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These findings highlight that homes with energy and efficiency upgrades are delivering not only long-term energy bill savings and comfort, but also measurable price premiums at a time when cost-of-living concerns are top-of-mind for Australians.

Executive Summary

Energy features are measurably influencing property values in Australia

The *Watt's it Worth* report presents a national-scale analysis to quantify that relationship, using our Automated Valuation Models (AVMs) alongside aggregated solar information supplied by Geoscape and energy estimates generated using Cotality property data combined with CSIRO's RapidRate™ tool.

Drawing on data from more than six million homes, the findings reveal how solar power systems and energy efficiency ratings impact pricing across different housing markets.

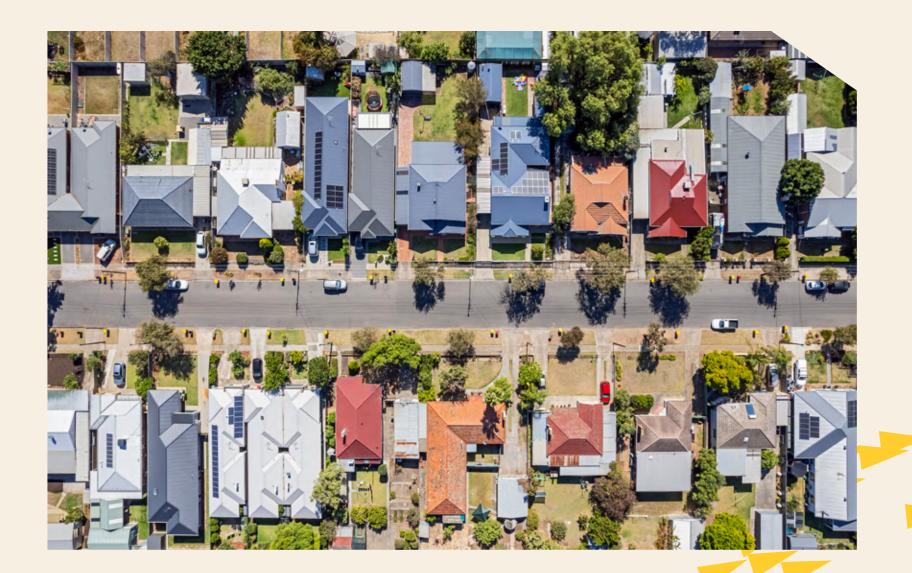
From a solar perspective, our study reveals that solar power systems appear to provide a tangible impact on home value, contributing to higher

price premiums. At the national level, houses with solar systems were valued at around 2.7% more than comparable dwellings without, equating to an uplift of approximately \$23,100 when controlling for other attributes.

When it comes to energy efficiency, the analysis suggests that nationally, the average uplift of an additional estimated NatHERS
Star is estimated to add 1.3% or approximately \$10,560 to the value of a house, while across capital cities, premiums range from \$3,749 to \$32,946 depending on location.

The figures demonstrate the impact also tends to be greater in more affordable markets, where upfront system costs represent a higher proportion of total value and bill savings carry greater weight.

Analysis across more than six million homes demonstrates a consistent price premium associated with the presence of solar panels and higher energy efficiency ratings.





Executive Summary

Energy features are measurably influencing property values in Australia

- For homeowners, these findings provide a clearer benchmark for the value of upgrades that reduce energy use and improve comfort.
- For lenders, performance data may become increasingly relevant to ESG reporting and sustainability-focused products.
- Developers and real estate agents are beginning to respond to buyer preferences, incorporating energy features into both design and marketing strategies.
- For governments, the evidence builds a stronger case for mandatory disclosure of energy ratings, upgrade incentives, and a more consistent national approach.

For the property technology sector, it confirms the opportunities on offer for their real estate customers and the need to support the identification and showcasing of a range of key energy efficiency features in sales and property management services.

Currently the ACT is the only state or territory where energy ratings are mandatory at the point of sale and lease¹. In response, the Australian Government has launched Stage One of the Nationwide House **Energy Rating Scheme (NatHERS)** for existing homes². This provides a nationally consistent pathway for homeowners and investors to obtain a government-backed Home Energy Rating conducted by an accredited Home Energy Rating assessor via a home visit. The scheme is designed to provide transparency of a home's

energy efficiency potential when the property is on the market. This will empower consumers with better property information, build awareness and support for property upgrades that deliver ongoing affordability and comfort, and prepare the market for potential future mandates.

The NSW Government is the first state to formally announce a commitment to introducing Home Energy Ratings at the point of sale or rent, in a phased approach³. Early trials have begun with the real estate and property technology sectors.

Crucially, this report highlights that energy performance is becoming an increasingly important lens through which Australia's homes should be appraised, financed, and upgraded, as it has the power to directly impact and shape the future of the nation's housing market and energy productivity.



¹ Civil Law (Sale of Residential Property) Act 2003 (ACT) cl 22 and cl 23.

^{2 &}lt;a href="https://www.nathers.gov.au/existinghomes">https://www.nathers.gov.au/existinghomes

³ https://www.energy.nsw.gov.au/sites/default/files/2024-09/NSW_Consumer_Energy_Strategy_2024.pdf

Foreword

The new value of home energy upgrades

Australia's housing market is at an inflection point where energy performance, once peripheral to value, is increasingly becoming a consideration in how homes are compared, bought, managed, financed, insured, improved and regulated.

This analysis was carried out using energy estimates generated based on Cotality property data combined with CSIRO's RapidRate™ tool, aggregated solar information from Geoscape, and our AVM.

The report is supported by CommBank⁴ and was developed in collaboration with Cecille Weldon, Director Weldonco Advisory and Project Lead for the Proptech Energy Efficiency Features Standard backed by Proptech Australia. Together, we are working to build a more affordable, resilient and sustainable

housing system, one where energy performance is visible, valued, and actionable.

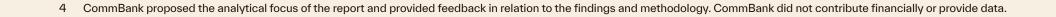
The research arrives at a time of accelerating change. Energy costs remain elevated; energy efficiency disclosure requirements are tightening; and lending to support customers in realising energy bill savings and to aid the transition to a lower-carbon economy is becoming more mainstream. Against this backdrop, understanding the deepening link between residential energy efficiency and value is essential for more informed decision-making across the property ecosystem.

Cotality's findings highlight that homes with energy and efficiency upgrades are delivering not only longterm energy bill savings and comfort,

but also measurable price premiums at a time when cost-of-living concerns are top-of-mind for Australians. These signals are visible in transaction and valuation data, with implications for homeowners, buyers, investors, lenders, policymakers, and developers alike.

Understanding the deepening link between residential energy efficiency and value is essential for more informed decisionmaking across the property ecosystem.







