

Service Upgrade Calculator

Compares projected demand, service utilization, spare capacity, and headroom margin from an existing service rating, calculated demand, added load, and explicit planning target.

Generated October 10, 2026

<https://www.elecatrix.com/residential-load-service/service-upgrade-calculator/>

Inputs		
Input	Value	Unit
Existing service rating	200	A
Calculated demand	150	A
Major new load	40	A
Target headroom	10	%
Results		
Result	Value	Unit
Projected demand	190	A
Service utilization	95	%
Target spare capacity	20	A
Actual spare capacity	10	A
Headroom margin	-10	A
Status		
Status	Value	Unit
Review comparison	Review service capacity or entered load	
Calculation details		
Detail	Value	Unit
Calculation basis	Projected demand adds the entered major new load to the entered calculated demand, then compares spare capacity against the entered headroom target.	

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Selection boundary

Service upgrade estimate only; no service load calculation, utility approval, conductor, panelboard, meter, permit, or code-compliance result is made.

Formulas

Projected demand = Calculated demand+Major new load

Service utilization = (Projected demand/Existing service rating) x 100%

Target spare capacity = Existing service rating x (Target headroom/100)

Actual spare capacity = Existing service rating-Projected demand

Headroom margin = Actual spare capacity-Target spare capacity

Warnings and limitations

This service upgrade estimate is a planning comparison. It does not perform a code service calculation, utility review, equipment selection, permit review, or code compliance determination.