

RAAIDA
... a team of leaders

COMPANY PROFILE & PORTFOLIO · 2026

Engineering that is measured, designed, built and proven

Energy & Sustainability · MEP Design · Electrical & Fire Safety · Supply & Installation

Raaida Engineering
251, West Monipur, Mirpur, Dhaka-1216, Bangladesh

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WHO WE ARE

An engineering consultancy and contractor for industry, buildings and infrastructure

Raaida Engineering was established in Dhaka in 2019 by engineers who had already spent years auditing factories and designing electrical systems for ports, power plants and campuses.

We work in four disciplines: energy and sustainability, MEP design, electrical and fire safety, and supply and installation. Most clients come to us for one of them. Many stay for the others, because the engineers who find a problem on site are the same people who can design the fix, install it and test the result.

Our clients include garment and textile factories, spinning mills, process plants, shopping complexes, banks, universities and public authorities. Our engineers' experience ranges from a single earth resistance test to the complete electrical design of a sea port terminal.



60+
factories assessed for green financing

30+
detailed energy audits of factories and buildings

132 kV
grid substation designed for a sea port terminal

68 MW
solar power plant reviewed to grid handover

Work delivered by our engineers since 2017, including projects carried out with partner firms.

OUR VISION

To be a leading and trusted engineering consultancy in Bangladesh, recognised for sustainability, innovation and excellence in creating safe and energy-efficient environments.

OUR MISSION

To deliver engineering consultancy, design and supply services that help our clients reach their goals, while upholding the highest standards of quality, safety and professional integrity.

HOW WE WORK

Advice you can check, and work you can test

Measured, not assumed

Our reports are built on readings: power-quality logs, flue-gas analysis, thermal images and earth resistance values, taken with calibrated instruments.

Certified audit lead

Energy audits are led by a SREDA Certified Energy Auditor and written to the formats SREDA, Bangladesh Bank and international brands accept.

Design that can be built

The engineers who draw our single-line diagrams also test installations on site, so drawings are sized from real loads and leave room for maintenance.

Responsible to handover

Every installation leaves with insulation, earth and functional test results in the handover file. If we found the problem, we can fix it and prove the fix.

01

Measure

Site survey, power-quality logging, thermal imaging and a year of energy data.

02

Design

Load calculations, single-line diagrams, layouts and BoQ to BNBC 2020.

03

Build

Panels, substations, generators, earthing, fire alarm and rooftop solar.

04

Verify

Testing, commissioning records and measured savings.

MESSAGE FROM THE PROPRIETOR

“We established this firm with a clear goal: to make a tangible impact on the engineering landscape of Bangladesh by championing sustainable and efficient practices. We believe in the power of collaboration and are dedicated to working closely with our clients to turn their vision into reality.”

Masuma Akter · Proprietor & Chief Financial Officer

COMPANY INFORMATION

NAME OF FIRM Raaida Engineering	TYPE OF ORGANISATION Proprietorship	PROPRIETOR Masuma Akter
ESTABLISHED 2019	TRADE LICENCE TRAD/DNCC/049169/2023 (DNCC)	OFFICE 251, West Monipur, Mirpur, Dhaka-1216, Bangladesh

SERVICES

Four disciplines, one engineering team



STANDARDS

SREDA Energy Audit Regulation 2023

ISO 50001 | ISO 50002 | IEEE 519

01

Energy & Sustainability

Energy audits built on site measurements, not nameplates

Energy audits and efficiency assessments for factories and commercial buildings, measured on site, led by a SREDA Certified Energy Auditor and written to SREDA, Bangladesh Bank and brand requirements.