Foreword

The new value of home energy upgrades

These insights also provide an evidence base for evolving energy efficiency disclosure frameworks, targeted property upgrade incentives, and climate-aligned design and development strategies. As energy performance becomes more attractive for buyers, the ability to respond with data-driven tools and forward-looking policy will shape how the housing sector adapts.

This work also reflects CommBank's broader commitment to supporting Australia's transition to net zero, helping customers better understand their climate impact and make informed choices as a part of the move to a lower-carbon economy.

Collaboration is also helping to bring together the best available science, property data, and financial insights, which provides the ability to quantify emerging market dynamics at scale and help all industry stakeholders and consumers to respond with clarity and confidence.

We are proud to share these findings and believe they provide an invaluable foundation for smarter, more sustainable decisions, today and into the future.

Tom Coad

Senior Director, Banking and Finance Cotality

September 2025

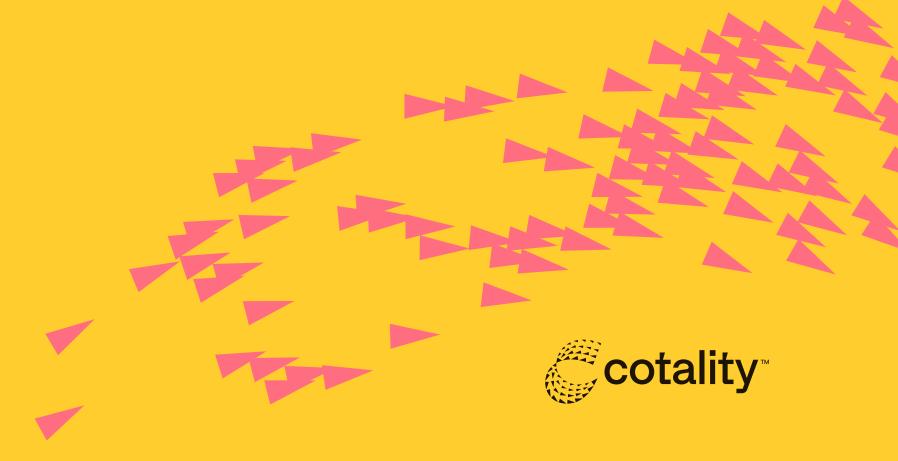


As Australia's largest home lender, we understand the important role solar and energy-efficient upgrades can play in improving a home's energy efficiency and helping to reduce energy costs.

Cotality's research provides insights into the benefits of solar and energy efficiency improvements.

As part of our commitment to helping our customers and supporting Australia's transition to net zero, we are supportive of research which can help Australians make informed decisions when it comes to the value of a property.

Ben Brazier Retail Bank ESG Lead CommBank



Introduction

Quantifying the shift in Australian housing

Australia's housing market is being reshaped by a merging of environmental, financial, and regulatory forces. While the built environment has long been a focus of national climate goals, the role of energy efficiency in influencing property value has remained largely anecdotal until now.

Watt's it Worth examines the relationship between residential energy performance and market value, with a specific focus on solar power systems and estimated thermal energy efficiency. It quantifies the estimated price premium associated with these features and explores the wider implications for buyers, investors, lenders, policymakers, and developers.

In doing so, it helps fill a longstanding gap in the market and a lack of consistent, evidence-based insight into whether, and how, sustainability is priced into housing.

These findings are being delivered at a crucial time.

As energy costs fluctuate and household budgets are under pressure, consumer preferences are shifting. Buyers are increasingly drawn to homes that offer more than aesthetic appeal or location advantage, such as improved comfort, lower running costs, and resilience to rising electricity and gas prices. These expectations are now improving with a more suitable supply network too, as new builds adopt more efficient standards and solar uptake continues

to accelerate across existing housing stock, partly driven by the increasing standards in the National Construction Code (NCC).

Responding to these key market shifts, the property technology sector, which underpins all aspects of the property experience for the real estate sector and consumers, has recently launched the Proptech Energy **Efficiency Features Standard for** residential property. This Australianfirst industry-led, data standard for energy efficiency features in residential property will enable clarity and visibility for these features at key decision-making moments in the property journey. It sends a strong signal that energy efficiency features and energy ratings are key to the next generation of property experiences and insights.

As energy costs fluctuate and household budgets are under pressure, consumer preferences are shifting.



Introduction

Quantifying the shift in Australian housing

From a policy and regulatory perspective, Australia is entering a period of increased transparency and disclosure. NatHERS expansion, Scope 3 emissions reporting, which refers to indirect emissions generated from a company's value chain, such as from financed or insured properties, and sustainability-linked lending products are all raising the profile of energy performance. However, for many stakeholders, clear, data-backed evidence of what this all means for the market has been missing.

Watt's it Worth is a defining report that answers questions and addresses the need for credible information. It demonstrates that energy performance and energy efficient features are increasingly a measurable contributor to property value.



From a policy and regulatory perspective, Australia is entering a period of increased transparency and disclosure.

> However, for many stakeholders, clear, data-backed evidence of what this all means for the market has been missing.





Part 1:

The solar uplift

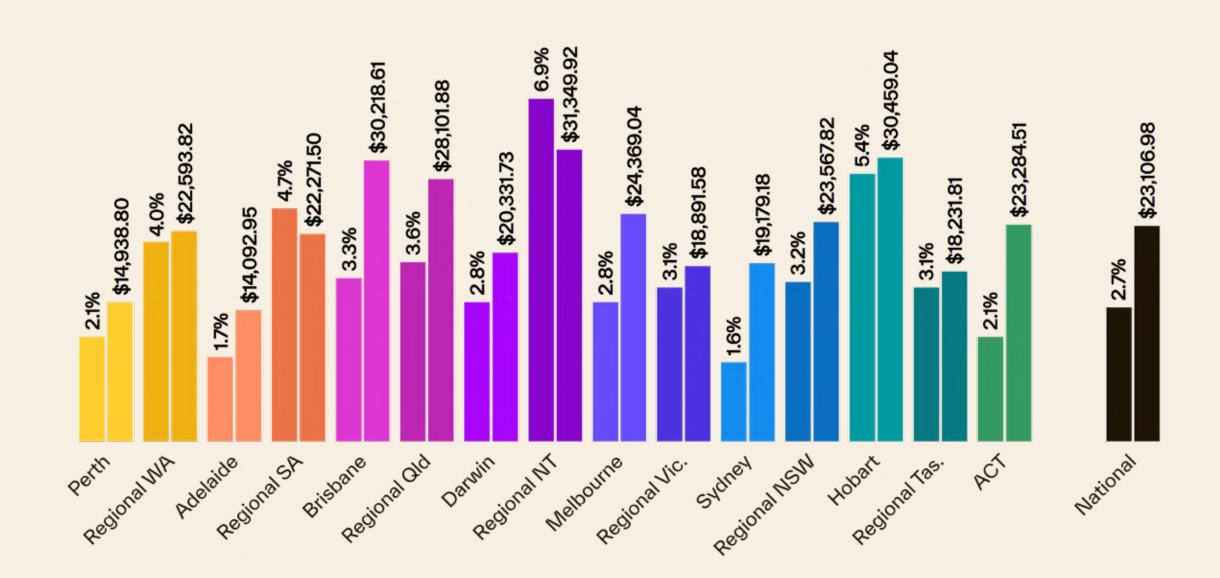
Rooftop solar power systems are one of the most visible and widely adopted home energy upgrades in Australian housing, and they show a measurable link to property value. Their relative affordability and ease of installation, as well as support through state and federal rebates, have likely contributed to their increasing uptake across a broad spectrum of housing markets.

