WHITEPAPERS

Commercial solar and battery storage planning

Start with the operating profile

Collect interval electricity data, recent bills, tariffs and planned load changes. Identify when the business consumes power and compare that pattern with expected solar generation. Separate reduced grid purchases from export revenue in the assessment.

Compare options on the same basis

Assess solar-only and solar-plus-storage options using consistent load, tariff and project-life assumptions. Include installation, connection, servicing and replacement costs. Ask the supplier to show the sensitivity to changes in consumption and tariffs rather than providing a single guaranteed payback.

Define the battery job

Specify whether storage is intended for time shifting, demand management or backup. Backup needs its own critical-load assessment, operating duration and system design; a battery in a proposal does not by itself establish outage protection.

Prepare a project brief

Supply the address, roof or site plan, available electricity data, switchboard information and decision timeline. Ask for a written scope, exclusions, monitoring arrangements and responsibility for approvals. Compare proposals against the same brief.

Sources and further reading

Australian Government: solar for businesses

Discuss solar and storage

Planning guidance only. Equipment selection, electrical design and approvals require a site-specific assessment by appropriately qualified professionals.

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Choosing AC or DC EV charging

Match charging to parking time

Record who will charge, how long vehicles remain parked and how much energy they need before leaving. Overnight staff or fleet parking differs from rapid-turnaround stops. Select the service level before comparing charger nameplate ratings.

Understand vehicle limits

AC charging uses the vehicle's on-board charger to convert power. DC equipment supplies DC power to the vehicle. Actual charging performance depends on vehicle capability and operating conditions as well as the station rating. Confirm connector and vehicle compatibility for the intended users.

Check the whole site

Ask an electrical designer to assess available supply, simultaneous demand and cable routes. Include future bays, accessible access, signage, communications and maintenance access. Define how charging capacity will be shared when multiple vehicles connect.

Set operating requirements

Decide whether charging is private, staff-only or public. Specify payment needs, user permissions, fault reporting, software fees and support responsibilities. For portable units, confirm the exact approved supply connection and operating instructions; portable does not mean compatible with every socket.

Sources and further reading

Australian Government: EV charging equipment

Explore EV charging

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Planning backup power for data centres

Define continuity requirements

List critical IT loads and the cooling, controls and auxiliary equipment needed to support them. Agree acceptable interruption and required operating duration. A generator rating alone does not establish facility resilience or any availability certification.

Coordinate the power system

The design brief should cover utility supply, UPS, generators, transfer equipment and controls as one system. Request an engineering assessment of load steps, starting requirements, protection and the transition between operating modes.

Assess the site and fuel

Review space, access, ventilation, exhaust, acoustic constraints, fuel arrangements and maintenance access. Confirm suitability with the equipment manufacturer and relevant specialists. Do not assume an engine designed for one fuel can operate on another.

Specify testing and ownership

Define commissioning evidence, transfer testing, periodic exercises and maintenance responsibilities. Document alarms, escalation contacts and refuelling arrangements. Ask the design team to identify single points of failure and the assumptions behind any redundancy proposal.

Sources and further reading

Shakra data centre power enquiries

Industrial generation range

Planning guidance only. Equipment selection, electrical design and approvals require a site-specific assessment by appropriately qualified professionals.