

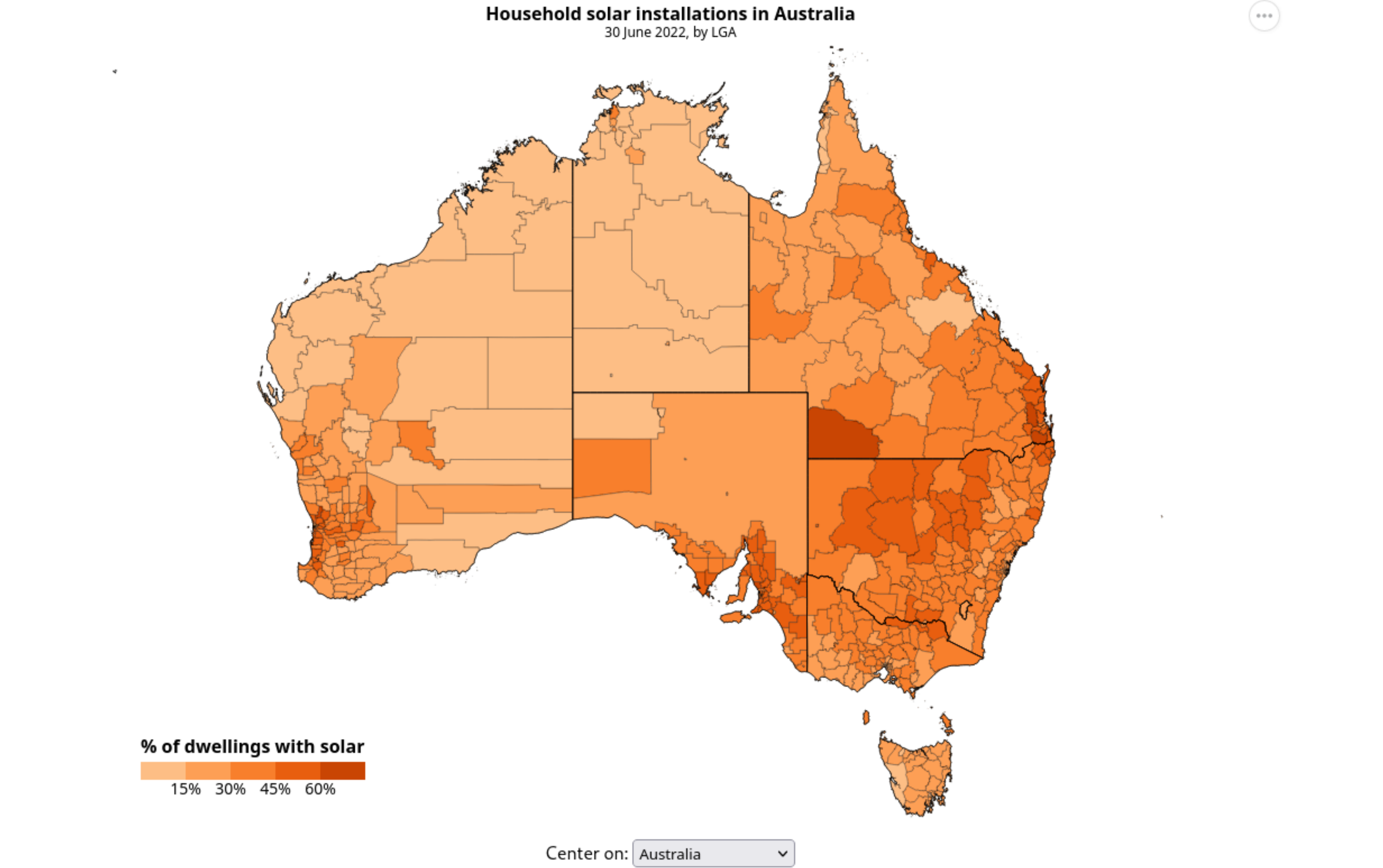
Solar Power in Australia

Residential solar usage depends on location

In states that receive relatively little solar radiation (i.e. Victoria, NSW and Tasmania), household solar is **less common** in urban areas.

The opposite is true in more sunny states, with noticeable **concentrations of solar usage** in around Perth, Brisbane, Adelaide and Darwin.

There are many factors which influence this. In rural areas, solar may be an attractive option for powering detached or off-grid buildings. In densely populated CBDs, solar is often infeasible due to reduced roof space and shading from nearby buildings.



The size of solar installations has increased over time

More and more houses in Australia are choosing to install solar panels. However, we're not close to reaching the peak rates of installations seen in 2011/2012.