Regression analysis across almost six million homes appears to demonstrate a consistent price premium associated with the presence of solar power systems. At the national level, **houses** with solar systems are valued at **around 2.7% more** than comparable dwellings without, equating to an uplift of approximately \$23,100 when controlling for other attributes.

The impact, however, differs significantly by region:

- In regional Northern Territory, solar added an estimated 6.9% to the median house value, about \$31,350 in dollar terms, reflecting high energy demand for cooling and heating as well as abundant sunlight.
- In Hobart, the uplift was 5.4%, the strongest among the capital cities.
- In Sydney, the percentage effect was smaller at 1.6%, yet the higher baseline values meant the estimated dollar premium still reached \$19,179.
- By contrast, Perth recorded a larger percentage gain (2.1%) but a smaller dollar impact (\$14,939).

How much are solar power systems estimated to add to a home's value?





Part 1:

The solar uplift

When aggregated across Greater Capital City (GCC) areas, the modelled uplift ranged between \$14,093 (Adelaide) and \$30,459 (Hobart), shaped by variation in property values, dwelling types, and consumer preferences. Importantly, the uplift was evident across diverse market segments rather than being confined to higher-value suburbs or income brackets.

This aligns with broader findings from CSIRO and other market participants that home energy upgrades are becoming more visible and common in sale listings, and that consumer search behaviour increasingly favours these inclusions, although at this time the way these features are represented is inconsistent⁵.

The value uplift data suggests that buyers are more likely to respond to home energy upgrades if they can deliver immediate and ongoing costof-living benefits. Solar reduces reliance on grid electricity, helps manage energy bills, and, for some households, improves energy resilience.

Beyond formal value indicators, there is a key shift in "perceptions of value" at the point of sale or rent. When upskilled on home energy upgrades and well-versed in the larger market drivers, the real estate sector is in a prime position to deliver more comprehensive property services and a more meaningful customer experience – and at a time when most people coming to an open home have cost-of-living concerns.

Beyond the buyer perspective, lenders are likely to view the property-level verified energy efficiency data as increasingly relevant to ESG reporting and sustainability-focused products.



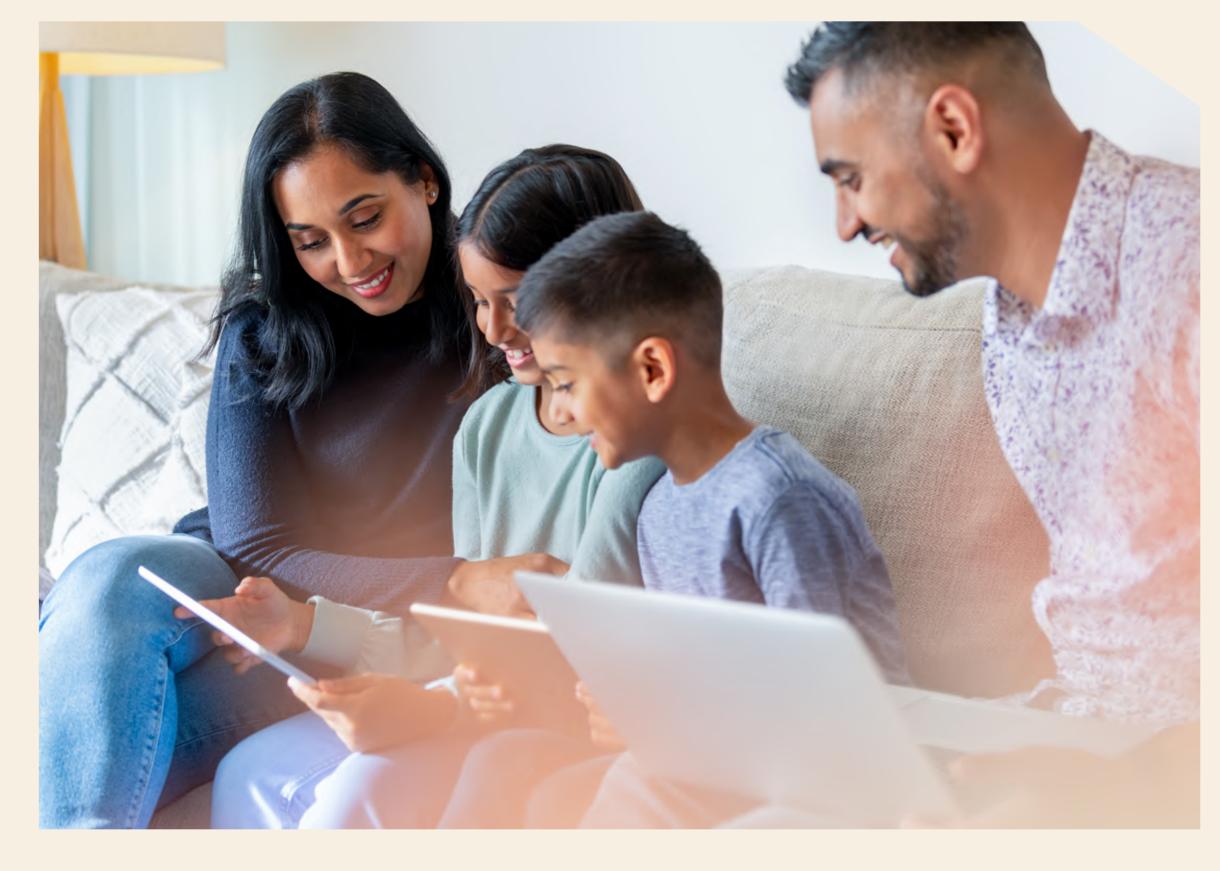
⁵ Romanach, Lygia. Property Attribute Standard for Energy Efficiency Features. Evaluation of current status and recommendations. Australia: CSIRO; 2025. csiro:EP2024-6446. https://doi.org/10.25919/qw20-1520

Part 1:

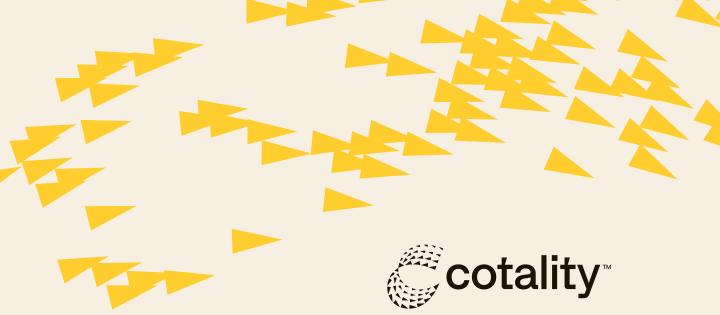
The solar uplift

Policymakers can point to these market signals in shaping incentive schemes and disclosure requirements, while developers and asset managers may treat a solar power system as a baseline inclusion in new projects rather than a discretionary add-on.