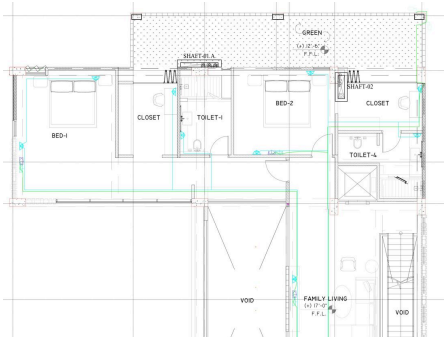
WHAT WE DO

- SREDA designated-consumer audits
- Green-finance assessments
- Efficient-machinery verification
- Boilers and steam
- Captive power and cogeneration
- Commercial buildings

YOU RECEIVE

- Audit report (SREDA Form-8 where required)
- Baseline with regression and CUSUM
- Measures ranked by payback, NPV and IRR
- Thermal and power-quality findings
- Measurement & verification plan

Who it is for: Textile and apparel factories, spinning mills, process plants with captive power, and large commercial buildings.



STANDARDS

BNBC 2020 | IEC 60364 | IEC 61439

Electricity Rules 1937

02

MEP Design

Electrical, HVAC, plumbing and fire design to BNBC 2020

Electrical, HVAC, plumbing and fire-system design for buildings and factories: load calculations, layouts, single-line diagrams, BoQ and tender documents.

WHAT WE DO

- Electrical design
- Earthing and lightning protection
- HVAC
- Plumbing and fire
- Solar PV
- Tender documents

YOU RECEIVE

- Load chart and maximum demand
- Single-line and circuit diagrams
- Lighting, power and conduit layouts
- Substation, generator and LPS sizing
- BoQ and tender documents

Who it is for: Building owners, architects and MEP consultants, and factories planning an extension or a new building.



03

Electrical & Fire Safety

Inspection backed by instrument tests, ranked by risk

Electrical safety assessments, thermographic surveys, and earth and insulation-resistance testing to BNBC 2020, NFPA 70 and Accord/RSC, with every finding photographed and ranked by risk.

STANDARDS

BNBC 2020 Part VIII · NFPA 70 · IEC 60364 · BS 7671 · Accord / RSC

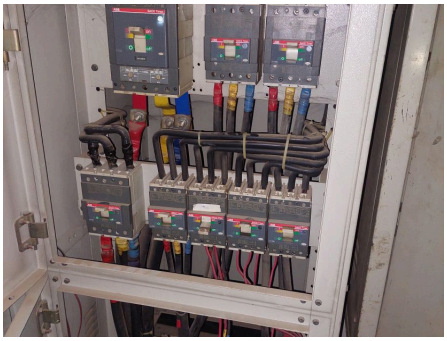
WHAT WE DO

- Electrical safety assessment
- Thermographic survey
- Earth resistance testing
- Insulation-resistance testing
- Power quality
- Fire safety and HIRA

YOU RECEIVE

- Checkpoint register rated Very High to Low
- Thermographic survey report
- Earth and insulation test sheets
- Photo evidence of each finding
- Corrective action plan

Who it is for: Factories preparing for buyer or Accord/RSC audits, laboratories, offices and any site without recent test records.



04

Supply & Installation

Installed, tested and handed over with records

Supply, installation and commissioning of panels and switchgear, substations, generators, earthing, fire alarm and rooftop solar, tested before handover.

STANDARDS

BNBC 2020 · IEC 61439 · IEC 60364 · Electricity Rules 1937

WHAT WE DO

- Panels and switchgear
- Substations
- Standby generators
- Wiring and conduits
- Earthing and lightning protection
- Fire alarm and rooftop solar

YOU RECEIVE

- Equipment to approved datasheets
- Installation and termination
- Insulation, earth and functional test results
- As-built drawings and handover file

Who it is for: Factories and buildings acting on an audit or safety report, and owners or consultants who need a contractor that tests its own work.

SECTORS

Where we work

01	**Textile & Apparel**	Garment, knit, sweater and denim factories and spinning mills: energy audits for SREDA and green finance, boiler and machinery assessments, electrical safety for Accord/RSC.
02	**Industrial Plants**	Process plants with captive power, steam and heavy electrical loads: chemicals, packaging, FMCG and testing facilities.
03	**Commercial Buildings**	Shopping complexes, offices and laboratories: HVAC and chiller performance, power quality, safety and tenant fit-out design.
04	**Institutional & Residential**	Mosques, campuses and private residences: electrical design, earthing and lightning protection, generators and rooftop solar.
05	**Infrastructure & Utilities**	Ports, power plants, economic zones and airports: high-voltage substations, distribution networks, lighting and design review for public infrastructure.

