

OES News June 2011

HEADLINES

Tensioned Cable System evolves; workshop planned for August; link to pictures in the field; design focus on two-tier mounts and KW scale solar farms

Electric Vehicles hit the streets; the Smart Grid; Impacts of EVs to the grid; OES Off-Grid EV Charging System turned 9 last winter

Utilities face RPS requirements, **EPA GHG rules** (with a pending AEP Co. v. Connecticut case), and the **Economics** of Recessions and Regulations

Zen and the Art of Solar-based Earth Maintenance; this is nothing more than a way of thinking amongst the shrinking

Tensioned Cable System evolves

With the design done, production under way, and systems being developed and installed over the summer, it is time for a workshop to tell about it. Look for a workshop on the TCS sometime in August 2011.

In the meantime, review and comment on our preliminary TCS Guide at http://www.olympicenergysystems.com/uploads/OES_TCS_M_Kits_Guide.pdf

You can view pictures from the field of detail aspects of the TCS at http://www.olympicenergynetwork.com/OES_News_Info.html

Our development is focusing on production of our baseline TCS kits, quality assurance, two-tier mounting ground units and KW scale Solar Farms. A reminder, small farms qualify for USDA grants, as well as the 30% Federal Tax Credit and production incentive payments (in Washington State).

Electric Vehicles hit the streets

The Chevrolet Volt (40 mile electric and 300 mile gas range) and Nissan Leaf (all electric 80 mile range) vehicles are just the beginning of the wave of electric and hybrid cars to reach the market. We have been hearing a buzz on something called the Smart Grid. Simply put, it is the use of digital communications to align energy demand with energy supply. Another way to say it, the bidirectional flow of energy and data. Why is that so important in our newsletter? The topic introduces a new era in our modern electrical world, the gradual transformation away from the so-called Jurassic Grid to the Smart Grid, where a hyperpersonalized digital world unfolds to our welcoming delight. The full charging of electric vehicles in the home will on average double the consumption of electricity consumed. The introduction of intermittent solar and wind energy poses special challenges to the utility grid, and the customers will see smart meters and distributed generation (on their roofs or on their ground) arrive while utility-scale solar farms and other renewable energy plants begin to dot the countryside. This [Smart Grid] is a very important technological revolution unfolding, so tune in to it.

The website of Olympic Energy Systems has posted since 2003 a picture of its electric vehicle charging system - an off grid auxiliary power system completed in January 2002...9 years old and paid off by its return of solar electricity. We have recently added an IZIP electric bike to the mix. Folks should consider an off-grid charging system energized from solar and begin with an electric bike, if an electric car is not in the picture for you yet. The economics of a solar bike versus a second car is compelling, so get going, and use a helmet and lights (for night biking). If you get any of the new electric vehicles, you should invite Jonathan from OES out for a spin, and he will repay you with a free consultation on options for a renewable energy system, charging station, and other such modern gems.

Utilities face RPS requirements

US Plants Under Construction by Fuel Type [Per Electric Light & Power Volume 89/03 - May/June 2011]

- 41% Natural Gas
- 21% Coal
- 18% Wind
- 10% Nuclear
- 4.3% Solar
- 1.3% Hydro
- 4.4% Other

Economical means of producing natural gas in North America has maintained the aggressive build up of natural gas electric power plants. We will not go into the "fracking" discussion right now, but feel free to seek investing in negawatts and tell your relatives on the east coast (where a high concentration of coal power plants are located). Gasland may turn into Aghastland. [Did we spell that correctly?]

Ohio has the 25% (clean energy) by 2025 mandate, California and Washington have aggressive Renewable Portfolio Standard (RPS) requirements, as well as other states. The driver for renewable energy sources for electricity, the EV era we now enter is paired with this important (legal) program of RPS and other "incentives". President Obama has called for 1 million electric vehicles on the road by 2015, a challenging goal. The initial demand can be met with the current electric transmission system, but the transformation to the Smart Grid, sought by the US and Europe alike, is imperative. No doubt, the certainty of climate change and GHG issues being on the table, which means uncertainty for utilities, means a growing overlap of the utilities, automotive industry, and personal lives. At a 1\$ per gallon equivalent price for EVs, the trend is predictable, but subject to what economic factors and principles? What does intermittent renewable energy sourcing, increasing demand, uncertainty over GHG (CO2) emissions regulation, and a long recession mean for us? Let's figure that out together. That situation is why Olympic Energy Systems is a client advocate firm, as it takes a diligent look at options, then graciously helps in the implementation of solutions.

Europe plans to source 80% of its electricity from renewable sources by 2050. They are generally turning away from nuclear (since 1986, we think...)

The US plans to source 80% of its electricity from clean sources by 2035. Clean includes solar, geothermal, wind, various other sources AND nuclear. Hmm.

The *Massachusetts v. EPA* case in 2007 gave us the regulation of CO2 and GHGs by the EPA under the Clean Air Act.

The *American Electric Power Co. v. Connecticut* case pending now before the US Supreme Court will undoubtedly rethink the issue of regulation of greenhouse gases. We may find that the EPA can not do the regulation without too much complexity, possibly landing the issue back into Congress, where honesty, cooperation, and vision - which obviously abounds there - should set it right.

Zen and the Art of Solar-based Earth Maintenance

This is merely a topical idea. We shall see it spawn to new levels of thought and perhaps a book.

Have questions, wonders, ideas, or comments? Free feel to call or email and we can discuss it.

Our President, Jonathan Clemens, is still doing free initial consultations and further (fee based) site assessments, designs, and development of systems, both on-grid and off-grid, though the company is pursuing product development of its Tensioned Cable System for mounting solar panels on roofs and the ground without penetrations or foundations, and will be emphasizing off-grid electric vehicle charging stations energized from solar.

Olympic Energy Systems, Inc.
907 19th Street
Port Townsend, WA 98368
(360) 301-5133
OlympicEnergy@aol.com
www.olympicenergysystems.com

