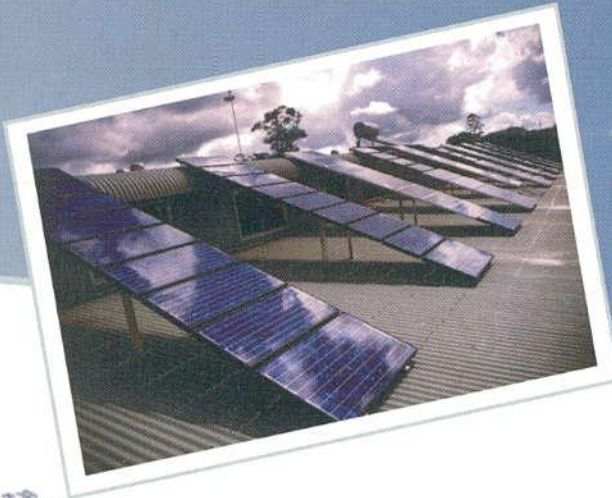
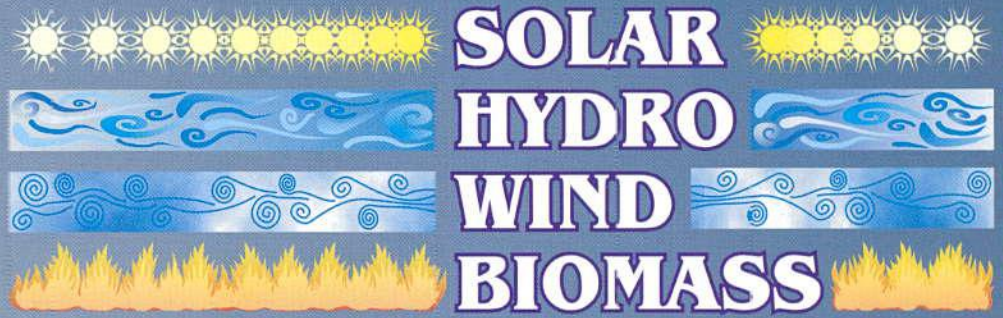
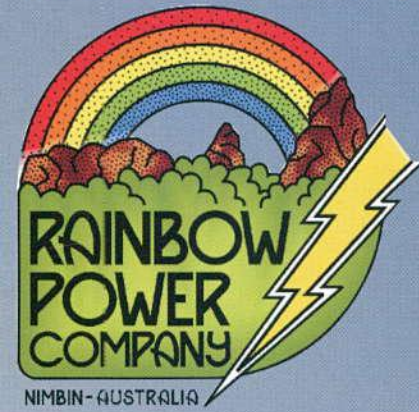


# RAINBOW POWER COMPANY LTD

Manufacture, Sales and Installation of Appropriate Home Energy Systems



Left and below:  
Over 100 solar panels on the roof of  
our premises generate approximately  
7 kW of clean power.  
The Rainbow Power Company building  
combines passive solar architecture and  
a Grid Interactive power system fed by  
a solar array and a wind turbine,  
a fascinating display for visitors.



Over the years the  
Rainbow Power Company  
has been leading the  
Renewable Energy Industry by  
the direct use and production of  
energy from the sun and wind for  
our state of the art  
factory and showroom.



Left: The Rainbow  
Micro Hydro  
generator  
will produce  
considerable  
amounts of power  
from relatively  
small streams  
with little impact on  
the surrounding  
environment.

