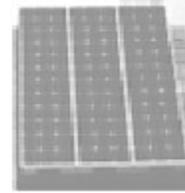


# GREAT BROOK ENTERPRISES



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2/11/2005

Jaclyn A. Brillling, Secretary  
New York State Public Service Commission  
3 Empire Plaza  
Albany New York 12223-1350

Dear Secretary and Staff:

This letter is pursuant to your January 28, 2005 request for comments concerning the matter of the System Benefits Charge, Case 05-M-0090.

My company is actively involved in the installation of residential, agricultural and light commercial solar, wind and micro scale hydroelectric power systems as well as geothermal heat pump heating and cooling systems. We have seen tremendous growth in the grid tie solar Photo voltaic industry as a direct result of System Benefits Charge (SBC) funding from NYSERDA. It would be a shame to see this funding reduced or terminated and with it a scaled back or even lost solar industry in NY. Through this support for solar energy by NYSERDA we have been able to double and sometimes triple the size of our installation crew. Through NYSERDA programs we have noticed a tremendous increase in the knowledge level of our customers about solar and wind power. An educated consumer is key to a successful well maintained long lasting system. NYSERDA SBC funding of installer training programs has also been extremely helpful for the education of our installers. This has lead to higher quality installations and has freed up staff for selling activities in order to increase sales volume.

## Answers to the commission's specific questions:

1. It is our opinion that most of the **goals and objectives** of the current round of SBC funding have or are being met. However, there is much more that can be achieved and if funding were to suddenly end some of what has been achieved will be lost. For instance installers encouraged to enter the NY market under current funding might move to states with higher levels of incentive leaving NY without a PV infrastructure.
2. **Term of SBC funding:** The SBC program should continue for at least 7 years beyond the current 2006 expiration in order to assist with RPS goals of 25% renewable energy by 2013. (See #14 for further detail.) The funding level should be carefully evaluated every year in order to be flexible to account for an ever changing energy market circumstances. Some programs should have increased funding while

others could be scaled back. For example solar PV system installation prices are currently rising due to short supply of PV cells and modules. In order to compete with traditional energy sources and provide the system owner with a reasonable return on his investment in equipment the current level of incentive needs to increase. As production plants come on line and supply of PV cells and panels improve so the price can drop the level of incentive could decrease (however, see #3). In order for financial incentives to be truly effective, the level of incentive for PV and wind systems should be based on a formula that takes into account: a) The end user cost of system components and installation; b) the cost of traditional energy; c) going average interest rates and d) the rate paid by Utilities to the end user for excess produced energy. The formula should arrive at an economic value of the system such that the end user can achieve a rate of return on his/ her system investment that is better than going interest rates. In addition the system should produce power over its expected life at a rate per kilowatt-hour lower than the end user's current electric rate. The level of incentive should be flexible in order to maintain these two economic factors. If and when the cost of systems decreases and the cost of traditional energy increases, the level of incentive could be reduced accordingly. At the current \$4 per PV STC watt level of incentive in combination with a 12 to 15 cent per watt increase in PV module costs, we have been experiencing about a 20% lower proposal acceptance rate over the last 3 months. However, inquiries into PV and wind systems have continued to steadily increase. This indicates that \$4.00 per watt incentive is now at a marginal level and needs to be increased very soon to about \$5.00 per watt if the PV market is to be maintained. According to my calculations an installed cost of a PV system at \$3.00 per watt residential and \$2.00 per watt commercial would result in a vibrant healthy market for PV systems. In addition the system size limit of 10 kw for net metering needs to be raised to at least 50 kw. If New York State is truly serious about promoting the use of solar energy, they would establish an incentive program designed to keep the price of PV systems in this range over the long term. The alternative is to loose the State's investment in high quality trained installers to surrounding states with better incentive programs and higher limits on net metering.

3. **Conditions have changed** since the last round of SBC funding was established. Most notably it was expected that the cost of PV modules and thus systems would decrease as the market increased reducing the need for incentives. In fact just the opposite has happened. Because of government incentives all over the world, demand for PV modules has outstripped the ability of manufacturers to produce enough. Because of the uncertain and predictable nature of government incentives to prematurely disappear, manufacturers are reluctant to invest in plant and equipment in order to meet current demand. The result is increasing cost of product not decreasing. Thus unless price of traditional electricity sharply rises, the level of incentive for system cost reduction needs to increase in the near term. The incentives also need to be guaranteed in some way over the longer term in order to encourage manufacturers to invest in plant and equipment to increase production. A guarantee of incentive availability over the long term would also encourage local installation and service companies to expand.
4. **SBC funded programs should be prioritized** in such a way as to help the state meet the goals of the Renewable Portfolio Standard (RPS) or even exceed them if possible. Additional programs could be created to help reduce the installed cost of systems such as solar thermal (hot water and space heat) and geothermal heat pumps. These systems can reduce the need for imported fossil fuels. The level of cost reduction incentive could be adjustable depending on the type of conventional energy such a system would offset. The lower the cost per BTU of the traditional energy source the system offsets the greater the level of incentive. For example a geothermal heat pump system installed where natural gas (least expensive) is the likely energy source replaced would rate the highest level of incentive and if electric resistance heat (most expensive) is replaced the lowest level of incentive is required. Also SBC funds should be allocated for programs to train and encourage new geothermal heat pump and solar thermal system installers similar to programs in place for increasing PV and Wind installers.

