

GROUNDBREAKING TECHNOLOGY

The Ecat is pioneering clean energy future



0%

Zero Carbon Dioxide Emissions

Zero Toxic Pollutants



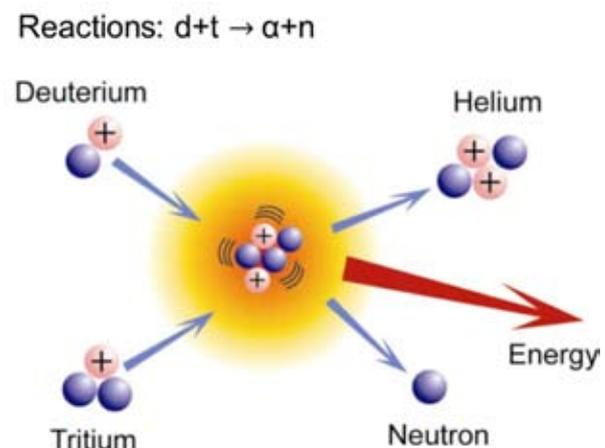
Welcome to a New Era of Energy Production

A profound new energy technology has recently emerged. It is called the Ecat (Energy Catalyzer), invented by Italian Andrea Rossi and is based on the process of Low Energy Nuclear Reactions (LENR) “aka Cold Fusion” – long regarded as the “holy grail” of sustainable energy production.

E-Cat technology works by taking a small amount of nickel, applying a catalyst, while in a pressurized hydrogen atmosphere. Truly novel reactions start to take place (beyond the usual chemical) and the result is a huge release of energy.

Totally Sustainable Energy, Economically Attractive and the Ultimate Green Machine

To give you an idea of the massive energy density of LENR, one barrow of Ni-H fuel, taken through the Ecat process, releases the same energy as a super tanker of oil. This is an energy density that is 100,000 times greater or more than burning fossil fuels.



Industrial 1MW Warm Ecat Applications: Industrial heating and air-cooling/conditioning

The Ecat 1MW plant contains 106 smaller Ecat units mounted in a standard size 20ft shipping container. Nano-sized particles of nickel, lithium aluminium hydride (LiAlH₄), pressurized hydrogen and a catalyst are heated in a small reactor to the point at which weak interactions between the reactants cause transmutation (ie some of the nickel is converted to copper). Considerable excess heat is emitted during this process. Once the reaction becomes self-sustaining, the input power can be reduced significantly.

The plant is recharged by specially trained and certified personnel every 6 months (without stopping the 1 MW of thermal energy flow)

Due to its container construction, it is easily transported, making delivery and installation straightforward. The containers can be stacked if your energy solution requires multiple 1MW plants connected into parallel. Also ideal for remote locations and tight urban industrial space constraints.

Coefficient Of Performance (COP)

E-Cat technology operates at an incredibly high COP, which is the measure used to gauge the efficiency of energy production, expressed as a ratio. The Ecat COP is guaranteed at

1:6. The average COP for combustion technology is 1:1. In other words, if you were to input 167 kW of electrical energy into Ecat, the output would be 1000 kW of thermal energy.

Recent performance and testing, with the 1 MW entering into a self sustain mode over a 24 hour cycle, the Ecat plant has been reaching a higher COP, indicating better performance and greater energy cost savings.

In the self sustained mode, a one megawatt plant can operate at full power, while consuming a small amount of electricity to operate fans, pumps and radio frequency generators. These radio frequency generators help stabilize and sustain the reaction processes, so the plant can continue functioning with minimal input.

Applications Of The 1MW Ecat

The E-Cat (Energy Catalyzer) technology holds the potential to be used in a myriad of energy applications ranging from production of heat for generation of hot water and steam (the first applications upon launch of the technology),

- Industrial and commercial heating
- Heating in industrial processes, such as manufacturing and drying
- Air conditioning (requires standard industrial equipment to be attached)
- Space heating for large industrial areas

E-Cat Technology works at a far higher performance than any other tech.

