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1. Fields of Research Interest

1. Renewable Energy
2. Solar PV Systems
3. Power Systems
4. Energy Conversion and Electrical Machines
5. Climate Change Mitigation
6. Energy Efficient and Low Carbon Technologies

2. Academic Qualifications

i. Master of Science (M.Sc.)

Degree	M.Sc. in Renewable Energy (2006)
Institution	Carl von Ossietzky University, Oldenburg, Germany
Result	1.7 (84.5% – 89.5%) [Secured 1st Position in the graduating class]
Thesis	Preparation and Characterization of Indium Sulfide Buffer Layer for CIGS Thin Film Solar Cells.

ii. Bachelor of Science (B.Sc.)

Degree	B.Sc. in Electrical and Electronic Engineering (1997)
Institution	Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Result	3.55 (on a scale of 4.00)

3. Awards and Research Achievements

- United Nations Momentum for Change Award (Morocco 2016):** At UNFCC Climate Change Conference (COP 22) for Development of “Smart Solar Village” which includes energy trading among the connected households with or without SHS.
- InterSolar (Europe) Award, (Germany 2016):** In the category of “Outstanding Solar Projects” in Munich, Germany.
- Education Leadership Award, (India 2018):** In the 7th World Education Congress at Mumbai, India for Excellence in Education, Leadership and Teaching in the field of Renewable Energy.
- Asian Photovoltaic Industry Association Award (China 2019):** for Academic contribution to the Solar PV Industry.
- IEEE- International Future Energy Challenge (USA 2009):** Finalist project of the competition at Illinois Institute of Technology, Chicago, USA for the project Integrated Starter/Alternator-Motor Drive for Automotive Applications.
- Development of a novel dry fabrication process steps for CIGS thin film solar cell with In₂S as buffer layer (Germany 2016)**
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].
- Inter University Innovation Project Award (Bangladesh 2016):** for the innovative project “Smart Solar Irrigation System” Organized by Ministry of Power, Energy and Mineral Resources of Bangladesh, at “National Power & Energy Week 2016”
- Inter University Innovation Project Award (Bangladesh 2018):** for the innovative project “Demand Response Enabled Smart Grid” Organized by Ministry of Power, Energy and Mineral Resources of Bangladesh, at “National Power & Energy Week 2018”
- BASIS National ICT Award, (Bangladesh, 2020):** Organized by Bangladesh Association of Software and Information Services (BASIS) for the development of ICT enabled Smart Solar Irrigation System (SirriS).
- Influential Leader of the Year (2021):** Bangladesh Solar Week, 2021, Organized by Solar Quarter, Bangladesh.

4. Membership in Professional Associations:

- Member, The Association of Energy Engineers (AEE), USA
- Life Fellow, The Institute of Engineers, Bangladesh (IEB)
- Member of Expert Panel of IEC for Systems Evaluation Group (SEG 4) on “Low 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)

5. Employment History

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|------------------|--|
| Name of Employer | United International University (www.uiu.ac.bd) |
| Duration | May, 2007 – Till date (14 years) |
| Profession | Research and Teaching |
| Position | Director, Centre for Energy Research and Assistant Professor, Department of Electrical and Electronic Engineering |
| Responsibilities | <ul style="list-style-type: none">• Established the Centre for Energy Research focusing on renewable energy.• Initiated a bi-yearly international conference on renewable energy.• Designed a Renewable Energy course (First RE course for EEE in Bangladesh)• Teaching undergraduate courses on Power Systems and protection, Renewable Energy, Power Plant Engineering, Energy Conversion, Electrical Machines,• Organized numerous national and international seminars on Energy & Renewable Energy.• Development of a Solar PV minigrid laboratory at the University [Sponsor: World Bank]. |
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|------------------|--|
| 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 \(www.ppre.de\)](http://www.ppre.de)
 - Duration April, 2009 – July, 2009 (4 months), A
 - Profession Research and Teaching
 - Position Guest Lecturer /Researcher, Post Graduate Program Renewable Energy
 - Responsibilities Conducting case study course on off grid electrification by Renewable Energy technologies, Laboratory course on solar home systems, Conducting research on Thin Film PV
4.
 - Employer [Centre for Solar Energy and Hydrogen Research \(www.zsw-bw.de\), Stuttgart, Germany](http://www.zsw-bw.de)
 - Duration August, 2005 – 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 \(BPDB\) \(www.bpdb.gov.bd\)](http://www.bpdb.gov.bd)
 - Duration March, 2000 – April, 2007 (7 years)
 - Profession Engineering
 - Position Assistant Engineer, Directorate of Program
 - Responsibilities Planning and design of power distribution systems, Preparation of annual development program of BPDB, Assessment and monitoring of foreign aided projects of BPDB
6.
 - Employer [Dhaka Electric Supply Authority \(DESA\)](http://www.desa.gov.bd)
 - Duration August, 1997 – February, 2000 (2.5 years)
 - Profession Engineering
 - Position Assistant Engineer, System Control and Grid Circle
 - Responsibilities Power distribution planning and load management, System control and protection, Grid substation maintenance, Supervisory Control and Data Acquisition (SCADA), Underground high voltage cable lying, cable fault detection and maintenance

6. Countries of Project / Work Experience: Bangladesh, Germany, UK, Kenya, Nigeria

7. Language Proficiency: Bangla (Native), English, German (Basic), Japanese (Basic)

8. Funded Research Projects:

<u>SN</u>	<u>Project</u>	<u>Position</u>	<u>Funding Source</u>	<u>Amount of Fund</u>	<u>Duration</u>
i	Development of Bangladesh Energy and Emission Calculator, 2050 [Lead Partner: Cardiff Univ., UK]	Investigator	Department of Energy and Climate Change, UK	GBP 103,000	Jan., 2013 – Jun., 2014
ii	Solar Nano-grids as an appropriate solution to the limitations of solar home systems in rural communities in Kenya and Bangladesh [Lead Partner: Loughborough Univ., UK]	Investigator	EPSRC + DFID	US\$ 720,000	2013-2016
iii	Development of robust and affordable DC and AC mini grid concepts at different voltage levels with power inputs from PV modules;	Team Leader & Principal Investigator	World Bank	BDT 10,712,740 (US\$ 138,000)	Nov., 2014 – April, 2015
iv	Development, piloting and evaluation of DC Nano-Grid Concept	Consultant	Solar Energy Research Institute of Singapore, NUS & GIZ	EURO 49,560	Jan., 2015 – May, 2015
v	Community Based Decentralized DC Nanogrids for Combined Household and Productive Use	Team Leader & Principal Investigator	World Bank and IDCOL	BDT 5,584,000 (US\$ 71,774)	Aug., 2015 – Oct., 2016
vi	SirriS: Smart Solar Irrigation Systems	Team Leader & Principal Investigator	World Bank and IDCOL	BDT 5,584,000 (US\$ 102,000)	Feb., 2016 – Jan., 2019
vii	FutureGrid: Demand Response Enabled Future Smart Grid	Team Leader & Principal Investigator	Energy and Power Research Council, Ministry of Power, Energy and Mineral Resources, Bangladesh.	BDT 39,788,600 (US\$ 470,000)	Oct., 2018 – May, 2022

