

ZERO

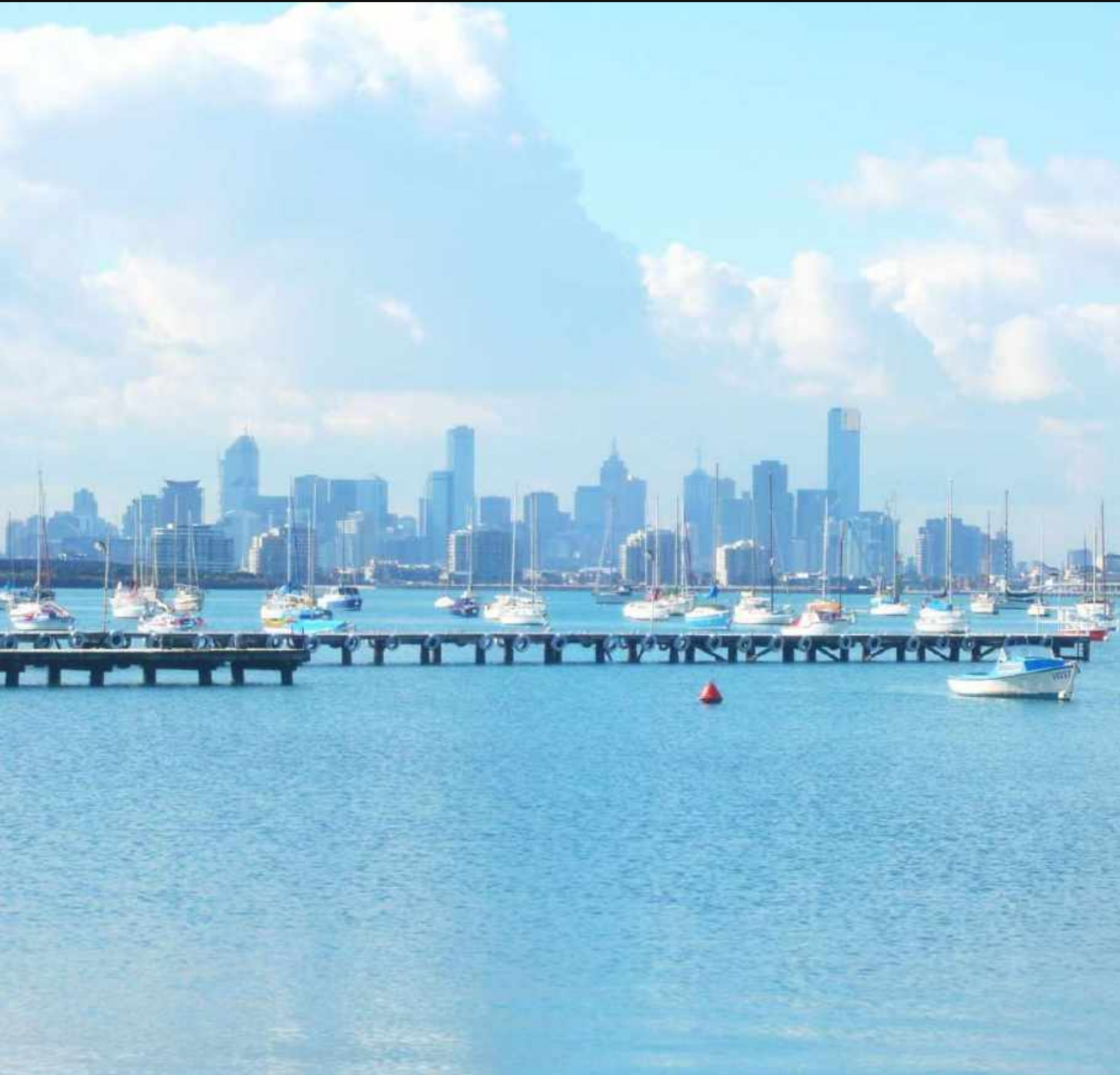


In Collaboration With  
Swinburne University Of Technology

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# Welcome to ZeRO

We are going to take you on a journey to discover the new concepts of ZeRO living. Imagine a world that is good, where design is regenerative and supports the environment. Where the homes you live and work in actually encourage health, comfort and accessibility for everyone. This future has arrived, and is visiting you in this book.

