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 @ProfRayWills

Bringing change to the Kimberley

ETAK was initially formed to build a 'common voice' for the Kimberley

- Actively promote the need for, and scope of, the energy transition
- Engage with local and State Government, incumbent energy suppliers, local communities and traditional owners to promote the aims of the Association
- Support and promote projects that can further the aims of the association

In 2020 the Energy Transformation Association for the Kimberley (ETAK) was awarded a WA ACE Grant to achieve the following outcomes:

- Increased understanding of the energy needs of the Kimberley community
- Increased energy knowledge of ETAK members
- The following report outlines the origins of ETAK, the situation in 2021 and the activities that ETAK delivered to achieve the project outcomes.



Change in the Kimberley

WA ACE grant has shifted ETAK goals:

- COVID pandemic onset resulted in the founding management committee members having less time and energy to put into ETAK, necessitating a reinvigoration of ETAK and a need to grow ETAK membership – essential to enable ETAK to start a conversation.

Coincidentally, the WA Government's covid stimulus package saw Horizon Power commit to a number of projects across the Kimberley including solar, batteries, stand-alone power systems, and streetlights, and also the Broome Customer Experience Centre



Bringing change to ETAK

High level conclusion of ETAK 3rd August 2021 workshop

- The focus of ETAK as being an organisation for the business community rather than the broader general community and,
- Importantly - agreement amongst participants that they wanted to continue on the conversation.



Renewing ETAK: 3 Aug 2021 workshop outcomes

Issues identified	What ETAK aims to do:
<p>Leadership on renewable energy needed across all levels to drive strategic change</p>	<ul style="list-style-type: none"> • Provide a strong voice by combining the views of many stakeholders • Engage with local, State and Federal government to <ul style="list-style-type: none"> • improve energy efficiency • progress opportunities for renewable energy • increase electric vehicle adoption • Advocate for integrated, collaborative and coordinated cross-portfolio Government
<ul style="list-style-type: none"> • Processes for local dialogue required to inform long-term planning and decisions, to increase transparency and to increase communication • A multi stakeholder entity which can collaboratively pursue the opportunities presented by the energy transformation would be valuable 	<ul style="list-style-type: none"> • Host dialogues to address specific energy challenges / opportunities for the region • Ensure all stakeholders are involved and • engaged in energy system planning across the region – solutions developed from the ground up
<p>Important to grow our understanding of the Kimberley energy - both technical issues in supply and demand, and also social issues that impact on energy use, history and culture including subsidies, temperature-driven high energy use, affordability, and a high proportion of rental properties</p> <p>.</p>	<ul style="list-style-type: none"> • Undertake and support studies to demonstrate the viability of renewable energy projects in the Kimberley context • Highlight opportunities available through the energy transformation including; <ul style="list-style-type: none"> • Distributed energy resources (DER) eg. rooftop solar, battery storage • Standalone power systems • Energy efficiency • Electric infrastructure and large scale renewable systems • Electric vehicles