9. Consulting Experiences

(1) Projects: Formulation of National Policy Documents

Position: Consultant

<u>SN</u>	<u>Name of Policy document</u>	<u>Position</u>	<u>Client</u>	<u>Status</u>
i.	Net Energy Metering Guideline for Bangladesh	Sole Consultant	Power Cell, Ministry of Power, Energy and Mineral Resources of Bangladesh.	Approved (July, 2018)
ii.	Bangladesh Delta Plan 2100	Author of "Part 4: Power, under Sustainable Transportation & Infrastructure"	Government of Netherland / Government of Bangladesh (Ministry of Planning) / PwC	Approved (Sept., 2018)
iii.	Guidelines for integration of solar irrigation systems into the national grid	Sole Consultant	UNDP and SERDA, Ministry of Power, Energy and Mineral Resources	Approved (July, 2020)
iv.	National Solar Energy Roadmap, 2021 – 2041	Sole Consultant	UNDP and SREDA, Ministry of Power, Energy and Mineral Resources	Draft Submitted (Dec., 2020)
v.	Mujib Climate Prosperity Decade Plan, 2021–2030	Consultant for Power Sector Planning	CVF (Climate Vulnerable Forum), AROHA, Switzerland; MEFCO, Bangladesh; IDCOL, Bangladesh.	Draft Submitted (July, 2021)

(2) Project: Solar-Diesel Hybrid Minigrids for off grid area electrification**Financier:** Infrastructure Development Company Limited (IDCOL)**Major project feature:** Feasibility study, Design, supervision of construction, testing and commissioning of solar-battery-diesel hybrid mini-grids for rural off grid area electrification:**Positions held:** Consultant (Team leader)

<u>SN.</u>	<u>Capacity (kWp)</u>	<u>Location</u>	<u>Developer / Sponsor</u>	<u>Status</u>
i.	141	Paratoli Union, Raipura, Narshingdi [GPS: 23.9582°N, 90.9170°E]	Shouro Bangla Ltd., Central road, Dhanmondi, Dhaka, Bangladesh.	Completed (2014)
ii.	149	Gorgori union, Bhaga, Rajshahi [GPS: 24.1525°N, 88.8505°E]	Hydron Bangladesh (Pvt.) Ltd. 86 Naya Paltan, Dhaka, Bangladesh	Completed (2014)
iii.	100	Dhurung Bazar, Kutubdia, Cox's Bazar [GPS: 21.8773°N, 91.8650°E]	Green Housing and Energy Ltd., DIT Merul Badda, Dhaka, Bangladesh	Completed (2015)
iv.	158	Narayanpur, Nagashwari Kurigram. [GPS: 25.8880°N, 89.8395°E]	Gramer Alo, House- 1A/2, Road # 07, Gulshan-1, Dhaka 1212, Bangladesh	Completed (2015)
v.	177	Monpura, Bhola [GPS: 22.1827°N, 90.9392°E]	Solar Electro Bangladesh Ltd. H- 292, R- 19/B, Mohakhali DOHS, Dhaka.	Completed (2016)
vi.	149	Char Asaridaha, Godagari, Rajshahi. [GPS: 24.3888°N, 88.3365°E]	Ava Development Society, Gopalpur, Lalpur, Natore.	Completed (2016)
vii.	210	Chilmari-Char, Daulatpur, Kushtia [GPS: 24.1220°N, 88.7484°E]	Parasol Energy Limited, 5 Mohakhali C/A, Dhaka, Bangladesh.	Completed (2017)
viii.	242	Baghutia, Doulotpur, Manikgonj [GPS: 23.9340°N, 89.7212°E]	Super Star Renewable Energy Ltd. Segun Bagicha, Ramna, Dhaka, Email:	Completed (2017)
ix.	130	RupsharChor, Kazipur, Sirajgang, [GPS: 24.5955°N, 89.7687°E]	SolarGao, Niketon, Dhaka	Completed (2017)
x.	250	Kachikata, Vedorgong, Shariatpur [GPS: 23.3462°N, 90.5545°E]	Solar Electro Bangladesh Ltd., Gulshan 2, Dhaka.	Completed (2017)
xi.	250	Monnia chor, Islampur, Jamalpur [GPS: 25.1127°N, 89.6575°E]	VGL Solution Ltd. 223 Tejgaon I/A, Gulshan Link Road, Dhaka	Completed (2018)
xii.	250	Noapara bazar, Naria, Shariatpur [GPS: 23.3895°N, 90.4606°E]	Solar Electro Bangladesh Ltd. H- 292, R- 19/B, New DOHS, Mohakhali, Dhaka.	Completed (2018)
xiii.	156	Shalipur, Char Bhadrashan, Faridpur [GPS: 23.6200°N, 89.9831°E]	Uddipan, Ring road, Adabor, Dhaka	Completed (2018)
xiv.	250	Fazlupur, Fulchari, Gaibandha [GPS: 25.1921°N, 89.6594°E]	Brit Bangla Trade & Investment Ltd (BBTIL), Lalmatia, Dhaka	Completed (2018)
xv.	250	Nischintapur, Kazipur, Sirajganj [GPS: 24.6385°N, 89.7435°E]	Envis Energy Ltd., Uttara, Dhaka	Completed (2018)
xvi.	250	CharPaka, Shibganj, Nawabganj, [GPS: 24.5727°N, 88.0987°E]	Eastec Ltd (EAL), 47 Dilkusha Commercial Area, Dhaka	Completed (2018)
xvii.	218	Kodalkathi, Char Rajibpur, Kurigram [GPS: 25.4968°N, 89.7710°E]	Connectia Limited, Gulshan-1, Dhaka.	Completed (2019)
xviii.	250	Saint Martin, Teknaf, Cox's Bazar [GPS: 20.6298°N, 92.3226°E]	Blue Marine Energy Limited Lal Bhaban, 18 Rajuk Avenue, Dhaka	Completed (2019)
xix.	218	GasChapri, Belkuchi, Sirajgang [GPS: 24.2700°N, 89.7260°E]	Uddipan, Ring road, Adabor, Dhaka	Completed (2019)
xx.	218	Nayeber Hat, Monpura, Bhola [GPS: 22.3040 N, 90.9840 E]	Western Renewable Energy Ltd. TCB Bhaban, Kawran Bazar, Dhaka-1215	Completed (2019)
xxi.	281	South Shakuchia, Monpura, Bhola [GPS: 22.1640°N, 90.9370°E]	Western Renewable Energy Ltd. TCB Bhaban, Kawran Bazar, Dhaka-1215	Completed (2019)
xxii.	250	Lesragonj, Horirampur, Manikgonj [GPS: 23.6690°N, 89.9245°E]	Impressive GreenTech Ltd. (IGTL) 46 Mohakhali C/A, Dhaka	Completed (2019)
xxiii.	10,000	Monpura, Bhola [22.2463°N, 90.9728°E]	Western Renewable Energy Ltd. TCB Bhaban, Kawran Bazar, Dhaka-1215	On going

(3) Project: Feasibility Study of Grid Connected Solar PV Projects**Positions held:** Team Leader /Solar PV & Power System Expert**Major project feature:** Detailed Technical Feasibility Study for developing grid tied solar PV power plants

