What is this form?

This checklist collects the data our engineers need to perform a complete Arc Flash Hazard Analysis and electrical safety verification for your site. Provide as much as you can estimates are acceptable; note them as 'approx.'

- Attach existing SLDs, protection schedules, or relay settings sheets.
- Partial data is always useful our engineer will identify gaps and follow up.
- All information is treated as strictly confidential.

Your Contact Details

Company / Organization: _____

Site Name & Address: _____

Your Name & Role : _____

Email Address : _____

Phone Number: _____

Date Completed: _____

A. SYSTEM OVERVIEW & DOCUMENTATION

System Type *e.g. Industrial / Utility / Commercial / Renewable*	**Applicable Standards** *e.g. IEEE 1584, NFPA 70E, IEC 61482, Local utility spec*
Highest Voltage Level (kV) *e.g. 33 kV, 11 kV, 6.6 kV*	**Lowest Voltage Level (V)** *e.g. 415 V, 240 V LV distribution*
Earthing / Grounding Philosophy *e.g. Solid, resistance, isolated neutral*	**No. of Voltage Levels / Buses** *e.g. 3 (33 kV, 11 kV, 415 V)*
SLD Available? *Yes attach / Partial / No*	**Previous Arc Flash Study?** *Yes attach / No / Unknown*
Applicable Grid Code / Utility Requirement *e.g. IEEE 519, utility safety notice, internal HSE requirement*	**Safety / Compliance Objective** *e.g. Regulatory audit, insurance requirement, incident after new VFD*

B. TRANSFORMERS & SOURCE IMPEDANCE (attach SLD if available)

Tag / Name	kVA Rating	Pri. kV	Sec. V	Z% Imp.	X/R Ratio	Grounding	Notes
e.g. TR-01							

Utility Fault Level at PCC	Grid X/R Ratio at PCC	On-Load Tap Changers (OLTC)?
e.g. 250 MVA / 13 kA	*e.g. 10 / Not known*	*Yes / No / Not sure*

C. SWITCHGEAR, PANELS & BUSBARS

Panel / Bus Tag	Voltage (kV/V)	Bus Rating (A)	Fault Rating (kA)	Equipment Type	Enclosure Type	Year / Age	Notes
e.g. MDB-01							

Total No. of Panels / Switchboards *e.g. 12 panels across 3 substations*	**Any Outdoor / Kiosk Switchgear?** *Yes describe / No*
Any Draw-out (withdrawable) Equipment? *Yes / No relevant to arc flash boundary*	**Any Isolated Phase Busduct (IPB)?** *Yes / No describe if yes*

D. PROTECTIVE DEVICES & COORDINATION DATA

Device Tag	Type	Rating (A)	Trip Setting (A)	Trip Time (ms)	Manufacturer / Model	Relay Type	Notes
e.g. CB-01							

Protection Coordination Study Available? *Yes attach / No*	**Auto-Reclose or Interlock Schemes?** *Yes describe / No*
Bus Differential / Zone Protection? *Yes / No / Not sure*	**Arc Flash Detection Relay Installed?** *Yes model / No*

E. ARC FLASH SPECIFIC INPUTS

Fault Current at Main Bus (kA) *e.g. 13.5 kA available at 11 kV*	**Arcing Fault Current (if known, kA)** *e.g. Calculated from prior study*
Max Fault Clearing Time (ms) *e.g. 500 ms from relay / fuse datasheet*	**Working Distance (mm)** *e.g. 455 mm per NFPA 70E Table*
Electrode Configuration *e.g. VCB (vertical), HCB, VOA, HOA (IEEE 1584)*	**Equipment / Bus Gap (mm)** *e.g. 32 mm for LV MCC, 153 mm for 11 kV switchgear*
Bus Width / Conductor Spacing (mm) *e.g. 152 mm for 480 V panels*	**Enclosure Size (Height × Width × Depth, mm)** *e.g. 508 × 508 × 508 mm*
Operating Scenarios to Model *e.g. Normal, max fault, min fault (weak grid), N-1*	**Parallel / Islanded Operation?** *Yes describe / No*

F. CABLES & SIGNIFICANT LOADS

Cable Ref	From	To	Length (m)	Size (mm²)	Voltage (kV/V)	Insulation	Notes
e.g. C-01							

Large Motors (>100 kW) Present? *Yes list below / No*	**Motor Contribution Fault Level (if known)** *e.g. 2 × 1000 kW motors, ~8 kA contribution*
Generators / DG Sets On-Site? *Yes capacity & parallel scheme / No*	**Solar PV / BESS Contributing to Fault?** *Yes inverter fault current rating / No*

G. PROBLEMS, INCIDENTS & SAFETY OBSERVATIONS

Tick all that apply even minor events help us calibrate the study scope:

☐ Previous arc flash incident or near-miss	☐ Unexplained breaker / fuse failures
☐ Switchgear burn / scorch marks observed	☐ Equipment tripping on energisation
☐ Protection relay alarm or malfunctions	☐ Nuisance tripping during normal operation
☐ Insulation failure / tracking on busbars	☐ Utility has raised a fault-level concern
☐ Failed electrical safety inspection / audit	☐ PPE/label requirements unknown or outdated
☐ Workers performing live work without labels	☐ Other describe below

Describe incidents / problems in your own words *What happened, which panel, how often, any injuries or equipment damage...*	**When did problems start?** *e.g. After 2022 expansion / Always*	**Injuries or property damage?** *Yes describe / Near-miss only / No*

H. EXISTING DATA & DOCUMENTS (tick what you can share)

Tick everything available. Even old or partial documents save significant data-collection time:

☐ Single Line Diagram (SLD) even old revision	☐ Protection relay settings schedules
☐ Short-circuit / fault level study report	☐ Load flow / load schedule
☐ Switchgear test certificates or type-test reports	☐ Transformer nameplate / factory test report
☐ Circuit breaker / fuse manufacturer datasheets	☐ Cable schedule or routing drawings
☐ Previous arc flash study or PPE label set	☐ Fault / trip log from protection relays
☐ Electricity bills (last 6–12 months)	☐ Photographs of main switchrooms / MCC
☐ SCADA / BMS demand & alarm data	☐ Generator / DG set technical datasheet
☐ Solar PV / inverter documentation	☐ Other describe below

Existing Fault Level Measurements *Value / Location / Date*	**PPE Labels Currently in Place?** *Yes standard used / Partial / No*	**Last Electrical Inspection / Audit Date** *e.g. March 2022 attach report*

I. STUDY OBJECTIVES & SCOPE

Tick your top priorities for this engagement:

☐ Arc flash hazard analysis for all panels / switchgear	☐ Determine incident energy (cal/cm²) at each bus
☐ PPE category & boundary determination (NFPA 70E)	☐ Arc flash label generation for all equipment
☐ Comply with IEEE 1584 / IEC 61482 / NFPA 70E	☐ Comply with utility or grid code requirements
☐ Identify high-risk equipment for mitigation design	☐ Short-circuit / fault level verification
☐ Protection coordination review (reduce clearing times)	☐ Safe operating procedure recommendations
☐ Prepare for electrical safety audit / inspection	☐ Connect new generation or large load safely
☐ Understand root cause of electrical incidents	☐ Other describe below

Most important goal / successful outcome *What does a good result look like for you?* _____ _____	**Deadline / Timeline?** *e.g. Utility compliance in 3 months / Audit scheduled* _____

COMPANY NAME

Full Name: _____
Signature: _____
Date: _____

What Happens Next

Our engineer will review your form shortly and contact you.