ZeRO homes are just being unveiled in Melbourne, Australia showcasing the future sustainable and ZeRO way of living in our communities embracing a new future where all is possible through the power of the sun, clever engineering design and You.

We hope that all who read about our 'Quest For ZeRO' will support our endeavours to create a better and more sustainable (and affordable) way of living for the future.

In gratitude,

**From all at Team ZeRO**

# The Story so Far

With Australia's population set to double by 2066 – the huge dilemma that Australia is facing over increased density OR urban sprawl has given ZeRO a huge opportunity to be creative with current infrastructure and affordable living.

Infrastructures Australia (IA) recent white paper Future Cities:

Planning for Growing Population (February 2018). It models the impact of an additional 2.4 million people in Sydney and 2.7 million in Melbourne by 2046 across three scenarios:

- 1 Expanded low density
- 2 Centralised high density
- 3 Rebalanced mid density

This IA report is quite direct in telling us the future will be pretty much rustier and more congested than the present if our planning laws do not find more creativity in solutions, especially sustainable and energy efficient solutions. The IA report tells us that Australian cities are at a breaking point – and out of this crisis must emerge new ideas. We don't just want tricked up eco friendly solutions, a panacea that does not serve our future children. We have been faced with unprecedented fires and climate calamities – solutions are there, more eco friendly ways of building have arrived in Melbourne. ZeRO homes are not only eco friendly, low carbon footprint, they are also zero energy, and can even export energy. ZeRO's smaller footprint saves on material costs, are built on smaller plots of land, larger suburban blocks can be sub-divided and this limited resource - LAND - is then used to its most optimum. Not high rise, but smaller footprints on the land – allowing future urbanization in a more sustainable and affordable way. A legacy is then built for future generations and a part solution for the future of the planet we live on.

This begins to offer our population another option in housing, and a new climate friendly and sustainable way of living. Australia builds some of the biggest homes in the world, big Land Cruiser type buildings, McMansions that fill up a whole plot of land – fence-to-fence. ZeRO builds smaller footprint homes, designed within an inch of their lives, clever storage, lofty ceilings, full kitchens, non toxic paint, natural materials, more garden space, inside/outside living, creating little nooks and crannies for reading, studying and meditation. This is the way of the future. ZeRO homes are more like the Nissan Leaf electric cars; small, efficient and don't burn fossil fuels. Our homes create 100% sustainable energy and will then even power your electric cars and the general public's vehicles (more news to come on this front). Living the inner urban lifestyle, yet self sufficient and creating a new style of urbanization that is required for our planet.

ZeRO homes incorporate highly efficient PV cells, micro inverters, Tesla Batteries, Co2 heat pumps for hot water, highly efficient split systems, specialised window technology, high levels of insulation throughout, clever engineering in construction and design to create the most beneficial outcome in conserving energy, upmarket flooring, tiling and carpet, bamboo vanities, high efficiency clever taps and shower heads, 40mm stone bench tops in both kitchen and bathroom, energy efficient and luxury appliances, Miele high-end stainless steel dishwasher, oven, cooktop and rangehoods, the toilets plumbed to rainwater tanks, and much more. Our ZeRO blueprint has been developed and researched for over 10 years, and will now begin to create a new era of housing.

