Parkes Water Infrastructure Renewal Project

# Resilience in Design

















#### Benefits of the new STP infrastructure

Control Contro



#### Benefits of the new WTP infrastructure

Parkes Shire Council was willing to invest in going beyond business as usual for longer term benefits to the environment, community and operating costs of the plant.

### Resilience Initiatives







Photovoltaic Augmentation



STP Outfall Redesign

Critical infrastructure such as sewage and water treatment plants are vulnerable to the effects of climate change.

#### Maximum temperatures projections

Year 2030
10.70

Year 2070
2 - 10

#### Climate change risk assessment steps



Climate effects identified



Key risks identified



Adaptation measures identified

#### Climate effects

#### 2 Key risks

RISK RATING	2030	2090
Very Low	3	2
Low	19	18
Medium	11	4
High	5	11
Very high	0	3
Total risks	38	38

#### 3 Adaptation measures

## This largely validated what Parkes Shire Council was already doing





Photovoltaic Augmentation







20%

plants energy supply per annum



8Yrs

Payback period

STP: 100kWp

WTP: 100kWp

288kWp

108kWp

Further savings if maximum energy draws shifted to peak sunlight hrs



Climate Change Risk Assessment



Photovoltaic Augmentation

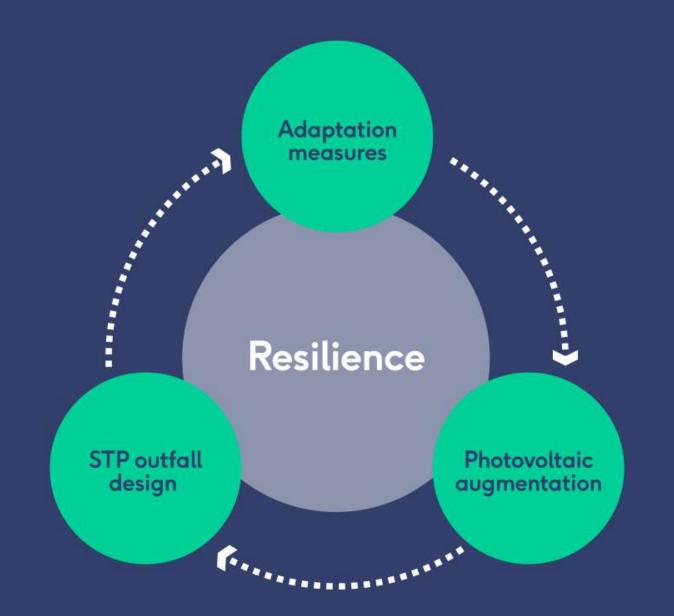


STP Outfall Redesign



#### The STP Outfall redesign included





#### Acknowledgements