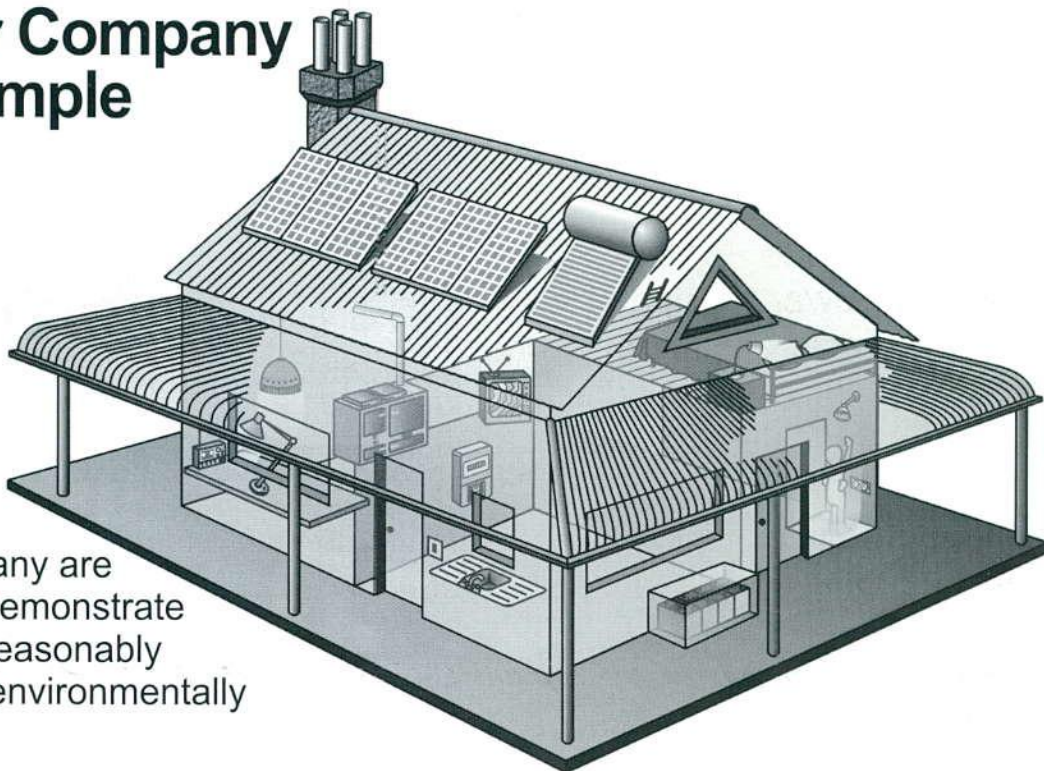
...about Renewable Energy



# Rainbow Power Company Leading by Example

Few governments or industries have yet taken the threat of world-wide environmental pollution seriously or taken appropriate action in dealing with the problem.

The staff at the Rainbow Power Company are united in our endeavor to demonstrate that it is possible to live a reasonably comfortable lifestyle in an environmentally sustainable way.



The Rainbow Power Company is practising environmental harmony in a gentle, peaceful and encouraging manner. We are demonstrating by example!

You are invited to come and visit our unique passive solar designed premises and see for yourself how you can live in harmony with nature.

---

## Customer Service

Rainbow Power Company has extensive experience in Australia and overseas.

This provides us with the ability to help you choose the best system to suit your needs. We have the latest range of products and a wide range of services to assist you.

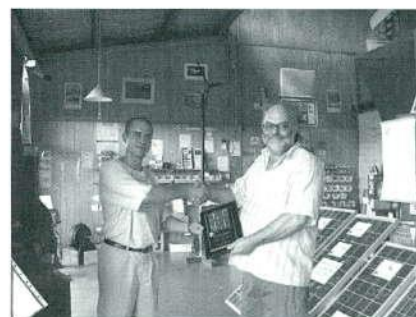
We can also call on a team of associated companies, most notably Energy from Nature Home Pty Ltd, and RESHAPE Pty Ltd to offer you training, give advice on passive solar design, composting toilets and grey water systems.

To make these choices easier for you we have created an award winning display in our building.

It incorporates virtually every aspect of energy production, and demonstrates energy efficiency, composting toilets and passive solar building design.

If you are considering a renewable energy system, the place to start is Rainbow Power Company. First, we'll perform an Energy Audit to establish what your needs are. Then, we can help you assess what your resources are and what type of system would be most appropriate.

We can then provide a large variety of services and products at very competitive prices, backing them up with quality ongoing after sales support.



