



# The Worlds First Fusion Energy Generator



**e.cat**   
AUSTRALIA

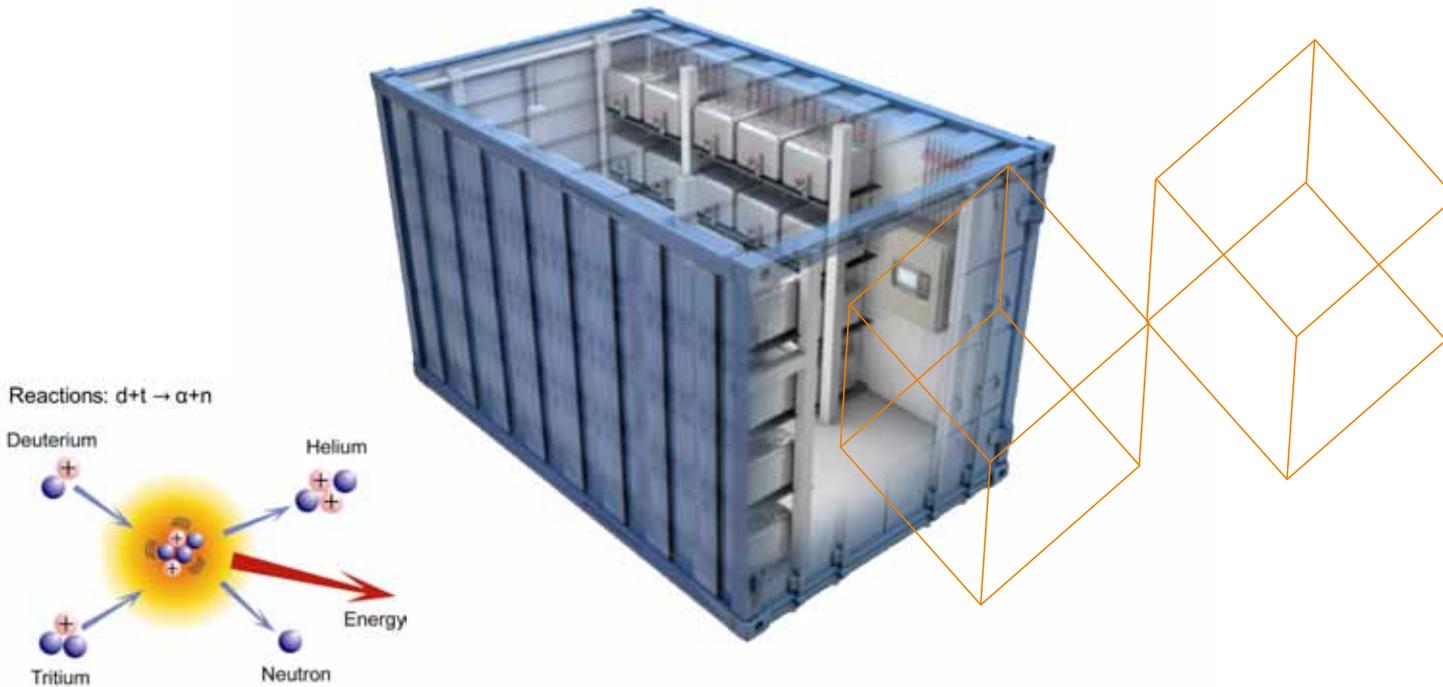
A NEW AGE IN ENERGY PRODUCTION



E-Cat technology safe, clean, green,  
renewable, carbon neutral and low cost.

Creating energy with very low energy  
inputs. Providing a truly green energy  
source without radioactive by-products  
or carbon emissions





It has already earned the reputation of being both economically attractive, saving energy and money for its customers, and the ultimate “green” machine.

### What is LENR?

LENR “Low Energy Nuclear Reactions aka Cold Fusion” are weak interactions and neutron-capture processes that occur in nanometer-to-micron-scale regions of surfaces in condensed matter at room temperature.

The idea of LENR has been around for several decades and has taken its final leap into reality with the release of the E-Cat Technology (Energy Catalyser).

The energy source is nickel and hydrogen and the energy density is a factor of 100,000 or more

compared to the combustion processes of conventional fuels. The energy density is so high that the E-Cat modules only need recharging twice a year.

**This is a game changer;** LENR produces high heat with very low energy inputs. E-cat technology provides a truly clean and green source of energy without radioactive by-products or carbon emissions.

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### COP (Coefficient Of Performance)

The E-Cat operates at a high COP (Coefficient Of Performance), which means combined with the low cost of the fuel, the consumer will pay a comparatively lower cost than they are currently for commercial heat, hot water, steam, air conditioning and cooling.

The COP is guaranteed at 6:1

- This means that the Industrial E-Cat inputs 167 KW in to create 1000KW of thermal energy (1000 divided by 167= 6)
- There is nothing else like this today
- It is highly competitive in the market place
- There are strong possibilities that this COP will increase beyond 6 in the near future

and has been measured independently to run in and out of 'self sustain' mode, which means no energy input – with energy output continuing.