<u>SN.</u>	<u>Capacity (MWp)</u>	<u>Location</u>	<u>Client</u>	<u>Status</u>
i.	400	Payra, Patuakhaliu	Payra Port Authority, Bangladesh / Royal HaskoningDHV, Neitherland	Completed (2021)
ii.	125	Sonagazi, Feni	Asian Development Bank (Under ADB TA 8084BAN)	Completed (2015)
iii.	130	Jaldhaka, Nilphamari	ATN Solutions Ltd.	Completed (2015)
iv.	250	Mollahat, Bagerhat	Rural Power Company Ltd. (RPCL),	Completed (2017)
v.	87 (Floating Solar)	Mollahat, Bagerhat	Fichtner GmbH & Co. KG, Germany and Rural Power Company Ltd. (RPCL)	Completed (2019)
vi.	70	Netrokona	Consortium of Paragon Poultry, Bangladesh; Risen Energy, China and CRESL, Bangladesh	Completed (2019)
vii.	7.6	Sirajganj	North West Power Generation Company Limited (NWPGL)	Completed (2015)
viii.	40	Gangachara, Rangpur.	Ananda Agro Farm Ltd.	Completed

ix.	12	Tetulia, Panchagarh	GETCO Limited	(2016) Completed
x.	12	Tetulia, Panchagarh.	Parasol Energy Limited	(2016) Completed
xi.	30	Katiadi, Kishoreganj	Biswas Solar Park Ltd. (BSPL)	(2016) Completed
xii.	10	Baburhat, Chandpur	Apollo Engineering and Construction Ltd.	(2018) Completed
xiii.	65	Dhamrai, Dhaka	IBV – SS Agro Consortium	(2018) Completed
xiv.	62	Debiganj, Panchagarh	IBV – Fu-Wang Consortium	(2018) Completed
xv.	250	Swarnodwip, Noakhali	Hanergy Power Gen. Investment Limited, Chaoyang, Beijing, China & Bangladesh Army welfare Trust	Postponed (April, 2019 -)

(4) Project: Preparation of Tender Document and Evaluation of Bids

Positions held: Team Leader /Solar PV & Power System Expert

<u>SN.</u>	<u>Capacity (MWp)</u>	<u>Location</u>	<u>Sponsor</u>	<u>Status</u>
i	3.28	<u>Sharishabari, Jamalpur</u> [GPS: 24.7723°N, 89.8426°E]	Concord Progetti Consortium Ltd.	CoD: August, 2017
ii	7.44	Kaptai, Chittagong Hill Tracts [GPS: 22.4916°N, 92.2266°E]	Bangladesh Power Development Board (BPDB)	CoD: May, 2019
iii	10.31	Tetulia, Panchagarh [GPS: 26.4826°N, 88.4095°E]	Sympa Solar Power Ltd.	CoD: August, 2019
iv	7.8	Saidabad, Sirajganj [GPS: 24.3861°N, 89.7486°E]	North West Power Generation Company Limited (NWPGL)	CoD: March, 2021
v	70	Netrokona	Consortium of Paragon Poultry, Bangladesh; Risen Energy, China and CRESL, Bangladesh	Technically responsive, 2020
vi	4.2	<u>Hatiya, Noakhali</u> (Solar-Wind-Diesel Hybrid)	Bangladesh Power Development Board (BPDB)	Bid Preparation, Evaluation completed, 2016
vii	40	Gangachara, Rangpur	Intraco Solar Company Limited	Bid preparation, Evaluation completed, 2016
viii	30	Bank of river Dhorolla, Kurigram	Acorn Infrastructure Services Limited (AISL), Canadian Solar, IDCOL	Preparation of Tender document, 2014
x	65	Baraiyarhat, Chittagonj	AG Agro Industries Ltd.	Preparation of bidding documents

(5) Project: Unsolicited Grid Connected Solar PV Systems [Proposal preparation]

Positions held: Team Leader /Solar PV & Power System Expert

<u>SN.</u>	<u>Capacity (MWp)</u>	<u>Location</u>	<u>Client / Sponsor</u>	<u>Status</u>
i.	12	Tetulia, Panchagarh	Parasol Energy Limited	CoD: July, 2019
ii.	40	Gangachara, Rangpur	Intraco Solar Company Limited	PPA signed
iii.	62	Deviganj, Panchagarh	IBV - Fu Wang Consortium	Lol issued (Jan, 2019)
iv.	65	Savar, Dhaka	IBV - SS Agro Consortium	Lol issued (July, 2019)
v.	10	Dasdi, Chandpur	AECL & SME Engg. Pte. Ltd.	Lol issued (Sept., 2020)
vi.	86	Tetulia, Panchagarh	Border Guard Bangladesh (BGB)	Proposal submitted
vii.	130	Kaliganj, Lalmonirhat	Sena Kalyan Sangstha (SKS), Welfare Association of Armed Forces	Proposal submitted
viii.	130	Setabganj, Dinajpur	DCHL-RISEN-IRBA-EBL Consortium	Proposal submitted
ix.	66	Bhaluka, Mymensingh	CNEEC-WAC- Kimin Consortium	Proposal submitted

(6) Project: Rooftop Solar PV Systems

Positions held: Consultant / IE / OE

<u>SN.</u>	<u>Capacity (kWp)</u>	<u>Location</u>	<u>Sponsor</u>	<u>Status</u>
i	256	Adamjee EPZ, Narayanganj (23.6787°N, 90.5227°E)	Urmi group	Completed (2017)
ii	723	Bhabanipur, Gazipur (24.1589°N, 90.4208°E)	Paragon Poultry Ltd.	Completed (2018)

iii	1100	Teliapara, Madhabpur, Habiganj (24.1347°N, 91.3502°E)	Far East Spinning Industries Ltd.	Completed (2019)
iv	986	Jamalpur sadar, Jamalpur (24.9003°N, 89.9888°E)	United Power Ltd.	Completed (2020)
v	351	Mouchak, Gazipur (24.0176°N, 90.2789°E)	Libas Textiles Ltd.	Completed (2020)
vi	2003	Meghnaghat, Narayanganj (23.6292°N, 90.6187°E)	Meghna group of Industries	Completed (2020)
vii	2665	Kasimpur, Gazipur (23.9649°N, 90.2928°E)	Square Textiles Ltd.	Completed (2020)
viii	321.6	Shagordighi, Ghatail, Tangail (24.5245°N, 90.1624°E)	Shagordighi Layer Farm. (Paragon Poultry Ltd.)	Completed (2021)
ix	245.69	Dhulivita, Dhamrai, Dhaka (23.9088°N, 90.2080°E)	Snowtex Outerwear Ltd.	Completed (2021)
x	192.96	Bauni, Sreepur, Gazipur (24.1570°N, 90.4984°E)	Sreepur Broiler Farm (Paragon Poultry Ltd.)	Completed (2021)
xi	367.83	Haluaghat, Mymensingh (25.1795°N, 90.2980°E)	Haluaghat Breeder Farm (Paragon Poultry Ltd.)	Completed (2021)
xii	3233	Vulta, Rugganj, Narayanganj (23.7722°N, 90.5607°E)	Joules Power Ltd. (OPEX @ Robintex group.)	On going
xiii	2037	Sreepur, Gazipur (24.1912°N, 90.4340°E)	Fakhruddin Textile Mills Ltd.	On going

(7) Project: Solar-diesel Hybrid Systems for Off-grid Telecom BTSs.

