

The State of Solar In the State of New Hampshire

Welcome!

Presented by Erik Shifflett

Partner - Granite State Solar,
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11/28/2017



About Granite State Solar

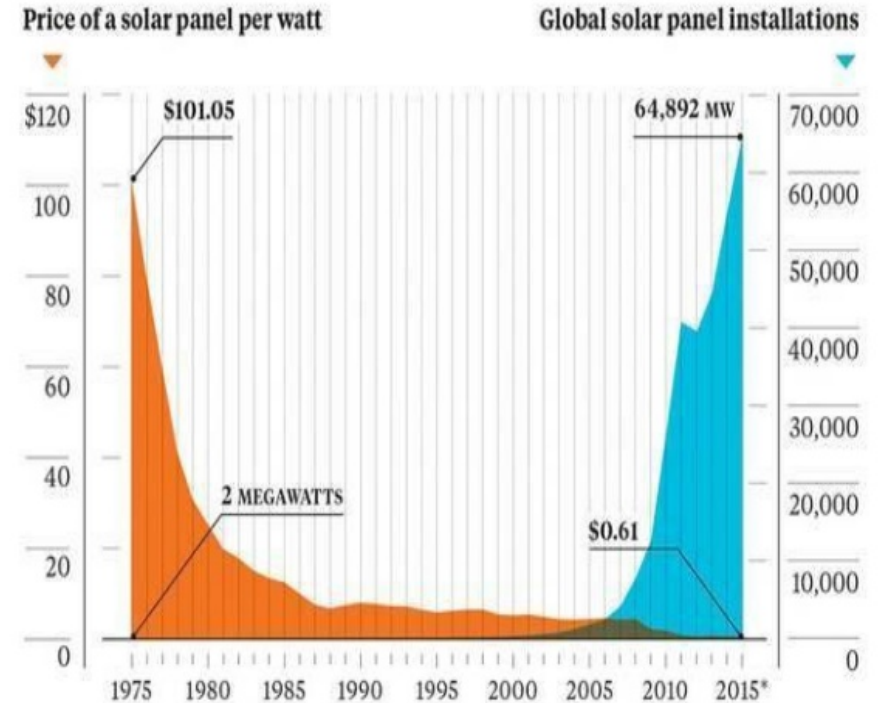
- GSS was founded in 2008 by Alan Gauntt - out of his home in Sutton
- GSS is now owned by Alan Gauntt and Erik Shifflett as a 50/50 partnership
- We have 23 full-time employees (no subs or temps) – who receive great pay and benefits including health insurance paid at 100%, year-round work, overtime if desired, and annual bonuses
- We do not subcontract any work – all work is performed by staff
- GSS is nearing completion of a brand-new facility on three acres in Bow

We are optimistic about our future – but GSS and the industry as a whole is facing a number of significant challenges



The Solar Industry is Strong...

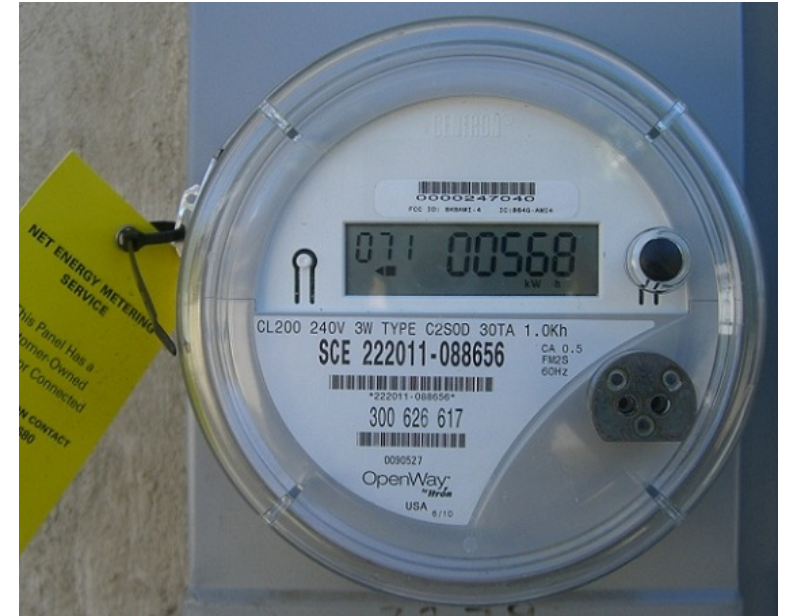
- Costs to purchase and install solar equipment have dropped by over 50% in just the last few years
- Consumer adoption has grown to the point where solar is no longer a novelty
- State-level and federal programs have provided a jump-start with valuable incentives
- Products and technology keep getting better and better



But There Are Challenges...

Changes to Net Metering – The “life blood” of the way solar works right now

- The NH Public Utilities Commission recently introduced new rules pertaining to net metering
- Historically, net-metered electricity was valued at “full retail” and producers received credit based on the volume of surplus energy sent into the grid (credit applied towards all supply, transmission and distribution charges)
- Current rules only allow for 25% of distribution costs to be reimbursed
- A typical Eversource customer of the recent past received about \$0.18/kwh in credit for net-metered energy... current customers receive about \$0.15/kwh in credit



The PUC is evaluating and studying the “true value” of solar generation and will issue a new and more permanent net-metering policy in the future. The outcome of the new policy will have a major impact on the solar industry – for better or for worse.

