

SOLAR CASE STUDY: FMSA, NORTH MELBOURNE



North Melbourne architecture firm walking the sustainability talk.

Having owned their building for 13 years, FMSA Architecture see themselves as long term property holders and are keen to do what they can to improve the sustainability of the building.

In 2012, FMSA completed a carbon audit and found that a major retrofit would significantly improve the building's energy efficiency. This was timed to coincide with a renovation required to create an additional office level. Energy efficiency measures included integration of passive and active energy efficiency such as insulation and replacement of lighting and mechanical systems, and sustainable building materials were used in the office renovation. Solar panels were considered at the time, but the decision was made to defer the installation for a second stage when the time was right.

"We didn't want to do it all at once, nor could we afford to", explains FMSA director, Greg Anson. "Greening the building incrementally rather than in one hit made the changes more achievable."

Four years later, thinking it would be a good time to take sustainability to the next level in the building, Greg attended a solar information evening in June 2015.

"I found out at that evening that we could install solar quite simply - and we did."

It was a combination of environmental responsibility and financial drivers that motivated Greg to go solar. Greg spoke about the possibility of installing solar with the building tenants who showed interested. Their leases were ending and I thought this may add value to their continued tenancy in the building. The previous retrofit had improved the building's NABERS rating from 2 to 5 stars, which increases the value of the building and tenancies, and installing solar would increase this further.

Installing the solar system turned out to be very straightforward for FMSA, and cheaper than they expected. According to Greg, the installers were easy to deal with and did a good job with the installation.

Location:

182 Cappel St, North Melbourne

System Size:

30kW

Solar panels:

120 x 250 Watt Yingli Poly-crystalline

Solar inverter:

1 x Fronius Symo 20kW
1 x Fronius Symo 5kW

Mounting system:

Cleenergy

Upfront costs:

\$44,000 incl. GST

Payback period:

4.5 years

Funding model:

Financed through installer & awarded a City of Melbourne solar rebate

Installation date:

August 2015

Installer:

EnviroGroup

CITY OF MELBOURNE ECO-CITY

“Once I knew how to approach the process, it was fairly seamless. We received great support from City of Melbourne, and the \$4,000 rebate was the final incentive. They put us in touch with Positive Charge who wrote the brief for us and recommended some contractors. I’m impressed with how it came together. It’s surprising how simple it was at the end of the day.”

Features

In August 2015, one hundred solar PV panels, most of the 30kW system, were installed directly on the incline of the FMSA building’s sawtooth roof, while another twenty panels were installed on stands on the flat parts of the roof. The power generated will be distributed throughout the building with 5kW going to each of the two tenancies, and 20kw to the FMSA upstairs offices.

Two Fronius Symo inverters (20kW and 5kW)inverters, which can handle any combination of panel, were chosen in case the output of the arrays needs to be changed in the future. In search for the best location for the inverters, FMSA ended up installing them in the men’s changeroom.

“I use the change rooms all the time and it’s really great having the inverters in a spot where you can see them ticking away, rather than having them hidden.”

The payback period for the solar installation is calculated at 4.5 years, with the building’s energy costs expected to decrease by 45%. FMSA will seek to have their NABERS building rating updated now that the solar panels are installed, and will promote the solar installation on our website.

“At the end of the day we see ourselves as advocates for green technologies, so we should walk the talk,” explains Greg.

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Two of FMSA’s directors, Peter Sandlow and Greg Anson, inspect the new 30kW solar installation system.