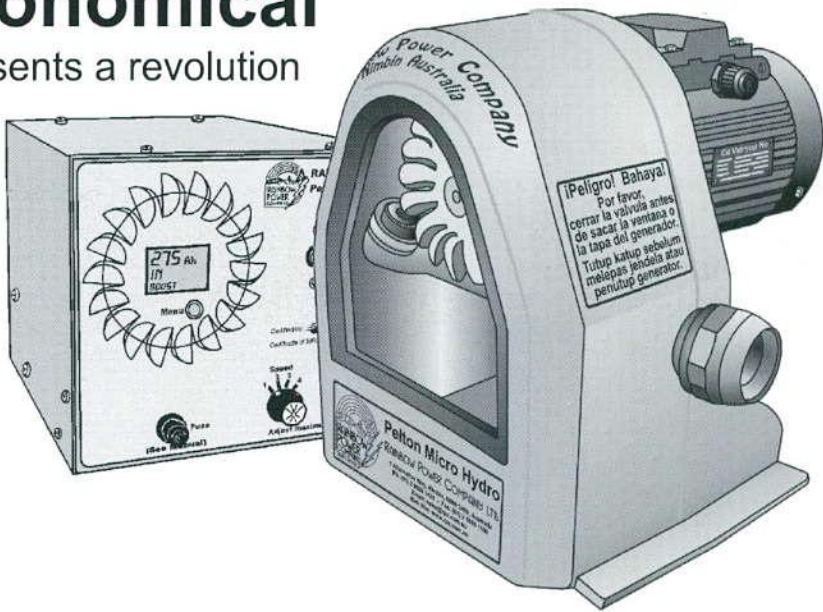
*Rainbow Power Company's  
Dave Lambert receiving our award  
for excellent customer service.*



# Practical and Economical

The Rainbow Micro Hydro represents a revolution in the production of electricity from small streams.

Designed by the Rainbow Power Company after two decades of experience in the field, the unit incorporates state of the art design and materials throughout, resulting in low maintenance with an exceptional service life.



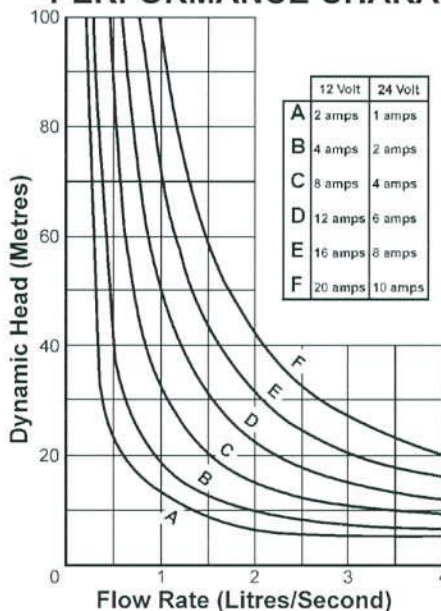
12V - Cat.# HYD-004 / 24V - Cat.# HYD-010

## SPECIFICATIONS

Turbine Impeller Type:	132mm diameter pelton wheel
Impeller Material:	Cast epoxy resin composite
Flow Control:	Changeable nozzles
Maximum Head:	150 metres
Minimum Useable Head:	7 metres
Maximum Flow:	4 litres/second
Minimum Flow:	0.2 litres/second
Generator Type:	Capacitively excited 3 phase 4 pole induction converter
Generator Voltage:	>=350 volts AC
Maximum Power:	300 watt
Charger/Converter Type:	High frequency switch mode variable ratio
Regulated Output Voltage Range, on 12 volt model:	12.5 - 16.5 volts DC
Input-Output Electrical Isolation:	>2500 volts
Regulation:	Adjustable shunt
Regulator Load:	Air cooled element

The Speed Control feature avoids the need for specially wound generators which are often used on small hydro systems.

## PERFORMANCE CHARACTERISTICS



The working head (Dynamic Head) is measured at the turbine and may be considerably less than the geographical head (Static Head) if too small a pipe is used.

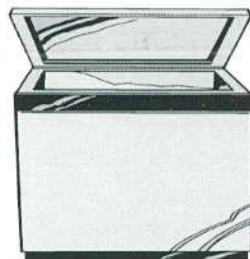
Approximate performance curves only. Consult our technical staff for individual site assessments.

# REFRIGERATORS: LP Gas - 12V or 24V DC

**LP Gas Refrigerator:** "Consul" 220 litre fridge/freezer has 30 litre freezer with separate hinged door. Door hinges are reversible. Uses about 45 kg of LPG in 3 months (1.58 Mjhr.). Has interior light powered by two 'D' size batteries for which rechargeable batteries may be used.

**DC Fridge & Freezers:** Standard domestic cabinets fitted with 12V or 24V DC compressor motors.

Also other models available.



