



## ***California's Self Generation Incentive Program promotes Steam Recycling projects***

*Lower cost of clean self-generated energy goes directly to steam user bottom lines*

---

### **Overview**

California's new program to provide financial incentives for clean energy provides a great opportunity for increased bottom line profitability for *California facilities* that use steam. Modifications made last summer to strengthen the California Self Generation Incentive Program and to implement Senate Bill 412 will offer members an additional benefit of lowering their facilities overall cost of operation.

Initially conceived as a peak-load reduction program, the SGIP also seeks to stimulate the installation of clean and ultra-efficient energy generation technologies. SGIP functions by providing one-time upfront incentives for the installation of new, qualifying self-generation equipment installed to meet all or a portion of the electric needs of a facility. The program creates a win-win scenario for California facilities who will lower their operating costs and the California electric rate payers will benefit from utilities having reduced need to invest in expensive transmission and distribution infrastructure. By providing a significant incentive for "on-site" electric power generation, California is both advancing its commitment to the California Global Warming Solutions Act of 2006, to significantly reduce carbon emissions as well as making a proven source of clean energy, more affordable. The incentive significantly reduces the .

The SGIP places pressure-reduction turbines on par with wind turbines – eligible to receive an incentive of up to 60% of the installed cost of the equipment or \$1,250 per installed kW. Pressure reduction turbines allow steam users to convert a portion of energy in steam to electricity at very high efficiencies. Many plants produce steam at a higher pressure than it is ultimately used and reduce that pressure through a pressure reducing valve (PRV). The opportunity for producing the clean power comes from placing a steam turbine generator set in parallel with the existing PRV. High pressure steam is now reduced to the desired lower pressure and temperature, through the turbine to meet the process requirements. The electricity generated displaces grid generated electricity bought from the electric utility, generating quantifiable savings. The technology involved is well-established and proven in thousands of applications worldwide.

### **SGIP Funding**

The total SGIP budget is set at \$83M per year for 2012, 2013 and 2014 and is portioned out to each of the utilities. Starting on January 1, 2013 the available incentive declines 10% per year. The sunset date of the program was extended until January 1, 2016 however the budgets for 2015 and 2016 are not known at this time. Since the allocated budget limited and interest is expected to be high, interested parties are encouraged to apply to the program early to ensure that project funding is available.

## Incentive Eligibility & Requirements

- Site must be located within the PG&E, SCE, SoCal Gas or SDG&E service territories and physically connected to the electric utility transmission and distribution system.
- Incentive for a back pressure turbine is \$1.25/W with 50% of the incentive being paid up front and the remaining 50% being paid out as an annual performance incentive based on the annual site generation
  - Performance incentive payouts will be calculated based on total power used on-site not the total generated (i.e. power for export is not incentivized)
  - SGIP incentive is limited to a maximum of 60% of total project costs.
  - Maximum incentive to a single customer is \$5,000,000.
- Power generated must be used for on-site power load. Export is allowed only after on-site power load has been met. Power for export will not be incentivized and can amount to no more than 25% of the annual self-generation total.
- Eligible generating systems will have a capacity based on the average annual steam flow rate and pressure drop across the turbine.
- The purchased system must carry provisions for an equipment warranty or service agreement covering generator system components for a 10 year period.
- The incentivized system must be purchased, installed and put into operation within 18 months of the date of the conditional incentive reservation notice which will be issued after receipt and acceptance of the formal application.

## Critical Application Requirements

- The application fee is 1% of the total incentive being requested.
- A survey or engineering study confirming adequate steam temperature, pressure and flow within the piping system as well as the estimated generating system's average capacity for a period of 10 years.
- The facility site will conduct or have performed a qualified energy audit within the last 5 years. Any energy savings measures identified as having a less than 2 year payback must be implemented before receipt of the upfront payment, made upon system start up.

Turbosteam can prepare all of the application materials for pressure recovery applications. Call now to speak to one of our development staff to help. Call 413-676-3000