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New Green Power Product Announcement

3Horsepower eFARM GT Mobile Energy Kit **Now available from Terraqueous Electronics**

Description

The **3HP eFarm GT Kit** is a unique, portable configuration of components for generating & or storing electrical energy in magnitudes of Kilowatt hours. The kit is a hybrid mobile power plant that works with both conventional and its own alternative energy sources. When assembled an eFarm can 'farm energy'. IE it will collect, store and make available electrical energy that's transportable and suitable for your needs anywhere you take it. GT stands for [Grid Tie](#), meaning the kit is able to consume and store from a local utility grid as well as return (sell) power to it all under your control. An eFarm GT Kit delivers over 2000 watts of electrical power in the form of conventional 120Vac 15A (GFCI) receptacle power and/or as 12V/24Vdc power. Power is available for personal use, to the vehicle it's housed in or to stationary or other equipment. It can be used to improve vehicle fuel efficiency and/or to integrate your vehicle/portable based energy production with that needed in a home, cottage or boat. For that matter into any product requiring electrical energy where energy source independence, carbon neutrality, emissions reduction or unattended operation is desired.

eFarm GT Kits are targeted at the mobility and independent energy source marketplaces. Systems are most easily transported in or operated from Station Wagons, Vans or Pickups but can also be setup or moved on hard or tote carts. In its most compact form a 3Hp eFarm occupies about 4'x2'x2' of space and weighs ~80kgs w/o batteries. The kits can be used by EV and non EV electric power enthusiasts, by consumers, by businesses operating away from the grid or where grid reliability is low. In general it's a useful tool for anyone considering producing & using their own clean fuel (power) onboard their travelling or stationary craft

The eFarm GT Kit is a new product, available now to promote energy independence & to enhance EV products giving buyers an option to store & produce their own conventional AC energy, instead of searching for retail energy sources or EV plug in points.. The eFarm GT, a nominal **3 Horsepower 'Hybrid Green Energy based, Bidirectional Grid Tie capable Power Plant'** designed for **portability!** In automobiles it can run your fossil powered vehicle electrics and other vehicle subsystems if converted to electrics. In computing speak an eFarm is like a Notebook PC. And conventional energy suppliers are like Mainframes! The eFarm GT Kit. Grid friendly KiloWatt sized Electrical Power to go. Think of it as a green mobile generator, on steroids! Making & refining it's own electric fuel. eFuel

eFarm GT Kit contents

- All kits come with a minimum of 3 energy input sources. Standard kits are true Hybrid Mobile Power Plants based on multiple green energy sources.
- 450 Watts of Solar Power configurable into 12, 24 or 48 Volt arrays.
- 800 Watts of Wind Turbine Power. (2 x 400W 24Vdc Marine grade Wind Turbines) Turbines come with Shut off switches to enable shutoff / silencing of the turbine
- A programmable 2500VA (5000VA Peak) +24Vdc to 120Vac True Sine wave Inverter with **Grid Tie capability**, expandability, a 60 Amp transfer Switch and a **120Vac I/P +24Vdc 55Amp 5 stage battery Charger** with single point Battery temperature compensation, a remotable controller and PC Interface. (Inverters are ETL UL 1741 Compliant labeled meaning they are certified for Grid Tie use in Canada & the US) see Purchaser requirements for Grid Tie use details. See the options list for other available voltage inputs & outputs.
- One 600 Watt, 120Vac Input +13.5Vdc Output power supply (with integral 12Vdc @ 40A 3 stage charger selectable for AGM, Gel, or Flooded Batteries). And a Solenoid bypass kit to optionally engage / disengage a Vehicles Gas powered +12V alternator.
- Interconnectors, Disconnecting Means, Breakers, GFCI Weather proof outlet, AC Power Output Monitor, Enclosure, Cabling, 40amp Solar Regulator, Wind Turbine Masts & Solar panel mounts suitable for carrying the panels on the roof of a Van or Station Wagon or a hooded/racked pickup. With the exception of batteries the kit includes everything you need to build your own complete mobile hybrid alternative energy power plant.