RPC Cat#	MODEL	Capacity	Daily Wh at 25 C	Dimensions (mm) H x W x D	Weight Kg
APL-001	Consul Fridge/Freezer	220L/30L	MJ/hr 1.58	1450 x 595 x 730	78
APL-120	Fridge/Freezer	115L/6L	500	820 x 525 x 55	30
APL-190	2 door fridge/Freezer	136L/50L	830	1230 x 500 x 590	46
APL-220	2 door fridge/Freezer	170L/50L	900	1390 x 500 x 590	54
APL-250	2 door fridge/Freezer	191L/57L	900	1595 x 525 x 550	55
APL-330	Fridge only	330L	940	1540 x 590 x 660	65
APL-360	2 door fridge/Freezer	254L/104L	1200	1330 x 645 x 790	65
APL-073	Eutectic Chest Fridge or Freezer	73L	220/440	510 x 480 x 840	35
APL-160	Fridge or Freezer	160L	380/820	890 x 610 x 660	42
APL-150	Chest Freezer	150L	690	920 x 560 x 660	46
APL-151	Chest Fridge/Freezer	150L/55L	600	920 x 720 x 660	53
APL-260	Chest Fridge/Freezer	260L /55L	760	920 x 1000 x 660	67



# AIR-X Wind Turbine

- \* Variable pitch blades
- \* Regulator slows blades to a silent spin
- \* Fully adjustable voltage control:  
13.8 to 17.8 volts: 12 volt model  
26 to 36 volts: 24 volt model

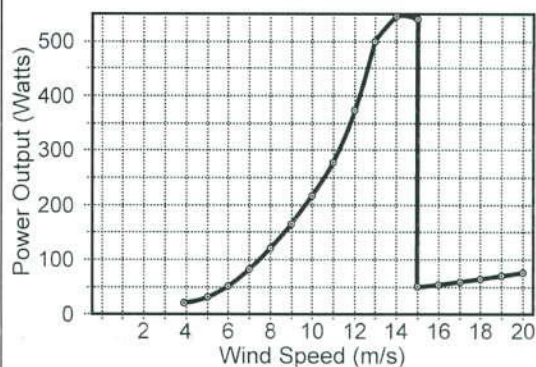
- \* Unit can be shut down at the flick of a switch
- \* Only weighs 5.85 kg
- \* Bearing may need replacing every 10 to 15 years
- \* Maintenance free - only 2 moving parts
- \* 3 year warranty



An ideal wind turbine to supplement solar power on those cloudy days when there is plenty of wind.

Cat.# WIN-303

Air X Performance



## SELECTRONIC & PSA Sine Wave Inverters

Selectronic Sine Wave Inverters

RPC CAT#	Model#	DC Volts	Power Ratings (Watts)		
			Continuous	30 minutes	Surge
INV-001	LD200	12V	200W	250W	600W
INV-008	LD250	24V	250W	320W	750W
INV-010	SE10-12	12V	350W	450W	1000W
INV-012	SE10-24	24V	350W	450W	1000W
INV-007	LD450	12V	450W	560W	1350W
INV-009	LD550	24V	550W	720W	1650W
INV-112	SE12-12	12V	600W	800W	1500W
INV-212	SE12-24	24V	700W	900W	2000W
INV-115	WM800-12	12V	800W	1100W	2400W
INV-215	WM1000-24	24V	1000W	1500W	3000W
INV-125	WM1200-12	12V	1200W	1650W	3600W
INV-122	SE22 (12V)	12V	1300W	1800W	4000W
INV-225	WM1500-24	24V	1500W	2250W	4500W
INV-122	SE22 (24V)	24V	1600W	2100W	5000W
INV-232	SE32	24V	2400W	3700W	7000W
INV-442	SE42	48V	3600W	5500W	10000W

PSA Grid/Generator Interactive Sine Wave & Battery Charger

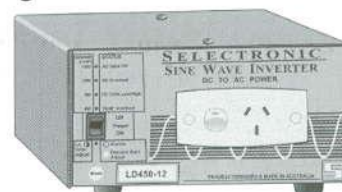
INV-P01		24V	2700W	3500W	7000W
INV-P02		48V	3000W	4000W	10000W
INV-P03		48V	5000W	6500W	10000W
INV-P04		120V	10000W	1300W	22000W



Cat.# INV-115

Produces mains quality power from a battery based power system.

It will produce 240 V AC true Sine Wave power at least as good as mains electricity.



