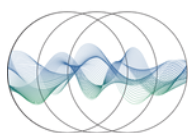
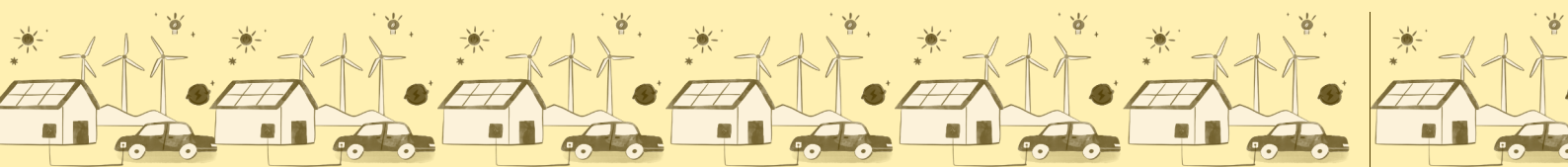


# PRIMER

## ENERGY CONSUMPTION AND PRODUCTION IN PUNJAB

2024-25



**PANJ**

Policy Advisory and  
Network for Joint Progress

# SUMMARY

With the fast growing population, energy use is only going to increase. This creates a need for assessing the current resources and installed capacities to see how we are fairing against future needs. In the case of Punjab, reports have indicated a mismatch between the plan for increasing installed energy capacities and the future needs. Moreover, greenhouse gas emissions could rise from 100.3 million tonnes of CO<sub>2</sub> in 2020 to 211.6 million tonnes by 2040. To this end, this primer assesses the status of different sources of energy production in Punjab, the regulatory landscape, and the consumption trends.

Over the years, the state government has been spending nearly 20% of the revenue receipts on providing power subsidies to different users, with the special focus being on agriculture. Moreover, Punjab is yet to capitalise on earning from exports in traded energy. The export of traded energy stood at 0 in 2022-23. On the other end, commercial users in Punjab have been paying the highest tariff over the years, with their tariff being nearly double the tariff for domestic users in some years.

Analysis shows that Punjab is yet to pick up pace in increasing the installed capacities for renewable energy. To this end, state government has introduced regulations to provide a push to adopting renewable energies by providing various incentives.



# Energy spending

Punjab budget FY 2024-25 allocation for energy consumption & production **7,934 crore** constitutes 5% of total expenditure

## Power subsidy

In FY 2024-25

**Rs 20,200 crore = 19% of revenue receipts**

In FY 2021-22

**Rs 13,443 crore = 17% of revenue receipts**

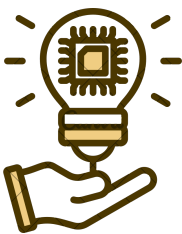
**In FY 2024-25, Rs 7,780 crore has been allocated towards free power to domestic consumers.**

Punjab's total final energy consumption is estimated to **reach 37,3671 kWh by FY 2031**

**2.85%** energy saving can be achieved in the moderate scenario and in ambitious scenario **4.59%** can be achieved by FY2031.

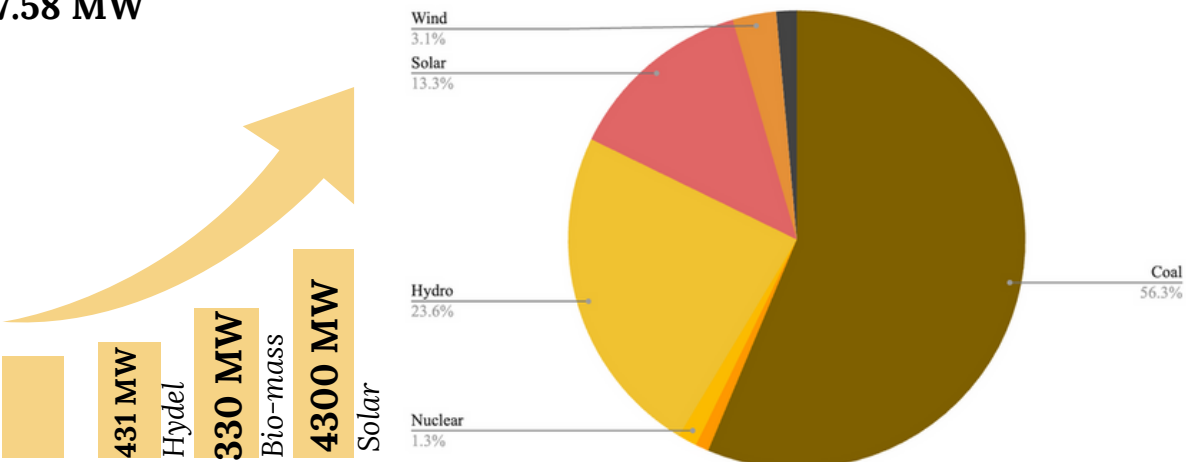
State Energy Efficiency Action Plan 2023

