## **Fairwater Living Lab**



## Year 3 of 3 - COMPLETE

#### 1.7mil over 3 years

2021-22

SIZE

PARTNERS

FUNDERS

REPORTS

- 29 University of Technology Sydney Curtin University Frasers Property Australia Green Building Council of Australia Wattwatchers
- ARENA Fraser Property Australia Government of NSW
- **ARENA Milestone Report Mar '19** ARENA Milestone Report - Jan '20 ARENA Milestone Report - Feb '21 Final Annual Report - Jun '22



#### **Overview**

The Fairwater Living Laboratory project aimed to assess the performance of renewable thermal energy heat pumps in the Australian context. A first in Australia, Frasers Property Australia installed this technology into homes at their Fairwater development in Blacktown NSW. Specifically, the study tested whether the technology reduced local peak demand (especially during hot summer days); was commercially viable; reduced energy consumption, emissions, and the cost of living for residents, and reduced urban heat island impacts. Now complete, results provide insight for stakeholders including Networks providers, property sector, customers (community) and supply chains.

### **Progress against outcomes:**



#### **Project insight**

The Fairwater Living Lab project has generated a number of actionable insights that are relevant to several key stakeholders. Based on the data generated through the project, project research partners UTS and Curtin University have composed reports outlining the key implications for Networks, the Property Sector, Customers and Supply Chains.

**Implications for Property Sector UTS Report** 

**Implications for Customers** UTS Report | Curtin University Report

UTS Report









**Implications for Networks** UTS Report | Curtin University Report

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**Implications for Supply Chain** 

# **Project Activities - Fairwater Living Lab**

<b>2019</b> Finalised all project agreements with partners						May - Dec 20 Monthly project	<b>020</b> updates provic	led to	
2019 Meetings with project steering committee 2019 Recruited 40 households to participate in the study						May-Oct 2020 Built a data capability with Curtin Institute of Computation to allow for easier extraction and synthesis of data		urtin allow for sis of data	Oct 2 Manua reading proper
<b>2019</b> Established research methodology, data management plan and project approved by the UTS ethics committee	ct plan which was indep	pendently reviewed an	d				Jul 2020 Manual gas readings for properties	data r all 40	Oct New Curtin for Co
2019 Installed Wattwatchers energy meters, water meters and Hux indoor air quality and environmental condition Feb-Mar 2020   winding down of database provider Winding down of database provider					2 <b>020</b> vn of original ovider, Hux		Sep 2020 New ARENA Case Manager		
Installed Phenocams and videocams externally in the Fairwater preci	inct								
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19 Jan Mar May Jul	Sep	Nov	2020	Гер	Apr	Jun	Aug		ОСТ
19 Jan Mar May Jul	Sep	Nov	2020	Feb 2020	Apr	Jun Installed thi env	Aug Aug 2020 ree outdoor vironmental		ост
19 Jan Mar May Jul    KEY   Project governance	Sep	Nov	2020	Feb 2020 New Climate manager	Apr e-KIC project	Jun Installed thi env monitor around th	Aug 2020 ree outdoor vironmental ing systems he Fairwater precinct	Meeting	<b>OCT</b> with proj
19 Jan Mar May Jul KEY • Project governance • Research methodology • Operational foundations	Sep	Nov	2020	Feb 2020 New Climate manager	Apr e-KIC project May 2020 project steering committee	Jun Installed the env monitor around th Replaced all the 80 inde to ma	Aug 2020 ree outdoor vironmental ring systems he Fairwater precinct Aug 2020 batteries in oor sensors aintain data connectivity Aug 2020	Meeting Added ad loggers adde	OCT with proj lditional W to seven h ed PV thro
19 Jan Mar May Jul KEY • Project governance • Research methodology • Operational foundations	Sep	Nov	<b>2020</b> Establ every	Feb 2020 New Climate manager Meeting with p ished manual ga 2-3 months for a	Apr e-KIC project May 2020 project steering committee May 2020 s data readings Il 40 properties	Jun Installed the env monitor around the Replaced all the 80 inde to ma to ma New Curtin replaced mat	Aug Aug 2020 ree outdoor vironmental ring systems he Fairwater precinct Aug 2020 batteries in oor sensors aintain data connectivity Aug 2020 nesearcher ternity leave cover	Meeting Added ad loggers adde	OCT with proj ditional V to seven H d PV thro ort at Curt for C

**Apr 2021** ies in the 80 indoor sensors to maintain data connectivity

Dec 2020 Manual gas data readings for all 40 properties

Dec 2021

Mar

Feb 2021 Replaced 16 faulty indoor devices

Feb 2021 Installed 10 gas loggers after signing a data sharing agreement between Jemena, Climate-KIC, UTS, Curtin and X2M Connect

