

Zero Carbon Buildings For All.

Dr. Dave Collins

Dr. Rob Brimblecombe



Healthy Buildings For All.

Dr. Dave Collins

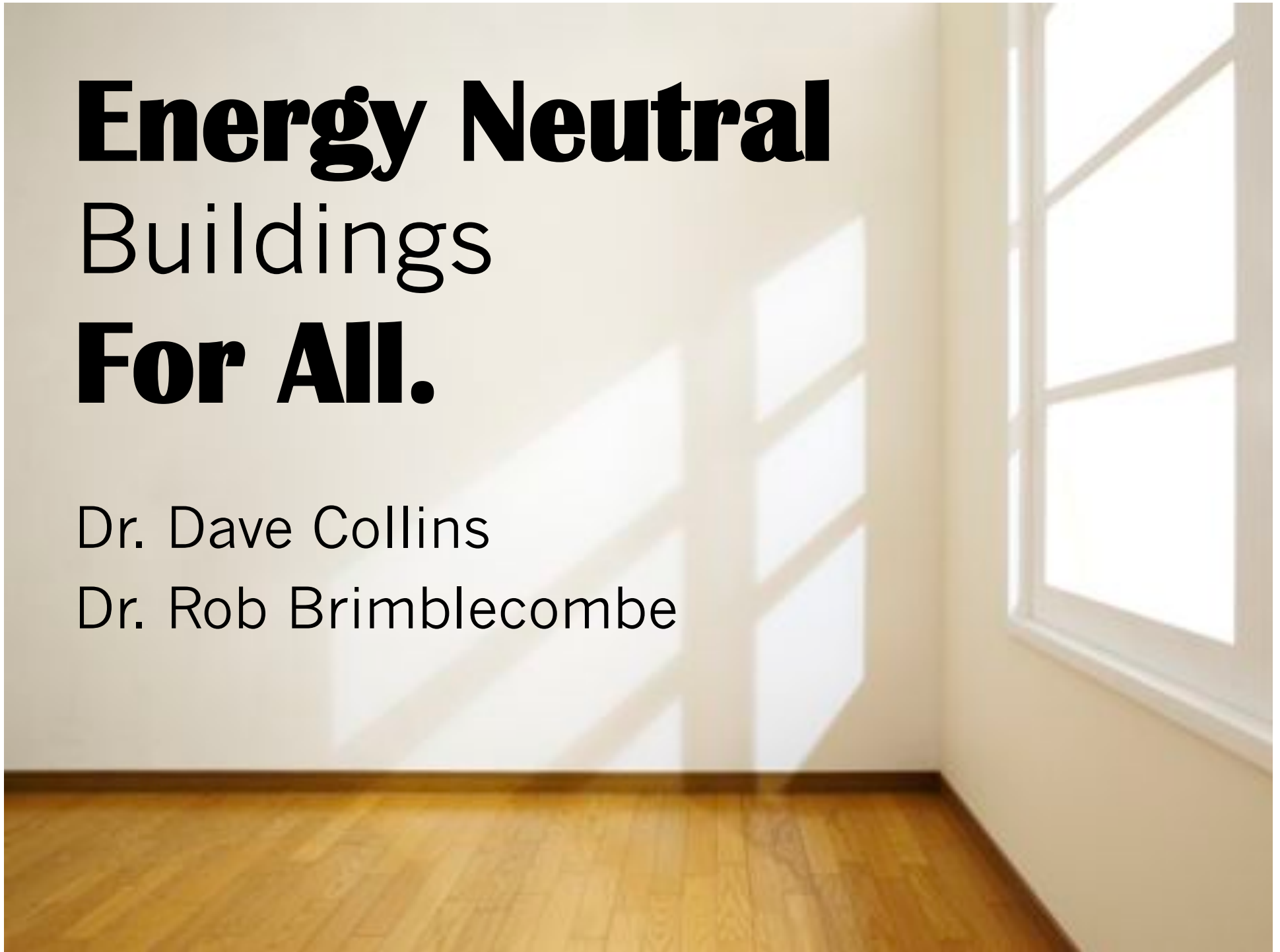
Dr. Rob Brimblecombe



Energy Neutral Buildings For All.

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Productive Buildings For All.

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Resilient Buildings For All.

Dr. Dave Collins

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Engaging Buildings For All.

Dr. Dave Collins

Dr. Rob Brimblecombe





Profitable Buildings For All.

