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FIELD WORKBOOK / COMMERCIAL & INDUSTRIAL

BESS Project Requirements

A planning checklist
you can put to work.

01 **Define the service.**

02 **Record the evidence.**

03 **Give unknowns a next action.**

Prepare a useful project brief before choosing battery power, capacity or configuration.

FILLABLE PDF + PRINTABLE WORKSHEETS

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BEGIN HERE

Use what you know.

Download a copy. Fill it in a PDF form reader and save, or print to write by hand. Reference supporting files in your entries.

03-04 Project overview

Complete the eight field groups. Unknown power or energy can remain "to be analysed".

05-07 Evidence and actions

Find the right source, label the records and assign a next action to important gaps.

08-11 Example and handover

Use the hypothetical factory as a guide, then choose what can happen next.

STATUS KEY

C Confirmed: source + checker + date. **E** Estimated: state the basis.
U Unknown. **N/A** Not applicable: explain why.
R/U Received / unverified: the file exists; its content is not yet checked.

TURN A REQUEST INTO A WORKING REQUIREMENT

Lower bills → Identify the relevant charge and obtain tariff details.

Back up equipment → Identify loads, duration, interruption tolerance and restart needs.

Hypothetical example only. This workbook supports early planning; it does not complete design, sizing or local approvals.

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WORKSHEET 01 / PART A

Your project overview

Use C / E / U / N/A / R/U. Add evidence references and open-item IDs to each entry.

Project / site

Prepared by / contact

1 Project and goals

Location; existing/planned site; problem; main and secondary goals; priority.

2 Consumption and generation

Bills/data; meter location; shifts; PV information; future operating changes.

3 Backup service

Loads/circuits; duration; allowable interruption; load shedding; restart needs.

Date / revision

No supported kW or kWh yet?
Record the question and keep preparing the brief.

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WORKSHEET 01 / PART B

Constraints and scope

Continue the same brief. Record assumptions and references rather than guessing missing values.

4 Grid and recharge

Connection; voltage/frequency; import/export limits; charging source/window.

5 Existing equipment

PV inverters, generator, switchgear, meters, controls; models and diagrams.

6 Site conditions

Location/photos; dimensions; access; environment; local assessment contacts.

7 Power and energy

Supported kW/kWh and their basis, or "to be analysed"; refer to open items.

8 Scope and programme

Supply/integration roles; local checks; timing/milestone; budget; expansion.

Find the right inputs

Collect what answers the current question. You do not need every possible dataset to start.

01 Electricity costs

Bills show the consumption and charges actually listed.

NEXT: Get the current tariff and billing rules.

Account holder / electricity supplier

02 Costly demand periods

A billed peak does not describe the complete event.

NEXT: Get time-stamped import or load data.

Metering provider / facilities team

03 Solar charging

PV capacity describes scale, not available surplus.

NEXT: Get generation and consumption/import-export records for matching periods.

PV monitoring contact / site metering

04 Backup duty

The equipment list identifies candidate loads.

NEXT: Confirm critical loads, operating schedule, interruption tolerance and starting needs.

Operations / electrical team

Monthly totals cannot reveal every peak or the timing of solar surplus. Estimated profiles remain estimates. See source links on page 11.

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WORKSHEET 02 / REUSE THIS PAGE AS NEEDED

Label the evidence

Record what each file measures before an analyst combines it with other records.

RECORD 01

Reference / file name

Provider / date received

Measurement point / units

Dates / interval / time zone

Status / gaps / shifts / assumptions / future changes

RECORD 02

Reference / file name

Provider / date received

Measurement point / units

Dates / interval / time zone

Status / gaps / shifts / assumptions / future changes

> Identify whether the data is whole-site consumption, net grid import, PV output or a circuit. Do not count the same solar contribution twice.

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WORKSHEET 03 / REUSE THIS PAGE AS NEEDED

Give unknowns an action

Assign the affected decision, evidence source and responsible person. Use another saved copy for additional items.

OPEN ITEM 01

ID

Open question

Decision affected

Responsible person

Next action / evidence source

Resolve before which decision?

OPEN ITEM 02

ID

Open question

Decision affected

Responsible person

Next action / evidence source

Resolve before which decision?

