

ASIA : INDIA

# Punjab

GDP: **\$62.6bn**Five-year economic growth rate: **3.3%**Population: **29.0m**Total clean energy investment, 2009-2014: **\$971.5m**Installed power capacity: **6.4GW**Renewable share: **10.4%**Total clean energy generation: **238.2GWh**

Top energy authority:

**Energy Department, Government of Punjab****INDIAN RANKING**

2014

2015

**OVERALL SCORE**

2015

7

9

1.08

## OVERVIEW

Punjab is known for its fertile lands, small-scale manufacturing industry and good infrastructure. Agriculture contributes about a quarter of the state's GDP and land prices are higher on average than in other states.

Located close to the Himalayas, Punjab has several prominent rivers useful in hydro power generation. As of year-end 2014, the state had 4.7GW of coal and 1.1GW of large hydro capacity on line. Non-large hydro renewables represented 10% of total capacity with biomass and waste accounting for the biggest chunk at 71% of that. Other sources of renewables capacity: small hydro and solar.

Punjab has recently stepped up efforts to add more solar capacity locally. It held a tender offering 300MW in power contracts in 2013 and a 250MW tender at the end of 2014. Scarcity of land for solar and high land prices have led to higher bids from solar developers than in other states, however.

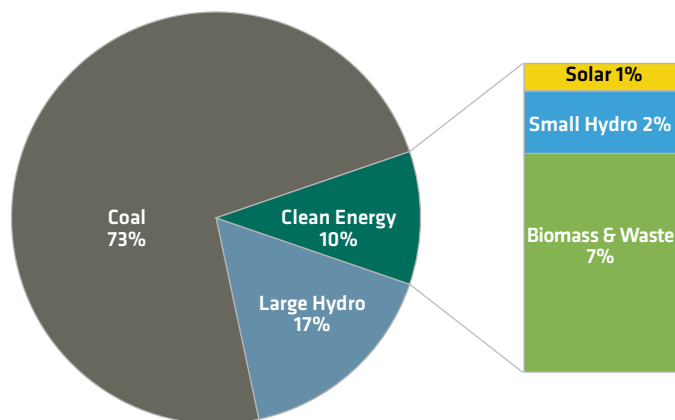
By year-end 2014, Punjab had roughly 60MW of solar on line and was expecting to see that ramp up sharply with capacity to surpass 200MW by the end of 2015. The state is also keen on solar rooftop generation and recently made 'net metering' available to system owners, allowing them essentially to be compensated for excess power they push back into the grid.

Punjab is not very windy and has seen no major wind projects developed yet. Its distribution utility has a favorable 'B+' rating and was recently recognized for the significant reduction in its transmission and distribution losses over the past seven years.

For further information, access [www.global-climatescope.org/punjab](http://www.global-climatescope.org/punjab)

## INSTALLED POWER CAPACITY BY SOURCE, 2014 (%)

6.4GW total installed capacity

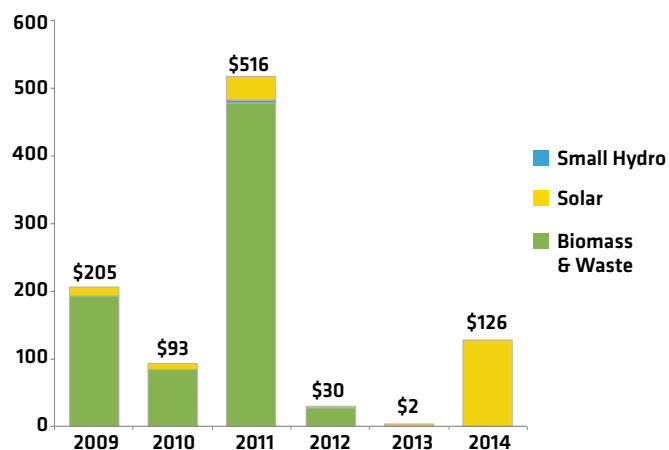


Source: Bloomberg New Energy Finance, Punjab Energy Development Agency

The utility is also upgrading its distribution network by increasing the share of information technology used in network management and monitoring. The scheme is incentivized and financially supported by the federal government which is helping the utility in reducing losses, theft and offering better quality of services.

## ANNUAL INVESTMENT IN CLEAN ENERGY, 2009-2014 (\$m)

\$971.5m total cumulative investment



Source: Bloomberg New Energy Finance

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