

RENEWABLE ENERGY FOR MELBOURNE



CITY OF MELBOURNE

ZERO NET EMISSIONS

We're boosting renewable energy
to decarbonise Melbourne's electricity supply.

OUR 2018 TARGET:

25% OF MELBOURNE'S
ELECTRICITY FROM
RENEWABLE ENERGY.

KEY NUMBERS

2012-13



3,799,663 MWH

of electricity consumed
in Melbourne each year.

2018



5,200,000 MWH

predicted electricity
consumed in Melbourne
each year.

BY 2018

25%
**RENEWABLE
ENERGY**



1,300,000 MWH

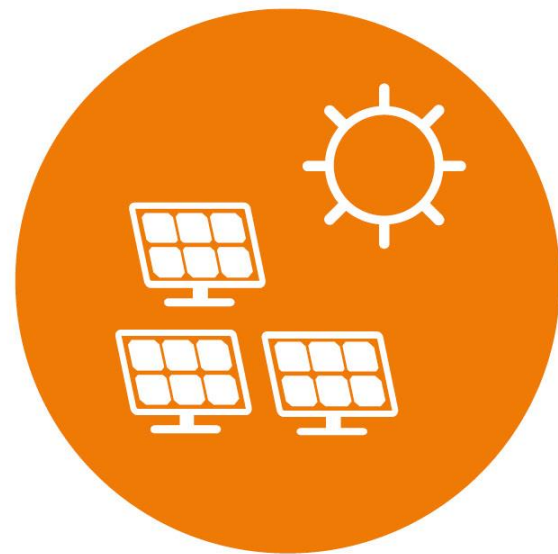
worth of renewable energy
generating capacity will
need to be installed by 2018.

HOW MUCH IS THAT?



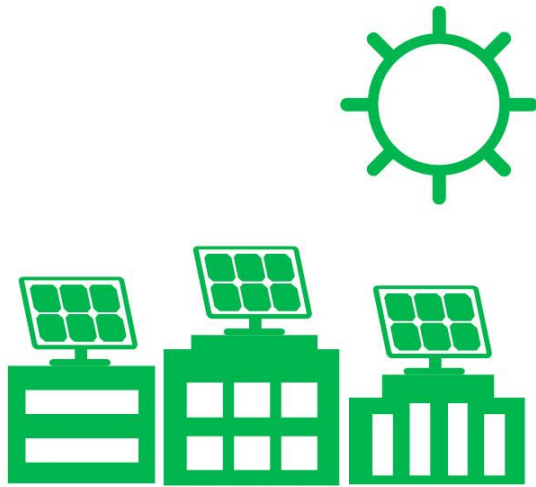
1,300,000 MWH

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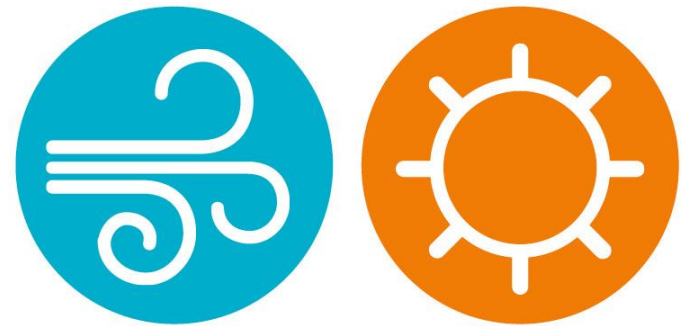
720 MW OF SOLAR PV

CAN WE DO IT ON OUR ROOFTOPS?



20 MW OF RENEWABLE ENERGY

generating capacity could be installed
on Melbourne's commercial rooftops.



BUT THIS IS A SMALL FRACTION OF WHAT'S REQUIRED

most of our renewable energy will need
to come from large-scale wind, or solar
installations upstream.

BACKGROUND

OUR 2018 TARGET:

25% OF MELBOURNE'S
ELECTRICITY FROM
RENEWABLE ENERGY.

CURRENT STATE:

10-15 %

Voluntary:

- Greenpower purchases
- Rooftop solar

Regulatory:

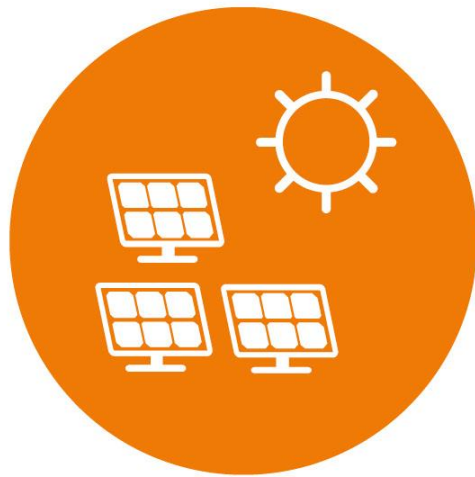
- Renewable energy target



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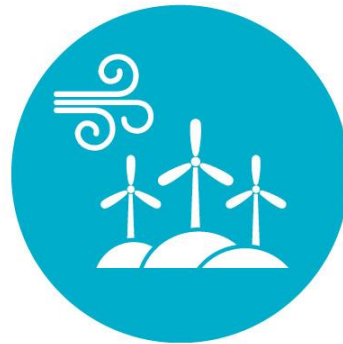
OUTSIDE OF MELBOURNE



700 MW OF SOLAR PV

7 x AGL's Broken Hill
100 MW Solar Farms.