Cat.# INV-007

Cat.# HET-003

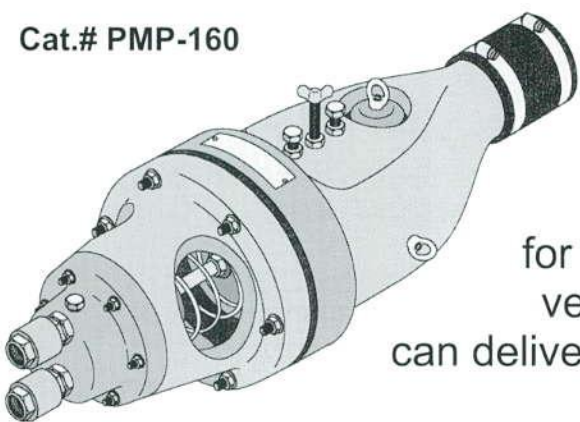


## BEST Slow Combustion Stove

- \* Very efficient combustion - reflected in fuel savings
- \* Designed for wood fuel
- \* Low external temperatures for comfortable use in all seasons
- \* Stainless steel stove top incorporates water heating jacket
- \* Stainless steel oven - easy to clean
- \* Circulation around oven for fast heat
- \* Hotplate, lids and doors in cast iron, body in steel and stainless steel
- \* Thermometer in oven door



Cat.# PMP-160

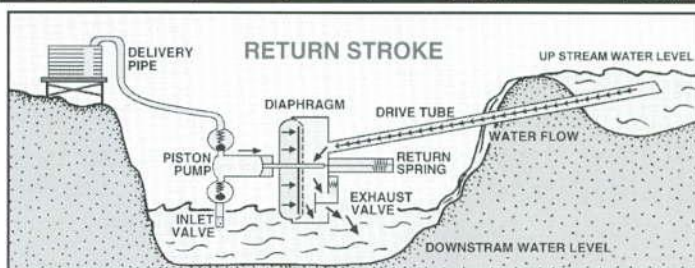
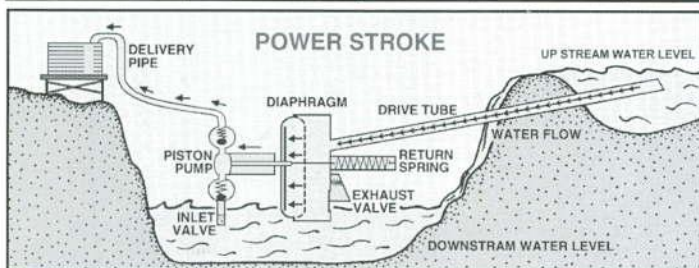


# GLOCKEMANN Water Powered Pump

Revolutionary technology which for the first time, allows pumping of water using very low supply heads - 0.6 metre supply drop can deliver 1600 litres per day to a head of 50 metres.

WATER PUMPS

Glockemann Model	Supply Rate Litres/sec	Drop in Metres	Drive Pipe Size (mm)	Delivery Height (metres) - Output (litres per day)								
				5m	10m	20m	35m	50m	75m	100m	150m	200m
Oasis 320	5.5	1.8	100			17000 g	10300 e	7450 d	4950 c	3750 c	2500 b	1850 a
	7.5	1.4	150			17000 g	10000 e	7500 d	5200 c	3900 c	2600 b	2000 b
	7.0	1.2	150			23000 g	14500 f	8600 e	6700 d	4500 c	3350 b	2250 b
	7.0	1.0	150	23000 g	19000 g	11200 e	7100 d	4950 c	3350 b	2500 b	1600 a	1250 a
Cat# PMP-320	6.0	0.8	150	18900 g	13000 f	7200 d	4150 c	2900 b	1900 b	1450 a	1000 a	700 a
	4.0	0.6	150	13950 f	7800 d	4150 c	2350 b	1600 a	1100 a	800 a	550 a	
Water Dragon 160	1.1	2.5					4000 c	3300 b	2100 b			
	1.4	1.5				3700 b	2400 b	1700 a	1100 a			
	1.6	1.0		5000 c	4000 c	2000 b	1400 a	900 a				
Cat# PMP-160	1.4	0.6		2700 c	2000 b	1000 a	600 a					
Bore Diameters												
d=73mm e=86mm f=98mm g=124mm a=35mm b=48mm c=60mm												



## Stationary, Gel & Traction Batteries

### SunCycle - Stationary Batteries

RPC Cat#	Volts	Capacity		Dimensions (mm) L x W x H	Weight Kg
		10 Hr	120 Hr		
BAT-037	6	105	195	286 x 184 x 286	30
BAT-033	2	235	450	190 x 197 x 286	21
BAT-034	2	340	620	190 x 276 x 286	32
BAT-038	2	450	840	190 x 292 x 482	51
BAT-035	2	515	1000	190 x 292 x 482	55
BAT-036	2	610	1100	190 x 292 x 482	59