The E-Cat technology works by taking a small amount of micron sized nickel powder, applying a catalyst, putting it all in a pressurised hydrogen atmosphere and applying heat to the setup. Truly novel nuclear reactions start to take place between the nickel and hydrogen atoms, and the result is a huge release of energy. The nickel and hydrogen fuel is cheap, and only tiny amounts are consumed.

E-Cat Australia has exclusive rights for marketing and sales in Australia, New Zealand, PNG, Pacific Islands and Indonesia for the world's first working fusion energy catalyser.

	Pollution Free	Very Safe	In-exhaustible	Unlimited	Low Fuel Cost	Low Reactor Cost	Compact	Locate Anywhere	Working 24/7 (4)	Ready Now
<b>Fossil Fuel</b>						✓	✓	✓	✓	✓
<b>Hydro-electric</b>	✓	✓	✓		✓	✓	✓			✓
<b>Wind</b>	✓	✓	✓		✓					✓
<b>Solar</b>	✓	✓	✓		✓					✓
<b>Uranium Fission</b>	(1)		✓	✓	✓		✓	(3)	✓	✓
<b>Plasma Fusion</b>	(2)		✓	✓	✓		✓	(3)	✓	
<b>E-Cat</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



## E-Cat

providing  
substantial cost  
savings over  
conventional fuels



We want green energy for  
the future needs of our children  
and communities that is safe,  
clean, affordable and sustainable.





**E-Cat Australia products:**

- 1. 1 MW industrial units (available now for delivery)
- 2. 10 Kw Domestic (soon to be released)

**One-megawatt thermal generating plant**

Due to its container construction the E-Cat 1 MW reactor is easily transported, which makes delivery and installation straightforward. It can be stacked if your energy solution requires multiple E-cat 1MW plants connected into parallel. The E-cat 1 MW can also be retro-fitted into your existing energy production design, as it will reduce energy consumption.

**Applications of the 1MW E-Cat**

E-Cat technology can be applied wherever compact safe inexpensive heat is required.

Current – up to 103<sup>0</sup> Celsius.

- Industrial and commercial space heating and hot water supply
- Heating and drying in manufacturing processes
- Heat source for air conditioning, e.g. evaporative type – which would require standard industrial equipment to be attached
- Heating for large shopping centres
- All buildings and supermarkets can be retro-fitted
- A major cost saver in the construction of new buildings
- Heating for hospitals, schools and universities
- Train stations, airports and large enclosed areas

- Sports stadiums
- Heating of swimming pools
- Heat / cooling source for greenhouse and hydroponic agriculture, hence increasing food production
- Estimated life span of 20 years

There is also the incredible potential for DESALINATION and water purification. The 1 MW produces saturated steam – which easily turns to water!

### Installation

It is shipped from its manufacturing plant in the USA to your location on a container truck. On average the delivery time is 4 months after receipt of a deposit. It takes 1 to 2 days to install and connect by our qualified team. Operational manuals are provided. The safety procedures are very similar to those involved with water boilers.

### In the near Future

Technology is currently being developed to convert E-cat heat into electricity. Making it ideal for remote locations and off-grid sustainable electricity. Drive your truck, park your E-Cat, turn it on

and you will have heat, steam, hot water and in the near future – electricity. Imminently, the temperature will increase between 200-400° C making E-Cat's potential limitless.

### The Bottom Line: Savings

The future is biased toward the E-Cat, as the technology is more cost effective when compared with conventional fuels, such as coal, electricity, gas and heating oil.

Currently the E-Cat is used as a hot water generator at 100° C or saturated steam at 103° degrees C.

Depending on your current energy input, it has been estimated anywhere between 50-80% savings on your energy heating bill.

Count how many trees you have saved, how much CO<sup>2</sup> you have reduced and send in your rebates for carbon credits. Also, calculate how much you saved by not paying carbon taxes *and* how much you have saved the planet.

For cost comparisons and updated data on the Australian energy marketplace log on to our website.

**Order your 1 Mw requirement online at: [www.E-CatAustralia.com](http://www.E-CatAustralia.com)**



E-Cat Technology –  
providing a workable  
solution for us and our  
planet's future



### HOME 10 kW units

- Retro-fit onto existing water heaters
- Install in your new house
- Low cost purchase and low maintenance
- 24/7
- Significantly reduce your energy bill

The energy density is so high that the E-Cat modules only need to be loaded twice a year. On these occasions, you will simply mail your E-Cat cartridge back to us be recycled. We will return your refill – for a small fee, and of course you will always have a spare cartridge close at hand.

The E-Cat becomes cheaper over time compared with conventional fuels and initial savings over any competing energy resources are identifiable.

### Environmental benefits

The need to find responsible and practical solutions to the very real problems of keeping our economy, livelihood and planet alive and healthy is a necessity, not a dream. Today, our world turns on energy that is produced from coal, oil and natural gas, or on large-scale nuclear reactors. All these leave harmful pollutants behind. When you think that products like coal lose almost 80% of their potential energy when burned, you begin to realise how much more efficient E-CAT technology is.

After decades of research and experimentation, E-Cat is imminent in providing a workable solution to our planets immense challenges. By investing in the right Energy Catalyser for your needs you are positively impacting the planet, your community and your future.