Currently, a solar power system is one of the few home energy upgrades that is both easily recognised by buyers and reliably measurable in valuation models and warrantied for a long period of time. This combination explains why its benefits are being priced into the market today as a key energy feature and as a material factor in how homes are valued, financed, and transacted.



A solar power system is one of the few home energy-efficient upgrades that is both easily recognised by buyers and reliably measurable in valuation models.





The efficiency premium

Energy efficiency features and energy ratings have historically been absent from traditional valuation models, primarily because these key features were largely missing from the whole property experience and the systems and processes that identify and record key property features at time of sale or rent.

This fragmentation and lack of standardisation has been a key barrier to measuring the impact of these features at scale. While features like insulation, glazing and orientation are known to improve thermal comfort and reduce energy bills, there has been limited data on how, or whether, those attributes influence market pricing.

Using Cotality's Energy Efficiency Portfolio Analytics in combination with our valuation model, the analysis examined how estimated NatHERS star ratings (from 1-10) correlate with property value. The results appear to show a consistent relationship.

Across the national sample, an additional star was linked to a median uplift of 1.3% in estimated home value, or around \$10,560.

The effect varied by location:

- Sydney's uplift translated to about \$21,000 for an additional star.
- Regional South Australia has a premium of 2.7%, highlighting the importance of efficient design in more climate-exposed markets.
- Darwin had the highest observed uplift at 4.5% for an additional star, reflecting the value of improved performance in managing climatic extremes.
- Brisbane recorded the smallest uplift at 0.4%, equivalent in dollar terms to approximately \$3,700 for an additional star, suggesting the sub-tropical climate may reduce perceived value from efficiency upgrades.





The efficiency premium

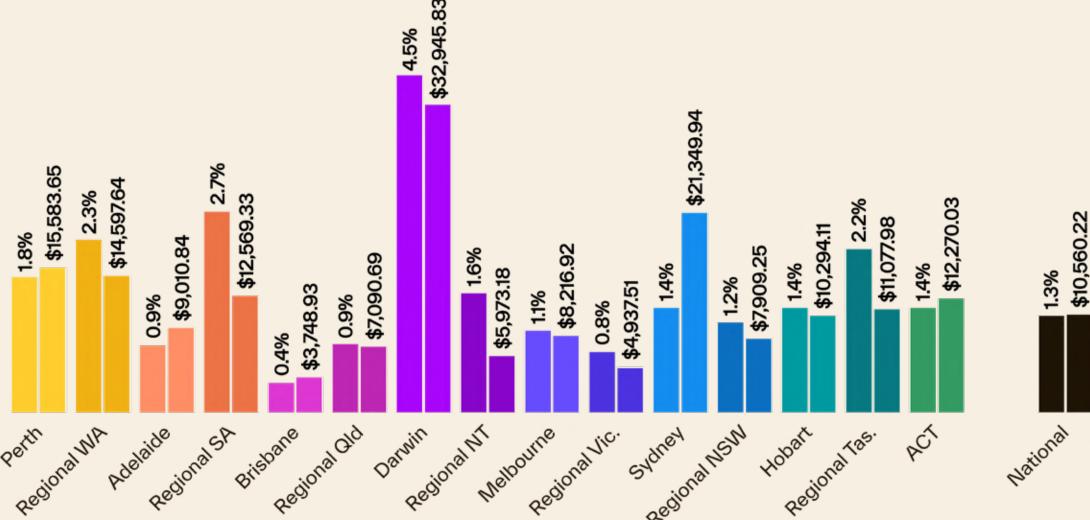
What makes these findings significant is not only the value uplift itself, but the fact that energy performance can now be measured consistently at scale.

To date, the ACT has led the country as the only jurisdiction with mandatory disclosure for energy ratings for more than two decades now.

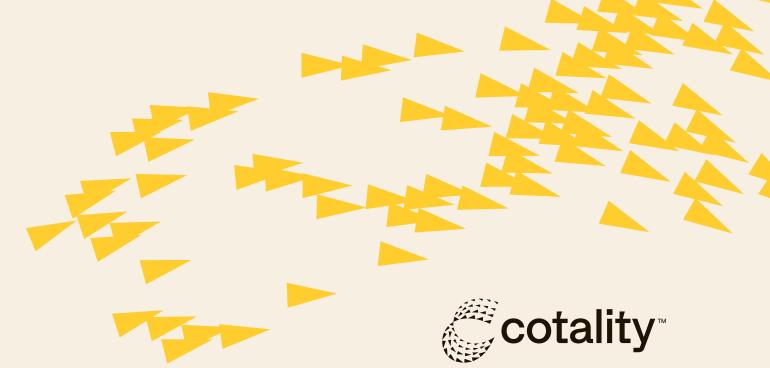
However, the current absence of transparency on a national level has limited consumer understanding of residential energy efficiency and the benefits it can deliver, and weakened an understanding of price impact within the broader market.

All jurisdictions are now working together to develop the formal requirement for a Home Energy Rating assessment at the point of sale, requiring disclosure of the rating in property marketing.

How much does an additional estimated NatHERS energy efficiency star add to a home's value?



Nationally, an additional star was linked to a median uplift of 1.3% in estimated home value.