Dr. Dave Collins

Dr. Rob Brimblecombe

The background of the slide is a photograph of a bright, empty room. It features a light-colored wooden floor and a white wall. A window on the right side of the frame allows natural light to enter, casting soft shadows of a staircase railing onto the wall. The overall atmosphere is clean, bright, and positive.

Positive Energy Places.

for People

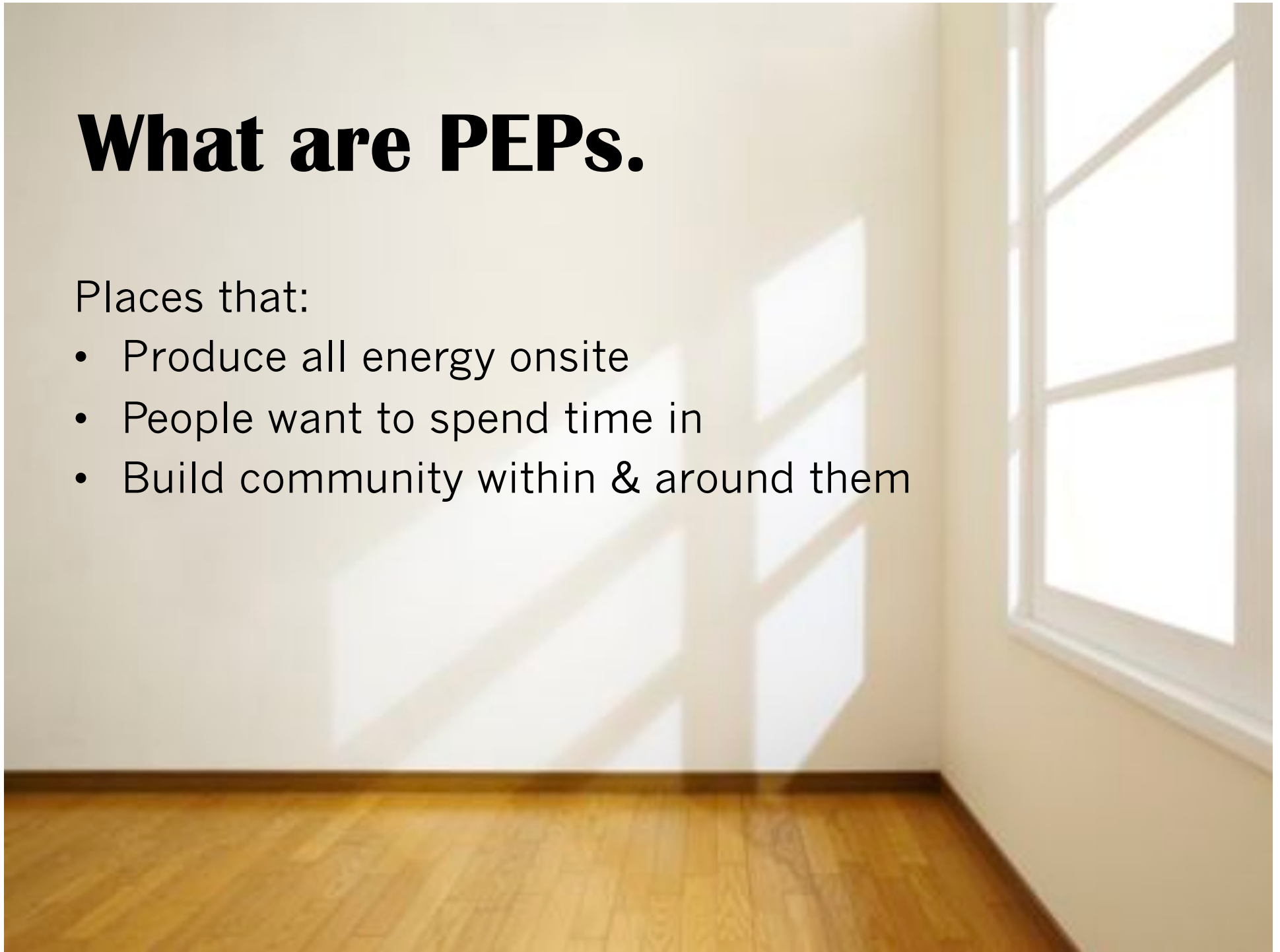
Profit

& Planet

What are PEPs.