Positions held: Team Leader /Solar PV & Power System Expert

<u>SN.</u>	<u>Capacity (MWp)</u>	<u>Location</u>	<u>Sponsor</u>	<u>Status</u>
i	40 BTSs of Orascom	Bangladesh	Engreen Limited (EL) and IDCOL	Completed (2014)
ii	70 BTSs of Grameen Phone	Bangladesh	InGen Technology Limited and IDCOL	Completed (2011)
iii	10 BTSs of Grameen Phone	Bangladesh	Japan Solartech (Bangladesh) Limited and IDCOL	Completed (2012)

Other Projects

(8) Project: Energy Efficiency and Integration of Renewable Energy into Grid in Bangladesh. (EEGIRE)

Duration: April, 2019 –May, 2021

Location: Bangladesh

Client/Sponsor: GIZ / GOPA-International Energy Consultants GmbH, Germany / SREDA, MPEMR, GoB)

Positions held: Nation Senior expert.

Major project feature:

- Creating the foundations to develop the general conditions for integrating solar power into the grid
- Strengthening the technical skills of the transmission grid operator to integrate solar power .
- Improving the prerequisites to increase the efficiency of the distribution grid in a pilot region.

(9) Project: Value Chain Analysis for market development and dissemination of Pico PV systems (Solar Lantern).

Duration: November, 2014 – February, 2015

Location: Bangladesh

Client/Sponsor: GIZ

Positions held: Subject matter expert.

Major project feature:

- Ascertain the prevalence of the most common lighting options.
- Carry out a baseline study on the importers, distributors/wholesalers and retailers/ re-sellers active in the chain
- Provide detailed value chain scenarios and distribution channel analysis.
- Map the off-grid products value chain
- Determine the key constraints and challenges for optimizing the current supply chain

(10) Project: Providing Expert Services on implementing net metering schemes.

Duration: September, 2018 – October, 2018

Location: Bangladesh

Client/Sponsor: GIZ

Positions held: Subject matter expert.

Major project feature:

- Visit project sites along with selected EPC contractor;
- Review of draft layout and single line diagram submitted by EPC Contractor;
- Review of system components as per agreed layout, appropriate standard of the existing system
- Provide necessary guidance to the EPC contractor in modifying system design,
- Introduce safety standard and selection of equipment;
- Along with Utility Representative, review capacity and system vulnerability due to integration of roof top system, visit project sites during handover, certify the appropriateness of the installation and supervise commissioning of each site;
- Submission of Site Completion Report incorporating above and any further guidance on O&M.

- (11) **Project: Piloting and Evaluation of Solar DC Nano Grid Concept**
Duration: October, 2014 – March, 2015
Location: Bangladesh
Client/Sponsor: GIZ [Partner: University of Applied Science, Ulm, Germany and Solar Energy Research Institute of Singapore (SERIS), National University of Singapore (NUS)]
Positions held: Investigator
Major project feature:
- Development and implementation 4 DC solar nano grids in off grid areas of Bangladesh.
 - Evaluate the potential of DC solar nano grids to cover basic energy needs substantially.
- (12) **Project: Feasibility Study to Provide Energy to Poor Rural Households with Renewable Energy Technology**
Duration: September –October, 2011
Location: Bangladesh
Client/Sponsor: GIZ
Positions held: Consultant
Major project feature:
- Assessing the present energy supply situation of the target area,
 - Conduct brief survey in the target village on energy needs, Energy technologies presently employed,
 - Money spend on energy services,
 - Explore the willingness of the rural poor people to accept the new technologies (ICS and PV based lighting),
 - Develop a first draft of strategies for improved energy supply for cooking and lighting purpose
 - Propose an implementation plan for strategies developed,
 - Prepare a risk assessment of the proposed energy supply strategies with respect to sustainable operation
- (13) **Project: Mobilization Private Investment for NDC Implementation in Bangladesh: Phase 2**
Duration: August, 2018 – February, 2019
Location: Bangladesh
Client/Sponsor: IKI (German International Climate Initiative) / Vivid Economics, UK; PwC; SREDA.
Positions held: Senior Consultant, Renewable Energy
Major project feature:
- Support public actors to create favourable conditions for the financing of NDC implementation by private and public sector
 - Select a priority sector for investment mobilisation
 - Identify and develop specific investment mobilisation measures as well pipeline for investment for the chosen priority sector
- (14) **Project: German Alumni Energy Expert Seminar for South and South-East Asian Countries**
Duration: 5 January, 2012 – 11 January, 2012
Location: Bangladesh
Client/Sponsor: BMZ (Federal Ministry for Economic Cooperation and Development), Germany
Positions held: Team Leader
Major project feature: To organize the German Alumni Energy Expert Seminar for South and South-East Asian Countries in Dhaka, Bangladesh [Project cost € 50,000.00]
- (15) **Project: Short-term consultant to Winrock International Institute for Agricultural Development under Winrock's project with USAID for the Nigeria Renewable Energy and Energy Efficiency Project.**
Duration: February-September, 2017
Location: Nigeria
Client/Sponsor: USAID / Winrock International, USA.
Major project feature:
- Provide technical expertise as a solar irrigation expert providing guidance and quality assurance for the feasibility, design and tender documents preparation for a proposed solar irrigation project in Nigeria.
- (16) **Project: Bangladesh Clean Energy Sector Assessment.**
Duration: Sept., 2019 – Till date
Location: Bangladesh
Client/Sponsor: USAID.
Major project feature:
- Provide comprehensive input in the policy gap mapping to identify the limitations/gaps/conflicts in the policies where adjustments are needed to increase renewable energy investments and reduce the risk for various stakeholders.
 - Provide overall input in the intervention design for USAID to work on the clean energy sector for Bangladesh
- (17) **Project: Development of guideline for integration of Solar irrigation pumps into national grid.**
Position held: RE- grid integration expert
Duration: February, 2018 - September, 2018
Location: Bangladesh
Client/Sponsor: UNDP (United Nations Development Programme, (SREPGen) Project, SREDA, MPEMR
Major project feature:
- Development of Technical solutions for integration of Solar irrigation pumps into national grid.
 - Development of Financial and Tariff model for integration of Solar irrigation pumps into national grid.
- (18) **Project: Feasibility Study and techno-economic solution of integrating wind energy system into solar diesel hybrid minigrad in Monpura island, Bhola.**
Position held: Renewable Energy expert
Duration: August - December, 2018
Location: Bangladesh
Client/Sponsor: UNDP (United Nations Development Programme), SREDA, MPEMR
Major project feature:
- Techno-economic appraisal and development of conceptual and technical design of the Project and determine its overall feasibility
 - Development of technical configuration and project financial and implementation detail's.
 - Preparation of the specification and Bill of Quantity for the Solar-Wind-diesel hybrid solution..
- (19) **Project: Development of Renewable Energy Power Generation Action Plan for Solar Photovoltaic Energy from 2019 to 2041.**
Position held: Renewable Energy expert
Duration: Nov., 2018 – Feb., 2019
Location: Bangladesh
Client/Sponsor: UNDP (United Nations Development Programme), SREDA, MPEMR
Major project feature:

- Renewable energy power generation action plan from 2019 to 2041 for solar photovoltaic energy encompassing the future RE scenario of the country in global perspective, potential financing sources and market, policy requirement, technological support and impending barrier in RE sector.
- (20) **Project: EmPower– Women for Climate Resilient Societies: Strengthening Human Rights and Gender Equality through Climate Change Action and Disaster Risk Reduction**
Duration: August, 2019 - January, 2020
Location: Bangladesh
Client/Sponsor: UNEP (United Nations Environment Programme) and UN Women.
Major project feature:
- Scoping and pre-feasibility studies to select intervention for empowering woman in offgrid areas electrified by Solar minigrids.
 - Scoping study: to carry out a broad study on women's existing and potential livelihood activities, climate resilience and other relevant developmental activities in selected locations and districts
 - Pre-feasibility studies: To be carried out for short-listed interventions and with respective potential women.
- (21) **Project: DFID Bangladesh Scoping Mission: Review of PCEP Program and Scoping of Opportunities for Future Programming.**
Duration: Feb., 2016 – January, 2018 [Intermittent]
Location: Bangladesh
Client/Sponsor: DFID /Adam Smith / PWC
Positions held: Energy and Renewable Energy Expert.
Major project feature:
- Providing program scoping and design support to DFID Country Offices and Regional Groups
 - Providing technical support to shape delivery of existing infrastructure and urban programs
 - Helping to build the evidence for urban and infrastructure programming through rapid technical advice from sector and cross-cutting experts, action research projects, and policy briefings.
 - Organize stakeholders meeting and workshops
- (22) **Project: Solar Nano-Grids: Appropriate solution for meeting off-grid community energy needs?**
Duration: 2013-2016
Location: Bangladesh and Kenya
Client/Sponsor: EPSRC, UK [Partner: Loughborough University, UK and University of Oxford, UK]
Major project feature: Develop and implementation of isolated solar nano grid for Bangladesh and Kenya.
- (23) **Project: Development of Bangladesh Energy and Carbon Emissions Modeling till 2050**
Duration: September, 2013 – December, 2014
Location: Bangladesh
Client/Sponsor: Department of Energy and Climate Change, UK / Cardiff University, UK.
Positions held: Co-Investigator
Major project feature:
- 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.
 - Produce an Excel based spreadsheet (as found for the UK 2050 calculator)
 - Produce an interactive web tool based on the Excel spreadsheet
- (24) **Project: Monitoring and Assessment, Advisory and Reporting for the JICA Renewable Energy Development Project (REDP)**
Duration: January, 2015 – December, 2017
Location: Bangladesh
Client/Sponsor: JICA (Japan International Cooperation Agency) / IDCOL (Infrastructure Development Company Limited)
Positions held: Engineer and Renewable Energy Expert.
Major project feature:
- Monitoring and Assessment of the Project Activities
 - Technological and business environment advisory on appraisal of potential subprojects, mainly for Solar Irrigation Pump, Solar Mini-Grids, Gasification of Biomass and Biogas Power Generation Components
 - Support for Environmental and Social Considerations Reporting
- (25) **Project: Bangladesh Off-grid Energy Sector Assessment**
Duration: March, 2013 – September, 2013
Location: Bangladesh
Client/Sponsor: WB, IFC (for Dr. Fouzul Kabir Khan)
Positions held: Renewable Energy Expert
Major project feature: Assist the lead author in
- Assessing solar PV cost (at different size and level) and market trends in Bangladesh
 - Assessing current market status for the smaller solar systems
 - Assessing current market status for mini grid systems in Bangladesh
 - Assessing anchor customers for the sustainability of mini grid operations in Bangladesh
 - Identifying currently available incentives for private sector to participate in the RE business in Bangladesh.
 - Proposing IFC interventions to address market barriers/gaps to facilitate sustainable private sector growth..
- (26) **Project: Development of a Solar PV DC mini grid laboratory**
Duration: October, 2013 – Till date
Location: Bangladesh
Client/Sponsor: WB (World Bank) / IDCOL
Positions held: Project Director
Major project feature:
- Research, study and development of DC solar minigrids for rural electrification.
 - Develop the switchgear, protection and safety schemes for DC power supply, distribution systems and loads.
 - Development of a laboratory setup for a 16 kWp prototype DC solar minigrid.
- (27) **Project: Testing of PV panels under IDCOL SHS program.**
Duration: June, 2013 – February, 2014
Location: Bangladesh
Client/Sponsor: WB (World Bank) / IDCOL
Positions held: Team Leader
Major project feature:
- Analyze the performance of solar panels used in the IDCOL SHS program
- (28) **Project: Technical Audit of the Solar Home Systems (SHS) Program**

Duration: April/2011 – July/2012 (2nd assignment)
June/2008 – March/2009 (1st assignment)

Location: Bangladesh

Client/Sponsor: WB (World Bank) / IDCOL

Positions held: Team Leader

Major project feature:

- Surveying the field performance of solar home systems (200 SHS in 5 different location of Bangladesh)
- Sampling the performance of the SHS components from the manufacturers production line
- Investigating the causes of malfunction of the components through laboratory testing
- Recommendation for proper specifications of the SHS components and quality control

(29) **Project: Supporting Implementation of Bangladesh Climate Change Strategy and Action Plan**

Duration: August, 2013 – Sept, 2015

Location: Bangladesh

Client/Sponsor: ADB (Asian Development Bank)/ AFC (Germany)/ BCAS

Positions held: Mitigation Specialist (National)

Major project feature:

- Feasibility study and development of DPP for a 100 MWp Grid connected solar PV plant at Sonagazi, Feni.
- 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;
- 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;
- Cross sectoral analysis 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.
- Formulate NAMA and strengthen local government private sectors and NGOs by implementing cleaner production energy efficiency and standardization and labelling approach;

(30) **Project: Translating Electricity Supply into Improvements of Rural households**

Duration: April, 2019 – October, 2020

Location: Bangladesh

Client/Sponsor: ADB, BREB (Bangladesh Rural Electrification Board), Practical Action Consulting, Bangladesh

Positions held: Electricity Distribution Specialist

Major project feature: Providing technical support, capacity building, strategic direction for idea generation on efficient and effective energy based micro/ small/medium enterprises development in rural areas under 5 PBS of Bangladesh Rural Electrification Board.

(31) **Project: Bangladesh Power System Expansion and Efficiency Improvement Program, Preparation of Tranche 2 [BAN 42378]**

Duration: April, 2013 - December, 2013

Location: Bangladesh

Client/Sponsor: ADB (Asian Development Bank / Power Cell

Position held: Solar Power Specialist (National)

Major project feature:

- Assess the national level power and diesel subsidies at present and forecast the subsidies for next 20 Durations, in collaboration with the Power Economist.
- 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.
- 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.
- Identify the reasons, if the pilot schemes have failed, for such failures and recommend remedial measures.
- Undertake community and relevant civil society consultations to develop a suitable business model
- Develop a strategy for mainstreaming solar powered irrigation pumps in Bangladesh.