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

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



- Heat source for air conditioning, ie; evaporative type units
- Heating for large shopping centers/shops.
- Buildings can be retrofitted
- Ideal in new construction as it is a major cost saver
- Heating for hospitals, schools, universities
- Ideal for large enclosed areas such as train stations and airports
- Sports stadiums
- Heating of swimming pools
- Heat source for greenhouses, hydroponics food production and agricultural purposes in hot and cold climates

Positive attributes

- Much cheaper per megawatt hour
- Clean, green – no pollution
- Low maintenance & reliable transportable
- Carbon credits – small footprint

Other Notable Aspects Of The 1MW Plant

It is not loud, producing a volume of less than 50 decibels at a distance of five meters.

It is environmentally friendly, consuming only tiny amounts of fuel, while producing no pollution.

It's output can be modulated by multiple means – turning off individual modules, adjusting the level of input

“drive”, or varying hydrogen pressure.

It cannot “melt down” like conventional nuclear reactors. This is because if the temperature inside the reactor cores rise beyond a certain level, the nickel powder will melt, destroying the reaction sites at which the nuclear reactions take place. With the reaction sites destroyed, the reactor cores will no longer function, and all nuclear processes will cease.

An auxiliary power source of 250 kW will be needed to start up the plant, bringing the resistive heaters up to temperature.



Ecat's Impact on Society – What Does it Mean?

The Vast Energy Market

Energy production is a trillion dollar market with literally billions of customers. Reserves of fossil fuels are finite. Fossil fuels create a range of problems, including pollution, climate change and dependence on imports.

The world pumps 28 Billion tonnes of carbon dioxide (CO₂) into the atmosphere each year. This is enough to cover the area the size of Australia in a blanket two meters thick. As a result, the world's oceans are now heating at a rate of 300 trillion watts, the equivalent of detonating 5 Hiroshima A-bombs every second of every day of every year.

The world needs the Ecat technologies to help reduce carbon particles within our atmosphere. If you look at the figures, in 75 years we have gone from 34 nano-particles to 360 nano-particles of carbon per cubic foot of atmosphere. The main offenders have been fine powdered coal fired furnaces. This causes the atmosphere to hold massive quantities of moisture, which is the main problem in reflecting heat back onto the Earth.

We have now reached 360 ppm carbon in our atmosphere! The introduction of the Ecat technology will make a substantial contribution to the reduction of CO₂ emissions. Ecat technology is cost effective, highly competitive with low operating costs, green and clean with a high value ROI and timeless growth curve - it is



Roger and Rossi

technology that has arrived and here to stay.

“My life and passion for the last ten years has been directed towards renewable energy systems. Our modern civilization keeps moving due to the gigawatts of thermal, mechanical and electrical energy it consumes on a daily basis. The Ecat technology represents an opportunity to reshape the energy landscape around the world. It provides an environmentally friendly source of very clean low cost energy, that has the potential to have a serious impact on our society and emerging third world communities. In the near future I can envision cars, trains, spacecraft, desalination, houses, industry, food production and local power stations being supplied energy by the Ecat Technology. Welcome to the future - a New Era of Energy Production.”

Roger Green CEO

Eco Global Fuels Limited - Ecat Licensee

Agent For: India, South Asia, Japan, Korea, Africa, Spain, Portugal, SE Asia, Indonesia, Australasia