5. SBC funded programs can be adjusted to have more emphasis on renewable energy sources in order to help meet the **goals of the RPS**. Our suggestions for how to accomplish this are explained in answers to your other questions.
6. The **SBC fund collection process** might involve an education program directed toward rate payers to inform them of what the money is being used for and how it benefits them. Electric bill stuffers could accomplish the purpose quite well. Stuffers could also be used to inform rate payers of NYSERDA programs including programs oriented toward renewable energy such as solar and wind net metering and the incentive programs. For electric customers who pay their bills online, web pages could be set up to accomplish the same thing as printed bill stuffers. In addition Utilities should be required to maintain a line item of the SBC on their customers' bills including on-line versions of the bill so customers can easily use these as proof of payment into the fund for NYSERDA program purposes. If the customer is exempt from SBC fund charge for some reason in should be required to say so on the bill.
7. **Eliminate, expand or create:** SBC funded programs for natural gas exploration in NY should be modified depending on how successful or unsuccessful the current explorations have been. If unsuccessful they should be scaled back or eliminated. In order to help alleviate the insufficient supply of PV cells and modules problem an SBC funded program that encourages manufacturers to expand or start up in NY should be established. This would increase jobs as well as help supply PV to help meet the world demand.
8. **More responsive.** Increased funding for installed cost of Geothermal heat pumps funded by Oil and gas consumers with a new SBC on oil and gas would help reduce pollution and reduce demand on imported fossil fuels. Making geothermal heat pumps cost competitive with installing equipment for and burning firewood would greatly reduce pollution from wood smoke. An SBC funded program for the purpose would be an inducement for oil and gas consumers to switch to clean geothermal instead of dirty wood heat.
9. SBC programs could be **marketed more effectively** by increased use of TV and radio advertising by NYSERDA. In addition NYSERDA should allow installers and their customers more free access to the news media. By offering pre-prepared scripts and other materials NYSERDA could empower installers to make greater use of the media when approached by them and ensure correct information is passed to the press. Current programs restrict access to the news media and have prevented otherwise good interviews from taking place. Who better to inform the media about solar and wind projects than those who know the systems best, the installers?
10. In what ways can **NYSERDA improve its administration** of the SBC? Any programs NYSERDA establishes designed to improve an industry by providing rules for obtaining incentives should first extensively pole and consult members of the affected industry in order to greatly reduce the chances of unintended consequences. Such industry involvement would help maintain friendly relations between NYSERDA and the industry.

11. The current **NYSERDA evaluation process** could be improved by providing a means by which data that installers collect from customers systems could be uploaded directly to a NYSERDA password protected web site as it becomes available. Then NYSERDA could periodically review it and post to a public page. This way the general public could compare system performance in different regions of the state and see tabulated total solar production for the state.
12. **Extension of NYSERDA programs:** SBC funds could be expanded to fund improvements to the state's utility grid and update its technology. By so doing it might be possible to reduce the risk of large scale grid power failures like that of August 2003. In addition NYSERDA could fund research projects that might help answer some Utility safety concerns about inverters and other distributed generation equipment. One project NYSERDA could fund is the surge testing of large commercial size inverters that manufacturers seem unwilling or unable to fund themselves. If this is not possible then surge testing should be eliminated as a requirement for becoming listed as certified equipment. Otherwise large commercial size inverters are unfairly discriminated against due to the cost prohibitive nature of sacrificing high cost inverters to satisfy the test.
13. **Natural gas programs:** An SBC could be established for each source of conventional energy. One for natural gas could be used to fund programs for alternate sources and conservation that reduces natural gas consumption. An SBC fund specifically set for reducing oil consumption could also be set up and paid for by oil consumers. The scope of SBC funding could be expanded to include programs for natural gas and oil. A natural gas program could fund expansion of infrastructure for fueling natural gas vehicles in more diverse parts of the state. Oil and natural gas SBC funding could fund installation cost reduction programs for geothermal heat pump and solar thermal systems. It could also fund installer education programs for such systems. Data could be collected on system performance by installation of kilowatt-hour meters on the electrical input of geothermal heat pumps and BTU meters on the output of solar thermal systems.
14. **Other comments not covered by your questions above.**

Experience has shown that it takes years to develop the market and an installer reputation. It often takes many years for people to educate themselves, become comfortable with the technology and to come to a purchasing decision. People we have been installing for have commented that they have been dreaming of having a PV system for at least 10 years. Finally with the help of the SBC funding it is becoming possible for a still small group of people to afford a system. Because the consumer purchase decision making process is often lengthy, it is important to have a long lasting incentive or other installation cost reduction program in place that consumers can count on when they decide they are ready for an installation. **A solar system purchasing decision should never be forced by expiring incentives.** Expiring financial incentives often leaves the negative impression in the potential customer's mind who missed the deadline that there is either something wrong with the technology because the government no longer supports it or that there is something wrong with the government. I have witnessed this phenomenon twice in my career as an installer. The first time was with the 1985 expiration of the Federal and State tax credits for solar and

again with the expiration of a program for off grid stand alone systems in NYSERDA project #6444-1 under PON 524.