Wind, solar, batteries change WA



WIND
253 kW
 Speed: 8.9 m/s



SOLAR
389 kW
 1093 W/m²



DIESEL
266 kW



RESISTOR
1 kW



DESAL
151 kW
 Capacity: 77%

Renewable Desalination

GENERATION

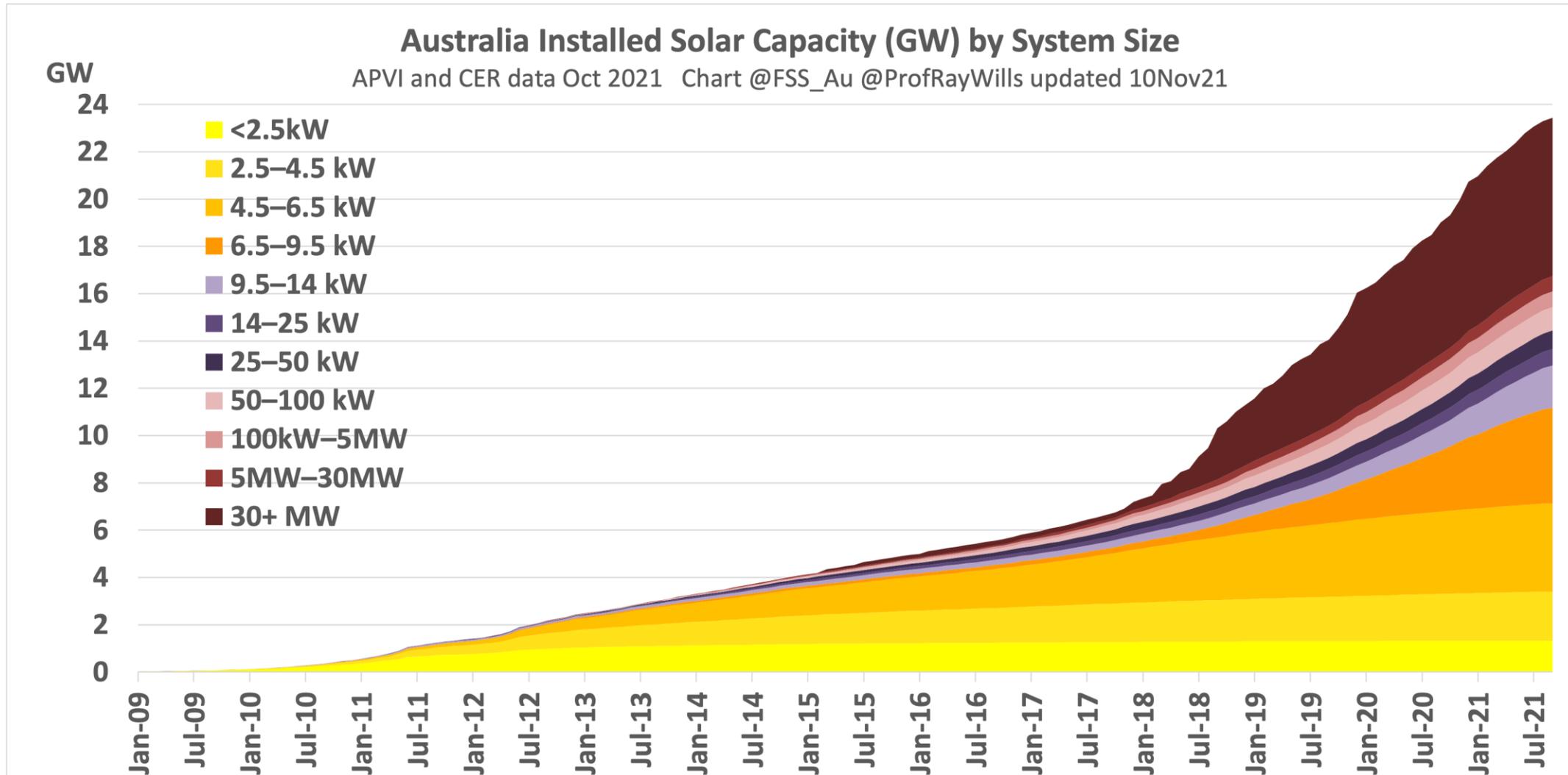


DEMAND

OUTPUT
908 kW
 ■ Customer Demand