Places that:

- Produce all energy onsite
- People want to spend time in
- Build community within & around them



The journey so far.

- Proof of concept
 - 490 Spencer St – DIY
- Research Projects
 - Monash Library– Asset replacement plan
 - Monash Office– Economical Redevelopment
- Commercialisation
 - 11 Leveson St – Commercial Office

Who we are.

Dave Collins

- Director, Synergetics
- Engineer – Thermodynamics



Rob Brimblecombe

- Sustainability Manager, Monash University
- Scientist – Bio Mimicry

What we're about.

- Creating engaging, beautiful and functional places for people to enjoy & connect with
- Giving meaning to 'sustainability'
- Making sustainability profitable



How do you design a PEP?

Design for people, and the rest is easy

PEP house rules.

- Community
- Engagement with surroundings
- Air quality
- Thermal Comfort
- Functionality
- Resilience



Community.

- Design for local community
- For like-minded people
- Places people are proud of



Engagement.

- With each other
- With surroundings
- With built environment



Air quality and comfort.

- Access to fresh air, natural light & views
- Thermal comfort



Positive energy.

Maximises value:

- More comfort
- Less complexity
- Less maintenance
- Less cost
- Less energy

Let the sun do the rest!



Why isn't every building Positive?

Competing interests considered in isolation
Death by a thousand compromises
Forgot to check the physics
Ignored the biology
Devil in the detail

490 Spencer St.

DIY - Proof of Concept



Total investment \$300K
410% revenue increase, 50% ROI.

*Average commercial building converted to:
Australia's first Positive Energy Office*

490 Spencer St.

Ground Floor

- Home of Synergetics
- Advanced CFD modeling
- Living laboratory



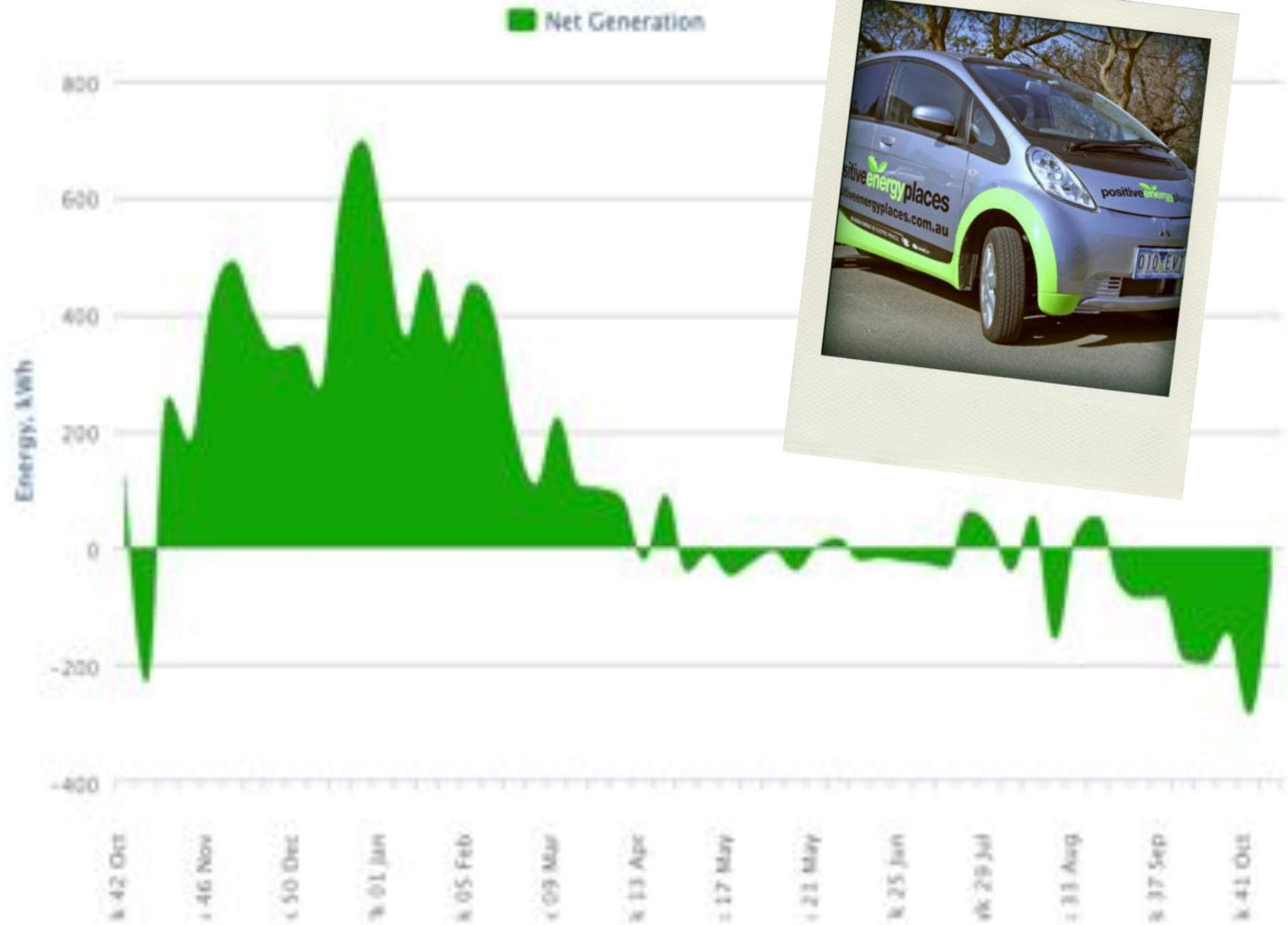
490 Spencer St.