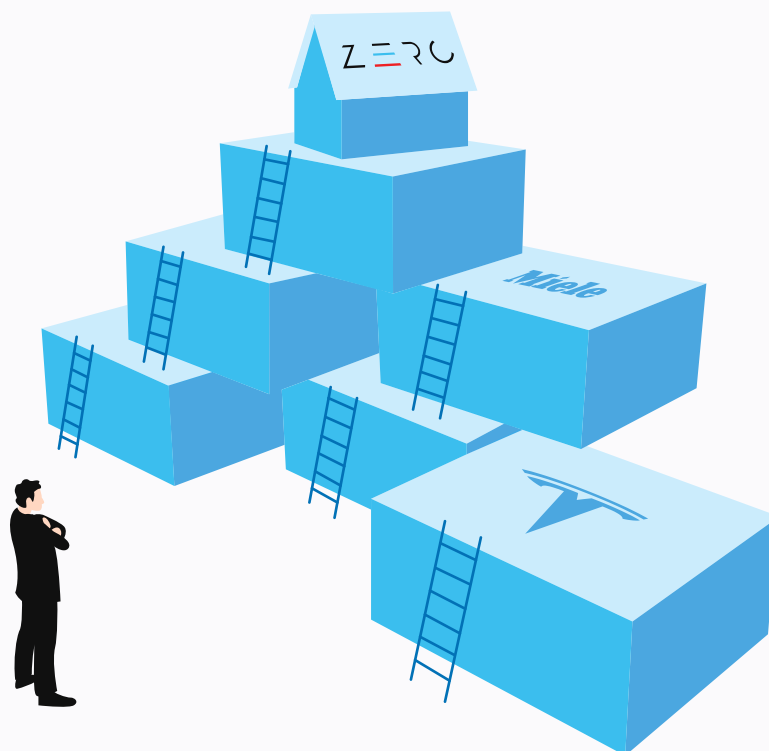
ZeRO's cutting edge design ensures you have everything you need and nothing you don't. No wasted spaces - a simpler way of living. Allowing you to find more time to do more of the things you love to do. Minimisation in a ZeRO home brings a whole new world to the owner, it offers a feeling of control over their own environment and gives the space and extra money to free the mind to think and explore more important lifestyle choices.

The optimum of design, uncompromised living at its best. **Less is definitely MORE**

# The Homes of Today

Buildings account for approximately 20% of total energy use and 18% of total greenhouse gas emissions in Australia. As consumers, we sometimes display an unrealistic faith that the products we buy are safe, effective and economical. Many of us trust that companies have our best interests at heart, and that the government will protect us from harm. It seems the bigger the price tag, the more naïve we can be.

Housing is our biggest expense, whether we are renting or buying – and yet often we drive our heads into the sand and blindly believe that buying a home will not hurt us physically or financially. Now, more than ever, we need to be conscious of what we purchase, especially when it comes to the place we spend so much of our time. We need to start to demand better home-buying options with optimum energy efficiency, comfort, clean air, durability and affordability.



"You cannot escape the responsibility of tomorrow by evading it today."

- Abraham Lincoln



New homes are simultaneously better and worse than ever before. With the advent of better and more modern building codes over the years, homes are somewhat more energy efficient than in the past. In Australia, we are now required to have a Six Star minimum efficiency energy rating in order to obtain a building permit. Some of the variables that are considered in this rating include the average level of insulation, use of a water tank or solar hot water boosted by electricity or gas, and high efficiency lighting.

While these improvements might shave a bit from the energy bill, most new homes fall woefully short when it comes to common energy efficiency measures, such as proper insulation and systematic air sealing. Insulation is often not sufficient or properly installed (or both). Air sealing is the most cost effective way to improve energy performance, reduce uncomfortable drafts, and protect the home from condensation problems.

Homes and furnishings are packed with toxic chemicals from formaldehyde and VOC's to flame retardants which can cause allergies, sickness and other health challenges. Indoor combustion, in the form of gas stoves, gas furnaces and gas water heaters, is standard in many homes.



This is inherently problematic; the toxic byproducts, such as carbon dioxide, sulfur dioxide, carbon monoxide, and oxides of nitrogen must be actively removed for a home to maintain healthy indoor air.

**ZERO brings you the 'all electric house'.**

# Healthy Living

The answer to better health lies not in adding more alarms to detect and warn us of these poisons, but in building homes that do not contain this fundamental threat from indoor combustion from toxic materials and finishes, and from letting polluted outside air inside without filtering it. Using low VOC paints, timber flooring, increased insulation and natural materials, the ZeRO build, creates a healthier indoor environment.