71 %
 RENEWABLE ENERGY
 Renewable Surplus

Solar key part of Australia's change

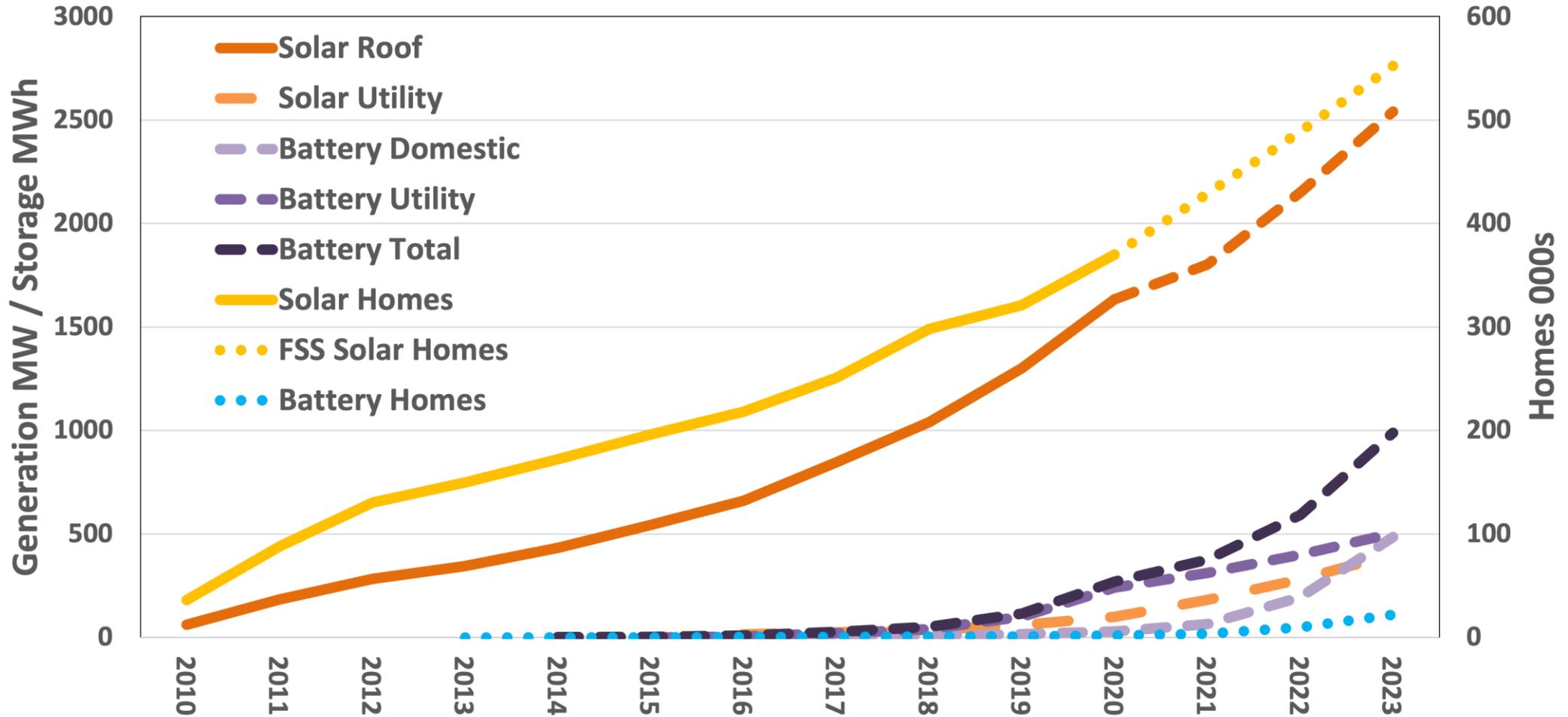


Solar key to WA's change

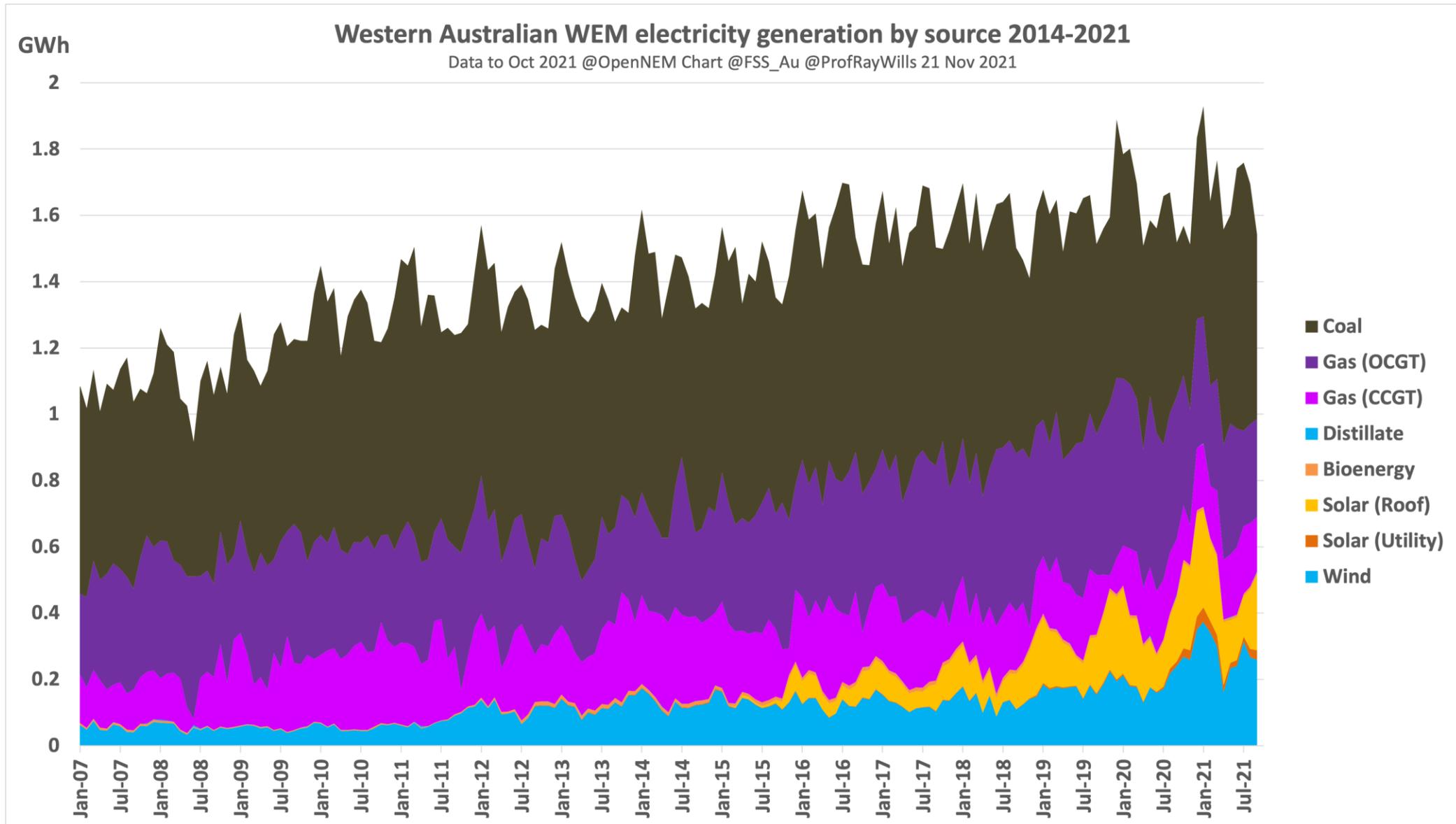
Western Australian solar and battery home & utility capacity growth and projection to 2023