# Energy production sources



Installed capacity of power projects in Punjab as of September 2024: **8,877.58 MW**

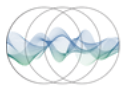
Over next 5 years, renewable energy capacity to increase to 5061.75 MW



Source: Rajya Sabha response dated 29 July 2024

Report on Resource Adequacy Plan for Punjab (2023-24 to 2029-30), Central Electricity Authority

It was found that the state's likely contracted capacity along with the trajectory of the banking arrangement is **not sufficient to meet capacity addition plans** for conventional as well as renewable energy sources to **meet projected demand**.

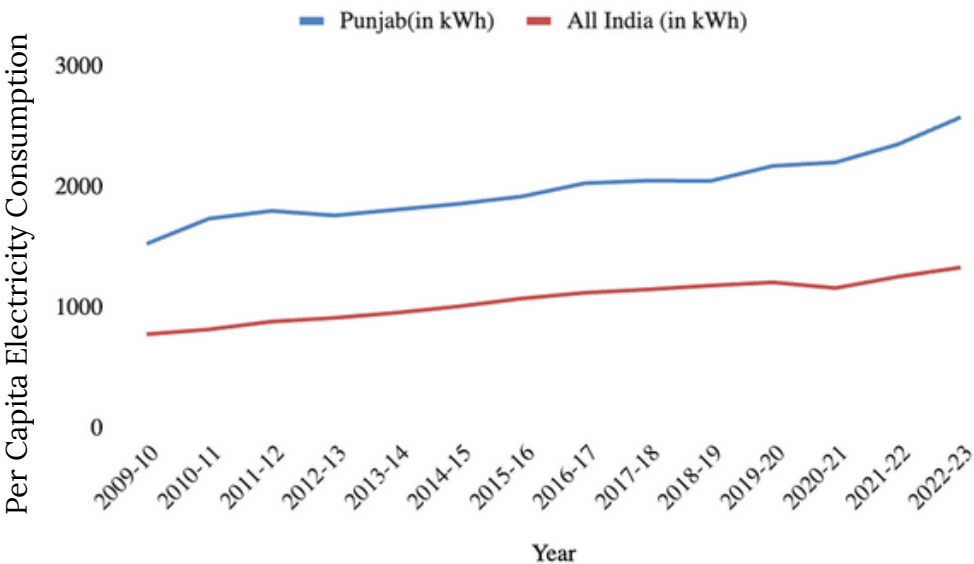


# How does Punjab fair against other states?

State Wise Import/Export of Traded Energy during 2022-23

State	Export (Gwh)	Import (Gwh)
Punjab	0	1408.77
Rajasthan	1183.84	0
Uttar Pradesh	272.32	1238.05
Himachal Pradesh	1351.28	7.19

Punjab **exported 0 Gwh of traded energy** in 2022-23. In comparison, other states in the north part of India faired better. ‘Traded energy’ indicates the buying and selling of energy commodities like crude oil, natural gas, electricity, and renewable energy sources on financial markets. *Source: Central Electricity Authority.*