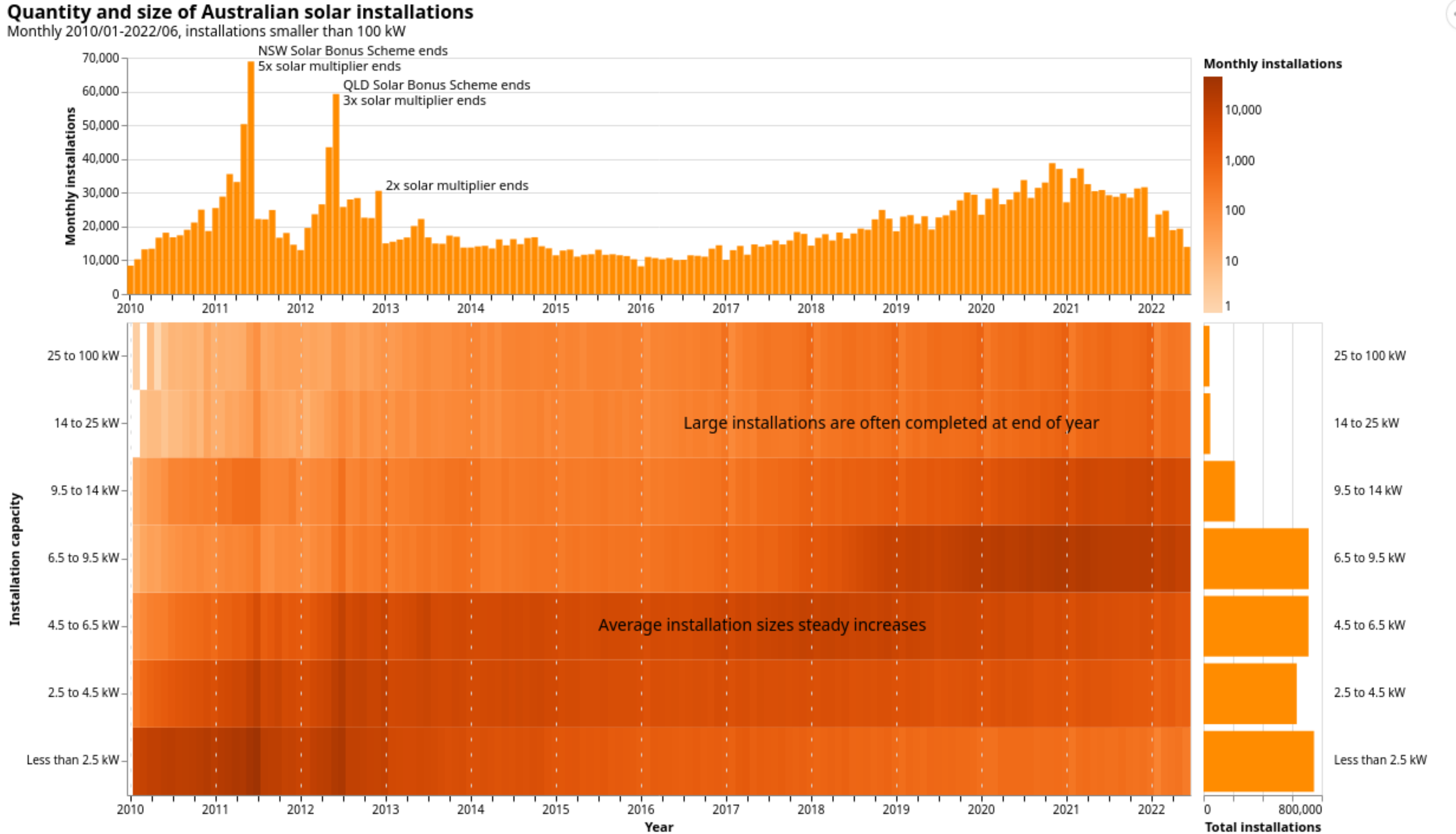
The average size of solar installations has been steadily increasing over the last decade, likely due to improvements in solar panel technology and its falling cost.

With both increasing quantity and size of installations, it's clear that solar in Australia is on a strong upward trajectory.

During this time, many states offered generous incentives for households to install solar panels, including the Solar Bonus Schemes, solar multipliers and feed-in tariffs. Curiously, it seems **the greatest incentives were the ending of these programs** - unrivalled quantities of households purchased solar as these ended in order to lock-in these benefits.

An interesting observation is that the larger of the small scale solar installations (14 to 100 kW) are often completed at the end of the year. These systems may be installed by businesses or schools where aiming to complete a project at the end of a year is convenient.

How to read: This visualisation explores the quantity and sizes of individual solar installations, not their combined capacity. The central heatmap shows the number of each size of installation over the last decade. The two histograms sum this data in the vertical and horizontal axes.



