

ASIA : INDIA

Punjab

GDP: **\$25.4bn**Five-year economic growth rate: **0%**Population: **27.7m**Total clean energy investment, 2006-2013: **\$2.1bn**Installed power capacity: **45.2GW**Renewable share: **13.5%**Total clean energy generation: **339.4GWh**

Top energy authority:

Energy Department, Government of Punjab**INDIAN RANKING
2014****OVERALL SCORE
2014****7****0.86**

PARAMETERS AT A GLANCE

Punjab ranked seventh among the 10 Indian states surveyed by *Climatescope* 2014. It scored 0.86 and had its best performance in Parameter IV, GHG Management Activities.

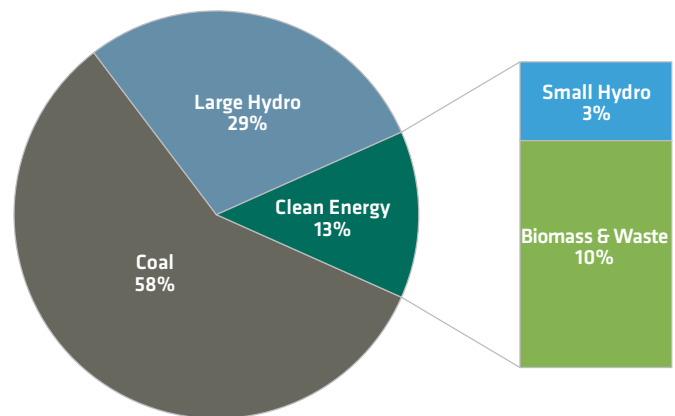
Punjab is known for its fertile lands that generate more than a quarter of its \$25.4bn GDP. Land is scarce, making conditions challenging for wind and solar deployment, but with ample feed-stock, biomass has become the main clean energy source.

From 2006-2012, Punjab invested a total of \$2.2bn in clean energy, while no major project investments were made in 2013. Biomass and waste-to-energy accounted for nearly all (96%) of 2006–12 clean energy investment, and it makes up 73% of the state's 4.5GW of clean energy capacity.

In 2013, the Punjab generated an estimated 21TWh, although not all of it was consumed within the state. Coal-fired plants were responsible for 77% of total electricity generation, while renewables contributed a very small portion, just 1.6% of generation and 13% of installed capacity.

Subsidies are distorting power tariffs. From 2005 to 2010, the state provided subsidies equivalent to 22% of the revenue of Punjab's distribution company. These price distortions had an impact on the financial strength of the company, although it received a relatively healthy 'B+' rating issued by the Ministry of Power in 2013.

INSTALLED POWER CAPACITY BY SOURCE, 2013 (%)

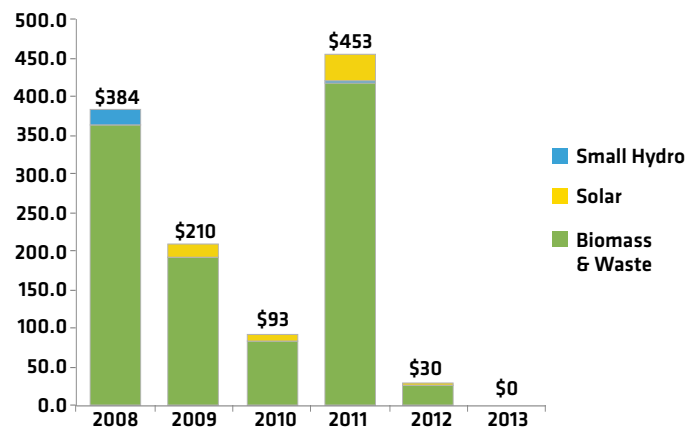
345.2GW total installed capacity

Source: Bloomberg New Energy Finance, Punjab Energy Development Agency

Note: Some values cannot be graphically represented due to scale, please see source data for the complete numbers.

In 2013, Punjab held auctions for 300MW of solar capacity, although no new capacity has been built. It has invited bids for 300MW of projects based on biomass or agricultural waste, and it does not have any meaningful wind resource.

ANNUAL INVESTMENT IN CLEAN ENERGY, 2008-2013 (\$m)

\$1.2bn total cumulative investment

Source: Bloomberg New Energy Finance

Notes: Total investment includes: Asset Finance, Corporate Finance and Venture Capital / Private Equity Commitments.

For further information, access www.global-climatescope.org/punjab