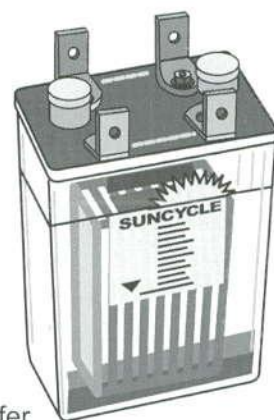
### SunGel - Power Gel Batteries

RPC Cat#	Volts	Capacity		Dimensions (mm) L x W x H	Weight Kg
		10 Hr	120 Hr		
BAT-200	6	125	200	276 x 184 x 265	32.5
BAT-250	2	156	250	109 x 184 x 265	13
BAT-450	2	270	450	184 x 197 x 265	23
BAT-650	2	390	650	184 x 276 x 265	32
BAT-900	2	542	875	145 x 206 x 680	49
BAT-1150	2	650	1050	145 x 206 x 680	54
BAT-1400	2	867	1400	210 x 191 x 680	71
BAT-1750	2	1083	1750	210 x 233 x 680	87
BAT-2000	2	1300	2100	210 x 275 x 680	103

### Apex Trojan - Traction Batteries

RPC Cat#	Volts	Capacity		Dimensions (mm) L x W x H	Weight Kg
		20 Hr	100 Hr		
BAT-026	12	105	117	324 x 171 x 248	24
BAT-001	6	225	250	264 x 181 x 284	28
BAT-029	6	305	339	295 x 178 x 365	41
BAT-002	6	395	438	295 x 178 x 424	55

The SunCycle batteries are made of antimonial alloy grids to give added strength and to facilitate the deep cycle capability. The container is optically clear thus enabling the user to visually monitor the condition of the cells. Ideal for solar and remote area applications.

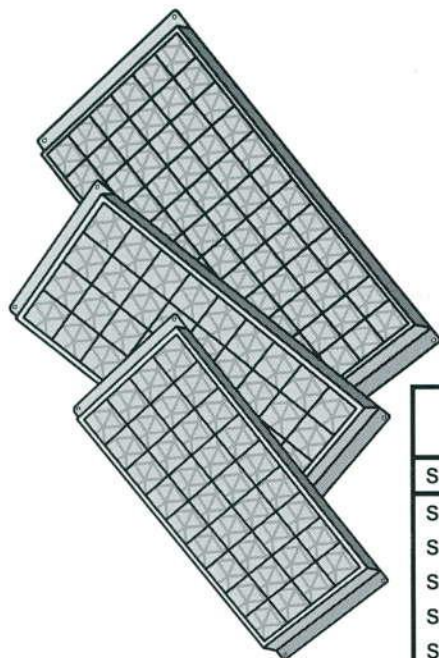


SunGel batteries are maintenance free deep cycle batteries that are easier and safer to ship to remote destinations than the standard liquid electrolyte type batteries. It can be used with most charging systems with minor adjustment and can be placed in areas where maintenance is difficult or beside sensitive electronic equipment.

Apex 2200 deep cycle batteries are one of the most successful traction batteries available. They have long lasting positive and negative plates. The lids are not heat sealed, but are sealed with epoxy resin to give greater strength. The vent openings in the lid are sealed with one piece, easy opening, time saving flame retardant plugs. Rugged stud type terminals allow for quick and simple battery connections.

BATTERIES





# PHOTOWATT Polycrystalline Modules

Photowatt modules of 40W or more have a 25 year warranty.

Most solar modules available in Australia have a thin tedlar plastic layer as rear protection.

All the Photowatt modules are available either with the standard tedlar backing or with a much more durable glass rear protection, except for the 100W modules which are only available with tedlar backing.

RPC Cat#	Power (Watts) Typical	Current (Amps) Typical	Dimensions (mm) L x W x D	Weight Kg	Warranty Years
SOL-Y05	5	0.3	250 x 230 x 25	1	15
SOL-P12	12	0.65	582 x 262 x 39	3.4	10
SOL-P22	22	1.38	720 x 370 x 39	5.2	10
SOL-P42	42	2.5	1042 x 462 x 39	9.2	25
SOL-P52	52	3	1042 x 462 x 39	9.2	25
SOL-P75	75	4.4	1272 x 556 x 39	13	25
SOL-P80	80	4.6	1272 x 556 x 39	13	25
SOL-P00	100	2.9 at 24v	1335 x 673 x 25	10.5	25

## PLASMATRONICS Battery Charge Controllers

Available in 20A (Cat# REG-L20), 40A (Cat# REG-L40) and 60A (Cat# REG-L60) models.