We would like to expand our company operations by increasing facilities and personnel but are extremely reluctant to do so based on a market that might disappear with expiring or reduced incentives with no guarantee of extension. Long term business planning is extremely difficult if not impossible with short term incentive programs such as SBC. Five years is not long enough for a fledgling industry such as PV and wind to become viable on its own, especially with increasing prices of critical components due to demand. Therefore we recommend the commission consider the term of the SBC be extended to be at least long enough to be useful for helping NY State meet or exceed it's goal of 25% of NY power be generated by renewable energy sources by 2013, in other words at least 7 years. In addition we recommend that approval and announcement of this extension of SBC funding be made as early as possible so industry can have enough advance notice to make intelligent long term plans.

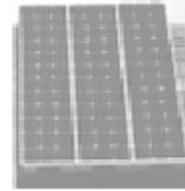
It is also important to note that continued funding for new installations is critical in order for business to justify establishment of and expansion of a PV service industry in order to keep aging solar systems on line continuing to produce power on into the future. Most likely the installers NYSERDA has helped train will be the same people responsible for servicing systems as they age. There need to be enough existing systems to justify having a full time service crew. The current number of existing systems is not yet sufficient to justify establishment of a service crew nor in our estimation will it be when the current SBC funding expires in 2006. Cutting funding for new installations in 2006 would thus directly impact future power production from existing systems.

I hope these suggestions have been helpful. I am very appreciative of the efforts and accomplishments so far by NY PSC and NYSERDA and I look forward to further positive advances in partnership with NY PSC and NYSERDA toward a clean energy future for New York State.

Sincerely

David M Austin  
Owner and manager  
Great Brook Enterprises (Renewable Energy)

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3/3/05

Jaclyn A. Brillong, Secretary  
New York State Public Service Commission  
3 Empire Plaza  
Albany New York 12223-1350

Dear Secretary and Staff:

This letter contains further comment pursuant to your January 28, 2005 request for comments concerning the matter of the System Benefits Charge, Case 05-M-0090. In particular we have suggestions for answer to your question number 7 to add to our earlier comments.

My company is actively involved in the installation of residential, agricultural and light commercial solar, wind and micro scale hydroelectric power systems as well as geothermal heat pump heating and cooling systems. We have seen tremendous growth in the grid tie solar Photo Voltaic industry as a direct result of System Benefits Charge (SBC) funding from NYSERDA. Traditionally SBC funding has benefited those with resources to match the funding. However, there are many less fortunate individuals and families who have difficulty paying for their utility services. This group of people desperately need energy saving devices and renewable energy systems in order to reduce their daily expenses but can not afford even the SBC subsidized pricing.

A new SBC funded program should be established to help the less fortunate obtain renewable energy systems and such things as energy saving light bulbs and appliances. This program could be administered through existing organizations that reach out to this group. Such organizations might be the local county Opportunities for *County*, HUD or Catholic Charities. Solar and wind systems incentives might be administered through organizations actively involved in low income home building and improvements such as Habitat for Humanity. SBC funding levels for projects in such a program should be much higher than the traditional. Project funding levels for low income projects should be on the order of 80% to 90%. Project Funding should not be 100% in order to encourage a sense of ownership. People are more likely to appreciate the help and the energy improvement and take care of it if they have an investment in it.

Most likely people with low income consume more energy than higher income because they can't afford energy conservation improvements of any sort. They buy ordinary light bulbs because they are cheapest. Traditionally programs have been set up to help low income people pay their utility bills, however, these programs have not encouraged conservation. Perhaps programs of the future should be set up so conservation is a requirement for receiving subsidy for utility bills. Education programs oriented toward the low income could also be established or expanded with SBC funding. Would it be possible for NYSERDA to encourage a program be set up that would operate something like Habitat Humanity for the low income

that would utilize “sweat equity” by the beneficiaries? This program might even inspire a new generation of installers from low income backgrounds as they contribute sweat equity in their parent’s solar and wind systems or solar homes. Maybe these could even be old fashioned “barn raising” community affairs organized and/or orchestrated by existing NYSERDA eligible installers. Many family farms in NY are struggling to survive and could benefit from such programs. Dairy farms in particular are energy intensive but have great difficulty affording investment in energy improvements.

Thank you for your consideration of our “outside the box” ideas for reaching out to the less fortunate. Pursuing helping the needy has a tendency to pay back in many unpredictable but very beneficial and rewarding ways. I am certain that the rate payers would benefit greatly from reaching out to the less fortunate among us.

Sincerely,

David M Austin  
Owner and manager  
Great Brook Enterprises (Renewable Energy)