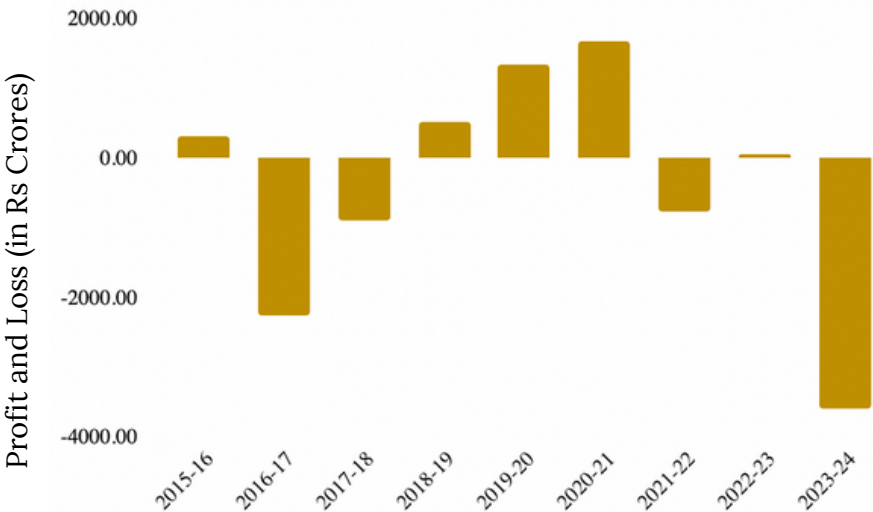
Source: NITI Aayog dashboard 2025

**Per capita electricity consumption: Punjab compared to all India avg**

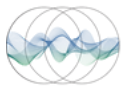
The average per capita electricity consumption in Punjab is **1,987.6 kWh over 12 years**. Whereas, the all India average during the same time was 1,060 kWh.

## Punjab’s Energy Corporation drooling in losses

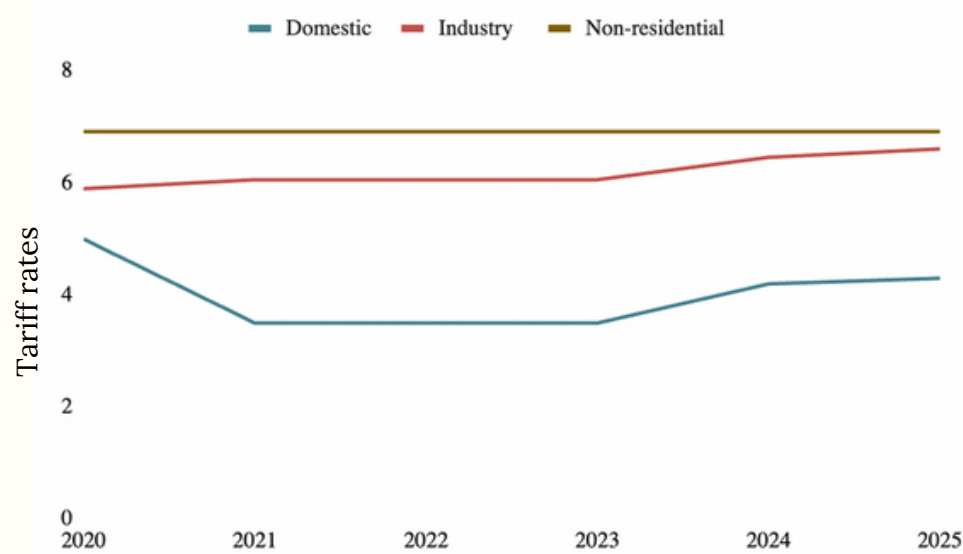
Punjab’s electricity corporation---PSCPL has been facing massive sources, with the average loss being **400 cr** over a period of **9 years**.