ORGANISATIONS OUR ENGINEERS HAVE WORKED FOR

Chittagong Port Authority · Bashundhara City · Jalal Ahmed Spinning Mills · Noman Terry Towel Mills · AFCCL · AB Bank · ULAB · Padma Oil Company · Sterling Apparels · South End Sweater · BTCL · JK Group · Wash Point

Named with reference to the projects listed in this profile. Some work was delivered through partner firms; see the track record for details.

Regulators and lenders

SREDA designated-consumer audits (Form-8), Bangladesh Bank green-financing assessments, and gas-utility and BERC compliance audits.

International brands

Level II factory audits and supply-chain decarbonisation programmes for European retailers.

Safety compliance

Electrical, fire and structural assessments to BNBC 2020 and Accord / RSC expectations.

PORTFOLIO

Selected projects



MEP DESIGN · 2022–2023

Chittagong Bay Terminal: 132/11 kV substation and port-wide electrical design

Chittagong Port Authority · Chattogram · Team experience

Complete electrical design for a new port terminal, from the 132/11 kV substation to quay lighting, with tender documents

132 kV	11 kV	9 months
grid substation designed	port distribution voltage	design programme

THE CHALLENGE

A new deep-water terminal needs power on a different scale from a building. Ship-to-shore cranes, yard equipment, reefer stacks and high-mast lighting all draw from one network, and a failure anywhere stops cargo. The Bay Terminal needed its whole electrical system designed from the grid connection down, in a form the port authority could tender.

THE RESULT

The design was issued with a cost estimate and a full set of tender documents, giving the port authority a package that contractors could price like for like. The work ran from November 2022 to July 2023 and remains the largest substation our team has designed.



MEP DESIGN · 2024

Sirajganj 68 MW solar power plant: electrical design review and site quality assurance

Utility-scale solar power plant · Sirajganj · Team experience

Design review, PV system approval and site inspections through to power handover to the national grid

68 MW	5 months	PGCB
installed solar capacity	review and site QA	grid handover coordinated

THE CHALLENGE

A 68 MW solar plant is built from thousands of repeated parts: strings, combiner boxes, inverters, transformers and kilometres of cable. A small design or workmanship error repeated across the site becomes a large loss of output or a safety risk, and the grid operator will not accept power until the plant meets its requirements.

THE RESULT

The plant's electrical design was reviewed and approved, and inspections continued through construction to grid handover between May and September 2024.



ELECTRICAL & FIRE SAFETY · 2024

Electrical safety audit and testing of a laboratory facility

Testing laboratory facility · Ashulia, Savar · Raaida Engineering

74-point safety audit: 5 very-high and 21 high-risk findings, plus earthing above the 1 Ω limit

74	26	≈3.4 Ω
checkpoints inspected	very-high and high-risk findings	generator earth vs 1 Ω limit

THE CHALLENGE

A testing laboratory needed an independent electrical safety audit of its substation, generators and distribution boards. There was no single-line diagram on site and no record of maintenance or testing, so nobody could say with confidence how the installation was protected.

THE RESULT

About 42% of the 74 checkpoints were compliant. The register identified 5 very-high-risk and 21 high-risk non-conformities, and the thermal survey found 3 major hot spots and 4 deficiencies. Generator earth pits measured about 3.4 Ω against a 1 Ω limit, and the site had no lightning protection. Cable insulation results were acceptable. The client received a ranked corrective action plan so...



ENERGY & SUSTAINABILITY · 2026

SREDA designated-consumer energy audit of a cotton spinning mill

Jalal Ahmed Spinning Mills · Narayanganj · With Armabel Global Limited

19 measures with about 3.1-year blended payback and about 4,800 tCO_2e saved a year

≈141 GWh	19	≈3.1 yrs
annual energy use	savings measures	blended payback

THE CHALLENGE

The mill uses about 141 GWh of energy a year, 99% of it gas burned in nine captive gensets. The engines were running at about 37% electrical efficiency with no waste-heat recovery and no sub-metering, so the plant could not see where its energy went.