www.Ecat.Tech

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

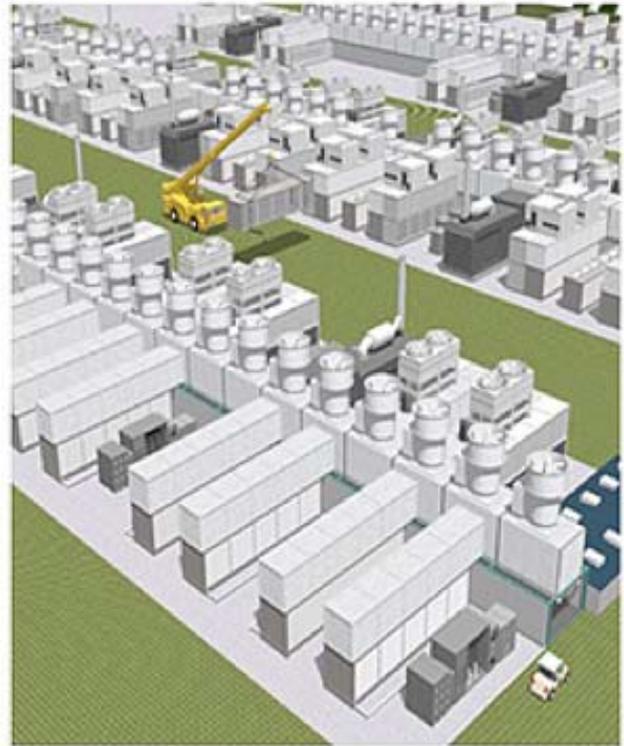
FUTURE PRODUCTS

A look into the Future with the Ecat

The E-Cat (Energy Catalyzer) technology holds the potential to be used in a myriad of energy applications ranging from production of hot water and steam (1 MW warm Ecat being the first application upon launch of the technology) and in the near future producing high pressure/temperature steam to drive turbines for the production of electricity (the Hot Cat) and in the future the domestic unit.

Future Uses of the E-Cat Tech

- Production of higher temperature steam e.g. 500 Celsius and above, capable of driving turbines to provide electricity for homes, businesses, communities, the grid, remote locations, etc.
- Production of high levels of heat for vehicles (land, air, and sea) utilizing steam engines, stirling engines and tesla turbines. We begin with the Ecat electric car.
- The desalinization (removal of salt) from ocean water. This could allow deserts to be turned into farmland, or ease the suffering of drought plagued areas.
- A source of infrared light (black body radiation) to be converted into electricity by photothermal voltaic panels. This could eventually produce electricity to power a home



- Production of heat and cooling source for growing food in extreme cold/hot conditions
- A source of energy for space vehicles, including super speed propulsion. A source of energy for outposts beyond Earth.

1 MW Hot Cat for Local Electric Power

Andrea Rossi with his new Hot Ecat reactor which was independently validated in October 2014 with a test that run for 32 days non stop. The Hot cat reached a temperature of 1400 celsius and the prototype is being completed within a 1 year, ready for demonstration around the end of 2016.

A future look at what a Ecat Power Station can look like The Hot Ecat

plants are stacked up, bolted onto a turbine and generator, delivering renewable electricity to anywhere in the world.

On 8 October 2014 a team of reputable, well-qualified European academics released a long-awaited report of the testing of an E-Cat device. The researchers had observed an E-cat operating constantly over a 32 day period at temperatures in excess of 1400 degree C, where it produced net energy of 1.5 megawatt. Testing was performed in Barbengo (Lugano), Switzerland, in a laboratory placed at the testers' disposal by Officine Ghidoni SA. In addition to this remarkable anomalous heat generation there were two significant further findings: evidence of isotopic shifts in the Lithium and Nickel in the reactor (suggesting a nuclear reaction) but no sign at all of radiation which would be expected to accompany nuclear fusion.

10 kW Domestic Unit

The ten kilowatt E-Cat is still in research and development phase. Upon completion, it will provide a constant yet adjustable output of up to ten kilowatts of heat (in the form of hot water).

The form factor of the ten kilowatt home heating device is expected to be small and compact. It will be rectangular in shape, and should be no larger than a small outdoor



central air conditioning unit. All the components of the home heating device will be contained in this rectangular or possibly square box. The unit will also be quiet, produce very little sound.

This large quantity of output is produced with only a very small consumption of electrical power (which can easily be supplied by solar panels). Like the one megawatt plant, it utilizes no radioactive materials, produces no radioactive waste, emits no radiation into the environment, and releases no pollution. The multiple built in safety features and the inherent nature of the E-Cat technology, will make this system an attractive heating solution for homes or small businesses.



