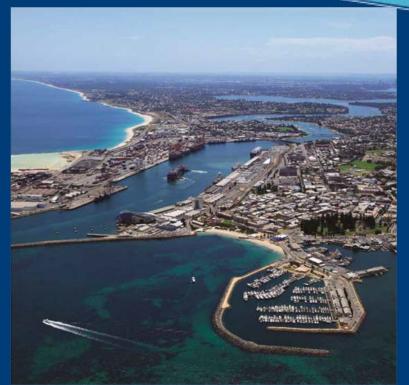




### City of Fremantle



## Fremantle as a living laboratory

Mayor Brad Pettitt





### A living laboratory of 30,000 people





# One Planet Fremantle Strategy



### The One Planet Principles

Zero carbon	making buildings more energy efficient and delivering all energy with renewable technologies
Zero waste	reducing waste, reusing where possible, and ultimately sending zero waste to landfill
Sustainable transport	encouraging low carbon modes of transport to reduce emissions, reducing the need to travel
Sustainable materials	using sustainable and healthy products, such as those with low embodied energy, sourced locally, made from renewable or waste resources
Local and sustainable food	choosing low impact, local, seasonal and organic diets and reducing food waste
Sustainable water	using water more efficiently in buildings and in the products we buy; tackling local flooding and water course pollution
Land and wildlife	protecting and restoring existing biodiversity and natural habitats through appropriate land use and integration into the built environment
Culture and heritage	reviving local identity and wisdom; support for, and participation in, the arts
Equity and local economy	creating bioregional economies that support fair employment, inclusive communities and international fair trade
Health and happiness	encouraging active, sociable, meaningful lives to promote good health and well being



### Two key components

- 1. Infrastructure investment
- 2. Education and capacity building in community and sector



# 1% of rates

We are one of the few councils in Western Australia that sections off a percentage of annual rates revenue to put entirely towards carbon reduction projects.







### 1. Renewable energy investment

Fremantle is WA's first carbon neutral council.

Solar PV on almost all Council—owned buildings

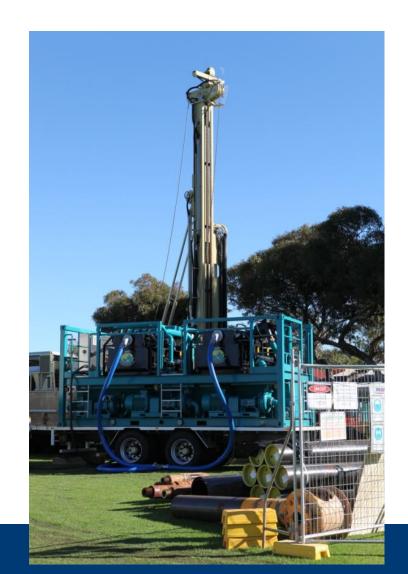




# \$3.5m Geothermal/heat pump municipal pool heating/upgrade project





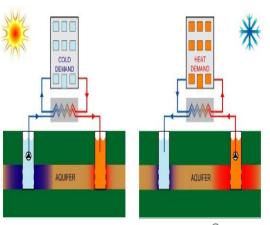




#### City of Fremantle

- 300kW closed geothermal heat pump draws water at 27°C from 160m below the ground.
- •Water is re-injected at 22°C into the borefield.
- •Geothermal supplies primary heating.
- •76kWe cogeneration unit.
- Gas boost (winter)





### Solar farm on South Fremantle Tip Site

- The landfill site covers 19.4 hectares, 88 per cent of it owned by Fremantle Council.
- The council is prepared to assign a 21-year peppercorn lease to potential developers or operators of the land.