Most builders offer only the sizes, configurations and finishes that maximise their own sales and profits. As a result, consumers suffer a significant lack of choice. The real estate and housing industry base their pricing on square metres, flashy finishes and bulky builds, meaning homebuyers are often stuck with homes that they fell in love with, but then cost more to own. Beyond that, they are unhealthy, need more maintenance and repair, are less comfortable and often unnecessarily noisy.

This is exactly why ZeRO has developed a creative and elegant solution. Our cutting edge design ensures you have everything you need, and nothing you don't. These affordable homes are located in inner Melbourne areas, giving you the opportunity to be close to work, cafes, restaurants, family and friends. - and still living sustainably, saving money. No wasted spaces, no excess rooms; simplicity, efficiency, luxury and comfort.



# What We Do

In collaboration with Swinburne University of Technology, ZeRO has engineered the world's first inner urban ZeRO Energy homes that can be built just about anywhere in the world. ZeRO builds smaller footprint homes, designed to optimize every inch of space available. Highest best use of the underlying land, using existing infrastructure these homes fit into the current urban landscape. It's the design trend for a modern age; a triumph of form that never sacrifices function.

ZeRO has achieved successful smaller space living, with light an important factor. ZeRO articulates the inside/outside living areas to create beautiful and functional spaces. The beautifully landscaped surrounds, provides gorgeous spaces to sit in and to enjoy entertaining your family and friends.

The unique use of light, space and storage makes every room a delight to live and work in. There is still the ability to have two and three bedrooms in these smaller size homes, with space used effectively and specifically for the function of the home. You have the flexibility and sustainability of it's build, combined with the fact that you will no longer be paying for electricity AND live in absolute comfort... it doesn't get any better than that.

ZeRO homes are not just all shine and glitz - which tends to be what is often marketed to consumers. These homes are built with a solid quality structure, built for energy efficiency, durability and for long lasting value.

ZeRO puts in stone benchtops, beautiful natural wooden floors, Tesla batteries, beautiful ceiling fans, and Miele appliances - and that is merely the icing on a very strong foundation.



When analysing the worlds resources and the future of climate change, we must analyse what our homes contribute to this dilemma. Our form of housing on our planet has changed dramatically over the millennium, and not always in a clever and planet friendly way. The construction and use of buildings place significant pressure on the environment. Buildings consume 32% of the worlds resources, including up to 40% of the worlds energy consumption and 12% of the worlds fresh water. Even worse, buildings produce 40% of waste going to landfill and contribute to 40% of air emissions. (OECD 2003, Environmentally Sustainable Buildings: Challenges and Policies, OECD , France).

ZeRO was founded in response to where we find ourselves today. The world has changed immensely over the past 30 years, the cost of living, the freedom of living – how we live, smaller blocks of land, housing affordability, stringent Council laws, - much has changed.

Homeowners are concerned about heating and cooling their homes, due to the rising energy costs. ZeRO understands the expense of electricity in our homes. We know how stressful BILL SHOCK can be. It is a terrible reality homeowners experience every day, and it decreases the freedom of choices, the health of the occupants of the home, the comfort and ultimately the lifestyle they can afford.



The freedom to be cool in summer and warm and toasty in winter should be our fundamental right and to add to this - ZeRO petrol bills, as you can charge your electric car in your own drive-way of your "all electric" ZeRO home.

To be healthy and happy in our homes is what **ZeRO** is all about.

And **NO** electricity bills.

# The ZeRO Difference

Our vision at ZeRO is to re-imagine the home, and how we live. Understanding the helplessness we all feel with climate change, the wastefulness of our resources, these ZeRO homes bring back some control in our lives, make a difference now and in the future and provide beautiful shelter, capital growth and cash savings in one easy package. A ZeRO energy home is just like any other home, with a world of added benefits. ZeRO homes are better insulated, more durable, and designed from the roof down for ultimate sustainability. These homes have thicker, more air tight walls, advanced window technologies, and promote healthy and quiet living. They are healthier homes built to a higher standard. The ZeRO design allows homes to circulate the cleanest air, and the temperature is always consistent and comfortable. These homes of the future offer their residents allergen-free and toxin-free environments, a healthy sanctuary for you and your family to gather in.