Our method is scientific, rigorous and robust, and we operate in a climate of transparency and openness. We invite you to share our dream, and to participate in the vision we are bringing to our planet today.

E-cat pays for itself in 1.5 years with energy savings or small amounts of hydrogen and nickel with no waste by products, in fact – we produce copper!



The future is biased toward the E-Cat. In the final analysis, over time the E-Cat is vastly more cost effective compared with conventional fuels.

To give you a quick example:

- Over 10 years the cost to run a 1 MW E-cat unit: approx. 3.2 M.
- Running a 1 MW unit on some of the cheapest electricity in the world (Dubai) it would cost you approx. 9.7 M.
- Running a 1 MW unit on #2 Fuel Oil at current process (expected to raise): 6M.
- Propane would cost you 10 M.

Other important factors are the proposed carbon taxes and the possible rebates or subsidies for clean energy technologies, (which are not calculated in above savings) which is even more in favour of the E-Cat.

For the technically minded- here are some basic figures for amortized cost savings for the Australian market place (you can also refer to our resources page for more details)

### Industrial Unit (now available)

- Conventional 1 MW thermal heat boiler
- Purchase and install average = \$160,000
- Running costs:
- 4500 MJ Natural Gas (NG) = 4.5 GJ per hour
- Electricity: 20 amps max draw= 8 x 415 volts- 3320 / 1000 = 3 kw
- 3 Kwh = 60 cents per hr. electricity
- Price of NG :
- 22.2 Mj = \$1.35
- Approx. \$30 per GJ industrial (50 % industrial rate-\$60.8 per GJ domestic rate)
- 30 x 4.5 GJ per hr. = \$135 per hr.
- 135 x 24 hr.= \$3240 per day x 365 days
- Costs approx. \$1.2 M per year to run with conventional energy

Compare the E-cat savings:

Cost to run 1 MW e-cat per year= \$168,580. Save 1 Million per year in energy costs.

## CUSTOMER SAVINGS BASED ON AUSTRALIAN MAw

Used with solar panel – photovoltaic (PV) to provide small amount of renewable electricity



- 1 Gj of natural gas (NG) equals 277.77 KWh
- Average NG of State of Victoria = 60 Gj per year
- 60 GJ = 16666.67 Kwh per year
- Per day is: 16666.67 divided by 365 = 45.7 Kwh per day
- 45.7 kwh day is now divided by our COP (6:1)
- 45.7 divided by 6 = 7.6 kwh per day electrical input to the E-cat
- E-cat input power of 7.6 kwh per day produces 90 Kwh of thermal heat per day BUT, these users only require 45.7 kwh thermal energy
- Divide the input power per day 7.6 by a ratio of 4 (ratio is Victoria sun pattern of average hrs. per day - which varies around Australia - desert is 5>1, NSW 4>1 VIC 4 >1, general principle from PV manufacturer is 4>1 in the city 5>1 in the desert: ratio of peak power necessary over the sunlight day)
- 7.6 div. by 4= 1.9 kwh Peak Power
- Which means we only require 50 % of that peak power (because the e-cat with an input in one day of 7.6 kwh will prod. 90 kwh of thermal energy- so we only need 47 - so 50%, which means the

amount of watts necessary to power the E-cat is 950 watts)

- Cost of PV solar panels per watt is \$2
- 950 watts x \$2= \$1900 of PV solar panels
- Cost of PV \$1900
- Cost of E-cat approx. \$2000
- Installation cost \$500
- Total \$4400 set up

### Amortized:

- Natural gas (NG) average price in Australia is 1 Gj = \$22.22
- Price of NG 60 Gj x 22.22 = \$1334.00 pa
- \$4400 divided by 1334 = 3.3 years
- Savings are \$1334.00 per year on NG

### After 3.5 years:

- Minimal maintenance costs on solar panel (PV)
- Reload/re-supply of E-cat modules at \$250 per year (every 6 months approx. \$125)
- Lifespan 20 years



## Specification of E-Cat 1Mw Unit

Thermal Output Power	1 MW
Electrical Input Power Peak	200 kW
Electrical input Power Average	167 kW
COP	6
Power Ranges	20 kW-1 MW
Modules	106
Power per Module	10kW
Water Pump brand	
Water Pump Pressure	4 Bar
Water Pump Capacity	1500 kg/hr.
Water Pump Ranges	30-1500 kg/hr.
Water Input Temperature	4-85 C
Water Output Temperature	85-120 C
Control Box Brand	Natl. Instr.
Controlling Software	Leonardo
Operation and Maintenance Cost	\$36.34/MWhr
Fuel Cost	\$18.33/MWhr
Recharge Cost	\$10/module
Recharge Frequency	2/year
Warranty	2 years
Estimated Lifespan	20 years
Price	1.5 M US\$
Total Cost (20 years operation)	\$3,371,610.00
Dimension	2.4x2.6x6m
Installation	E-Cat Australia

For more information, cost comparisons and orders log on to our website:

**[www.E-CatAustralia.com](http://www.E-CatAustralia.com)**

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