(32) **Project: Feasibility Study for Selecting the Most Promising and Feasible Renewable Energy Based Solution(s) for Blue Gold Program**

Duration: June, 2016 -

Location: Bangladesh

Client/Sponsor: Blue Gold Program (collaboration program of Government of the Netherlands (donor) and the Government of Bangladesh).

Positions held: Renewable Energy Expert

Major project feature:

- Advisory service for development of a framework for literature review (i.e. what secondary sources are to be relied on for necessary data on both national and international scenario regarding application of renewable energy solutions).
- Point out 'Key Experts' in the relevant field, who will be interviewed for short listing promising renewable energy technologies.
- Provide feedback from technical point of view (i.e. considering the technological aspects) against the draft report prepared based on Phase A activities (i.e. literature review, and expert interviews).
- Providing technical advisory service during 'Operational Feasibility Analysis' and 'Competitive Advantage Analysis' of different renewable energy technologies.

Others

(33) **Project: Testing and certification of Solar Home System equipment/components.**

Duration: October, 2010 – Till date

Location: Bangladesh

Client/Sponsor: Solar Home System (SHS) equipment manufacturers/suppliers

Positions held: Team Leader (Director)

Major project feature: Centre for Energy Research (CER) certifies the technical compliance of the SHS equipment in Bangladesh. Director of CER is responsible for the testing and certification process.

(34) **Project: Training of Trainers (TOT) Program on SHS**

Duration: 2008 – Till date

Location: Bangladesh

Client/Sponsor: Infrastructure Development Company Limited (IDCOL)

Positions held: Resource Person

Major project feature:

CV of Md. Shahriar Ahmed Chowdhury

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:
 - Properties and characteristics of SHS components (Solar Panel, battery, charge controllers and loads),
 - operation and maintenance schemes of SHS
 - Optimized sizing of PV systems
- (35) **Project:** Solar Technician Training Program
Duration: December, 2012 – Till date
Location: Bangladesh
Client/Sponsor: Infrastructure Development Company Limited (IDCOL)
Positions held: Project director of the Training Program
Major project feature:
Conduct training for the Technicians of the Partner Organizations (POs) of IDCOL on SHS systems.
Training includes:
 - Properties and characteristics of SHS components (Panel, battery, charge controller and different loads), systems
 - Operation and maintenance schemes of SHS
 - Optimized sizing of PV systems
 - Safety issues
- (36) **Project:** Design, Supervision and development of operational strategy for 30 Solar PV based irrigation systems for Rural offgrid areas of Bangladesh
Duration: July, 2015 – August, 2016
Location: Bangladesh
Client/Sponsor: Uddipan Energy Limited
Position held: Solar Powered Irrigation systems Specialist [Team Leader]
Major project feature:
 - Design the optimized solar irrigation pump systems considering dynamic water head, Soil and crop type of rural Bangladesh.
 - Development the operation and maintenance strategies.
 - Support in preparing the due diligence for bankable project profile.Train the staffs of Uddipan Energy Limited on general operation and maintenance of Solar Irrigation Pump Systems
- (37) **Project:** Supervision of construction, installation and commissioning of solar PV assembling plant
Duration: January , 2011- April, 2012
Location: Dhaka, Bangladesh.
Client/Sponsor: Radiant Alliance Limited, East Coast Centre, SW (G)-8, Gulshan Avenue, Dhaka.
Positions held: Independent Engineer
Major project feature: 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) **Project:** Consulting services for Design/Review of Solar BTS project and Solar panel assembling plant
Duration: October, 2010 – December, 2010
Location: Bangladesh
Client/Sponsor: Keystone Business Support Company Limited, Dhaka, Bangladesh (www.keystone-bsc.com)
Positions held: Team Leader
Major project feature:
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.
- (39) **Project:** Appraisal of solar PV assembling plant
Duration: July, 2010 – September, 2010
Location: Dhaka, Bangladesh.
Client/Sponsor: Electro Solar Limited, Radiant Alliance Limited (RAL)
Positions held: Consultant
Major project feature: 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.
- (40) **Project:** Evaluation of proposals of prospective investor(s) for solar PV manufacturing/assembling plant in Bangladesh.
Duration: February, 2010 - June, 2010
Location: Bangladesh
Client/Sponsor: Infrastructure Development Company Limited (IDCOL), Dhaka, Bangladesh.
Positions held: Consultant
Major project feature: Evaluation of technical and financial aspects of proposals for setting up solar PV assembling plant(s) in Bangladesh. After the evaluation 4 proposals out of 22 were awarded for financing.
- (41) **Project:** Consulting services for collection of exhibits for galleries of National Museum of Science and Technology
Duration: February, 2010- June, 2011
Location: Bangladesh
Client/Sponsor: National Museum of Science and Technology Ministry of Science and Information & Communication Technology, Dhaka, Bangladesh.
Positions held: Member (Electrical)
Major project feature:
 - Prepare the technical specifications of the foreign exhibits
 - Evaluation of the submitted proposals bidders
- (42) **Project:** Performance Analysis of CIGS solar Panel
Duration: February, 2009
Location: Bangladesh
Client/Sponsor: Rahim Afroz Renewable Energy Limited, Dhaka, Bangladesh).
Positions held: Team Leader
Major project feature: Performance Analysis of CIGS Solar panel to detect the reason for underperformance of a lot of solar panels supplied by Centennial Solar, Canada.
- (43) **Project:** Design of a microcontroller based solar charge controller
CV of Md. Shahriar Ahmed Chowdhury

Duration: April, 2009 – June, 2009

Location: Bangladesh

Client/Sponsor: Easy Electronics, H- 27/Ka, Rd.- 2, PC Culture Housing, Dhaka- 1207, Bangladesh.

Positions held: Team Leader

Major project feature: Design of a microcontroller based charge controller for Solar Home Systems.

(44) Project: Feasibility study to set up a battery manufacturing industry in Bangladesh

Duration: 22 August, 2011 – 7 September, 2011

Location: Bangladesh

Client/Sponsor: IRG Development Services Ltd. Level 5, Nakshi Homes, 6/1/A Topkhana Road, Segunbagicha, Dhaka- 1000, Bangladesh