Includes LCD meter to measure:

- \* Battery voltage
- \* Charge current
- \* Load current
- \* Charge amp-hours
- \* Load amp-hours
- \* Battery temperature
- \* Daily maximum and minimum battery volts
- \* Data is kept for last 32 days

### Advantages of PL Series Regulators:

**Versatility:** One unit, thousands of applications

**Upgradeable:** The same unit will do 12V, 24V and 48V

**Timing Function:** Can be used like a domestic electric time switch

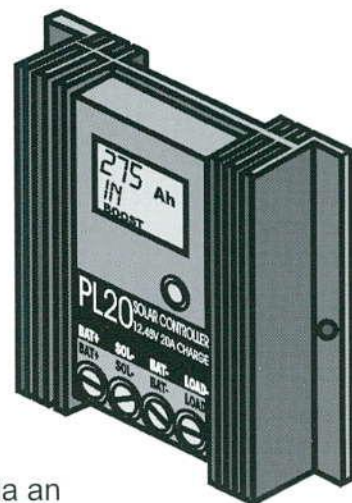
**Battery Gauge:** Battery state of charge estimator

**Generator Control:** Can turn a generator on and off according to battery voltage, estimated state of charge and time

**Low Battery Voltage Load Disconnect:** Can be used to help prevent excessive discharge of battery bank

**Computer Interface Option:** Can communicate with a computer or modem via an optional serial interface adaptor

**Inverter Metering:** Optional external load shunt can be added to measure inverter load current



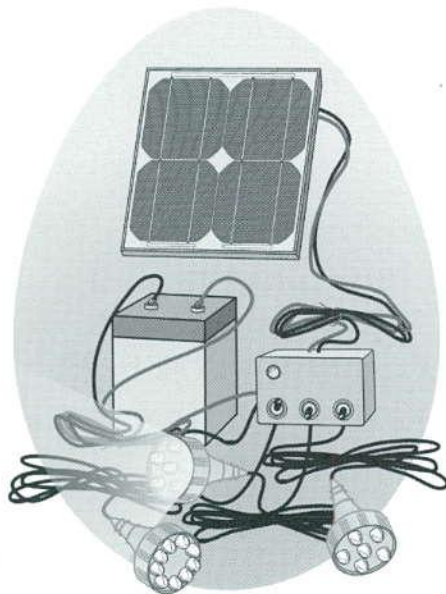
## Rainbow Micro Solar Kit

These economical micro solar kits are ideal for basic lighting requirements for remote village homes, holiday homes and camping. The kits are all prewired and can be installed by the homeowner in less than an hour.

They use high efficiency LEDs designed specifically for lighting applications. LEDs are ideal for small lighting applications as they are efficient and robust. They do not produce radio interference and they are designed to last 100,000 hours.

The kits include a high quality solar panel, a sealed lead acid battery, a regulator, LED lights and cable. The standard kit contains 3 lights on 5, 10 and 15 metre leads.

These lights contain a total of 21 super bright LEDs.





# Energy from Nature Book/Catalogue

Energy from Nature is now in its 11th edition.

Over 30,000 copies have been sold worldwide.

This book is popular amongst students, libraries, teachers and people who live in remote areas and rely on Renewable Energy. Energy from Nature offers the information needed to design and maintain a renewable energy system.

Solar, hydro and wind applications are thoroughly covered in a simple and concise manner; ideal for the novice but also for those experts who need to refresh or gain more information on specific topics.

140 pages dedicated to designing, installing and maintaining your own renewable energy power system using nature's abundant free energy and an entire range of products, appliances and accessories are covered extensively in this publication.

Cat.# PRN-006



ENERGY FROM NATURE  
HOME

## Energy from Nature Home Pty Ltd Courses



Energy from Nature Home Pty Ltd holds a variety of courses to suit many different needs.

You can choose to learn the skills required to maintain your own renewable energy power system or to become fully qualified and SEIA accredited in order to install and maintain other systems. Please contact our office for more information.