First Floor

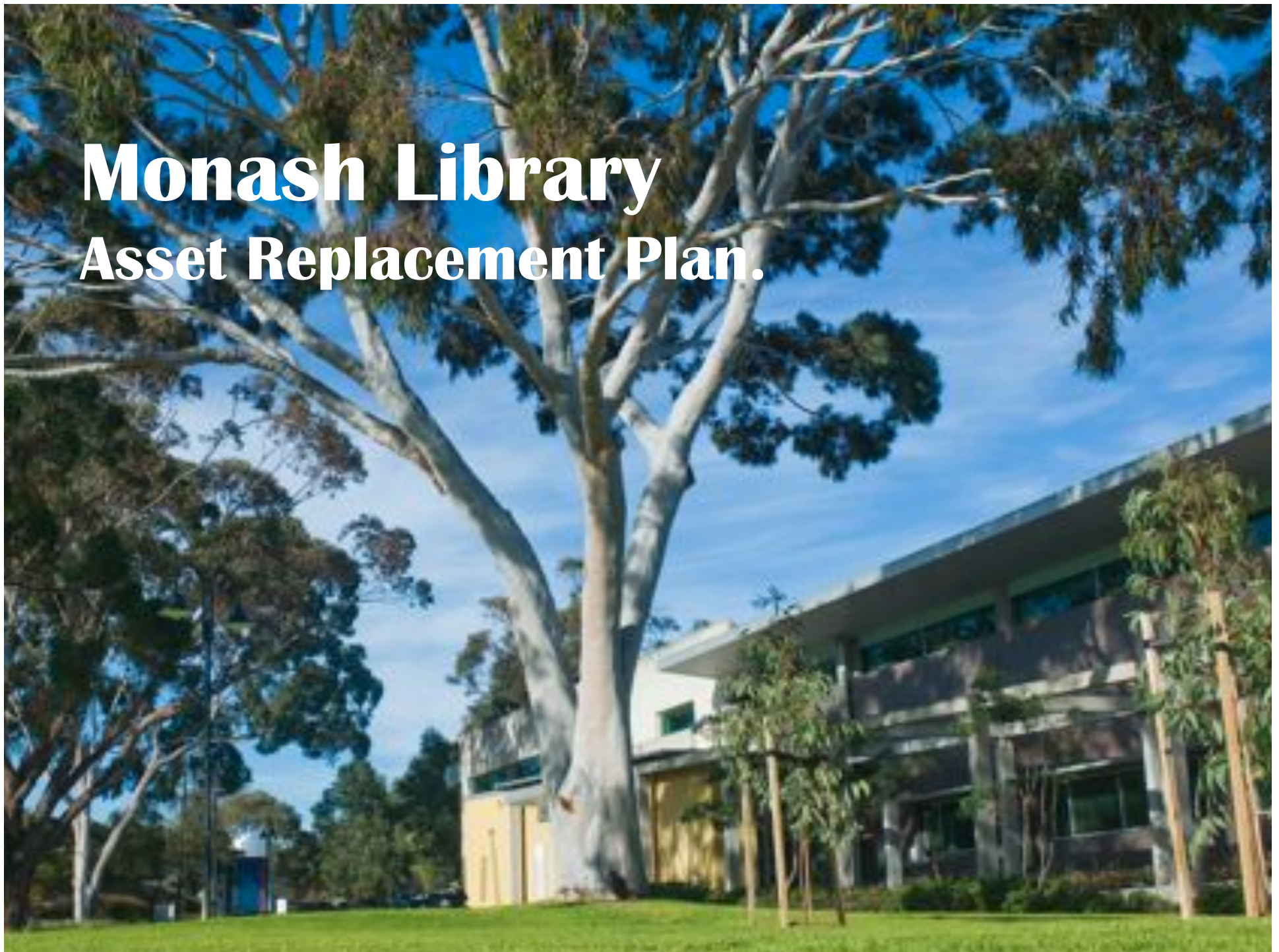
- Commercial office space
- Attracts premium rent