If the owner of an action is unknown, ask the project coordinator to identify the right person. A missing input may block one decision while other work continues.

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WORKED EXAMPLE / HYPOTHETICAL FACTORY

Turn gaps into tasks

Existing PV + lower-bill objective + selected-load backup. Proposed actions and roles; none is shown as completed.

U1 Which costs should storage address?

AFFECTS Savings strategy

ACTION Review bills and tariff; request time-stamped meter data.

OWNER Account holder + EPC analyst

BEFORE Selecting the cost-reduction duty

U2 What must stay powered, and for how long?

AFFECTS Backup duty and conversion requirements

ACTION Mark critical equipment; obtain duration, interruption and restart requirements.

OWNER Operations + electrical team

BEFORE Confirming backup sizing and functionality

U3 What charging energy and headroom exist?

AFFECTS Recharge feasibility

ACTION Obtain aligned PV/load records and connection limits; review charging windows.

OWNER Facilities + PV contact + electrical engineer

BEFORE Confirming recovery and repeat operation

Teaching example only. No load values, battery size or product choice are assumed.

Resolve priorities and fit

Existing PV + lower-bill objective + selected-load backup. Proposed actions and roles; none is shown as completed.

U4 What priority must backup retain?

AFFECTS Energy allocation

ACTION Agree backup availability and permitted trade-offs during daily operation.

OWNER Site owner + operations

BEFORE Agreeing the operating policy

U5 Which existing devices can participate?

AFFECTS System architecture, including outage operation

ACTION Collect diagrams, models and interface documents; request compatibility assessment.

OWNER Integrator + relevant manufacturers

BEFORE Confirming a configuration

U6 Which site and delivery conditions apply?

AFFECTS Layout, local requirements and project scope

ACTION Collect location, photos and dimensions; identify local assessors; agree scope, timing and budget status.

OWNER Coordinator + owner + local specialists

BEFORE Committing to affected layout, scope or schedule

Teaching example only. No load values, battery size or product choice are assumed.

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DECISION AID / NOT APPROVAL GATES

Choose the next task

Different work can proceed in parallel. Keep conditional findings labelled as conditional.

01 Initial discussion

HAVE	Site/problem described; available records and gaps listed.
START	Clarify requirements and plan data collection.
OPEN	Capacity, savings and equipment suitability.
HAND OVER	Overview + open items to EPC, integrator or manufacturer.

02 Duty-specific analysis

HAVE	Defined service; relevant load, tariff or backup inputs; stated assumptions.
START	Analyse power/energy; compare preliminary scenarios.
OPEN	Final sizing while material assumptions remain unresolved.
HAND OVER	Data + limitations to the analyst; request missing evidence.

03 Configuration screening

HAVE	Analysis range; connection, backup, equipment and site conditions.
START	Screen configurations and discuss interfaces.
OPEN	Unverified compatibility, detailed design and local approvals.
HAND OVER	Requirements + open conditions to supplier and local engineer.

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BEFORE YOU SHARE

Make the brief usable

A recipient should be able to find the evidence, understand the uncertainty and assign the next task.

- [ ] Important entries have a status, source and open-item reference.
- [ ] Confirmed entries identify the checker and date.
- [ ] Estimates state their assumptions; received files are not treated as verified.
- [ ] Important gaps have an owner, action and decision deadline.
- [ ] File names match the attachment references.

HYPOTHETICAL FACTORY: CURRENT HANDOVER

Available: monthly bills, PV capacity information and equipment list - received, not yet verified.

Next: clarify requirements and collect evidence under U1-U6.
Power / energy: to be analysed. No model or backup capability confirmed.

TECHNICAL BACKGROUND

REopt: load data and utility bills >

DOE: solar and resilience >

SAM: grid outage modelling inputs >

Planning aid adapted from GeePower's BESS Project Requirements article. Specific equipment, site conditions and local requirements need project-level confirmation.

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CONTINUE THE CONVERSATION

Bring your brief.
Keep the open questions.

Share your location, project stage, main goal, available records and unresolved items. Power and energy can remain "to be analysed".

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C&I ESS Manufacturer & Solution Partner

Involve your local EPC or electrical partner in site and integration questions.

SCAN TO CONTACT