The efficiency premium

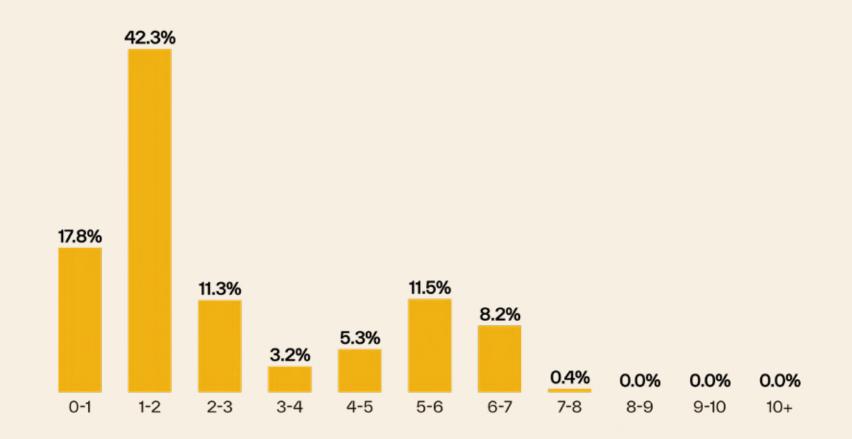
With over 70% of Australia's housing stock, excluding apartments, sitting below four stars out of 10, these underperforming homes, uncomfortably hot or cold with high running costs, represent both an upgrade opportunity and a growing source of exposure for owners, investors, and insurers

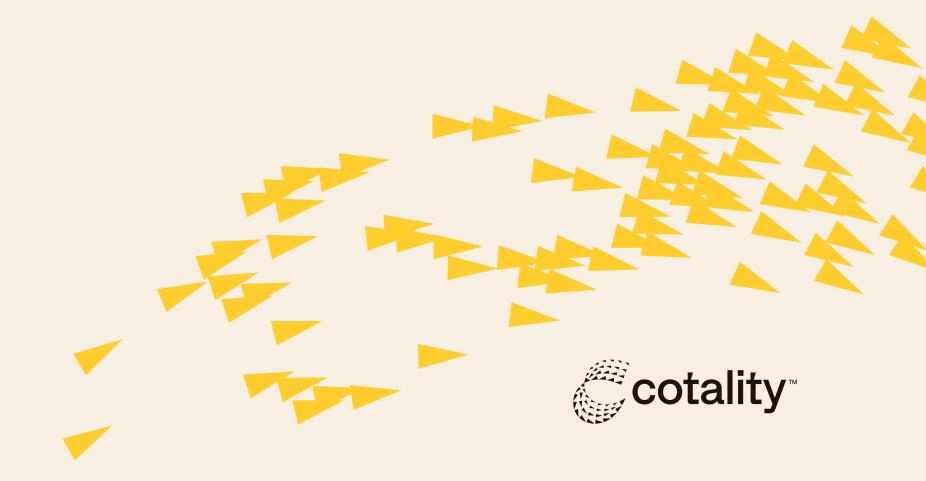
Improving a property with energy efficiency features is increasingly linked to capital growth and protection from rising energy and retrofit costs. Buyers are paying closer attention to inclusions that deliver the potential for a more comfortable home all year round, lower operating costs, and the likelihood of future upgrades, especially in older properties that fall below current NCC standards.

The introduction of Energy Ratings into the residential data landscape and the standardisation of energy efficiency features across the property sector will deliver much needed transparency and a more comprehensive view of property, and will impact how homes are appraised, viewed, assessed, compared, priced and marketed. These considerations have already begun to shift our perceptions of value, influencing our expectations of a better home.

Over 70% of Australia's housing stock, excluding apartments, sits below four stars out of ten.

Nationwide distribution of estimated NatHERS star ratings





The efficiency premium

For developers and builders, the findings reinforce the commercial case for delivering higher-performing stock and ensuring these features are showcased at point of sale or rent. In growth corridors and newer precincts, for example, energy ratings are becoming a point of differentiation rather than a compliance exercise.

These signals are still emerging, but the ability to quantify them at scale marks a turning point.

With consistent, property-level benchmarks now available, the relationship between energy efficiency and value is becoming transparent and actionable.



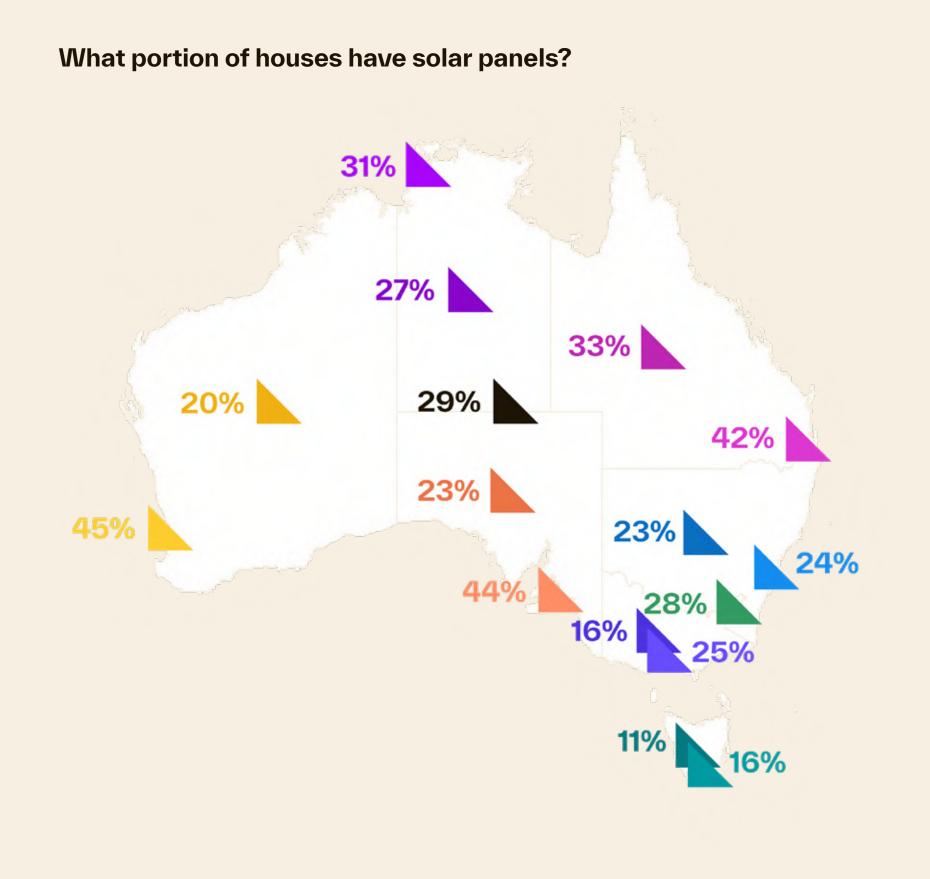
Deep dive

Mapping Australia's solar uptake

Solar coverage for Australian houses shows a remarkable level of diversity across the broad regions and climate patterns of the country, ranging from more than 40% of houses across Perth, Adelaide and Brisbane to less than 20% of houses in Hobart, Regional Victoria and Regional Tasmania. Nationally, 29% of houses have solar.

How do we know?

The penetration of solar panels, sourced from Geoscape, is dependent on a broad range of factors, including environmental (how much solar radiation and climatic conditions), policy (what state-level incentives are available), housing (stand-alone homes are more likely to have solar) and economic factors (electricity prices, upfront costs).