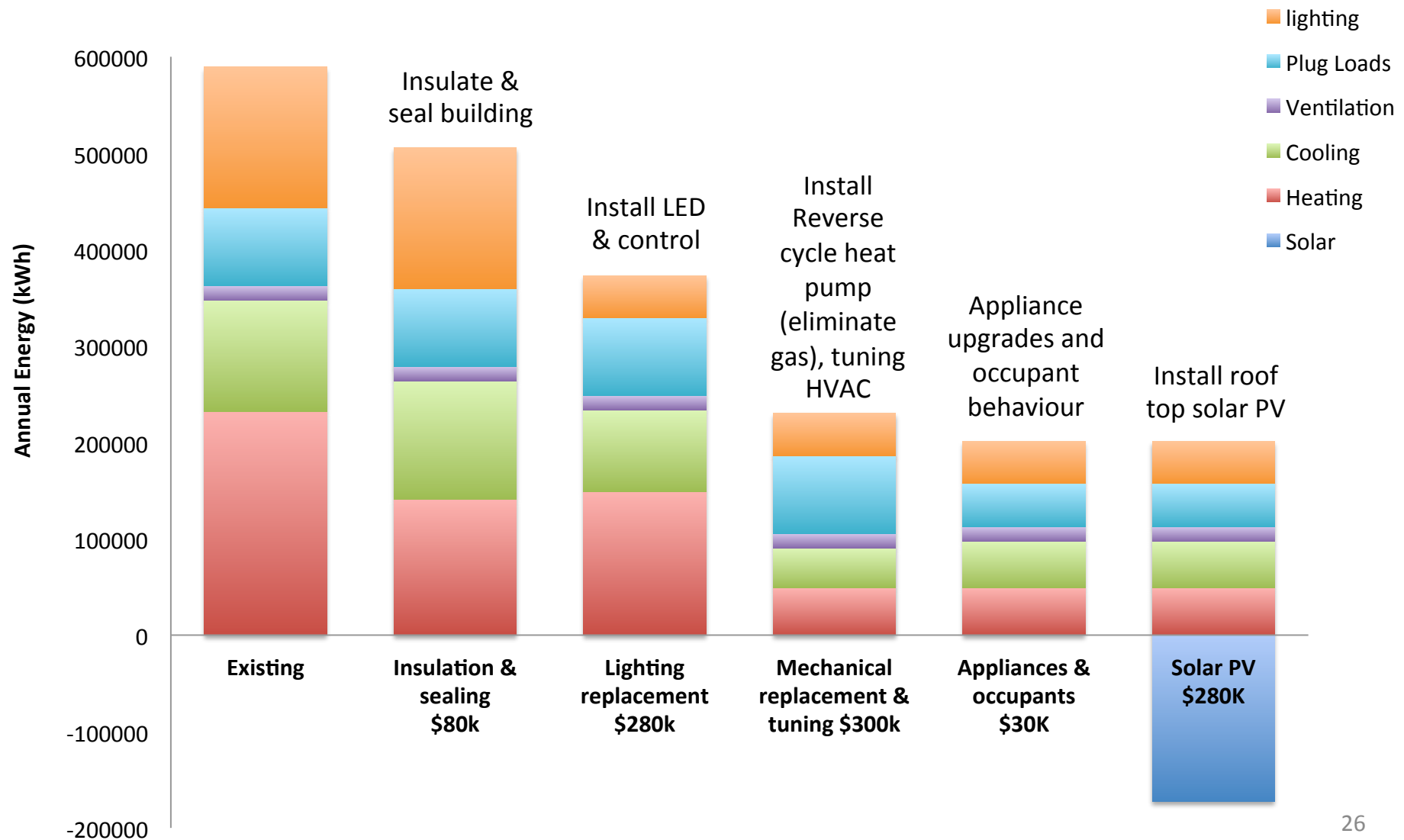
Thursday, 18 October 2012 to Thursday, 24 October 2013



Monash Library Asset Replacement Plan.