A 3HP (2.5Kwatt) eFarm GT Kit setup on MilFORD the Van at TQELX.COM. (Wind Turbines & GT inverter plant not shown here)

eFarm GT Kit Options

A number of eFarm GT Kit Options are available to customize your kit;

- Full assembly of the kit into a portable configuration.
- Installation / setup on your vehicle or to your specifications.
- Vehicle Battery boxes fully integrated to your vehicle or delivered as components
- Alternate energy sources. Micro Hydro, Regenerative Braking, More Solar..
- 48Vdc base voltage / for energy storage instead of 24Vdc
- A PC based power plant monitor & control system. In the form of Software, Hardware or both. A demonstration form of the software is available as a free download.
- Inverter add ons for 240Vac split phase or 120Vac 3 phase power for delivering up to 7.5KVA continuous power or 15KVA peak.
- Full CSA electrical approval for your inverter setup.
- Electrical Code compliance & permitting for structure embedded installations.
- Extended Warranties & Annual maintenance contracts.

A **3HP eFarm GT Kit** is a standard set of parts. However Terraqueous is a custom shop and will configure or build kits or plants to meet your specific needs. Please note Wind Turbines are not intended for deployment/operation while mobile. Not at product release time at least. An eFarm Solar Array can operate while mobile.

The following needs to be provided by Purchasers

- * *For Vehicle based use, 1) A Van, Stn Wagon or Truck with Roof or Cargo Racks capable of supporting 50" wide x 120" long x 55kg Solar Array Structure. 2) A Vehicle trailer hitch suitable to accommodate a removable bicycle tailgate rack.*
- * *A +24V Battery Pack with a minimum of 100Ah rated capacity (2.5kw-hr). A 7Kw-Hr pack is recommended so long as the vehicle can carry 400lb of extra Payload. (Kits can handle most Lead based battery systems, some NiCad ones and some others. Some limits on the type of pack may exist. Check with us on compliance and charge limitation matters for non conventional battery pack technologies.*
- * *Tools necessary to assemble the parts, Electrical tools & crimping means for Awg#4 Wire. A Drill, hole saws and a multimeter.*
- * *Any Materials needed to channel cables from the vehicle exterior to interior.*
- * *An awareness of electricity, electrical safety practices, battery handling, ohms law & shock hazards. In general worst case shock hazards exist at any voltage above about 20 Volts. The lower the voltage the safer it is. If you don't have an electricity background consider a build option or take a night school course.*
- * *For Public Utility Grid Tie operation, a purchaser must meet requirements of the local Utility Provider (in B.C. See http://www.bchydro.com/rx_files/info/info11776.pdf) or the current regulation. That or work with a private power network capable of power*

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sharing/networking (IE The Inverter is compliant Honda EU Generator or other Electronic Inverting generators or Inverters). It should be noted some aspects of the BC Electrical Code may govern interconnection of production sources in Private Networks. The kit includes UL 1741 Grid tie functionality. The right & use of Grid Tie capability is the sole responsibility of the kit owner.

The eFarm GT Kit Power Specification

The eFarm GT Kit's 3 Hp rating (2.2Kw RMS) is a nominal rating for the system. The rating is primarily based on the inverters ability to produce 2500VA of 120Vac power continuously until your battery supply is depleted. (Horsepower to Killowatt calculations are based on 1 Horsepower equaling 0.746KWatts or 746 Watts of electrical power). When tide to the grid you can collect energy (ie Charge your batteries) at an adjustable rate up to 3KWatts / hour (3Kw=3000 Watts)*. Off grid the standard kit can collect energy at up 1250 Watts / hour or a little under a rate of 2Hp hour per hour. When you consider that a typical electric bikes requires 10Watt hours of energy / Km when operated as a hybrid, an eFarm kit has a lot of power production capability. *This is a cumulative rate including simultaneous collection from both a standard 120Vac duplex receptacle & your alternate energy products. With availability of a higher rated receptacle and a larger fuse on your kit, the maximum combined collection rate go up by more than an extra Kwatt / hour.