Nationally, 29% of houses have solar.

45% Perth

44% Adelaide

42% Brisbane

31% Darwin

20% Regional WA

23% Regional SA

33% Regional Qld



Deep dive

Mapping Australia's solar uptake

In fact, about 7% of Australian suburbs have at least half of the detached housing stock with rooftop solar, topped by the Sydney suburb of Bungarribee where 96% of homes have solar.

Most of the suburbs with a high solar coverage are in relatively new housing estates or rural residential markets where detached housing is the predominant form of housing, roof spaces tend to be larger and there is less blockage from shade. In the case of new housing estates, it is becoming more common for builders to include rooftop solar panels as part of the building package.

Top 20: suburbs with the highest coverage for rooftop solar (houses only)

Suburb	GCCSA	SA4	SA3
Bungarribee	Greater Sydney	Sydney - Blacktown	Blacktown
Stake Hill	Greater Perth	Mandurah	Mandurah
New Beith	Greater Brisbane	Logan - Beaudesert	Jimboomba
Bovell	Rest of WA	Bunbury	Augusta - Margaret River - Busselton
Walkley Heights	Greater Adelaide	Adelaide - North	Salisbury
Craigburn Farm	Greater Adelaide	Adelaide - South	Mitcham
Yatala	Rest of Qld	Gold Coast	Ormeau - Oxenford
Elimbah	Greater Brisbane	Moreton Bay - North	Caboolture
Nome	Rest of Qld	Townsville	Townsville
Weyba Downs	Rest of Qld	Sunshine Coast	Noosa Hinterland
Gnangara	Greater Perth	Perth - North West	Wanneroo
Minden	Greater Brisbane	lpswich	Ipswich Hinterland
Pine Mountain (Qld)	Greater Brisbane	lpswich	Ipswich Inner
Stretton	Greater Brisbane	Brisbane - South	Rocklea - Acacia Ridge
Pelican Waters	Rest of Qld	Sunshine Coast	Caloundra
The Vines	Greater Perth	Perth - North East	Swan
Rangewood	Rest of Qld	Townsville	Townsville
Bunya	Greater Brisbane	Moreton Bay - South	The Hills District
Banksia Beach	Greater Brisbane	Moreton Bay - North	Bribie - Beachmere
Sumner	Greater Brisbane	lpswich	Forest Lake - Oxley



Conclusion

Implications for the housing market and financial sector

This report confirms a clear trend: homes with solar power systems and higher estimated energy efficiency ratings are attracting strong buyer interest and demonstratable price premiums. These signals are showing up in search behaviour and valuations.

To unlock the full value of energy performance, consistent data capture is key. Standardising how key property features such as solar power systems and energy ratings are recorded—across listings, contracts, and valuations—builds the foundation for smarter investment, policy, and product design.

Better data also powers lending opportunities. With energy metrics now measurable at scale, lenders can have a better understanding of property performance, which may help with offering products for efficient

homes. Renovation incentives, council discounts, and insurer benefits further align financial outcomes with performance.

For buyers, sellers, and developers, the message is clear: energy upgrades boost comfort, cut bills, and protect long-term value. Lenders and developers are already adapting, and international models show what's possible when energy ratings are embedded in housing systems.

Australia has a chance to lead. The ACT's long-standing disclosure rules prove that trusted ratings influence buyer behaviour and pricing. The opportunity now is to make energy performance a core part of how we build, buy, and value homes.



As the housing market continues to gain value and expectations for comfort, ongoing affordability and sustainability evolve, the findings from this report highlight a broader shift in how value is perceived, and signal a future where performance is priced as prominently as postcode.

Tom Coad

Senior Director, Banking and Finance Cotality



Methodology

How we conducted the analysis

This analysis quantifies the relationship between residential energy performance and property value using a regression-based statistical approach. It isolates how specific features, namely estimated NatHERS Star Ratings and the presence of a solar power system, contribute to a property's market value, independent of other factors.

Two bespoke versions of Cotality's Hedonic Model, which also underpins our national Home Value Index (HVI), were used to run the analysis. This model estimates the marginal effect of individual property characteristics by controlling for location, land size, dwelling type, floor area, and other known value attributes. In this instance, we extended the model to include two additional variables:

An estimated NatHERS-aligned star rating for energy efficiency (produced via Cotality's Energy Efficiency Portfolio Analytics platform), and

A variable indicating whether the property had a solar power system installed, based on Geoscape National Solar data.

All property attributes and valuation data were drawn from the 12 months to 15 April 2025. This effective date aligns with the version of the Portfolio Analytics model used, ensuring a consistent reference point across energy, sales, and valuation data.

The model estimates the average percentage change in AVM (Automated Valuation Model) value associated with:

- A one-star increase in estimated energy rating; and
- The presence of solar panels versus no solar panels, with all other attributes held constant.

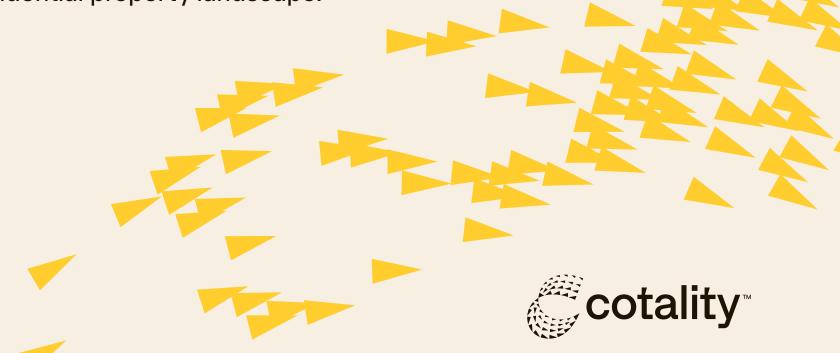
To help interpret these results at a local level, we translated the modelled percentage changes into an estimated dollar impact for each Statistical Area Level 3 (SA3). This was calculated by applying the percentage change to the median AVM in each area. For example, a one-star increase associated with a 1.5% uplift on a median AVM of \$800,000 equates to an estimated \$12,000 increase in value. Multi-star increases were not modelled.

This methodology is designed to reveal how energy features correlate with property value across the broader market. It is not intended to predict the value of an individual home or replace a professional valuation. Rather, it helps identify where energy efficiency is being priced in, and by how much, based on robust, data-driven modelling.

As with all statistical models, findings are subject to the accuracy of input data and the limitations of the model's assumptions. Cotality measures the input quality for the energy efficiency estimates, which aggregates at an average of 0.47. Observed features increase this, whereas modelled and inferred features decrease this, Assumptions are made on non-visible features like insulation.

Note that while solar power system batteries may be present at the properties they have not been factored in as an attribute.

