



# Denman Prospect

**Solar fact sheet**

February 2020, Issue 5

# Solar Overview

Denman Prospect will be the first Australian suburb to have a minimum requirement for solar power for every home. On the average home in Canberra a 3kW system will generate about 4,000kWh of clean electricity, reducing emissions from fossil fuel power by approximately 3.7 tonnes a year, which is about the same as taking one average Australian car off the road. Based on a typical annual electricity consumption of 7,000 kWh for new, six-star homes, and based on current residential tariffs, a 3kW solar system will reduce a homeowner's annual electricity bill from approximately \$1500 to \$1000, which equates to a saving of a third, noting it will vary from year to year and from home to home.

# Home Design

When designing your home you should consider the layout of the solar panels and incorporate it in your home design. PV arrays are to be shown on design drawings which are submitted for building and siting drawings. Efficiency of solar panels can vary significantly, depending on the tilt angle, the orientation, adjacent overshadowing elements and yearly weather conditions. Please refer to the design and siting guidelines for more information.

## Solar Irradiation Guide

For clarity the maximum efficiency (100%) for the solar panels is facing north and the panels are placed on a roof with a 30 degree pitch. The table above should be used as a guide only where it shows the yield as a percentage (%) as a proportion to the ideal installation for combinations to be installed.

Plane Azimuth is orientation of the PV Panels (0 =North, 90 = East, 180 = South, 270 = West) and Plane Inclination is the angle of the PV panels (0 = flat, 30 = standard roof pitch, 90 = vertical like a window).

ANNUAL DAILY IRRADIATION ON AN INCLINED PLANE EXPRESSED AS % OF MAXIMUM VALUE FOR CANBERRA

Plane Azimuth (degrees)	Plane Inclination (degrees)									
	0	10	20	30	40	50	60	70	80	90
0	87%	94%	98%	100%	99%	96%	91%	83%	74%	64%
10	87%	94%	98%	99%	99%	96%	91%	83%	74%	64%
20	87%	93%	97%	99%	98%	95%	90%	83%	74%	64%
30	87%	93%	96%	98%	97%	94%	89%	82%	73%	64%
40	87%	92%	95%	96%	95%	92%	87%	80%	72%	63%
50	87%	92%	94%	94%	93%	89%	84%	78%	70%	62%
60	87%	91%	92%	92%	90%	86%	81%	75%	68%	61%
70	87%	90%	90%	89%	87%	83%	78%	72%	66%	59%
80	87%	89%	88%	87%	84%	80%	75%	69%	63%	56%
90	87%	88%	86%	84%	80%	76%	71%	65%	59%	53%
100	87%	87%	84%	81%	77%	72%	67%	61%	56%	50%
110	87%	86%	82%	78%	73%	68%	62%	57%	51%	46%
120	87%	85%	80%	75%	69%	63%	58%	52%	47%	42%
130	87%	84%	78%	72%	66%	59%	53%	48%	43%	38%
140	87%	83%	77%	70%	62%	55%	49%	44%	39%	35%
150	87%	82%	76%	68%	60%	52%	45%	40%	35%	32%
160	87%	82%	75%	66%	57%	50%	42%	36%	33%	29%
170	87%	82%	74%	65%	56%	48%	41%	35%	30%	28%
180	87%	81%	74%	65%	56%	48%	40%	34%	30%	27%
190	87%	81%	74%	65%	56%	48%	41%	35%	30%	28%
200	87%	82%	74%	66%	57%	50%	42%	36%	32%	29%
210	87%	82%	75%	67%	59%	52%	45%	40%	35%	32%
220	87%	83%	77%	69%	62%	55%	49%	43%	39%	35%
230	87%	84%	78%	72%	65%	59%	53%	48%	43%	38%
240	87%	84%	80%	74%	68%	63%	57%	52%	47%	41%
250	87%	85%	82%	77%	72%	67%	62%	56%	51%	45%
260	87%	86%	84%	80%	76%	71%	66%	61%	55%	49%
270	87%	87%	86%	83%	79%	75%	70%	65%	59%	52%
280	87%	89%	88%	86%	83%	79%	74%	68%	62%	55%
290	87%	90%	90%	89%	86%	82%	77%	71%	65%	58%
300	87%	91%	92%	91%	89%	85%	81%	74%	67%	60%
310	87%	91%	93%	94%	92%	88%	83%	77%	70%	61%
320	87%	92%	95%	96%	94%	91%	86%	79%	71%	63%
330	87%	93%	96%	97%	96%	93%	88%	81%	73%	63%
340	87%	93%	97%	98%	98%	95%	89%	82%	74%	64%
350	87%	94%	98%	99%	99%	95%	90%	83%	74%	64%