These homes are ZeRO Energy. These homes have ZeRO Electricity bills – in fact, you get paid for your excess energy.

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These homes produce ZeRO greenhouse emissions – in fact they offset the equivalent of 2-3 cars per ZeRO Energy home.

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These ZeRO homes offset the equivalent of 11 trees per month - not per year, but per month. So, five homes offset the equivalent of 55 trees per month. ZeRO homes can make a difference today. YOU can make a difference by your choice of home.

**ZeRO homes can now make a difference, and YOU can make a difference by your choice of home. "Remember the Future"**



A home with a standard solar energy system installed is still required to be connected to the grid. With your home producing 100% sustainable power, and producing more than your home is using (and storing), it needs to go somewhere - and it goes back to the grid. This helps to offset societal carbon emissions while getting you paid at the same time.

ZeRO homes don't suffer from black outs, brown outs or planned outages due to our primary energy generation and storage system. So you will be happily cool even when the general population has no electricity.



ZeRO energy housing sets a new benchmark for sustainable living. ZeRO houses produce and store (using tri battery technology) 100% sustainable and renewable power.

This stored power can then either be exported to the grid or to supply 100% renewable power to future EV smart charge bollards - located on the nature strip outside our ZeRO homes (STCA). These bollards are used to power EV cars parked on the street (i.e. public EV charging - using excess solar power from the ZeRO Energy Housing). Alternatively, you can simply charge your own EV with your own 100% free and 100% sustainable power.

# Why ZeRO?

A ZeRO home will save you money. From the moment you move in, and ten years down the track you will be still paying ZeRO energy bills in comparison to a standard built home. Imagine in ten years time still paying the same price to keep your lights on, your heating and cooling providing you with your ideal climate – and no increase in costs, as they will have remained and always will remain ZeRO.

**The future has arrived.** These cutting edge designed homes, the technology, sustainability and energy efficiency will allow you to feel good, knowing that you are building a legacy for yourself and your family. The ZeRO homes power consumption is self contained, produces no greenhouse gases and incurs no energy bills. These homes offer great capital gains , due to the added ZeRO benefits, often 30 - 40% more than comparable homes in similar suburbs. On top of that, if you decide to sell your ZeRO home, you will reap the benefits at the point of sale as well. As more homebuyers become interested in the benefits of eco-friendly solutions, demand for properties with the ZeRO system implemented will continue to grow exponentially. This means you get to enjoy the benefits now and will benefit again when you sell your home. These homes are not unrealistically expensive, some have already been built - and more are on the drawing board.