However, this approach enables a consistent, scalable view of emerging price signals across Australia's residential property landscape.



Acknowledgement

Our partners



Geoscape Australia

Geoscape Australia is delivering location intelligence to enable positive outcomes across the economy, to help build a smarter, safer and more productive Australia.

Geoscape Australia is the trading name of PSMA Australia Limited, a self-funded public company owned by the 9 governments of Australia.

About National Solar

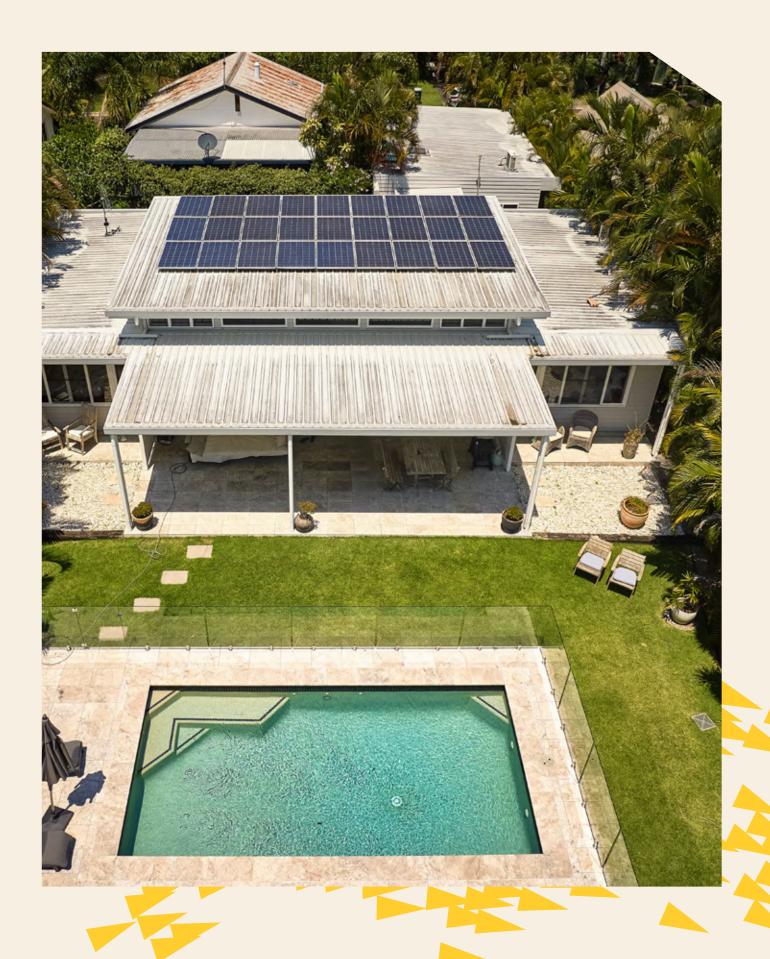
National Solar was used in the creation of this report - a national dataset that spatially represents photovoltaic solar panel related features and provides aggregated solar information at the address and building.

National Solar is populated from two different capture sources and the population of the product schema will vary between these as follows:

- Urban (satellite source) areas with a population greater than 200, or with significant industrial/commercial activity in a visual assessment, digitised from satellite imagery.
- Urban (aerial source) areas with a population greater than 200, or with significant industrial/commercial activity in a visual assessment, digitised from aerial imagery.

Key Features of National Solar

- Maps each solar array with type, size and daily output
- Totals solar capacity per address and building, linked to G-NAF and Geoscape Buildings
- Simple yes/no flag for solar at each location
- Extra roof details: material, slope, shape and planning zone





CommBank disclaimers

This article is intended to provide general information of an educational nature only. It does not have regard to the financial situation or needs of any reader and must not be relied upon as financial product advice. You should consider seeking independent financial advice before making any decision based on this information.

While CommBank supports Australia's transition to net zero by 2050, the views expressed in this report do not necessarily reflect the views of CommBank.

Cotality disclaimers

RapidRate used to calculate the star rating and outputs is not accredited software under the Nationwide House Energy Rating Scheme (NatHERS) and any star rating or other outputs generated represents an estimated NatHERS star rating and is not a replacement for a NatHERS Certificate.

While the software has been created with due care, the information used to train the software will continue to developover time, and there is no warranty or representation that the star rating or other outputs are free from errors or omissions or generated with appropriate or accurate assumptions.

The star rating and other outputs are estimated based on certain inputs and assumptions, and no claim is made as to the accuracy, completeness, reliability, currency, suitability or otherwise of the star rating or other outputs, especially where Cotality Input Data is based on assumptions.

The star rating and other outputs are provided on the basis that the Customer or End User receiving the star rating and other outputs are responsible for assessing whether it will meet its requirements and be fit or suitable for that person's or organisation's purpose or intended use.





About us

We are Cotality

We illuminate property insights through rich data, deep expertise and innovative technology. As a leading data-driven technology company, our clients trust us to help them unlock growth opportunities, drive business performance and navigate risk with confidence. Together, we uncover hidden risks and powerful opportunities — empowering you to transform your business and contribute to a more resilient, thriving society.

Our story begins with people

We know that behind the data points, underneath the technology, and within every insight is someone searching for answers to society's most pressing questions. We know that because we're people too. We work with you to reveal better outcomes by delivering smarter, faster, and more human-centered experiences.