Source: NITI Aayog dashboard 2025



# Tariffs



**Graph: Tariff rates across domestic, industry, and non-residential (commercial) users in the last 5 years**

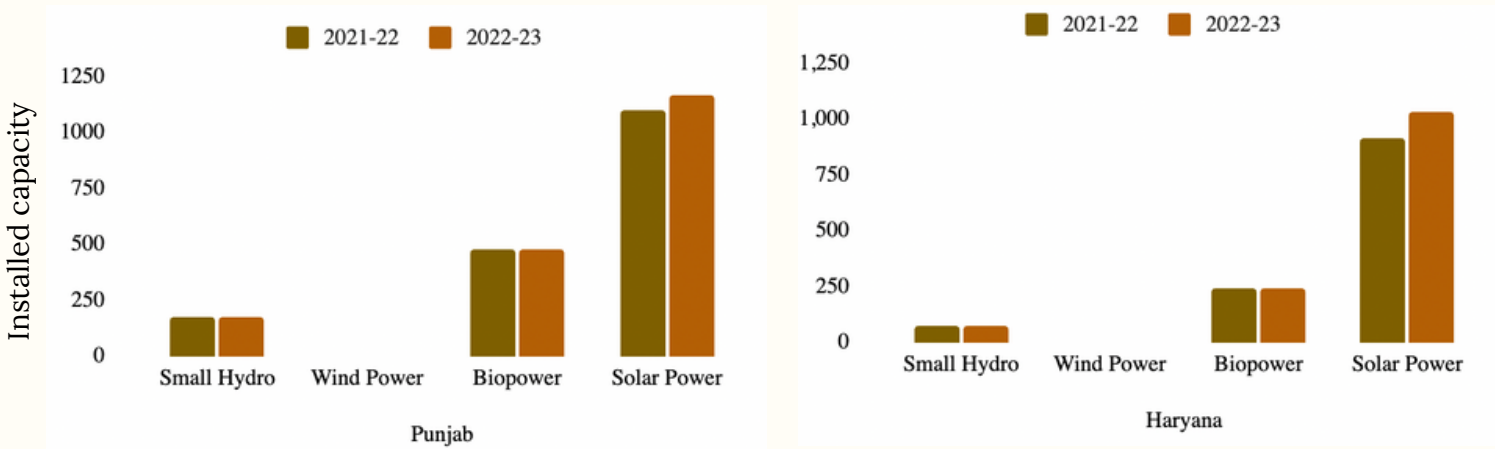
The tariffs for commercial users has seen the least change, but they have historically been paying the highest.

**Table: Tariffs for different users in Punjab over the years**

Provision of subsidised tariff of Rs 5.50/kWh for industries in approved industrial parks and tourism-focused facilities. With **3%** annual increase.

Year	Domestic	Industry	Non-residential
2025	4.29	6.6	6.91
2024	4.19	6.45	6.91
2023	3.49	6.05	6.91
2022	3.49	6.05	6.91
2021	3.49	6.05	6.91
2020	4.99	5.89	6.91
2019	4.19	5.81	6.86
2018	4.91	5.81	6.86

\*Tariffs for base units  
Source: GoP Tariff Orders



Source: Energy Statistics Report 2024

*Punjab and Haryana installed capacities across different energy sources.*





## Regulatory landscape

**Punjab State Electricity Regulatory Commission (PSERC)** introduced

*Renewable Purchase Obligation and its Compliance Regulations, 2022*

mandates every distributor or open access consumer will meet part of its consumption of electricity from renewable energy (RE) sources

Year	RPO (%)
2023-24	27
2024-25	30
2025-26	33
2026-27	36
2027-28	39
2028-29	41
2029-30	43

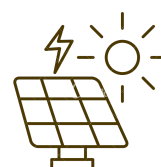
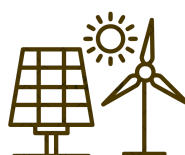
Table: Mandated Renewable Purchase Obligation (RPO); target is to reach nearly 50% by 2030.

**Punjab State Energy Action Plan (EAP)** aims at reducing greenhouse gas emissions. Under the agricultural sector, it aims at 100% transition from diesel-powered pumps to solar pumps.



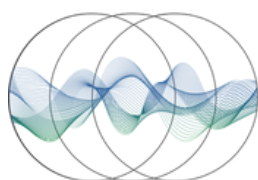
**New and Renewable Sources of Energy Policy (NRSE 2012)** launched for promoting renewable energy technologies. Incentives offered under the policy:

- ✓ 100% electricity duty exemption for power consumed from state licensee during construction and testing of the project (Section 4(v))
- ✓ VAT exemption for manufacturing & sale of renewable systems and equipment for renewable power projects (Section 4(vii))
- ✓ 100% exemption from entry tax for supplies for setting up and trial operations of the projects (Section 4(viii))
- ✓ Solar PV power projects to be exempted from obtaining any NOC/consent under Pollution control laws from the PPCB (Section 4 (xi))



Punjab has **adopted GoI's Green Energy Open Access Rules** allowing consumers who have a contracted demand or sanctioned load of 100 kilowatts or more, to procure power through green energy open access.





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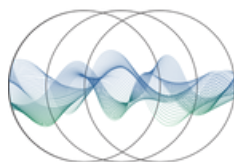
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