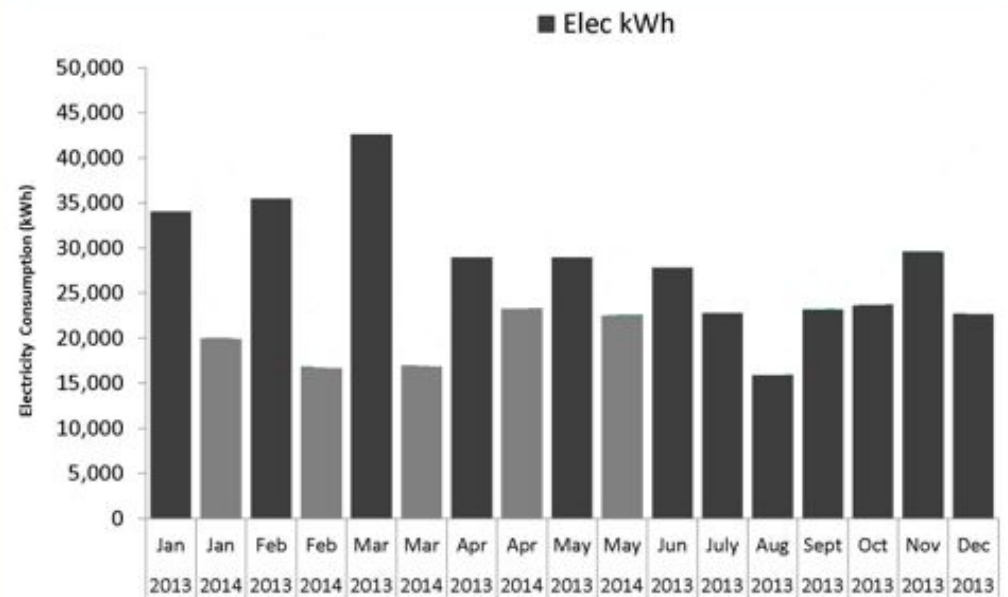
Library Asset Replacement Plan.



Progress to date.



Peninsula Library – Lighting Upgrade & Solar Installation



Monash University Office

Cost effective office redevelopment.



Positive energy.