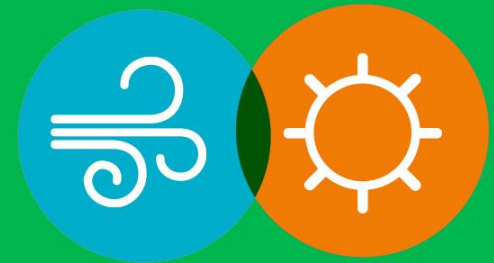
OR



520 MW OF WIND TURBINES

1.25 x MacArthur Windfarms.

MIXED GENERATION



390 MW

180 MW

390 MW of wind and 180 MW of solar will achieve this target and provide a more even generation profile with potential production peaks during the morning, midday, and afternoon – better matching demand.

IT'S ACHIEVABLE

34%

OF GOOGLE'S ENERGY
IN 2013 WAS FROM
RENEWABLE SOURCES.



Google consumed more than 2 million MWh in 2010, roughly equivalent to ½ Melbourne's usage.

IF A COMPANY
LIKE GOOGLE
CAN ACHIEVE IT,
SO CAN
MELBOURNE


25%

RENEWABLE ENERGY
TARGET.




Melbourne is a global sustainability leader with the support of a forward looking and innovative business community.

What is the problem?

- Growth in renewables has slowed due to policy uncertainty
 - Abundant proposals for new projects but development not progressing
 - National electricity market has sufficient existing fossil fuel capacity
 - Greater capital outlay required for renewable projects
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Barriers for new renewable energy:

- Power Purchase Agreements
 - 10 – 15 Years
 - Finance
 - Price premium (RECs, or other means)
 - Planning approvals
 - Network connections
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Solution being explored


- Develop a group purchasing model to directly support new renewable energy projects through long term off-take contracts.
- Test ability to reduce costs
- Deliver additional co-benefits to organisations



Our Partners




Possible solution

- 10 year contract
 - Individual retail contracts for each customer
 - 15 – 30 MW wind farm /
 - ~ 30 MW solar park
 - ? biomass projects
 - Possibly ARENA support
- 


How?

- Key requirements:
 - Sufficient load ~ 100GWh
 - Long term contract (~ 10 – 15 years)
 - Low risk counterparties
 - Demonstrate additional benefits


Additional benefits?

- Leadership
 - Long term price certainty
 - Meeting corporate sustainability targets
 - Carbon Neutral Electricity (NCOSS)
 - Co-benefits:
 - Reputation and marketing
 - Community Development
 - Job Creation
 - Educational & Research
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Work done to date?

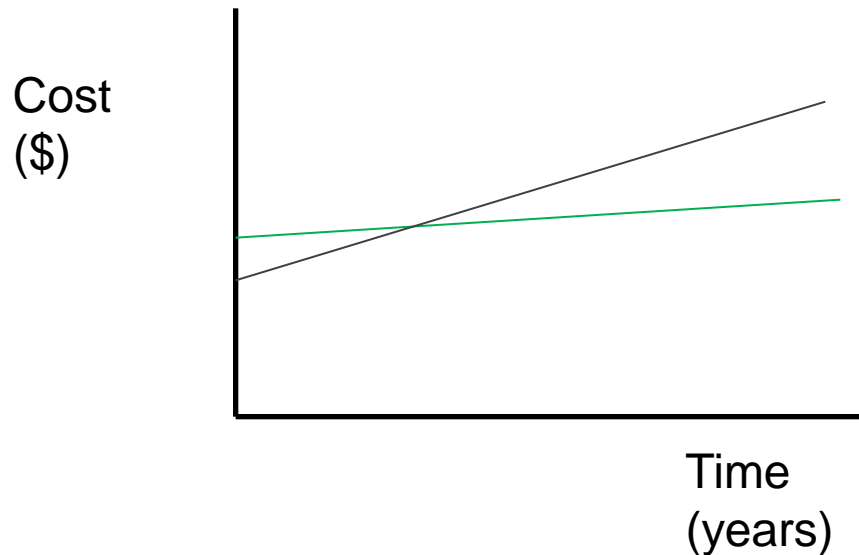
- Develop purchasing group partnership to achieve required scale of demand
 - Non-binding, market testing RFI process
 - Evaluate responses
- 
- A decorative graphic in the bottom right corner consisting of overlapping blue triangles and polygons of various shades, creating a modern, abstract geometric pattern.

Next Steps

- Present business case (April 2015)
 - Commitment to proceed to tender (June 2015)
 - Develop Procurement Plan (Q3 2015)
 - Appoint broker/Agent to undertake procurement on behalf of purchasing group
 - Develop Tender Spec (Q4 2015)
 - Tender - 2016
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Developing the business case

- Potential to lock in long term electricity costs, avoiding fluctuation.
- Advice is that electricity prices are currently at record lows. A good time to lock in long term electricity contracts.



Opportunities for local governments

- Understand appetite for initial cost increase (eg. 30%)
- Understand appetite for long term contracts
- Identify partners to achieve critical load
 - Universities; other councils; corporate;
- *Or* identify potential for biomass projects (eg. landfill methane)

Questions?



What we know

- Abundant proposals for new projects

Victoria existing and potential new developments by generation type (MW)