But There Are Challenges...

The Renewable Energy Fund (REF) – A.K.A. NH PUC Solar Rebates

- 2014 – Oct. 2015: \$3,750 max (residential)
- Oct. 2015 – July 2017: \$2,500.00 max (residential)
- Now: \$1,000 max for 525 rebate applications received between January 2nd and February 1st, 2018 – by random lottery

The REF is depleted for now, so the return on investment for current and future customers will take longer and negatively impact buying decisions.

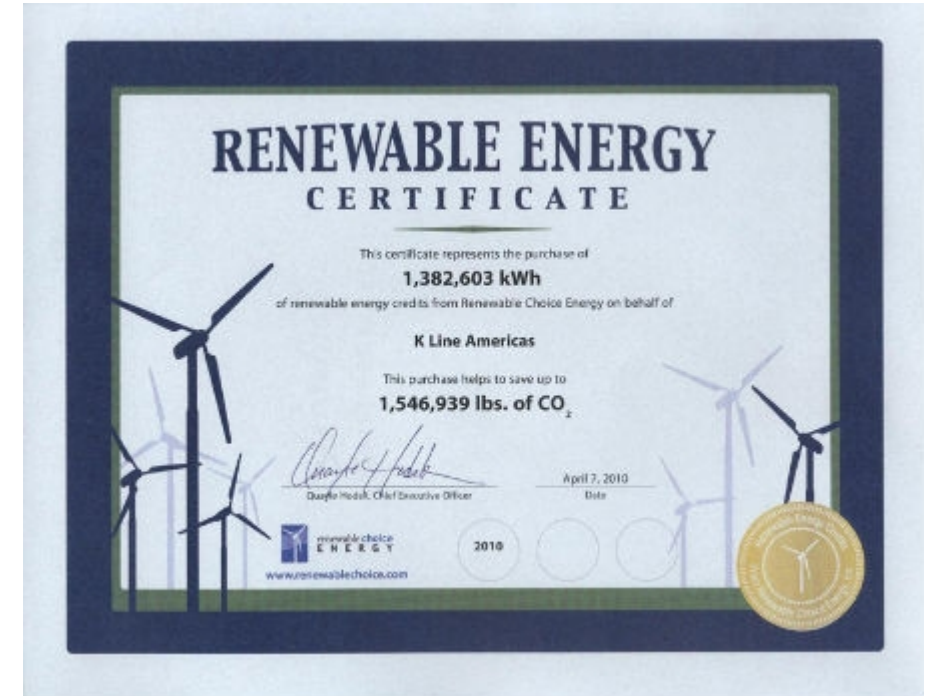


But There Are Challenges...

RECs – Renewable Energy Credits

- A credit (REC) is generated for each 1,000 kWh of production.
- The average home solar array produces about 10,000 kwh/year – creating ten RECs
- Each REC has historically been worth about \$55.00 to the system owner (generator)
- RECs are generated, minted and sold on a quarterly basis at auction
- Utilities purchase the RECs to comply with the Renewable Portfolio Standards (RPS)

A recent glut of unregistered systems has allowed the utilities to claim the production for themselves (yes, the law allows for this) and depress REC prices to \$21.00 at the time of the last sale.



But There Are Challenges...

Tarriffs

- Two US-based solar panel manufacturers (Suniva and SolarWorld USA) recently petitioned the International Trade Commission (ITC) requesting tariffs to be imposed on foreign-made solar modules
- The ITC has ruled in favor of the petitioners – tariffs are coming

“Suniva and SolarWorld are calling for duties of 40 cents per watt on imported cells and a floor price of 78 cents per watt on modules. If the commission approves the request, it could destroy [88,000 jobs](#) in installation, sales and construction, according to estimates by the Solar Energy Industries Association (SEIA). Numbers from [GTM Research](#) are similarly bleak, showing that tens of gigawatts of solar installations could be wiped out compared to business as usual.” Source: *GreenTechMedia*



But There Are Challenges...

Local zoning ordinances and one-off building codes

- Some towns have enacted ordinances restricting the height of ground-mounted solar arrays – limiting the feasibility of these systems in some cases (For example, Hollis limits height to 10-feet and requires a Conditional Use Permit for any ground array)
- The Portsmouth Fire Department recently petitioned the city council for setback requirements related to rooftop solar building codes
- If adopted, the net result would limit the useable space on a Portsmouth rooftop by 50%... or more (The house to the right supporting 30 panels would only support 16 panels under the PFD proposal)



All it takes is one bad apple to spoil the bunch!



Granite State Solar's outlook and action items...

Work Smart

- GSS and other solar integrators can overcome the loss of state rebates and increased module pricing by streamlining operations and reducing overhead costs as much as possible – and passing those savings to customers in the form of a lower cost per-watt of installed systems

Adapt

- Battery storage has the potential to reduce the impact of unfavorable future net metering rules.
- Allowing homeowners to store excess power on site and use it when needed essentially brings the value of that power back up to “full retail.”
- Battery prices need to drop before this becomes a mainstream solution

Set a good example

- Proper ratios on site and by-the-book workmanship 100% of the time

Maintain political activism and work with other integrators and the NHSEA to achieve legislative goals!



Thank You!

Questions?

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