THE RESULT

The audit identified 19 measures with a blended payback of about 3.1 years and about 4,800 tonnes of CO_2e avoided a year. The largest were jacket-water heat recovery from the gensets and an ISO 50001 energy management system with sub-metering to track results.



ENERGY & SUSTAINABILITY · 2025–2026

Energy audit of a large shopping and entertainment complex

Bashundhara City · Dhaka · With Armabel Global Limited

9 measures saving about 1.47 GWh and 926 tCO_2 a year, payback about 2.7 years

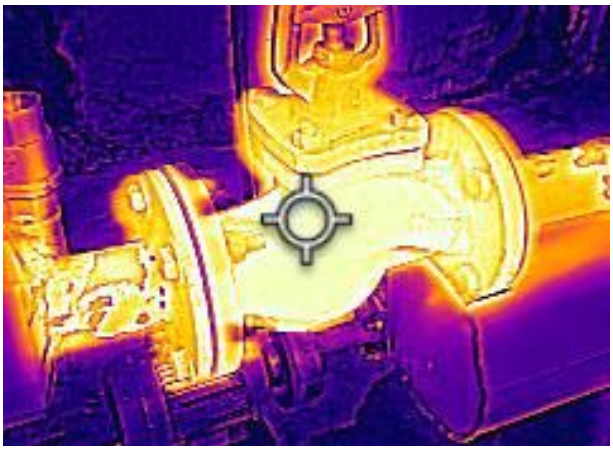
≈1.47 GWh	≈926 t	≈2.7 yrs
saved per year	CO_2 avoided per year	payback

THE CHALLENGE

The complex uses about 31 GWh of electricity a year, almost all from the grid. Its energy use intensity of about 199 kWh/m^2 a year was above the 160–180 benchmark for the building type, and HVAC accounted for about 55% of consumption.

THE RESULT

Nine measures were identified, saving about 1.47 GWh a year (about 4.7%) and about 926 tonnes of CO_2, with a payback of about 2.7 years. Chillers were running at a COP of about 4.5–4.7 against 5.6 design, and current harmonic distortion reached about 45% against a 15% limit.



ENERGY & SUSTAINABILITY · 2025

Boiler energy efficiency assessment at an apparel factory

Sterling Apparels · Ashulia, Dhaka · Raaida Engineering

Boiler running at about 73% against 80% rated, with about 4% condensate recovery

≈73%	80%	≈4%
measured boiler efficiency	rated efficiency	condensate recovered

THE CHALLENGE

As part of a decarbonisation programme, the factory suspected that its 313 kg/hr gas-fired boiler was running below its rated performance, but had no measurements to confirm it or to size the fix.

THE RESULT

Boiler efficiency measured about 73% against 80% rated, with combustion efficiency of about 74%. Only about 4% of condensate was being recovered. The recommended measures, covering combustion tuning, insulation and condensate return, would bring the plant back to about 80%.



ENERGY & SUSTAINABILITY · 2026

Green refinance energy audit at a sweater factory

South End Sweater · Ashulia, Dhaka · Raaida Engineering

32 of 51 financed items eligible, saving about 237 TOE and 628 tCO_2 a year

32 / 51	≈237 TOE	≈628 t
line items eligible	saved per year	CO_2 avoided per year

THE CHALLENGE

To refinance efficient equipment bought under 18 letters of credit, the factory needed the energy audit report required by Bangladesh Bank's green refinance scheme, item by item.

THE RESULT

32 of the 51 items qualified. Together they save about 237 TOE and about 628 tonnes of CO_2 a year, with a payback of about 2.1 years. The finding that only part of the equipment qualifies is common in these audits, and it is why each item has to be checked rather than the whole purchase assumed eligible.