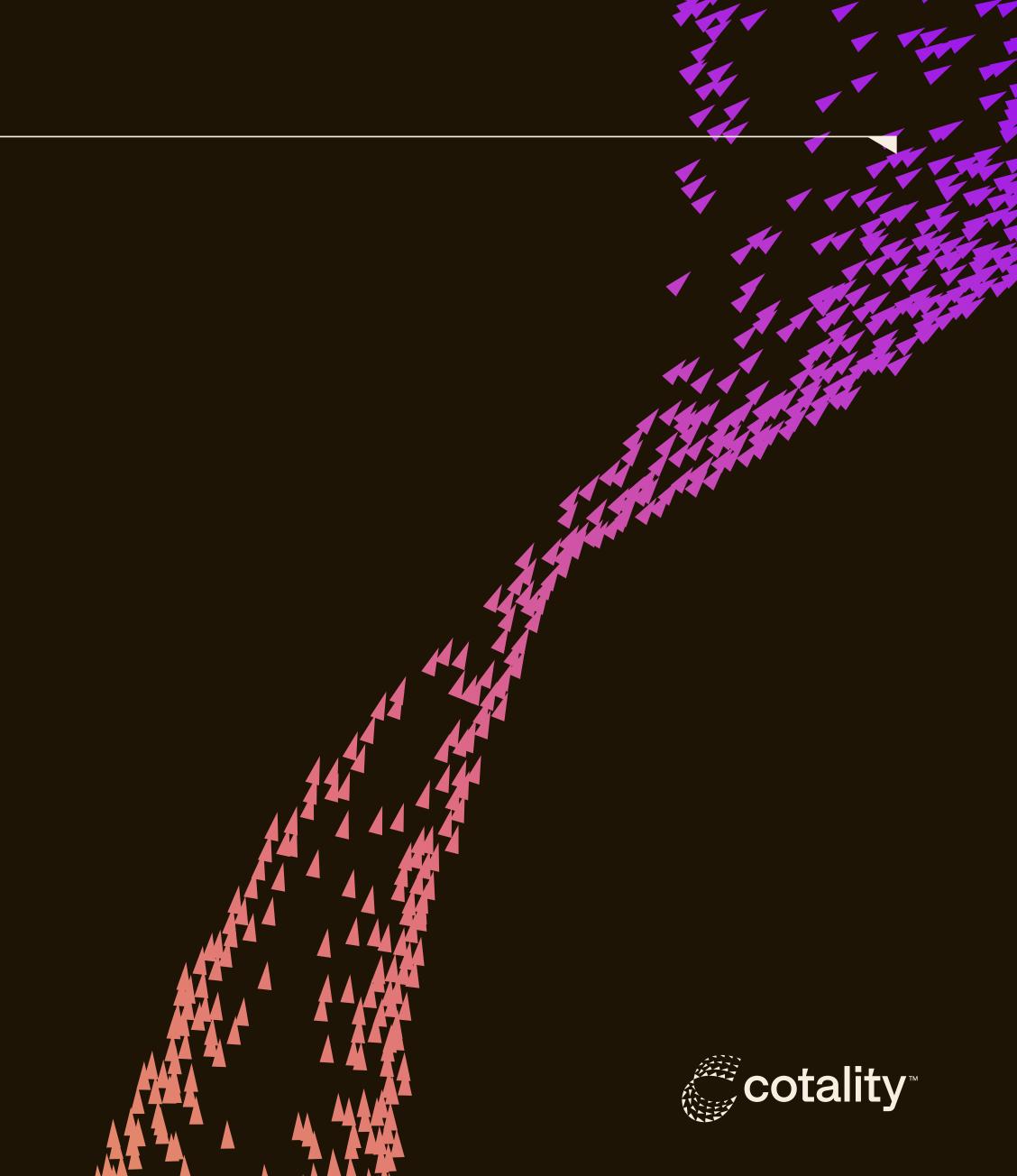
Our data

We push beyond the binary nature of data to get the whole story.

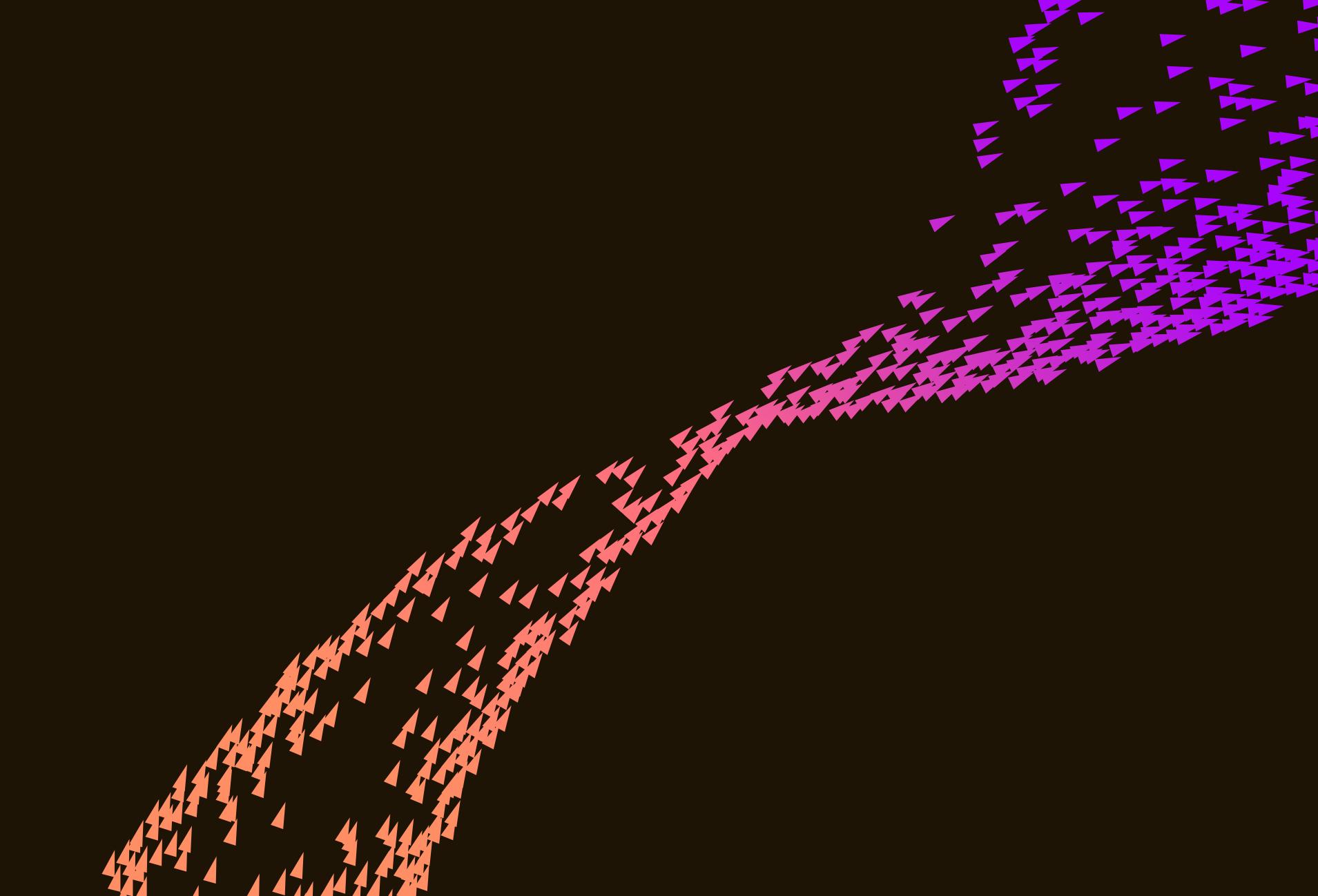
Our view of the property ecosystem is global. With billions of real-time data points, our technology helps you design plans that draw on holistic insights and analysis.

We layer decades of details — like geospatial parcel data, property tax transactions, and natural catastrophe vulnerability into a network of insights so you can navigate complexity with ease.

Accelerate insights so you can go beyond what you know today and illuminate the ideas that will define tomorrow.







cotality.com/au