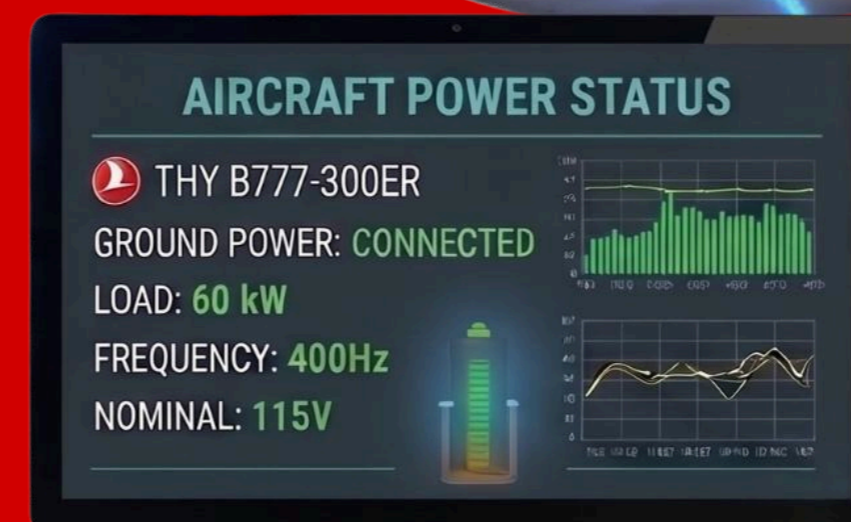


# Managing Energy Drawn from the Passenger Boarding Bridge

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# OPERATIONAL CONTEXT

After the aircraft is positioned at its parking stand, electrical power is supplied to the aircraft throughout ground operations on the apron. This supports cleaning, technical inspections, catering, and similar operational requirements. Once operations are completed, this power usage must be terminated and the relevant electrical sources must be switched off.

This process takes place within an operational setup where different teams work on the aircraft sequentially or simultaneously. Therefore, ending electrical usage at the right time after operations is important for both process monitoring and resource management.





## How Is The Post-Operation Electrical Power Usage Process Managed?

Termination of electrical power usage after the operation depends on the completion of service steps performed on the aircraft. The process is generally carried out in the following stages:

1. The aircraft is positioned at the parking position and ground power (GPU) is connected as required by the operation.
2. Ground handling teams carry out their respective operational steps for cleaning, technical checks, catering and similar services.
3. After the teams complete their tasks, the shutdown of ground power is expected. Since the current charging model is time-based, costs continue to accrue as long as power remains on, even if there is no active use on the aircraft.
4. Through the airport operator's integrated software and monitoring display, the availability of aircraft-specific power connections, the on/off status of the power source, and usage information can be monitored.
5. However, the monitoring process is not an integrated system that triggers automatic actions; it relies on relevant personnel to manually check the display and when required, direct the ground handling teams.

# How Might We Canvas

## Who?

who are the stakeholders that get effected?

Ground Handling Teams and On-site Teams (cleaning, technical, catering, etc.), Airport Energy Management.

## What?

what is the problem that needs to be solved?

Failure to switch off the electrical power supplied via the passenger boarding bridge after aircraft operations are completed, and the inability to monitor this process automatically.

## Why?

why is this problem worth solving?

This situation leads to unnecessary energy consumption and higher costs.

## How?

how can this problem be eliminated?

Solutions can be developed to detect when power remains on after operations are completed and, when necessary, provide alerts or trigger automatic shutdown.

### Challenge:

How might we reduce costs by preventing unnecessary energy consumption caused by leaving the aircraft power connection on after onboard apron services (such as cleaning and catering loading) have been completed?