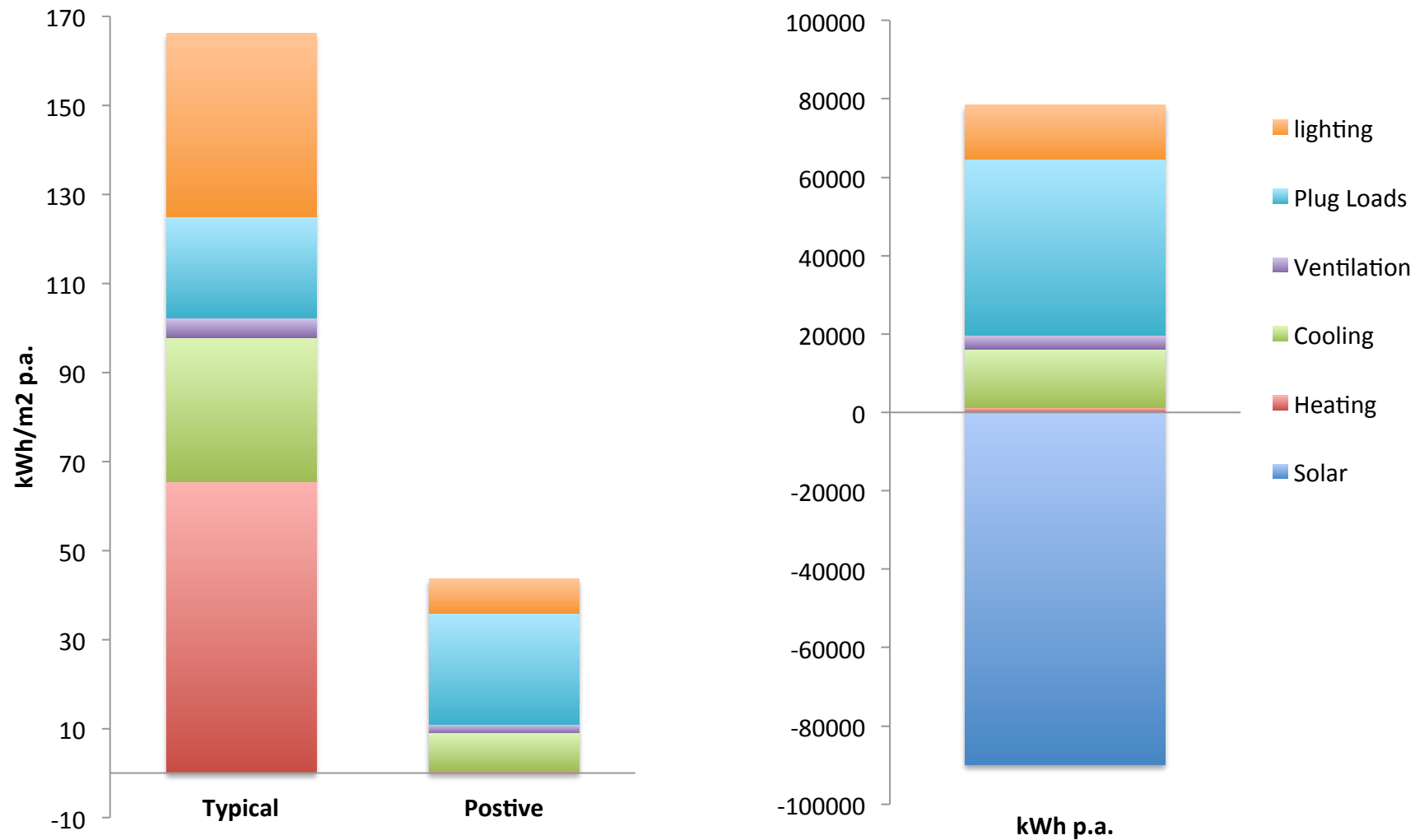
Maximises value:

- More comfort
- Less complexity
- Less maintenance
- Less cost
- Less energy

Let the sun do the rest!



Cost Effective Positive Office.



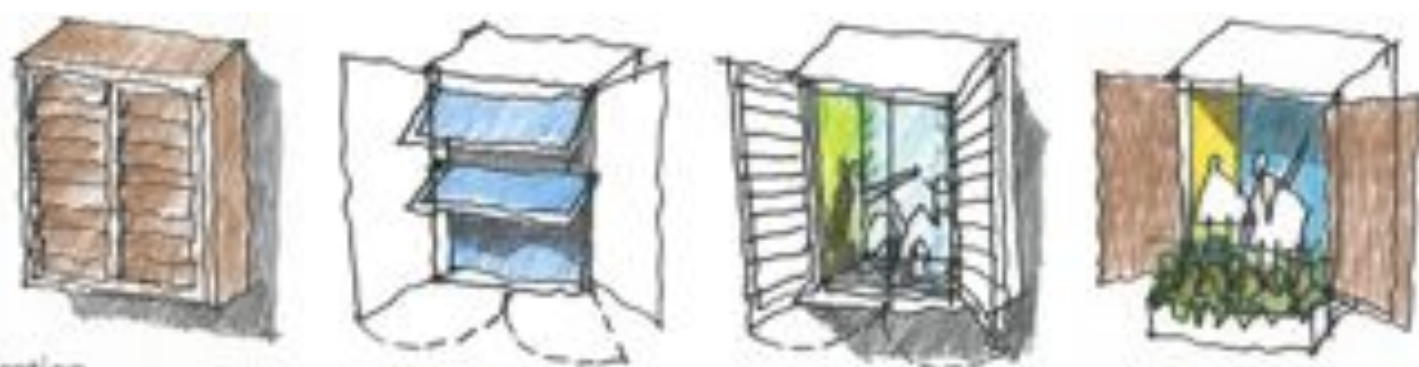
Positive for the same cost
Fabric cost premiums offset
by savings in building services.

