Electricity Bill by Slab (Telescopic) Tariff

Energy charge, duty and total of an electricity bill under a slab (telescopic) tariff with up to four slabs, a fixed charge and electricity duty.

Method: Telescopic (slab-wise) tariff arithmetic

Input parameters

Unit system: SI

Parameter	Value	Unit
Units consumed in the billing period (kWh)	350.00	
End of slab 1 (kWh)	100.00	
Rate in slab 1 per kWh	3.0000	
End of slab 2 (kWh)	200.00	
Rate in slab 2	4.5000	
End of slab 3 (kWh)	400.00	
Rate in slab 3	6.0000	
Rate above slab 3	7.5000	
Fixed charge for the period	120.00	
Electricity duty on the energy charge	6.0000	%

Calculated results

Parameter	Value	Unit
Energy charge	1,650.0	
Duty	99.000	
Total bill	1,869.0	
Average cost per kWh	5.3400	
Marginal rate (price of the next kWh)	6.3600	

Notes for this case

• Under a telescopic tariff each slab's units are charged at that slab's rate: the first slab at the lowest rate, the next units at the next rate and so on. The fixed (demand or meter) charge and duty are added. The marginal rate, the price of one more unit including duty, is what an energy saving actually saves. Some tariffs instead charge all units at the rate of the slab reached; this calculator follows the telescopic method.

Formula and method

$$C_e = \sum_i c_i \max\left[0, \min(U, U_i) - U_{i-1}\right], \quad C = C_e(1+d) + F$$

Variables

U	Units consumed in the billing period (kWh)	-
U_1	End of slab 1 (kWh)	-
c_1	Rate in slab 1 per kWh	-
U_2	End of slab 2 (kWh)	-
c_2	Rate in slab 2	-
U_3	End of slab 3 (kWh)	-
c_3	Rate in slab 3	-
c_4	Rate above slab 3	-

F	Fixed charge for the period	-
d	Electricity duty on the energy charge	-
C_e	Energy charge	-
C_d	Duty	-
C	Total bill	-
$\bar{c}$	Average cost per kWh	-
c_m	Marginal rate (price of the next kWh)	-

Method and standards

Slab tariff.

Assumptions and limits

- Telescopic slabs; one billing period.

References

Telescopic (slab-wise) tariff arithmetic

Report details

Report reference	FCC-8HPJ-EAN0 (the same inputs always give the same reference)
Generated	23 November 2026, 17:50 UTC
Calculator	Electricity Bill by Slab (Telescopic) Tariff
Method last reviewed	17 November 2026
Software release	FireCAD Calc, release of 22 November 2026
Release checks	3 reference cases of this calculator, computed independently, are checked on every release

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

This calculator online

https://calc.firecad.com/electrical/power/electricity-bill-slab

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.