

EXAMPLE: fictional site

This is a sample of the Gridcap £195 workplace / commercial EV supply check. The site, business, figures and references are made up. It is not a real customer's site and must not be submitted to a DNO.

Workplace EV supply check: Example Unit, fictional business park

Reference: EXAMPLE. Postcode: EXAMPLE (placeholder). MPAN: EXAMPLE (placeholder).

1. Site summary

A small office and light industrial unit on a fictional business park. Three-phase supply, CT-metered, agreed import capacity 100 A per phase. The owner wants four 7.4 kW single-phase chargers (7.4 kW is the usual 32 A single-phase unit) for staff parking, used mainly during the working day. No battery, no solar PV, no other generation.

2. Inputs received

Input	Value
Supply	Three-phase, CT-metered
Agreed import capacity	100 A per phase (69.3 kVA)
Supply fuse / protection rating	100 A per phase
Existing peak (from half-hourly CSV)	L1 52 A, L2 47 A, L3 50 A
Proposed equipment	4 x 7.4 kW single-phase EV chargers (32.2 A each)
Charging profile	Workplace daytime (8am to 5pm)
Minimum charge current per charger	6 A
Battery / generation	None

3. Peak margin applied

Gridcap's standard allowance is to add 10% to each phase's half-hourly peak, because a 30-minute average hides short peaks (a kettle, a compressor starting, a heater cycling). The figures below include it. The DNO may ask for its own figure, for example from logger data or its own assessment.

Phase	Half-hourly peak	With 10% margin (used)
L1	52 A	57.2 A
L2	47 A	51.7 A
L3	50 A	55.0 A

Where a customer has a spot reading or logger data showing a higher peak, we use the higher figure.

4. Result

The chargers are spread one per phase, with the fourth on the most heavily loaded phase (L1). The installer should wire them this way or ask us to re-run the figures with the actual layout.

Phase	Existing (with margin)	New chargers	Unmanaged peak	Headroom to 95.0 A	Needed at minimum	Status
L1	57.2 A	2 chargers, 64.3 A	121.5 A	37.8 A	12.0 A	AMBER
L2	51.7 A	1 charger, 32.2 A	83.9 A	43.3 A	6.0 A	GREEN
L3	55.0 A	1 charger, 32.2 A	87.2 A	40.0 A	6.0 A	GREEN

- ALM operating limit:** 95.0 A per phase (95% of the 100 A agreed capacity, a control margin).
- Overall result: AMBER, governed by L1.** The site's existing peak on L1 leaves 37.8 A of headroom below the 95.0 A limit. That 37.8 A is shared by the two L1 chargers: about 18.9 A each at the worst moment. Each charger's 6 A minimum (12.0 A for the pair) is well within that.

- **Without load management:** with all four chargers at full rate, L1 would reach 121.5 A, which is over the 100 A supply. That is not acceptable, and it is why a G100 load management scheme is needed.

In plain terms: an EREC G100 load management scheme that holds the site's import at or below 95.0 A per phase means the four chargers may fit on the existing supply without an upgrade. The DNO makes the final decision.

5. Likely DNO route: apply first

This job is **apply to the DNO before installing**, with details of the G100 load management scheme. Reasons:

1. Four new chargers are proposed. Connect and notify only covers one new EV charger or heat pump.
2. The supply is CT-metered. Connect and notify only applies to whole-current supplies.
3. The unmanaged peak is above the operating limit, so the installation relies on load management, which the DNO assesses before installation.

The application is made by the installer (or the customer). Gridcap does not submit anything to the DNO.

6. Evidence for the installer's DNO application

- This note and the attached calculation pack (per-phase figures and the 95.0 A per phase operating limit).
- The half-hourly CSV the peak figures came from, covering at least a full working week.
- The connection agreement or bill showing the 100 A per phase agreed capacity, and the MPAN.
- Charger datasheets: model, rated power and current, and phase connection for each unit.
- The planned phase layout (two on L1, one each on L2 and L3) and a single line diagram.
- The DNO's EV and heat pump application form (or its own online form).
- The load management system details: make, model and set limit (95.0 A per phase).
- Evidence that the load management fails safe (the chargers drop to the set limit or off if the controller or CT signal is lost).
- The CT sensor position, showing it measures total site import on each phase.
- Photos of the meter position, CT chamber and main switchgear labels.

7. Not included

A site visit, logger hire, design of the load management kit, submitting anything to the DNO, or a guarantee of approval. Generation is not assessed beyond a G98 / G99 flag (none at this example site).

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