SHCP and CER STC Data to Jun2021

Chart, Projection @FSS_Au @ProfRayWills updated 21July2021



Renewables bringing change to WA

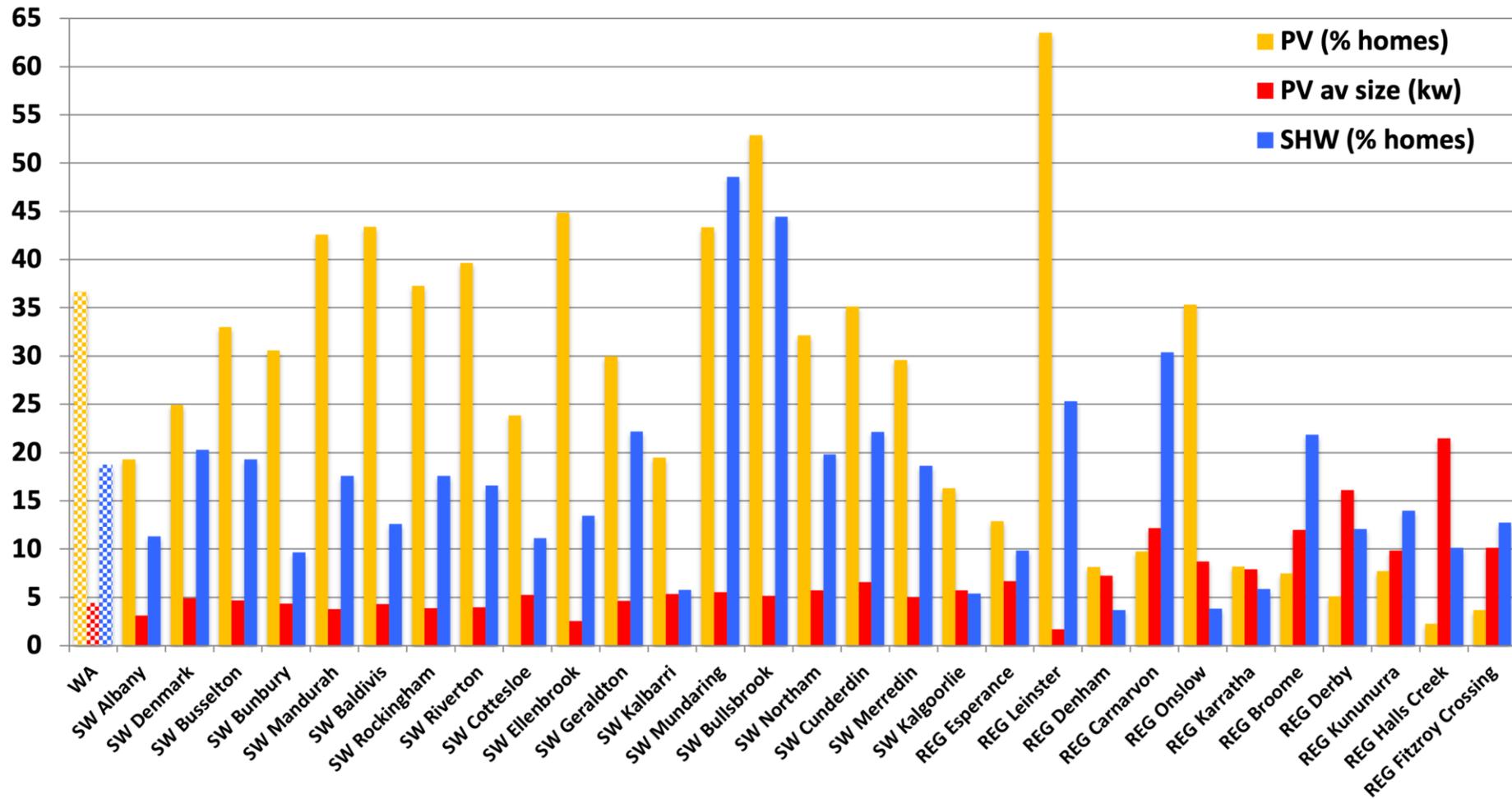


Solar on roofs in WA

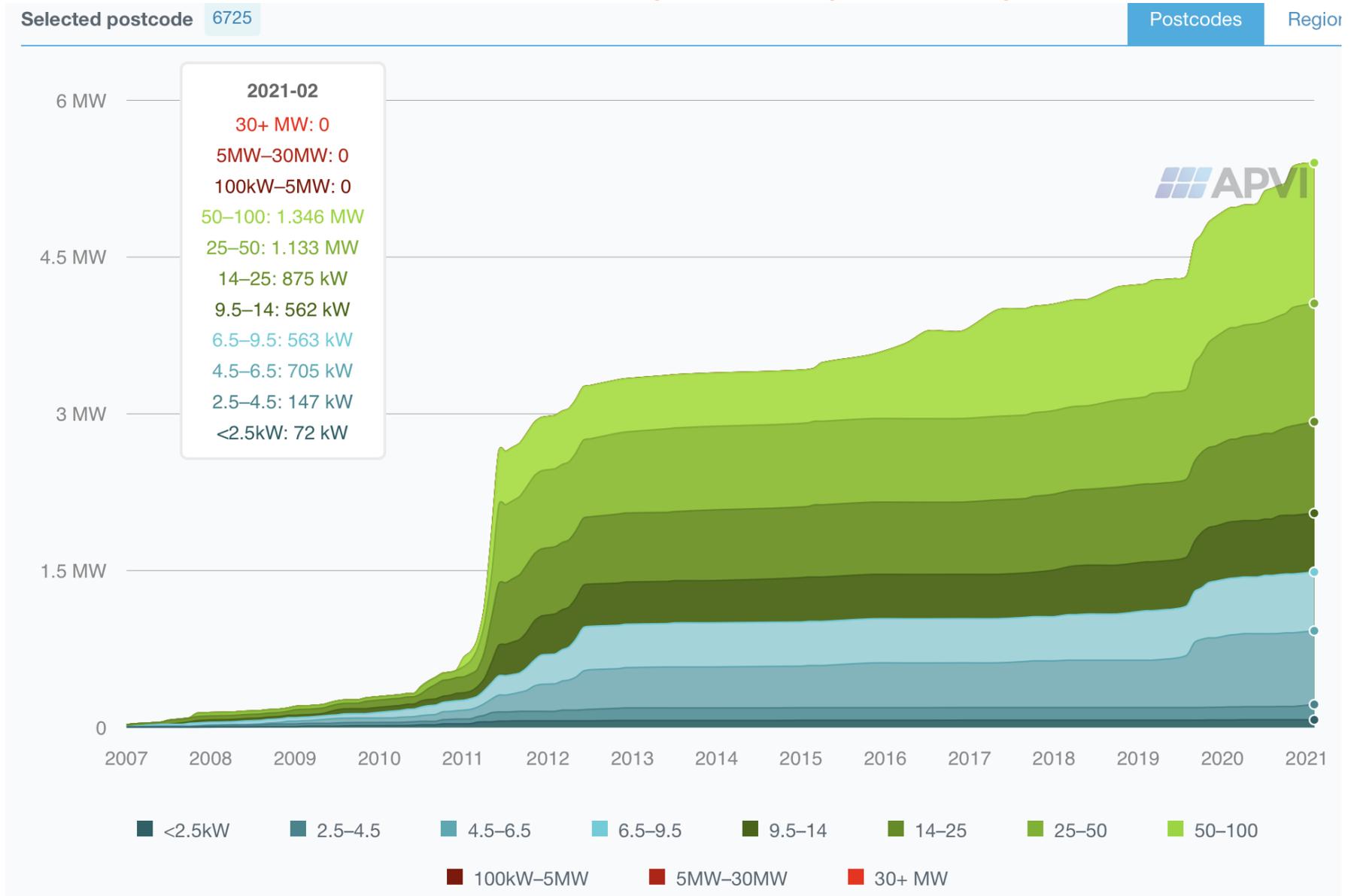
Western Australian Households with Solar PV and Solar Hot Water

Towns and cities by postcode SW grid vs Regional microgrid towns

Households ABS via APVI CER STC data via APVI to May21 Chart @FSS_Au @ProfRayWills 4 Jul 21



