Cleanroom Operating Cost Allocation

How-to guide: what the workbook does, how to use it and what every number means. mfgcalcs.com

Cleanroom Operating Cost Allocation

Build each cleanroom's cost per room-hour from its energy and running cost, and charge it to the programs that use it.

For: Cleanroom and facilities managers, plant controllers and cost accountants in medical device, pharma, electronics and optics manufacturing.

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Quick start

1. On Setup, type your company, currency and electricity price, list your rooms with their hours, average electrical load and other cost per room-hour, and your programs.
2. On Charges, give each program's use of each room a row: its share of the room's hours and any fixed support and validation cost.
3. Fix anything the Check column names.
4. Open the Dashboard: what each room costs an hour, what each program is charged, and the room cost nobody is charged for.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Company, currency, electricity price, the rooms with their hours, load and running cost, and the programs.
Charges	One row per program's use of a room: share of the room's hours and fixed support in; assigned hours, energy and the charge out.
Dashboard	What each cleanroom costs an hour, what each program is charged, and the room cost nobody is charged for.
Method	How every number is calculated, with assumptions, limits and sources.
Verify	Self-check: the workbook's formulas recomputed on fixed inputs against an independent reference.

What each number means

Quantity	How it is calculated	Units
Energy and cost per room-hour	Average load x electricity price; + other cost per hour.	currency/room-h
Assigned hours and kWh	Operating hours x share; assigned hours x average load.	room-h, kWh
Assigned operating cost and total charge	Operating hours x cost per room-hour x share; + fixed support.	currency

Quantity	How it is calculated	Units
Per room-hour and per assigned hour	Total charge / operating hours; total charge / assigned hours.	currency/h
Room cost, share charged and not charged	Hours x cost per room-hour; sum of shares; room cost - assigned operating cost.	currency, %
Allocation	Complete at 100% charged, Partial below, Out of limits above.	-

Assumptions, limitations, sources and the self-check (the Verify sheet, which recomputes the workbook's formulas on fixed test inputs) are in the workbook. The last page shows the Dashboard with the example data for Lumen Medical Assembly, a fictional business.

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Engineering estimates for planning and improvement work. Verify the results against your own process, data and standards before you rely on them.

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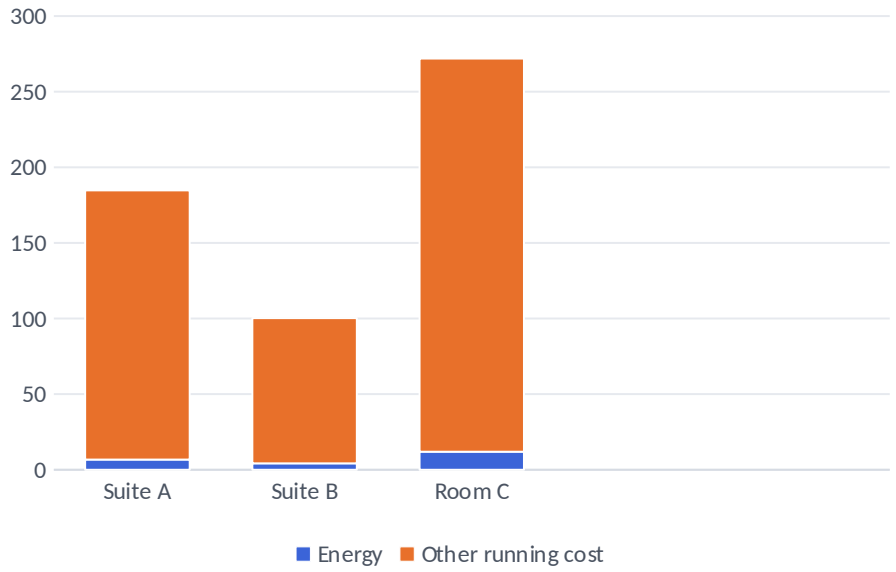
What each cleanroom costs an hour, what each program is charged, and the room cost nobody is charged for.

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Lumen Medical Assembly (example): 3 rooms charged to 4 programs. Amounts in USD; electricity price on Setup.

ROOM OPERATING COST	ROOM ENERGY (KWH)	CHARGED TO PROGRAMS	ROOM COST NOT CHARGED
341,092	**98,660**	**359,133**	**15,960**
Hours x cost per room-hour	Hours x average load	Operating share + fixed support	Hours no program carries

Cost per room-hour by room



Charge by program