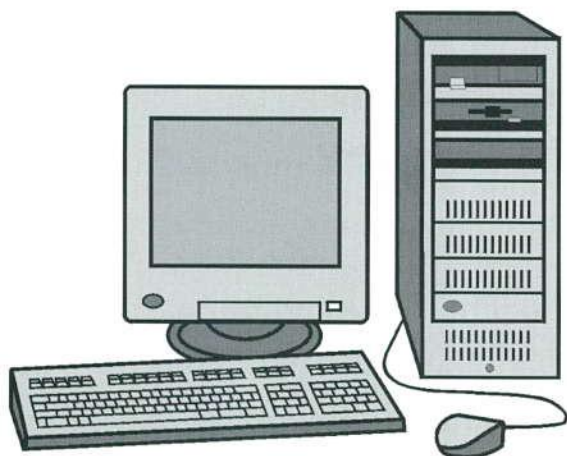
*Our students come from all over the world to learn about renewable energy. We offer them hands-on experience under supervision of our experienced technicians.*

## System Sizing Service

Rainbow Power Company uses comprehensive System Sizing software to ensure professional system design.

Our consultants are at your service and will help in assessing all your power requirements.

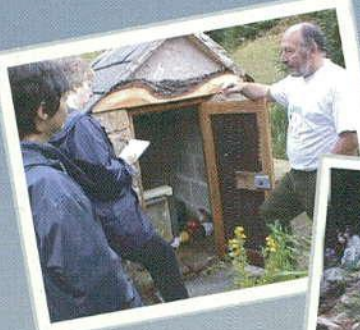
We can offer you an extensive range of high quality products to best suit your needs and budget.



**Contact us if you require an assessment form to be sent to you.**



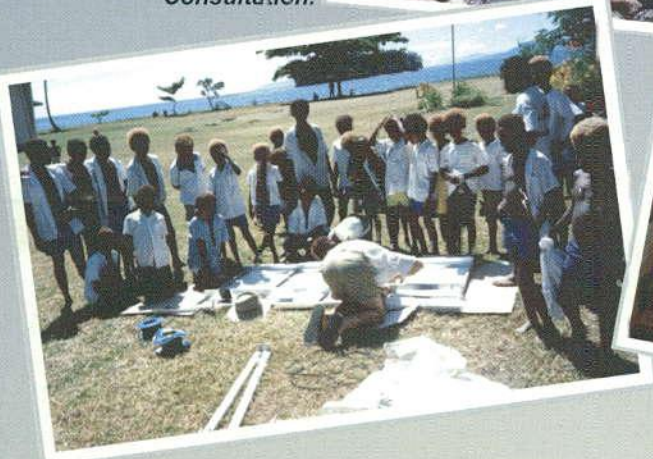
North Energy Associates,  
Rainbow Micro Hydro  
installation  
at Paddaburn, UK



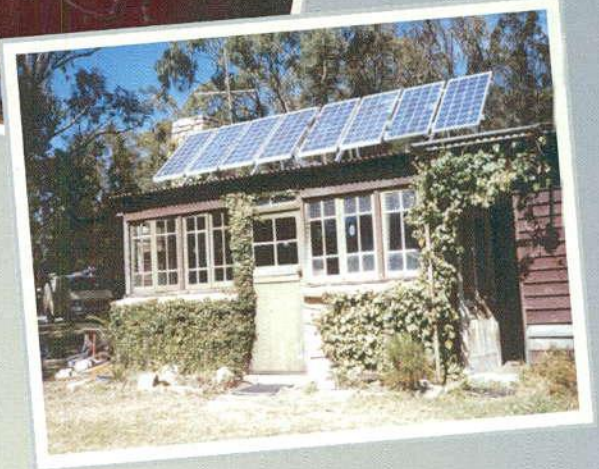
Right: The smiling faces of  
the people of the  
Province of Milne Bay  
in Papua New Guinea  
during a Hydro Site  
Consultation.



Above: Solar installation in  
the Solomon Islands.  
Left and below:  
Installation of a domestic  
solar system in Queensland,  
Australia, under the  
government  
solar rebate scheme.



Above: Terry McGovern,  
Rainbow Power Company's technician,  
is watched by an interested crowd of  
young people from the Province of  
East New Britain, in Papua New Guinea.



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Energy from Nature Home Pty Ltd  
Training and  
Accredited Courses



# RAINBOW POWER COMPANY LTD

Manufacture, Sales and Installation of Appropriate Home Energy Systems

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