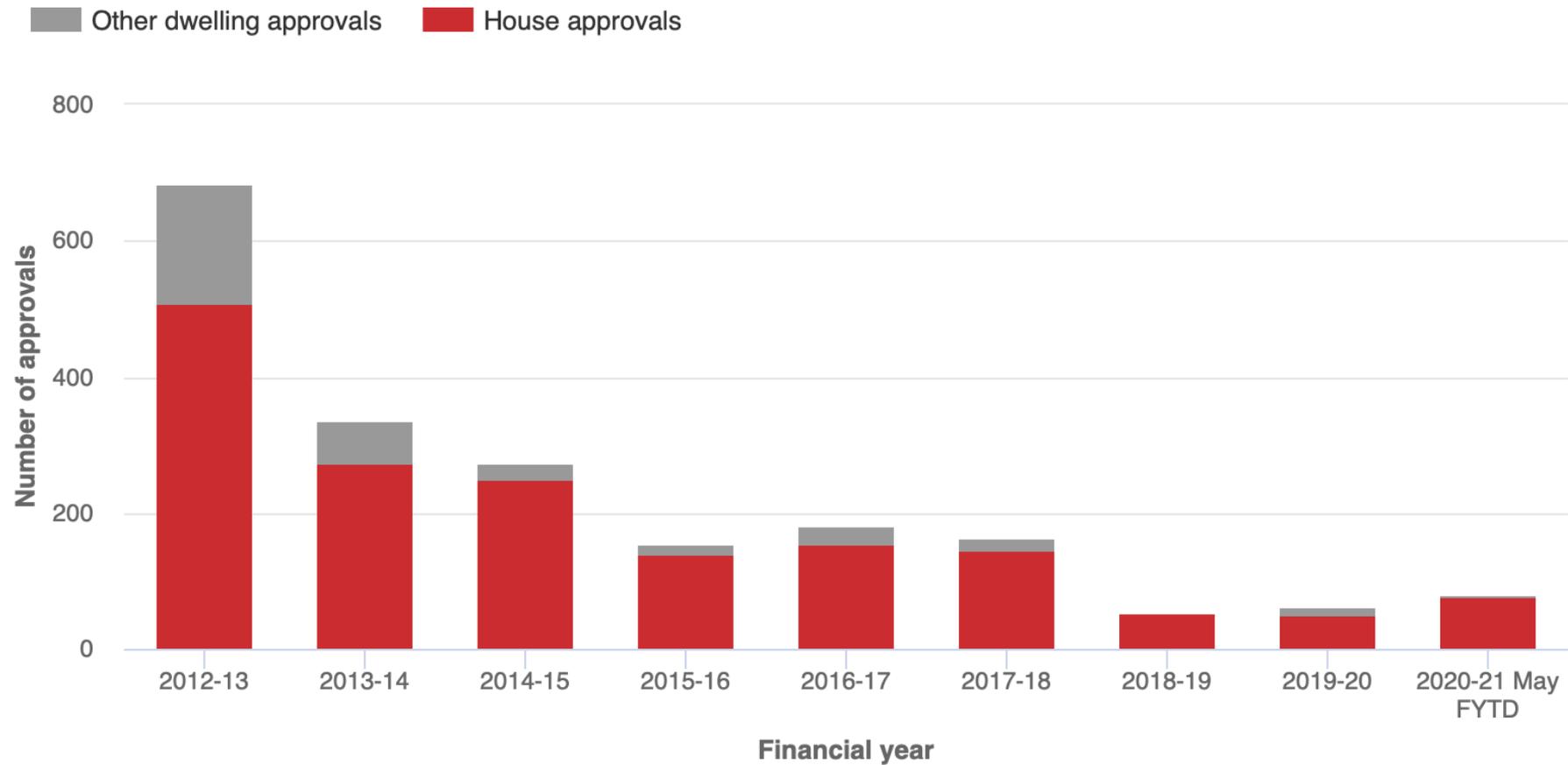
Broome solar roof history - capacity



Broome building approvals

Residential building approvals

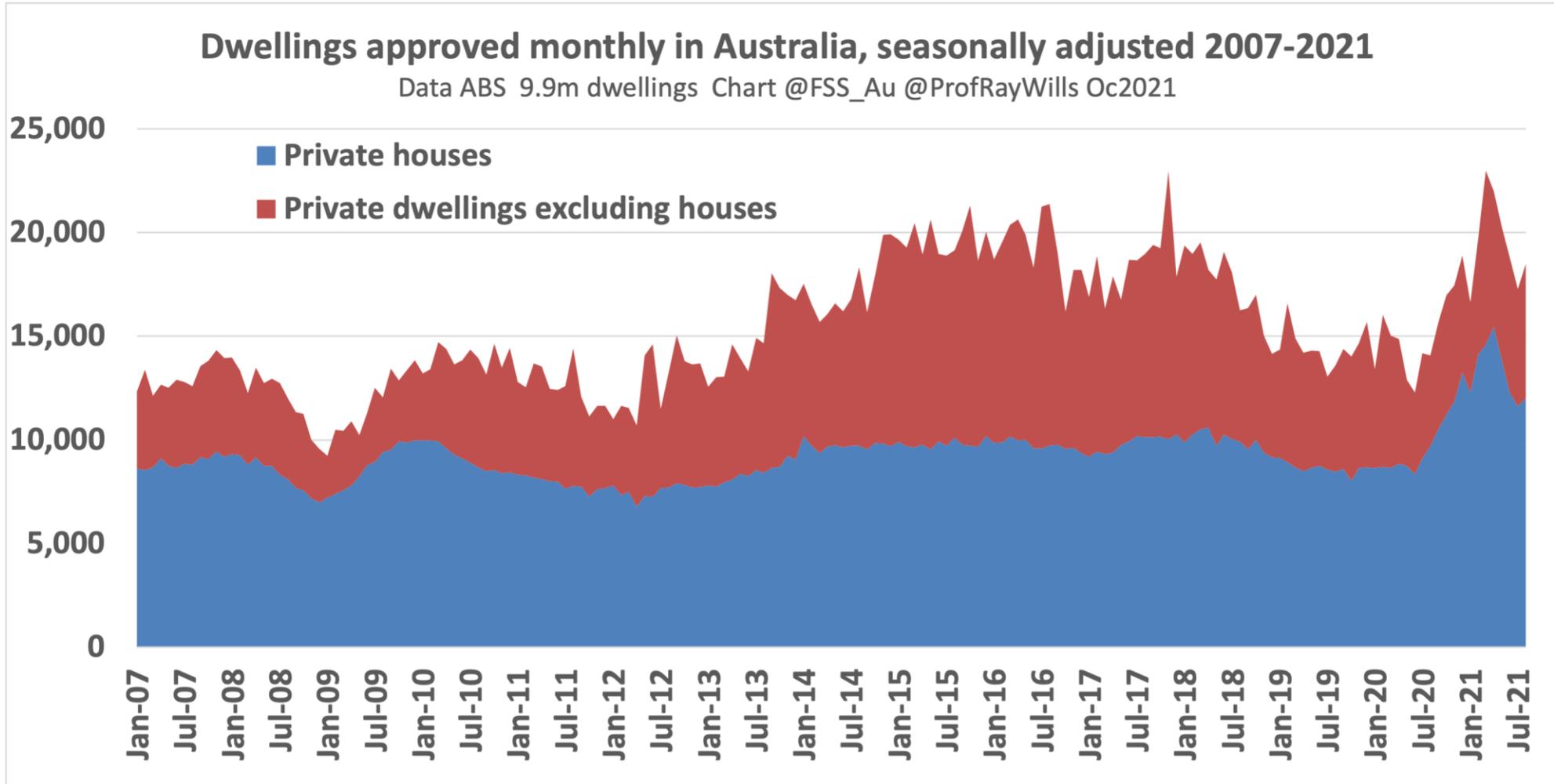
RDA Kimberley



Source: Australian Bureau of Statistics, Building Approvals, Australia (8731.0). Compiled and presented by .id (informed decisions).