Positions held: Team Leader

Major project feature: 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

10. Scholarships / Academic Research Grants

- (1) World Bank / IDCOL 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 of solar PV based DC nano grids (Awarded: June, 2015)
4. Development of Automatic Solar Irrigation system with remote monitoring and prepayment system.[Awarded: Feb, 2016]
- (2) GIZ, Germany Development and installation (Pilot) of DC solar Nano grids for rural electrification in Bangladesh (Awarded: October, 2014)
- (3) EPSRC, UK Development and Implementation of Solar DC Nano grid in Kenya and Bangladesh (Awarded: January, 2014)
- (3) DAAD, Germany To participate in
(a) International Conference on “Renewable Energy 2030 – Experts’ Vision” as a session chair on “Solar Energy” in Uni Oldenburg, Germany (01 – 02 October 2012)
(b) Panel discussion on “German Higher Educational Co-operation” in Berlin and
(c) Workshop on “Regional Challenges and Possible Solutions for Future Energy Supply” in HWK Institute for Advanced Study, Delmenhorst, Germany (28 – 29 September, 2012).
(d) Visit to The Potsdam Institute for Climate Impact Research (PIK), Potsdam, Germany.
- (4) Federal Ministry of Economic Cooperation (BMZ), Germany To organize an international seminar “German Alumni Energy Expert Seminar for South and South-East Asian Countries”. @ Dhaka, Bangladesh in January, 2012 (Grant amount € 50,000.00)
- (5) DAAD, Germany 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 (2011) and visit to the Fraunhofer ISE.
- (6) USAID, US To participate in the South Asia Regional Initiative for Energy Partnership Program and to participation in the 2nd IEEE CSET in Kandy, Sri Lanka (04.12.2010 – 11.12.2010)
- (7) EU Erasmus Mundus For Academic Visitor at the University of Staffordshire, UK. (February- March, 2010)
- (8) IEEE, USA 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 Research grant for research and study on Thin Film PV in University of Oldenburg, Germany (April –July, 2009)
- (10) DAAD, Germany To participate Summer School “Applied Solar Technology in Developing Countries” organized by Uni Oldenburg, Germany (09.06.2010 – 11.06.2010)
- (11) DAAD, Germany To participate in the International Photovoltaic Summer School organized by PPRE, Uni Oldenburg, Germany (28.08.2006 – 02.09.2006), Participate in the 21st PVSEC and Visit to the Q-Cells manufacturing plant in Thalheim, Germany.
- (12) DAAD, Germany Scholarship for M.Sc. studies in Renewable Energy (PPRE) at the University of Oldenburg, Germany (August, 2004 – January, 2006).

11. Trainings and Professional Developments

(1). Training Seminars on Energy Auditing (December, 2014)

Organizer AEE Bangladesh Chapter and USAID- CCEB
Venue CCEB, House No. 14, Road No. 1, Gulshan, Dhaka, Bangladesh
Fields Certified Energy Auditor (CEA) Certification Course.

(2). Training Seminars on Solar PV systems (March, 2013).

Organizer SMA Solar Academy, Niestetal, Germany
Fields “Planning and design of small, medium and large On Grid and Off Grid PV power plants”, “Inverters, Visualization, remote access and communication for small to large PV power plants”.

(3). Summer school on “Water, Energy and Sanitation in Urban and Decentralized Regions” (March, 2013).

Organizer German Academic Exchange Services (DAAD) and University of Oldenburg, Germany. 2013

(4). Biogas compact course and workshop (April, 2013)

Organizer Netherlands Development Organisation (SNV) and University of Oldenburg, Germany

(5). International Conference on “Micro Perspectives of Decentralized Energy Supply” (Feb - Mar, 2013).

Organizer Micro Energy International, Technical University of Berlin.
Technical University of Berlin, Berlin, Germany.

(6). Workshop on “Regional Challenges and Possible Solutions for Future Energy Supply” (September, 2012)

Organizer University of Oldenburg and HWK Institute for Advanced Study, Delmenhorst, Germany.
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 ICSET and knowledge exchange among the energy experts of South Asian region.(06.12.2010 –10.12.2010)

- Organizer IEEE Singapore section and USEA, Funded by: USAID (SARI/Energy) @Kandy, Sri Lanka
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, 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, University of Flensburg, and CER, United International University, Dhaka, Bangladesh (January, 2012)
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 (2011)**
Organizer University of Freiburg and Fraunhofer institute (ISE), Germany (June, 2011)
Fields design, implementation and maintenance of off grid rural electrification, Solar water & 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.
- (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), The Westin, Dhaka, Bangladesh (18.10.2011 –19.10.2011)
Fields Steps of developing wind power project, Wind Resource Assessment, energy calculation, PPA/EPC/O&M contracting, turbine selection and warranty, site engineering, economic modeling and project financing; risks assessments involved in Wind Power Projects and ways to mitigate while appraising the projects
- (11). InterSolar Exhibition and Conference (2009, 2010, 2011, 2015, 2016)**
Organizer Solar Promotion GmbH (participation was funded by German Academic Exchange Services- DAAD, GIZ, Munich Trade Fair Centre, Munich Germany (2009, 2010, 2011, 2012, 2014, 2016)
Fields World's largest exhibition of solar industry (Technology, Processes and systems related to Solar Photovoltaics and Solar Thermal Energy) along with the related conferences.
- (12). Symposium on “Small PV-Applications: Rural Electrification and Commercial Use” [2009 & 2011]**
Organizer OTTI, Germany & University of Applied Sciences, Ulm, Germany. (June, 2011)
Fields Small PV Technology, Application and Financing
- (13). Teachers Training Program**
Organizer EU Erasmus Mundus (eLink) & University of Staffordshire, UK (February – March, 2010)
Fields Renewable Energy resource assessment
- (14). Final competition of the IEEE International Future Energy Challenge (IFEC-2009)**
Organizer IEEE- Power & Electronics Society (IEEE-PES) and the Power Sources Manufacturing Association (PSMA), USA. @ Illinois Institute of Technology, Chicago, USA. (2009)
Fields Power electronics & machine control systems (Integrated Starter/Alternator-Motor Drive for Automotive Applications)
- (15). International Photovoltaic Summer School (2006)**
Organizer Postgraduate Program Renewable Energy, University of Oldenburg, Germany
Fields PV Technology, Application, system analysis, performance and simulation; PV applications in developing countries: Issues and Challenges, Satellite based monitoring of PV systems.
- (16). 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 @Washington DC, USA.
Fields Power electronics and machine control system
- (17). 21st European Photovoltaic Solar Energy Conference and Exhibition**
Organizer European PVSEC @Dresden, Germany.(04.09.2006 – 08.09.2006)
Fields State of the art Technology, Research, development and demonstration of PV projects; PV applications; PV markets, products and services; Present day PV issues.
- (18). Workshop on “Regional Challenges and Possible Solutions for Future Energy Supply”**
Organizer University of Oldenburg and HWK Institute for Advanced Study, Delmenhorst, Germany [2012]
Fields Challenges and possible solutions for sustainable future energy supply
- (19). Research work on CIGS Thin Film Solar Cell Fabrication Process**
Organizer Centre for Solar Energy and Hydrogen Research (ZSW), [2005 – 2006]
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
- (20). International Seminar on Solar Photovoltaic Systems, An alternate solution for growing demand**
Organizer Kathmandu University, Nepal and Alternative Energy Promotion Center. (11th – 12th Dec, 2011)
Fields Kathmandu, Nepal
Fields Solar photovoltaic and Solar thermal technology for electrical power generation, Solar PV system components of grid connected, standalone, hybrid systems, BIPV systems, Solar PV system monitoring and control systems, Solar PV systems planning and policies,
- (21). Workshop on Intercultural Communication – an Opportunity to Solve Conflicts?**
Organizer German Academic Exchange Service (DAAD) and STUBE, University Hildesheim, Germany
Fields Hildesheim, Germany. (17 – 19.12.2004)
Fields Cause of intercultural conflicts and way to overcome it
- (22). Short course on “Project Finance Vis-à-vis Corporate Finance”**
Organizer ADFIMI and IDCOL . (November, 2012) @ Pan Pacific Sonargaon Hotel, Dhaka, Bangladesh
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,
- (23). Short course on “Financial Modeling”**
Organizer Infrastructure Development Company Limited. Dhaka, Bangladesh. (27 – 28 June, 2012)
Fields Mechanics of preparation of price proposal for various projects, methodology for evaluating price proposals submitted by various bidders and agreement negotiation, Participate in loan negotiations and draw up financial covenants for loan agreements, Construct financial model
- (24). Workshop on Geospatial Toolkit for Renewable Energy Resource Assessment**

