The “Power for Peace”

There are no geographic borders, no ethnic, religious, or racial boundaries – renewable energy is the one common denominator that can be used to improve lives anywhere in the world.

It truly is the “power for peace”!

By: Michael G. Lee
Renewable Energy Advocate
Security/Communications Analyst
Green Power Management Solutions, LLC
mike.lee@gpmsllc.com

Dr. Samuel Lee Hancock, CM
President & Executive Director,
EmeraldPlanet
Rotarian & Paul Harris Fellow

Tel: 202-718-2762              Skype: emeraldplanet1
Email: Dr_Sam_Hancock@yahoo.com
emeraldplanet1@gmail.com
Web: www.emerald-planet.org
Devastating earthquakes are accelerating in the 21st Century

The UNDP Estimates that 195 Major World Cities are located in such high risk locations

Earthquakes with 6-8 magnitude from 1900-2008
With Creative Technology and Renewable Energy…

• Jobs can be created
• Local government tax base is expanded and strengthened
• Education and health care services are increased

Renewable Powered Technologies are the catalysts for change
Renewables give “power” to remote villages, agricultural communities, urban centers creating....

...jobs, clean water, communications, education, healthcare, financial services, government outreach, entertainment, and much more.
“PCP” – Public Communication Portals

Cell and Data networks
For every 10% increase in cell phone use GDP increases more than .6% in underdeveloped areas

• <30 watts per TRX (GSM)
• 14 cell calls per TRX
• 15km range
• Local call routing w/o carrier interface
Internet Access and wireless networks.....

- Pre-Paid SIM cards
- Cell phone rental/sales
- Cell phone charging
- SMS text
- Internet access
- Email
- On-line banking
- Training, Healthcare,
  Education, Security

Communication Stations
Irrigation for Farmers Cooperatives and water for livestock and private gardens....

Pumping, irrigation, and purification from 2,400 to over 100,000 gallons per day
Clean Water Controlled Distribution

- Solar cells operate the pump as well as telecommunications and control equipment.
- The regional service centre automatically receives an alarm if the pump needs servicing.
- A 10,000-litre water tank with a switch that stops the pump when the tank is full.
- The local community owns the system, and in addition to clean water, they receive part of the profit that is made.
- The users pay for the water with their smart-cards which have been prepaid via their mobile telephones.
- The central database in Denmark distributes the credits for the pre-paid water.
- The water from the SqFlex plant improves life conditions for the local population and growth conditions for plants and animals.
All size Power Systems using solar and wind for communications, healthcare, education, financial services, entertainment, and much more.....
BioDiesel Processing for Generator based power systems

All natural fuel processing
Benefits of BioDiesel production

Job creation:
  plant production used as fuel source
  Fuel production and distribution
  Generator deployment, service

Uses for Generator based power systems
  Deep well water pumping
  Irrigation
  large scale communications
  Schools, Hospitals, Medical recovery

Diesel fuel for critical vehicles
More Micro Entrepreneurial opportunities

**Cell phone business operations**
- SIM card sales (pre-paid)
- Phone sales/rental/service - private calls
- Cell phone charging

**Water pumping, distribution, irrigation**
- Farmers cooperative farming, irrigation, and gardens
- Drilling services, pump spare parts, pump repairs

*“Village Assembled” kit assembly*
- Lighting products, i.e., LED energy efficient lights
- Battery charging – cell phones, PDAs, radios
- Solar powered fans, radios, and cell phones

**Information dissemination**
- Agricultural and aquaculture education
- Health care information and education
- Advertising/sales of local products to national markets
- Village Assembled products/services
- Financial services – micro loans, transfers, banking
Natural Wastewater Treatment and Pollution Control
Artificial Wetlands

• No mechanical equipment
• Little to no power requirement (solar where necessary)
• Scalable from a home to a small village to major metropolitan cities
• Promotes agriculture and aquaculture food production
• Promotes pollution control, reduces soil erosion and helps eliminate shipping port sediment build-up
• Provides reliable source of drinking water for humans and livestock

Beijing City
Treatment capacity ranges from 1,000 to 10,000 tons of waste per day.

Large scale
Beijing Olympic Village

Medium
Yunnan Province, China

Small
Lotus Lake Artificial Wetland

Comparison Samples Before Treatment and After
Personal and Communal Waste treatment facilities

Composting toilets - the gray water is diverted to the artificial wetlands and solid waste is dried and used for compost.
The “Power for Peace” is a program to advance living conditions in underdeveloped areas around the world that would benefit from some of the modern day technology advancements.

However, the concepts and systems are designed to work in the modern world when natural or man made disasters destroy infrastructure and drastically change living conditions.....
Mass casualty Natural Disasters come in all shapes and sizes.....

- Hurricanes
- Cyclones
- Tsunamis
- Famine – Drought
- Earthquakes
- Forest and Urban Fires

These disasters have several characteristics in common:
- Infrastructure destroyed or disabled
- No Power
- Contaminated Water supply
- No Communications
- Need of Shelters and Medical Supplies
- Food

Renewable Energy Used in Disaster Recovery
Devastating earthquakes are accelerating in the 21st Century

The UNDP Estimates that 195 Major World Cities are located in such high risk locations

Earthquakes with 6-8 magnitude from 1900-2008
From the initial Search and Rescue Missions through reconstruction there is the constant need for POWER!
Skytower Water Purification systems from Rotary International
Water filtration/purification systems in all sizes – no power required

One “man power” water purification and pumping system
Ultra Filtration water purification systems

These containers are self contained water purification systems. Using new ultra filtration technology, they filter bacteria, viruses, parasites, fungi and more - and provide up to 15,000 liters of clean drinking water before a filter change is required.
Rapidly Deployable Power systems for Communications, Security, Battery Charging, Water Filtration and Pumping, Refrigeration, and much, much more which depend upon local community needs
Shelters and Equipment for temporary and longer term living in disaster zones

Tent based schools and hospitals....
Rapidly Deployable Power systems for Communications, Security, Battery Charging, water pumping and more.

- 400w wind
- 500w solar panels
- 1350ah batteries
- Rapidly Deployable
- 15 minute set-up
- No fuel replenishment
- No heat signature
- Quiet
- Mission Critical Applications
Power Systems for Communications & Security
In Support of Disaster Recovery efforts:

Satellite Communications
Internet Access
GSM Cell phone communications
Water Purification
Lighting
Disaster/Emergency Communications

Sun Tracker Power Trailer

3Kw Power Station

Solar Powered Command Trailer
There are no geographic borders, no ethnic, religious, or racial boundaries – renewable energy is the one common denominator that can be used to improve lives anywhere in the world.

It truly is The “Power For Peace”.

Village Powered Marketplace – power for communications, refrigeration, water purification, battery charging, lighting - and a shelter for community markets
The “Power for Peace”

There are no geographic borders, no ethnic, religious, or racial boundaries – renewable energy is the one common denominator that can be used to improve lives anywhere in the world.

It truly is the “power for peace”!

By: Michael G. Lee
Renewable Energy Advocate
Security/Communications Analyst
Green Power Management Solutions, LLC
mike.lee@gpmsllc.com

Dr. Samuel Lee Hancock, CM
President & Executive Director,
EmeraldPlanet
Rotarian & Paul Harris Fellow
Tel: 202-718-2762              Skype: emeraldplanet1
Email: Dr_Sam_Hancock@yahoo.com
emeraldplanet1@gmail.com
Web: www.emerald-planet.org