean Energy Summit, Singapore, October, 2014 on â€œSHS based Rural Electrification in Bangladesh and its success factorsâ€. 3. Seminar on â€œAdaptation to Climate Change in Bangladeshâ€, organized by Goethe Institute, Bangladesh, December, 2014, on â€œDissemination of Knowledge and Technology in the Field of Renewable Energyâ€ 4. International Seminar: â€œSolar Photovoltaic Systems: An Alternate Solution for the Growing Energy Demandâ€, Kathmandu University, Kathmandu University, Nepal, December, 2011 on â€œResearch and future prospects of Solar Photovoltaic systemsâ€

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