- Organizer NREL, USAID, GTZ and Ministry of Power Energy and Mineral Resource,
Government of Bangladesh @ DPDC building, Dhaka, Bangladesh. (8 – 9th August, 2010)
Fields Renewable energy data, geospatial toolkit training, monitoring and resource assessment.
- (25). Workshop on “Climate Change : Impact and Carbon Trading (CDM)”**
Climate Change Cell, Department of Environment, Ministry of Environment and forest, Government of Bangladesh.
Organizer Bon Bhaban, Agargoan, Dhaka. (18th November, 2009)
Fields Global Warming, Climate Change, CDM
- (26). 1st, 2nd, 3rd, 4th & 5th International Conference on the Developments in Renewable Energy Technology**
Organizer UIU, GIZ, IDCOL, UC Berkeley, Uni Oldenburg, Kathmandu University, TERI,
Dhaka, Bangladesh. 2009, 2012, 2014, 2016
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,
- (27). Total Quality Management (TQM)**
Organizer Bangladesh Power Development Board, Regional Training Centre, Tongi (17–26th Feb, 2004)
Fields Total Quality Management
- (28). Distribution Engineering (Nov., 2002)**
Organizer Distribution Training Centre (DTC), Bangladesh Power Development Board, Khulna, Bangladesh.
Fields Power Distribution Planning and Design, Load Management, Load Flow, Supervisory Control and Data Acquisition
(SCADA), Distribution Fault Analysis
- (28). Management Development and Rural Economy**
Organizer Bangladesh Academy for Rural Development (BARD), Comilla, Bangladesh. (May, 2001)
Fields Leadership, Entrepreneurship, Rural Economy, Rural Development, Co-operatives
- (29). Management Training Program**
Organizer Bangladesh Institute of Management (BIM), Dhaka, Bangladesh. (05 – 10th May, 2001)
Fields Personnel Management, Project Management and Evaluation, Operational Management
- (30). Induction Training of BPDB (Feb – March, 2001)**
Organizer Engineering Academy, Bangladesh Power Development Board (BPDB), Kaptai and RTC, BPDB, Tongi.
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

12. 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)
- Founding Director Established Centre for Energy Research at United International University to facilitate researches on
Renewable energy and energy efficiency (since 2010)
- Founding Chairman Centre for Renewable Energy Services Ltd. (since 2015)
- Founding Co-Chair International Conference on the Developments in Renewable Energy Technology (ICDRET). So far 5
events were successfully organized. [www.icdret.uiu.ac.bd]

13. Other Experiences and Activities

- Organizing Co-Chair 1st, 2nd, 3rd, 4th, 5th & 6th International Conference on the Developments in Renewable Energy Technology
(ICDRET), 2009, 2012, 2014, 2016, 2018 & 2021 @ Dhaka, Bangladesh & Kathmandu, Nepal.
- Student Representative General Secretary, Shahid Smriti Hall Students' Union, Bangladesh University of Engineering and
Technology (BUET) [1999 – 2000]
- Moderator United International University Science and Engineering Club [2008- '09].
- Reviewer i. Journal of Electrical Engineering, Institute of Engineers (IEB), Dhaka, Bangladesh.
[http://www.iebbd.org]
ii. International Conference on “Renewable Energy 2030 – Experts' Visions”
Oldenburg, Germany, 01-02 October, 2012
iii. International Conference on the Developments in Renewable Energy Technology,
Dhaka, Bangladesh (1st, 2nd, 3rd & 4th events in 2009, 2012, 2014 & 2016).
iv. International Conference on Electrical, Computer & Communication Engineering, Organize:
Faculty of Electrical and Computer Engineering, CUET, Chittagong [www.cuet.ac.bd/ecce/]

14. Personal Information

- Date of Birth 01.01.1973
- Place of Birth Dhaka, Bangladesh
- Nationality Bangladeshi (By birth)
- Permanent Address 219/7 Tejkunipara, Tejgaon, Dhaka- 1215, Bangladesh
- Marital Status Married
- Language Proficiency Bangla (Native), English, German (Basic), Japanese (Basic)

15. Key Note / Invited Speeches in International Events

- i. 7th Chinese Renewable Energy Conference and Exhibition, Wuxi, China, November, 2015, on “The Practical
Challenges and Solutions to PV Development in Bangladesh”
- ii. Asia Clean Energy Summit, Singapore, October, 2014 on “SHS based Rural Electrification in Bangladesh and its
success factors”.
- iii. Seminar on “Adaptation to Climate Change in Bangladesh”, organized by Goethe Institute, Bangladesh, December,
2014, on “Dissemination of Knowledge and Technology in the Field of Renewable Energy”
- iv. International Seminar: “Solar Photovoltaic Systems: An Alternate Solution for the Growing Energy Demand”,
Kathmandu University, Nepal, December, 2011 on “Research and future prospects of Solar Photovoltaic systems”

16. Publications

Book Chapters:

- 1) **Shahriar A. Chowdhury**, Shakila Aziz, Sebastian Groh, Chapter 6: The Case for Solar Diesel Hybrid Minigrids in Bangladesh: Design Considerations, Decentralized Solutions for Developing Economies: Addressing Energy Poverty Through Innovation, Springer publications, 2015, ISBN 9783319159638.
- 2) **Shahriar A. Chowdhury**, Shakila Aziz, Chapter 15: Renewable Energy and Its Prospects in Bangladesh, Bangladesh Geosciences and Resources Potential, CRC Press (Taylor & Francis Publications), 2021, ISBN 9780367531805.

Journal Papers:

- 3) **Shahriar A. Chowdhury**, Monjur Mourshed, SM Raiyan Kabir, Moududul Islam, Tanvir Morshed, M. Rezwan Khan, and Mohammad N. Patwary. "Technical appraisal of solar home systems in Bangladesh: A field investigation." *Renewable Energy* (Elsevier) 36, no. 2 (2011): 772-778.
- 4) **Shahriar A. Chowdhury**, Shakila Aziz, Sebastian Groh, Hannes Kirchhoff, and Walter Leal Filho. "Off-grid rural area electrification through solar-diesel hybrid minigrids in Bangladesh: resource-efficient design principles in practice." *Journal of cleaner production* (Elsevier) 95 (2015): 194-202.
- 5) **Shahriar A. Chowdhury** and Monjur Mourshed. "Off-grid electrification with solar home systems: An appraisal of the quality of components." *Renewable Energy* (Elsevier) 97 (2016): 585-598.
- 6) Shakila Aziz, **Shahriar Ahmed Chowdhury**, and Sebastian Groh. "The success of solar diesel minigrids in Bangladesh: A case study of Sandwip Island." *Energy Procedia* (Elsevier) 103 (2016): 316-321.
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