City of Fremantle







City of Fremantle fremantle.wa.gov.au

### 2. Green buildings: key part of strategy

 Our Target: All buildings within the operational control of the City of Fremantle will be 'net zero carbon' by 2020

### Household scale - Josh's House in Hilton

10 star Nationwide House Energy Rating Scheme (NatHERS) same cost and timeframe as normal house in Fremantle



### All new commercial buildings 4 star Greenstar All new city owned buildings at least 5 star Greenstar





### Good progress at commercial level BUT

Time for demonstration of a sustainable multi-unit residential development





### Bedzed U.K.







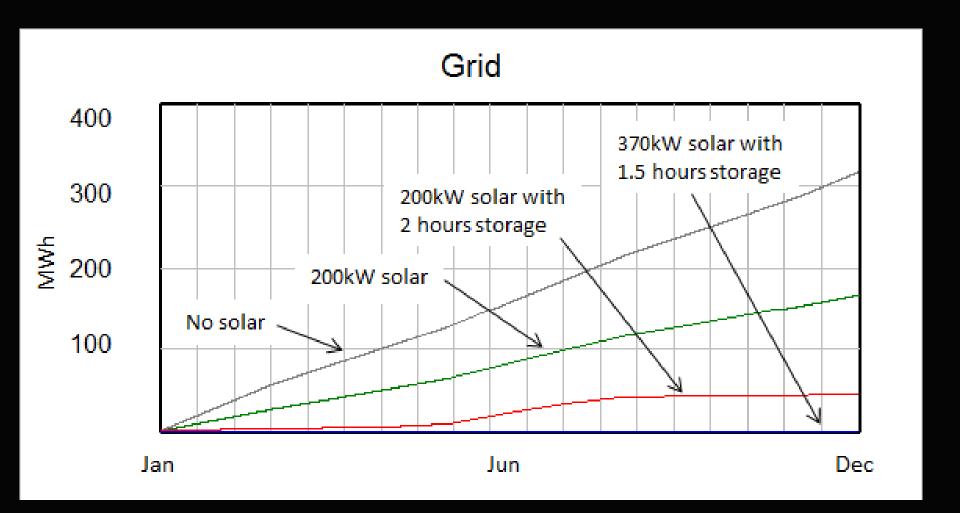
### Lochiel Park, Adelaide

### Vision for old Fremantle Depot Site

- Use Greenstar Communities/One Planet
- #1 Priority Investigation of sustainable development potential for the Knutsford Street Depot Site



### Initial GHD study – electricity required from grid







# Building sustainability leadership within City of Fremantle staff





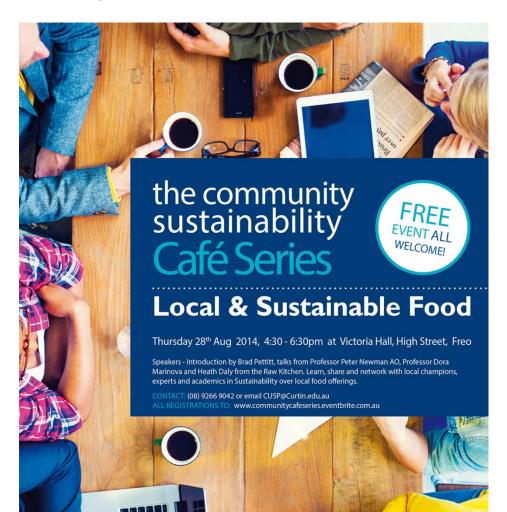
### Building leadership in the community

- Sign eight schools to the Low Carbon Schools program by 2016.
- Sign 20 commercial businesses to the CitySwitch program by 2017.
  - Abernethy Owen, LED lighting
  - 8 month payback!





### Community café series





### Fremantle as a living laboratory

- Evidence based approach to best value carbon reduction.
- Key lighthouse projects to inspire broader change beyond Fremantle.
- Education and community engagement.
   Sustainable change is not getting too far ahead ... bringing the majority with you.

### Thanks

mayor@fremantle.wa.gov.au







### Transport: from bikes to light rail

 Our target: The City of Fremantle will reduce emissions from transport by at least 30% by 2020









### Density: From small dwellings to TODs