MEP DESIGN · 2017–2018

Electrical design for a LEED Platinum certified garment factory

A R Jeans Producer Ltd. · Savar · Team experience

Electrical design that had to satisfy LEED Platinum energy targets and Accord safety requirements together

LEED Platinum	2017–18
certification achieved by the factory	design period

THE CHALLENGE

A garment factory aiming for LEED Platinum has to prove low energy use on paper before it is built, while also meeting the electrical and fire safety requirements that apply to every export-oriented factory in Bangladesh. The two sets of rules pull the design in different directions unless they are handled together from the first load schedule.

THE RESULT

The factory was certified LEED Platinum. For our team it set the pattern we still follow: energy efficiency and electrical safety are designed together, not added afterwards.

TRACK RECORD

42 projects across four disciplines

"Team experience" marks work our engineers delivered through other firms. "With Armabel Global Limited" marks work delivered in association with that firm since July 2025.

PROJECT	CLIENT / SITE	YEAR	DELIVERED BY
MEP Design · 13 projects			
Electrical design for a new two-storey mosque	Mosque, Jinaighati	2026	Raaida Engineering
Electrical layouts and SLD for a multi-storey building	Multi-storey building, Baridhara, Dhaka	2026	Raaida Engineering
Laldia Container Terminal: electrical and IT systems design	Container terminal, Chattogram	2026	With Armabel Global Limited
Sirajganj 68 MW solar power plant: electrical design review and site quality assurance	Utility-scale solar power plant, Sirajganj	2024	Team experience
Electrical design, SLD and BOQ for a private residence, delivered as subcontractor to an MEP consultant	Private residence, Sylhet	2023–2024	Raaida Engineering
Chittagong Bay Terminal: 132/11 kV substation and port-wide electrical design	Chittagong Port Authority, Chattogram	2022–2023	Team experience
MEP design for a bank building, Gulshan	AB Bank Limited, Dhaka	2020	Raaida Engineering
MEP design and supervision for a university campus building	University of Liberal Arts Bangladesh (ULAB), Building D, Dhaka	2018–2019	Team experience
Electrical design for a LEED Platinum certified garment factory	A R Jeans Producer Ltd., Savar	2017–2018	Team experience
MEP design and supervision for a commercial building, Paribagh	Padma Oil Company Limited, Dhaka	2017–2018	Team experience
33/11 kV substation and distribution network design for an economic zone	National economic zone, Mirsarai, Chattogram	—	Team experience
Electrical design and supervision for an airport passenger terminal expansion	Jashore Airport, Jashore	—	Team experience
Mechanical, electrical and firefighting design for a knitting factory	Concept Knitting Limited	—	Team experience
Energy & Sustainability · 21 projects			
Green refinance energy audit at a sweater factory	South End Sweater, Ashulia, Dhaka	2026	Raaida Engineering
SREDA designated-consumer energy audit of a cotton spinning mill	Jalal Ahmed Spinning Mills, Narayanganj	2026	With Armabel Global Limited
Boiler energy efficiency assessment at an apparel factory	Sterling Apparels, Ashulia, Dhaka	2025	Raaida Engineering
Captive power plant and utilities energy audit at an FMCG plant	FMCG manufacturing plant, Chattogram	2025	Team experience
Energy audit of a large shopping and entertainment complex	Bashundhara City, Dhaka	2025–2026	With Armabel Global Limited
Energy efficiency assessment of a new biological ETP	Wash Point Ltd, Gazipur	2025–2026	With Armabel Global Limited