We represent a brilliant team of cutting edge scientists, inventors and investors all committed to effective change and a vision of a better world. Be part of the solutions! We feel R&D is of great importance to the emerging Ecat Science, providing safe, economically feasible, environmentally sound & socially acceptable solutions to world challenges

Home Ecat units will not be available for a few years due to rigid testing, certification and regulation procedures.

RESEARCH AND DEVELOPMENT

Applications of LENR

- Adsorption Type Refrigeration Systems & HVAC
- Transportation:
 - Hybrid Cars & Trucks
 - Substitute For Diesel - Electric Locomotives
 - Turbine Driven Ships & Submarines
- Space - Substitute for “Hot Isotope” RTG Units
- Space Planes & Exotic Propulsion
- Site Generated Power

Our Research and Development (R&D) is completely independent and not affiliated with Andrea Rossi and Leonardo Corporation. Like all R&D, it carries greater risk and an uncertain return on investment. All our R&D projects listed below are available for investment.

- Converting Ecat Energy into Electricity via the Ultra Efficient Tesla Turbine
- Converting Ecat Energy into Fuels Hydrogen, Ethanol & CO₂ Sequestering
- Development of the Ecat Car via Tesla Turbine + Generator

LENR is the next step in terrestrial propulsion and beyond

Cars have had the same fuel source for more than 100 years. Rocketry has been nearly the same. Due to the negative impact that conventional fuels is having on the environment, change is not only possible, but ABSOLUTELY NECESSARY for our continued survival. We can no longer keep doing “business as usual.”

Park your car in the garage the Ecat reactor does not stop, it recharges your home and business (imagine a million vehicles powering up the national grid).



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





Ecat technology is cost effective, green and clean, and here to stay!

Why develop an Ecat Car?

- Zero Emission
- Long Life
- Little maintenance
- No need for refueling or recharging stations
- Overall low cost per mile compared with conventional vehicles
- Smaller storage battery/lower cost

Advantages of LENR/Electric Hybrid Transportation

- Unlimited Range – Vehicle charges as it goes
- Either batteries or supercapacitors can be used for a storage medium
- Capacitors have a longer life, and less maintenance
- Less maintenance
- Heat source for cold weather – selling point in northern countries.
- Heat can also be used in an evaporative-type air conditioner.

WATER DESALINATION

Ecat & Sustainable Water Desalination

We have a vision to build the first Ecat ‘Vacuum Assisted’ low energy Ecat desalination and water purification system.

ECAT, AGRICULTURE, LENR & FUTURE CITIES

Sustainably Bridging The Energy-Gap For A Better Tomorrow

In the near future, the Ecat could help provide desalination techniques, and very importantly provide the energy needed (heating and cooling/ electricity) for greenhouse crops, hydroponics and dwellings. On-Site Ecat Power, offers a measure of energy independence, and avoids the huge losses from distribution power line grids.

Ecat & BTM combined can grow crops in the desert using low cost methods. Our trial farm in Dubai proved up BTM tech. We reduced



high salt sands 13.2pH to a measured 8.2pH, using our tailored made microbes, sea water extracted 'ormes', biochar & 'magnetized water'. We grew vegetables in the desert without any chemical fertilizers.

The Rossi Ecat 1 MW containers are easily transported to anywhere in the world, including arid, dessert and remote locations. The Ecat provides the energy needs for intensive greenhouse crops production in the form of heating (colder climates) and cooling (hotter climates). Massive greenhouses can be built on cheap land, integrated with outdoor crops, shading and hydroponics. The Ecat can also provide the sustainable electricity needed for pumps, human dwellings and new LENR Cities. As the worlds population increases and more land is needed for agriculture, the Ecat and BTM can provide the solutions for the need for increased food production. Obviously, these combinations can be used on current productive lands to increase yields and lower energy costs.

BLOOM THE DESERT

Bloom the Desert Projects will Promote and deliver capital

investments into BLOOM THE DESERT JOINT VENTURES, to market, produce, license and develop globally the location of primary water, the development of agriculture products, soil rejuvenation processes, mineral resources detection, the adaption of cost effective technologies, sustainable electricity production, in conjunction and partnership with local companies, landowners and Governments. 



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

www.Ecat.Tech



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