SITE LOAD SCENARIO STUDY / ILLUSTRATIVE CASE

Will the new equipment change our peak demand?

The management decision

Model when the new load would run. Its rated power alone cannot show whether it will coincide with today’s busiest period or create a new peak at another time.

A proposed machine may look manageable on its own until it runs at the same time as other large loads. Changing shift hours can have a similar effect. This study gives project sponsors a way to compare likely scenarios and identify the capacity questions that need answers before a purchase or schedule change. That early comparison can help the team decide what to ask a supplier to confirm.

Worked example

An observed 180 kW peak plus a new 45 kW load at the same time gives 225 kW. If only 20 kW coincides with the old peak, that period reaches 200 kW. Average readings may miss very short peaks.

Example figure	What it represents
180 kW	Observed peak
225 kW	Full overlap
200 kW	Partial overlap

What changes the answer

If the machine is idle during the old peak, the new maximum could move to a different time. Check every period in the proposed schedule before reporting the highest demand.

Site load scenario study

What to commission

Model the present load and one planned equipment or shift change across a representative operating schedule.

We compare alternative schedules and operating patterns, track which periods set the highest demand and test the assumptions that drive the result. We note where finer readings or a local engineering check would change the level of confidence.

How to judge the result

The owner can see the highest demand in each scenario, the assumed overlap and the capacity questions for a site engineer.

Use the model to choose a schedule or commission more detailed checks. Local verification is required before deciding on protection settings or physical capacity.

Decision worksheet

Project detail	Starting point for your team
Decision owner	Facilities or capacity planning lead. Name the person who will approve the next step.
Records to gather	Site readings, equipment ratings and the proposed changes to equipment or running hours.
Agreed output	An editable model, charts comparing likely peaks and questions for local verification.
Decision date	Record the deadline, any unresolved assumption and who will confirm it.

Discuss this case

Tell us which change you are considering and when it would happen during a normal day. Share what is driving the capacity question and the date of the planning or purchase decision. We can agree which scenarios and site records would be most useful.

Email info@oxetc.co.uk and mention ENG-09. All figures in the worked example are illustrative.