What we build to live in

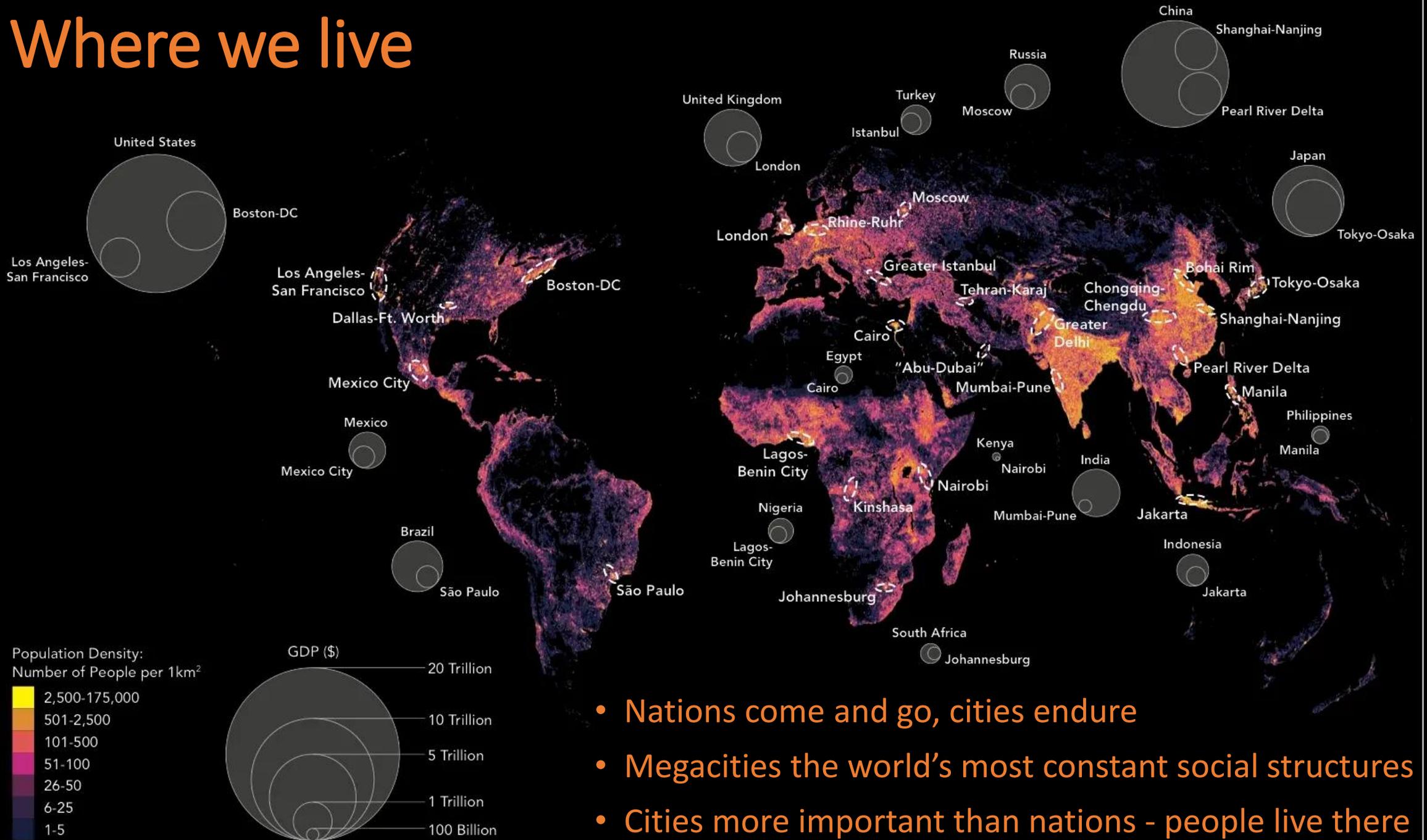


Speed and Saturn <https://twitter.com/ProfRayWills/status/1462332648773210118>

Barcelona <https://twitter.com/ProfRayWills/status/1449553338446479364>



Where we live



- Nations come and go, cities endure
- Megacities the world's most constant social structures
- Cities more important than nations - people live there

Australia's corporate players

Latest News

Woolworths Group to be powered by 100% green energy by 2025 in move set to help grow renewable sector



OVER THE LONG TERM

Sustainability at Wesfarmers.

Bunnings and Officeworks commit to 100% renewable energy by 2025

Bunnings and Officeworks have announced plans to source 100 per cent renewable electricity by 2025, to help achieve their recently announced targets of net zero Scope 1 and 2 emissions by 2030.