The size of solar plants varies between states

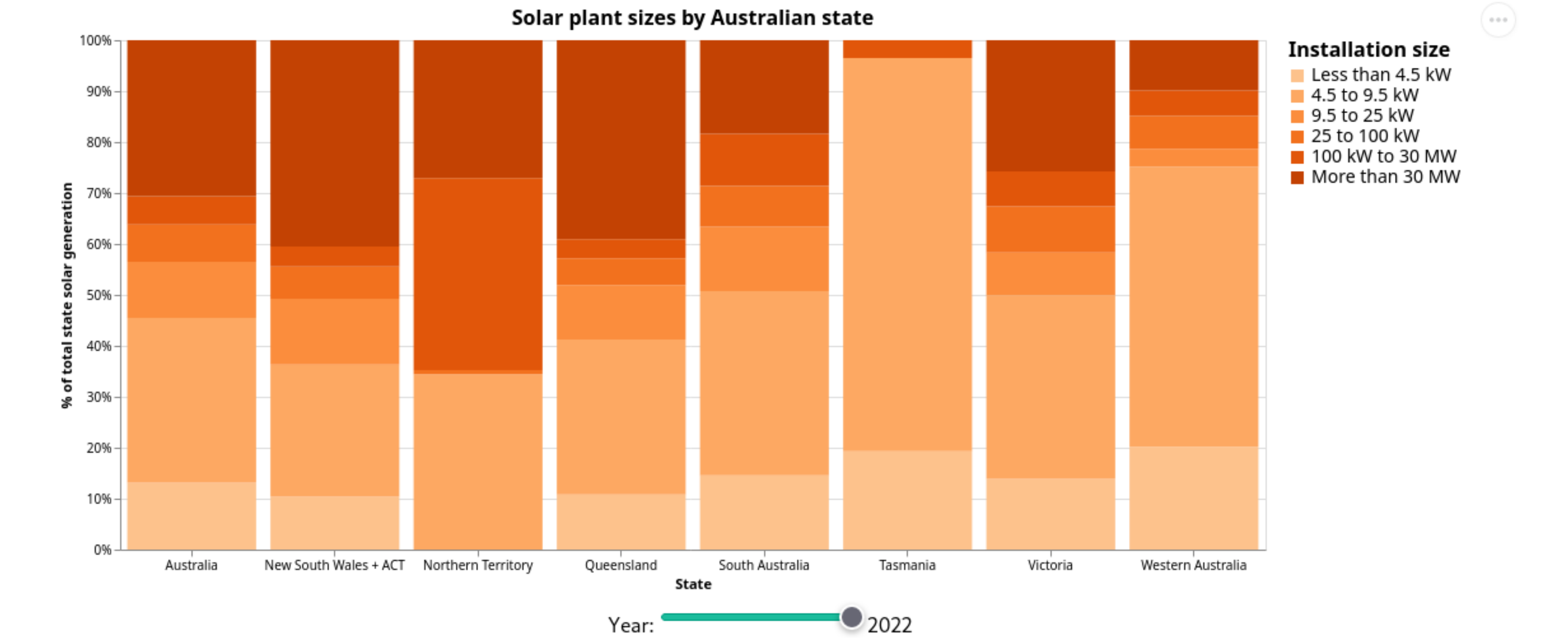
Majority of states have their solar generation capacity come primarily from **two sources: Household-scale solar (4.5 to 9.5 kW)** and **large-scale solar power plants (over 30 MW)**.

Northern Territory has an abnormally large amount of mid-scale generation (100 kW to 30 MW), a category of solar installation rarely found in other states despite the very wide range of capacities enclosed.

Using the "Year" slider, we can see that barely a decade ago, the average size of solar installations was notably small by today's standards. The vast majority of household installations were in the **smallest size category**, and **large-scale solar farms** scarcely existed at all.

However, there are a few interesting exceptions to this. Tasmania has close to zero large-scale solar generation, as its lack of solar radiation makes such an investment unfeasible.

Perhaps unsurprisingly, the states with the most atypical distribution of installation sizes are also those with the least installations/smallest sample size.



Australia is an increasingly solar-powered country

The amount of solar power available in **Australia** has been growing **exponentially** since the first panels appeared two decades ago.

Most notable is a large jump in 2006, due to the opening of Emu Downs Solar Farm in **Western Australia**. This was by far the largest solar plant at the time, and was a major milestone in the development of solar power in Australia.

The amount of installed solar across Australia's states spans an order of magnitude. At first it's easy to blame this on a lack of sunlight for places like **Tasmania**, but it turns out for it's small population, it has a similar amount per capita as other states.