PROJECT	CLIENT / SITE	YEAR	DELIVERED BY
Energy efficiency assessment of new machinery at a woven garment factory	Woven garment factory, Gazipur	2025	Raaida Engineering
New machinery energy assessment at a flexible packaging plant	Flexible packaging plant, Chattogram	2025	Team experience
Detailed energy audit of a composite textile plant	South East Textiles (Pvt.)	2024	Raaida Engineering
Detailed energy audit of a fertiliser complex under the SREDA and GIZ programme	AFCCL, Ashuganj	2024	Team experience
Detailed energy audit of a government office complex	Deputy Commissioner's Office, Rangpur, Rangpur	2024	Team experience
Detailed energy audit of a terry towel mill	Noman Terry Towel Mills	2024	Team experience
Efficient machinery assessment at a knit composite factory	Knit composite factory, Gazipur	2024	Team experience
Efficient machinery assessment at a sweater factory	Sweater factory, Ashulia, Dhaka	2024	Raaida Engineering
Supply-chain decarbonisation programme for an international apparel retailer	Apparel factories supplying a European retailer, Dhaka, Gazipur, Savar, Narayanganj	2023–2024	Team experience
Green supplier capacity programme for an apparel supply chain	Textile and apparel suppliers	2021–2022	Team experience
Level II detailed energy audits of 25+ garment and textile factories	Knit, sweater, woven and denim factories	2020–2024	Team experience
Captive power plant energy audit for BERC compliance	Knit garment factories	—	Raaida Engineering
Energy assessments for equipment financing at 40+ factories	Factories of leading apparel and textile groups	—	Team experience
Energy assessments for rooftop solar financing at 20+ factories	Apparel and textile factories	—	Team experience
Gas-utility compliance energy audits of industrial plants	Textile-accessories and plastics plants, Chattogram	—	Team experience
Electrical & Fire Safety · 4 projects			
Electrical safety audit and testing of a laboratory facility	Testing laboratory facility, Ashulia, Savar	2024	Raaida Engineering
Electrical safety assessment programme for garment factories	Multiple RMG factories	—	Raaida Engineering
Fire safety audits and evacuation plans for garment factories	Multiple RMG factories	—	Raaida Engineering
Structural integrity assessments of factory buildings	Multiple RMG factories	—	Raaida Engineering
Supply & Installation · 4 projects			
Complete building wiring for a commercial office building	Multi-storey commercial office, Dhaka	—	Raaida Engineering
Electrical distribution system upgrade for a factory	JK Group	—	Raaida Engineering
Fire detection and alarm system for a residential complex	Apartment complex, Mirpur, Dhaka	—	Raaida Engineering
Turnkey substation equipment installation for a telecom facility	BTCL, Mirpur, Mirpur, Dhaka	—	Raaida Engineering

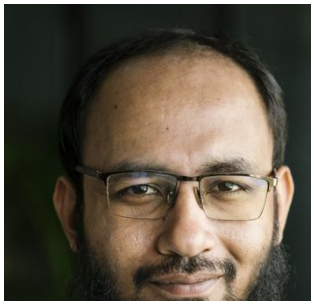
PEOPLE

The team

Engineering and project staff in Dhaka, supported by advisers in Berlin and New York. Every project is led by a named engineer.

MA

Masuma Akter
Proprietor & Chief Financial Officer
Dhaka, Bangladesh



Rubel Mahmud
CEO & Team Leader
M.Sc. EEE (BUET) · SREDA Certified Energy Auditor



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Rasel Mahmud
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Jubaer Ahmed Raji
Project Manager
Dhaka, Bangladesh



Md Ziaur Rahman
Site Engineer
B.Sc. (EEE)



Matrook Islam
Developer
Dhaka, Bangladesh



Md Sakil
Project Coordinator
Dhaka, Bangladesh

INSTRUMENTS

- Power and harmonics analysers: PROVA 6830A, Hioki PW3360-20
- Thermal cameras: FLIR TG297
- Clamp-on earth tester: Hioki FT6380
- Flue-gas analyser: Testo 320
- Insulation-resistance testers
- Ultrasonic flow meter, lux meter, thermo-anemometer

OUR SOFTWARE

Rumara: measure · verify · save

Our engineers built Rumara to run an energy audit from data collection to a SREDA-format report, with engineering calculations, anomaly checks and a second review built in. It is the platform behind our own audit work.

rumara.raaida.com

WORKING WITH US

1 Tell us about the site
Send a short description of the site and what you need. An engineer replies within one working day.

2 Agree the scope
We confirm the scope with you and ask for any drawings or data we need to prepare a proposal.

3 Receive a proposal
You receive a written proposal setting out the scope, the timeline and the fee.

START A CONVERSATION

Discuss your project with an engineer

Tell us about the site and what you need. An engineer will reply within one working day.

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