ABC RURAL

A renewable energy revolution is powering Australia's \$720bn mining and resources industry

ABC Rural / By Daniel Mercer and Tom Edwards

Posted Mon 15 Nov 2021 at 4:24am, updated Thu 18 Nov 2021 at 8:33am

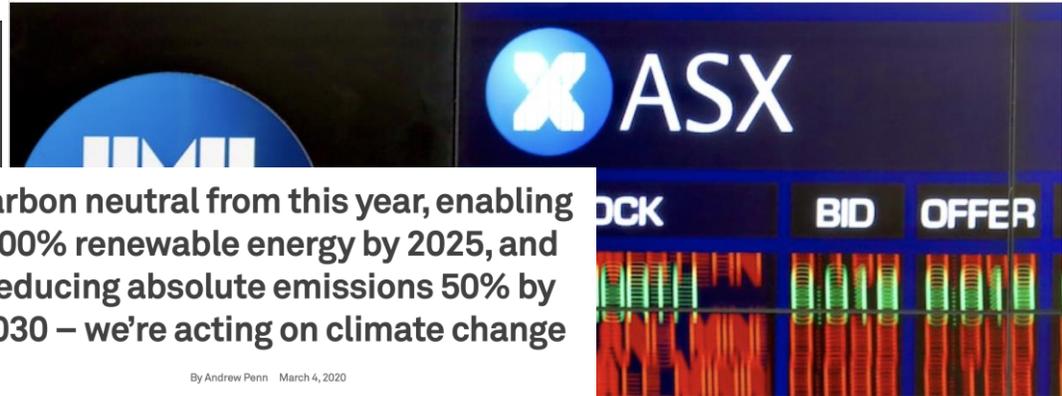


ASX surges on higher commodity prices, BHP investors back climate plan and Woolworths' renewables pledge

by business reporters [Sue Lannin](#) and [Rhiana Whitson](#), wires

Posted Fri 12 Nov 2021 at 4:40am, updated Fri 12 Nov 2021 at 2:04pm

(Image credit: Christian Sprogøe)



Carbon neutral from this year, enabling 100% renewable energy by 2025, and reducing absolute emissions 50% by 2030 – we're acting on climate change

By Andrew Penn March 4, 2020

Telstra is one of the largest consumers of power in the country. Powering networks to cover a continent this big so that millions of Australians stay connected requires something in the order of 5.9 petajoules of energy each year and last year that resulted in nearly 1.3m tonnes of greenhouse gas emissions.

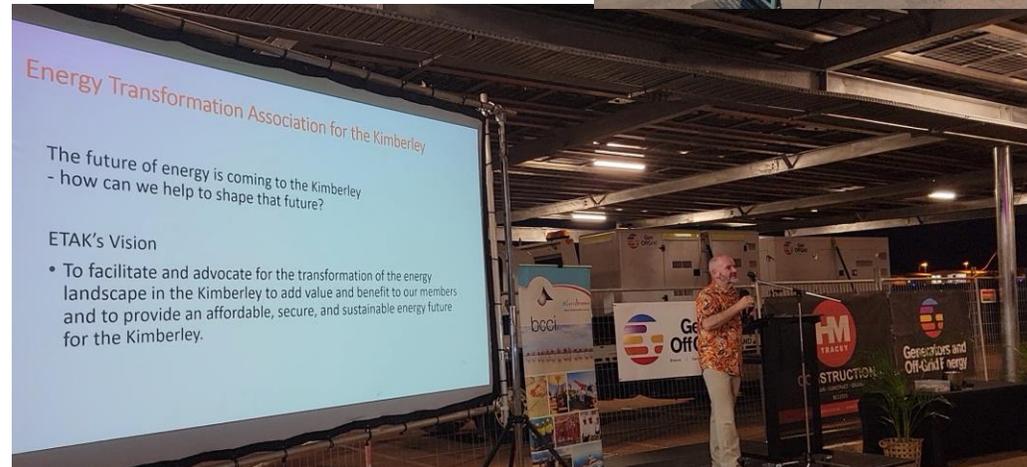


Highlighting ETAK to Broome businesses

Aligning with Broome Chamber of Commerce “Canapes Under the Canopy” sundowner event on 17 Sep 21

About 100 people attended a BCCI event (sponsored by Generators and Off-Grid Energy and H&M Tracey) organised to celebrate the new Boulevardde solar car park and with a presentation by Prof Ray Wills on the future of energy in the Kimberley, and highlighting ETAK.

<https://youtu.be/q2qPoIUaHBc>



Bringing stakeholders to ETAK

During week of 13 Sep 2021, and subsequently in Perth, Prof Ray Wills, held one-on-one meetings with 13 businesses, organisations and government agencies to discuss their views on energy transformation, and what they expected of ETAK.

Conversations very positive - intention is to progress these conversations toward ETAK membership, and ultimately, as paying members of ETAK.

The other avenue for self-sustainability of ETAK is as a potential collaboration with the Broome Chamber of Commerce and Industry.



Stakeholder conversations

Face-to-face meetings September 2021

ATOM; Broome CCI; Dept of Communities; Development WA; Engawa Architects; First National Real Estate; Generators and Off-Grid Energy; H&M Tracey; Horizon Power; Kimberley Community Renewables; KRSP; Prendiville Group; Shire of Broome; WaterCorp

Additional conversations to be held - Buru Energy, Kimberley Mineral Sands, Kimberley Ports, Willie Creek, Fruitico, additional Broome solar installers, and additional Dept Communities, Dept Housing, Water Corp



Outcomes

- Greatly increased activity of ETAK
- ETAK self-awareness – increased understanding of diversity of energy needs in the Kimberley
- Increased understanding of member expectations and needs
- Workshop and information sessions held for stakeholders - and more planned collaboratively with members and stakeholders on energy efficiency, electric vehicles, energy in remote communities, COP outcomes, and more ...
- Growing interactions with members and stakeholders
- Media presence building with website and Facebook
- ETAK experience with WA ACE Grant to share through EPWA