Return on Investment / Longevity / Warranty

Considering Solar Panels in the system come with a 20 Year warranty, a well cared for eFarm can provide power & a good return on investment over a very long life span. That is as good as or better than the typical ROI on an electric vehicle conversion. Or any vehicle for that matter. Furthermore selection of modern batteries such as AGM type, can also extend the lifespan for a storage subsystem by up to 10 years** which is the typical design lifespan for AGM products if not used in a constant heavy deep cycling routine. (** For an example of design lifespan see Discovery Energies D121000 Battery data sheet @ <http://www.discover-energy.com/files/datasheets/D121000.pdf>). Other main components in the system generally come with a 2 year manufacturer's warranty. An optional 5 year inverter warranty is available.

In an optimal power production setting, (sunny & windy) this plant can produce 10KW Hours of electricity per day. Enough to range extend an EV car by 30KM's, or an electric motorbike by 300KM's or a fleet of 10 electric bicycles by a 1000km's collectively.

eFarming & the eFarm GT Kit is a novel idea and product, the technology is not. An eFarm GT kit can help reduce your need for oil, and lead to a new mindset in green vehicle range & electrical energy availability. Per year they cost less ¼ of the total fuel& energy bill of a typical single vehicle based home. You can think of it as a Toyota Prius Plug in Hybrid upgrade kit supercharged with Grid Tie capability but for regular vehicles, or as a transportable green power plant or as a Range extender for your EV or NEV.

Call us for a Quote

Call us for a quote on your own customizable eFARM GT Kit. Kits can be upgraded or downgraded to meet your needs. Quantity discounts are available. Terraqueous Electronics & Services designs, builds, & supports other sizes of Green Power Systems and other products for the Environmental Electronics Market. Visit our website or give us a call.



MOBILE ENERGY FARM

3Hp eFARM GT Kit



Be your own Carbon Creditor.
The GRID & Beyond, or Bust!
Green AC Power available where you want.

Now Accepting Orders



TERRAQUEOUS
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Free Stuff. We offer free* eFarmed charging electricity to Scooters, eBikes & eTrikes. Stop by [725 Quadra](#), near Victoria's Beacon Hill Park, for an eFarm demo & a free vehicle recharge,. *(This is a Limited time offer daily from 1-7pm & while supply lasts. We hope it will be ongoing. Customers are asked to bring their own AC charger. We can accommodate most 12 Volt packs and some higher voltage packs too but your best to come with your own AC Vehicle charger.)

For further information **Contact:**

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Google link to our location: <http://maps.google.com/maps?f=q&hl=en&geocode=&q=725+Quadra+St.+Victoria+BC+Canada&ll=48.428289,-123.364534&sspn=0.048923,0.045834&ie=UTF8&il=48.420144,-123.360329&spn=0.048931,0.045834&z=14&iwloc=addr>

Terraqueous Electronics & Services Ltd is a BC owned & operated Environmental Electronics Consulting, Services & Technology Company and has been in business since 2005. It has divisions that provide Environmental Sensing products & services and a division focused at value added Green Power design, installation, support & use. Abbreviated as TQELX or TQELX.COM the firm is focused at the use & support of technologies that relate to the environment & to people & companies affected by it. Deliverables have ranged from Real time reporting Tide Gauges, to environmental electronics consulting reports, to products for electric mobility & off grid Green Power Plants of up to megawatt size annual production capacity. As a very young company Terraqueous Electronics has already delivered products & services in over 5 Countries and exceeded sales targets in its first 2 years of operation. Its employees constitute 25 years of experience in these industries and 35 years experience in the electronics, electro mechanical & computer fields. TQELX.COM is also a BC Licensed Low Energy Electrical Contracting Business. Contractor #94390.

What is Energy Farming?

Farming implies using land, water or air to grow things. Conventional farming also often allows land or the resource to be repurposed. To grow, carrots, then pumpkins, then flowers or other products. Farmland is sometimes temporarily repurposed. Some farmland becomes flooded in winter, and can act as an aquifer, skating rink, or sailing pond. **Energy Farming** is as coined by us is the application of farming concepts to the collection of energy. Mobile energy farming could be thought of as sheep herding applied to green power collection. Shepards commonly move around with their herds as the land & feed source changes with the seasons. A mobile energy farmer can do the same moving around to where the potential resource exists. To a sunny hill, windy plain or otherwise.