# The PV System

**The 3kW PV system to be installed by Harvey Norman Commercial Solar will consist of:**

- SMA SB301AV40 inverter\*
- 11 x Trina Solar TSM330DD06M 330kW solar panels\*
- Includes 10 year Installation and Workmanship Warranty covering any defects in the works carried out by our accredited installers.

\*If any of the components become unavailable for any reason Harvey Norman Commercial Solar will use reasonable endeavours to replace the unavailable component with a component of like quality, functionality and cost.

**Inclusions are:**

- ACTPLA inspection fee which is subject to variation in line with any change to the inspection fee
- Small-scale technology certificates (STC) remain with Harvey Norman Commercial Solar and are fully assigned to Harvey Norman Commercial Solar or additional costs will apply
- Extra costs may apply if additional work is required. Contact the team at Harvey Norman Commercial Solar for variation and upgrade costs.

## Installation Process Overview

Installation of a PV System in a new residential Premises is best done in three stages: electrical cable rough-in followed by panel and inverter fit-off then final certification.

### **Stage 1 - Rough-in electrical cables**

- Rough-ins are completed by Harvey Norman Commercial Solar before houses are sheeted, usually at the same time as a typical electrical rough-in.
- The builder and/or land owner are to provide Harvey Norman Commercial Solar no less than 3 weeks' notice that a rough-in is required to be completed at particular Premises.
- Estimated time for Harvey Norman Commercial Solar to rough-in is 2 business days.

### **Stage 2 - Fit-off panels and inverter**

- Fit-offs are completed by Harvey Norman Commercial Solar towards the end of a build, once the roof is completely installed and switchboard work completed. This needs to be at lock up stage so that inverters are secure after install.
- The builder and/or land owner are to provide Harvey Norman Commercial Solar no less than 3 weeks' notification that a fit-off is required to be completed at particular Premises.
- The builder and/or land owner shall ensure that Harvey Norman Commercial Solar's STC assignment form are signed and returned to Harvey Norman Commercial Solar at fit-off.
- Estimated time for Harvey Norman Commercial Solar to fit-off is 2 business days.

### **Stage 3 - Final Inspections and Certifications**

- The builder and/or land owner are to advise Harvey Norman Commercial Solar no less than 3 weeks' notification when a Certificate of Occupancy has been obtained for each Premises.
- Harvey Norman Commercial Solar will book ACTPLA solar inspection and advise inspection date to the builder and/or land owner.
- ACTPLA complete solar inspection and copies of certification will be provided to the builder and/or land owner.
- Should a larger sized system is selected the builder or land owner will be required to pay Harvey Norman Commercial Solar the difference between Harvey Norman Commercial Solar's quoted price of the larger system and the contract cost of the Denman 3kW system (please note that the STCs from the larger system will still remain with Harvey Norman Commercial Solar and are fully assigned to Harvey Norman Commercial Solar or further additional costs will apply).

### **Standard Solar Installation**

For solar installation please contact Harvey Norman Commercial Solar by emailing [denmanprospect@au.harveynorman.com](mailto:denmanprospect@au.harveynorman.com) or phone (02) 6202 2000.

### **Alternative Solar Installation**

Although there is a minimum 3kW solar requirement for each home in Denman Prospect, you may elect to purchase and install your own system instead of purchasing the standard solar installation from Capital Estate Developments.

For more information, and to ensure your home will be compliant, please contact us by phone on (02) 6175 3300 or send an email to [design@capitalestate.com.au](mailto:design@capitalestate.com.au).