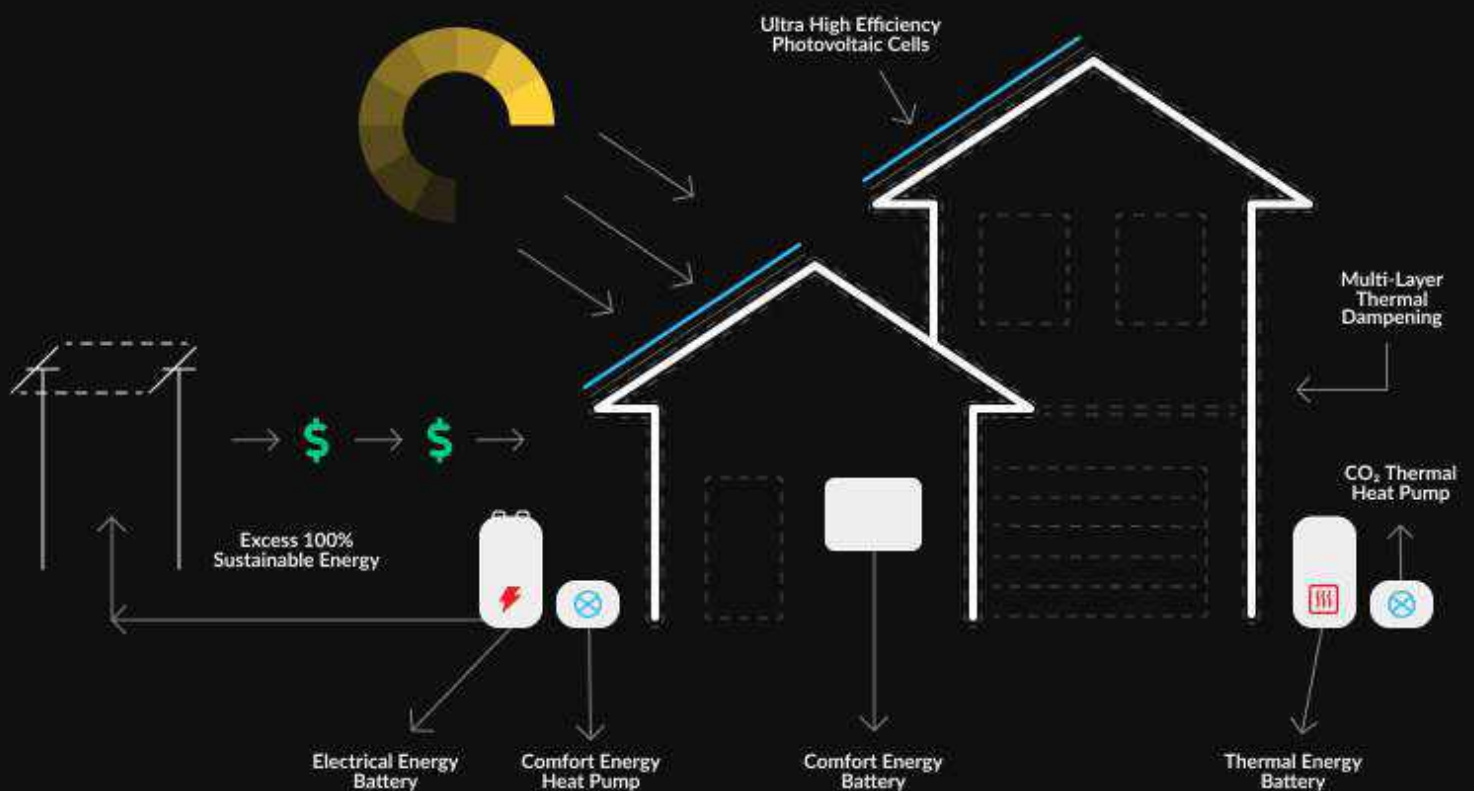
ZeRO puts the design first, to create inspiring, innovative and enviable homes.

Everyone would want a home that is well-designed, healthy and runs ZeRO electricity bills.

# ZeRO Bespoke Engineering

## Using Tri Battery Technology

This ZeRO home is a fully engineered micro power station with Tri Battery Technology, high efficiency PV cells, micro inverters, window technologies, heat pumps, highly effective heating and cooling systems, and efficient water heating technologies.



Example of our bespoke ZeRO design.

# ZeRO = Freedom

ZeRO combines the best of both worlds - 100% energy independence but still connected to the grid. These inner urban 1, 2 or 3 bedroom ZeRO energy homes essentially cost a fraction more to build, and nearly every house can be engineered and designed to be ZeRO from the roof down. ZeRO gives you the opportunity to allow you to live a worry free life, independent from government and corporate decisions, free from black outs, and the freedom to turn on your air conditioner or heater as high and as long as you want.

ZeRO brings you freedom and the possibility to use your savings for the delightful things we live our lives for. ZeRO is both your and our legacy to future generations.

ZeRO is the answer.

ZeRO is the future.

ZeRO is here!





# Conclusion

We hope you have enjoyed the book on ZeRO.




If it has sparked an interest in a house, a workshop or even a free consultation on living ZeRO, our team would be happy to oblige.

We hope you have received value from this book. Our quest for ZeRO is an important one. It is an opportunity for everyone to make a difference, with the largest of purchases, a ZeRO house, or the smallest, a ZeRO pen. We appreciate all your support in creating a better future for all. ZeRO has been established to help us all gather to make a difference.


We thank you for your interest.

Click the button below to claim your free, no obligation consultation now. We would love to assist with a current or future home, a workshop or a retrofit to "almost ZeRO".

## Contact Team ZeRO

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