Superior thermal comfort
Ample natural light
Views to the outside
100% fresh air
Completion late 2014

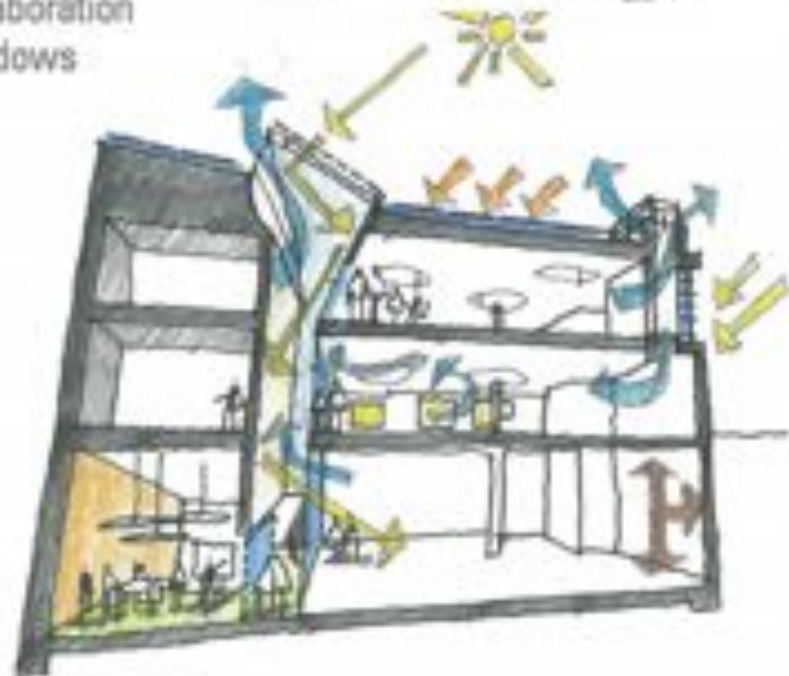
11 Leveson St.

Commercial Office development

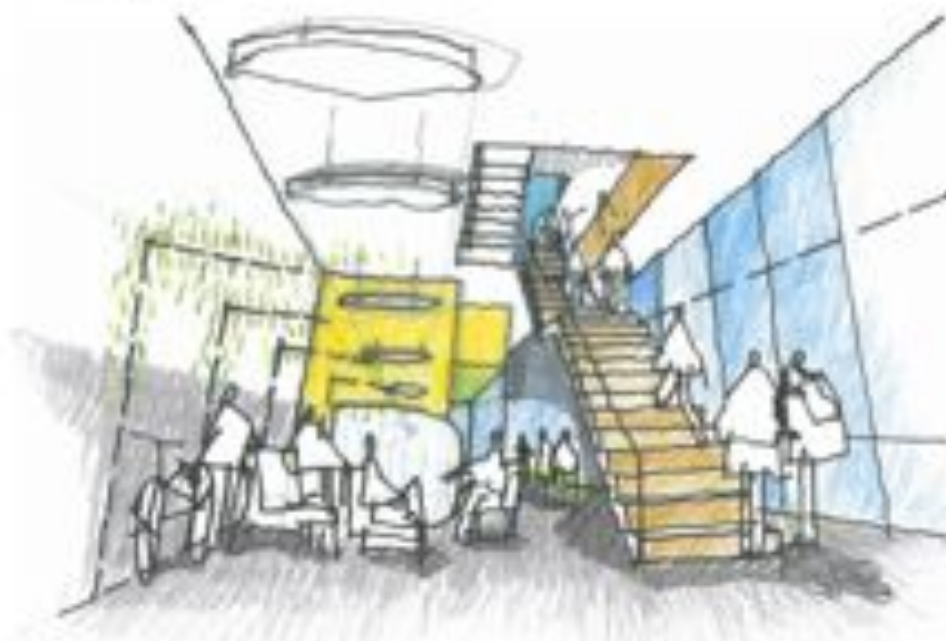




collaboration
windows



bioclimatic section



interactive foyer

Positive for Profit

Creating premium office space.

*Existing low grade office
Develop to premium positive office*

Making Commercial Sense.

- Redeveloping buildings to create profitable places, is good for:
 - Tenants
 - Businesses
 - Air quality
 - Planet
 - Community
 - Building owners
 - Investors



How you can be involved.

- Tenants – tell us about your property needs
- Finance providers – invest in our property secured investments with premium returns
- Technology suppliers - tell us about your low energy products
- Building owners – partner with us to retrofit your buildings
- Developers – partner with us to create PEPs
- Everyone – join the revolution

Thank you.

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