ANALYSIS

CALIFORNIA PUBLIC UTILITIES COMMISSION

SB 412 (Kehoe) – Self-generation incentive Program
As Amended May 28, 2009

SUMMARY

SB 412 amends the existing Self-Generation Incentive Program (SGIP), a program established to reduce peak load and incentivize new and emerging technologies (Public Utilities Code 379.6), to give the CPUC authority to determine eligible technologies for SGIP based on greenhouse gas (GHG) emissions pursuant to AB 32 (Pavley, 2006), the California Global Warming Solutions Act of 2006.

CPUC POSITION AND SUPPORTING ARGUMENTS

SUPPORT. The Commission supports SB 412 as the proposed legislation would remove the statutory limits to the SGIP that preclude awarding incentives to GHG reducing technologies other than wind and fuel cells.

As currently implemented, the SGIP program misses opportunities to support clean distributed energy technologies that reduce greenhouse gas emissions, such as: (1) biogas-fueled combined heat and power (CHP) generation,(2) natural gas-fueled CHP generation in certain GHG reducing applications, (3) certain gas-displacing solar thermal technologies such as solar heating and cooling which are not included in the California Solar Initiative (CSI) because they displace gas not electricity, as well as (4) complementary peak load reduction technologies such as energy storage.

The Commission supports the State's climate change goals, and as such sees missed opportunities in the current SGIP as the above technologies and other new and emerging technologies are currently excluded from the program. Additionally, in regard to CHP, the California Air Resources Board's AB 32 Scoping Plan identifies the need for an additional 4,000 MW of CHP facilities by 2020 to meet the AB 32 goals. Making CHP an eligible technology in SGIP will help smaller CHP facilities contribute to this overall goal.

ANALYSIS

- Allows CPUC to determine SGIP technology eligibility: Since January 1, 2008 SGIP has been limited by statute to providing incentives for wind and fuel cell technologies only. This limitation misses GHG savings opportunities from clean distributed generation (DG) technologies such as biogas generators with proven benefits. The limitation also doesn't allow support for emerging clean DG technologies or complementary technologies such as energy storage.

- Since its inception in 2001, SGIP has collected extensive performance data on supported projects and technologies, including GHG emissions savings. In 2006 SGIP projects reduced over 110,000 tons of CO2 equivalent emissions.[1] Of all the technologies in the program at the time, the technologies that reduced the most GHG emission per MWh of electricity produced were biogas generators. Biogas micro turbines, engines and fuel cells on average reduce 2.7 tons of CO2 per MWh of electricity produced. The GHG emissions savings of biogas-fueled CHP generators exceeds the GHG savings of wind, solar, or natural-gas fired CHP (all of which have been funded by the SGIP program and similarly analyzed.) This bill would allow the CPUC to re-include biogas generators in SGIP which makes good sense given the State's GHG goals.

- Natural gas fueled combined heat and power systems, which generate electricity and process usable waste heat, can also be GHG emissions reducing. The best performing CHP micro turbines and engines yield significant GHG reductions- but their GHG savings is based on site specific applications.

- Historically, the State has attempted to maximize the environmental benefits of the SGIP program. During 2002 – 2004, SGIP supported fossil-fueled CHP to the extent that the technologies or systems met air quality (AQ) and overall efficiency specifications overseen by the California Air Resources Board. This bill would extend that authority to allow the CPUC, based on analysis of existing and future data, to determine the necessary programmatic requirements to ensure both performance and waste heat recovery standards for CHP systems that will ensure that all CHP systems supported through SGIP yield GHG emissions reductions.

- There is a range of other technologies that this bill could enable the CPUC to consider supporting through SGIP, including certain solar thermal technologies (due to specific application requirements may not be included in the California Solar Initiative or the AB 1470 solar hot water program). This flexibility also will allow the CPUC to consider supporting *new and emerging* clean DG technologies as they become available on the market.

- <u>Extends the SGIP one year, until January 1, 2013:</u> SGIP is currently set to expire on January 1, 2012.

- <u>Prohibits the recovery of SGIP program related costs from California Alternate Rates for Energy (CARE) ratepayers:</u> Ratepayers participating in the CARE program will not be subject to any increase in rates to fund this program.

- <u>Requires the CPUC to ensure that SGIP incentives are available to all ratepayers:</u> SGIP currently allows that incentives are available to all ratepayers, including both residential and commercial customers. However, in current law there are size requirements in both the SGIP and a companion program, the CEC Emerging Renewables Program (ERP), that can act as customer class limitations as both programs implement incentives for wind and fuel cells, but for different project sizes. If additional technologies were allowed into the SGIP, there would not be an overlap with

[1] Itron, *CPUC Self Generation Incentive Program Sixth Year Impact Evaluation*, August 2007

the CEC program. The current overlap with the CEC ERP prevents SGIP from offering incentives to projects under 30 kW. This could serve as another reason to amend the current law--more technologies would be available to residential customers. The current status of SGIP and ERP size requirements are:

- SGIP incentives are available for all qualifying wind and fuel cell technologies less than 5 MW, except those already funded elsewhere by ratepayers. The first 3 MW of the project is eligible for incentives. The minimum project size for biogas fuel cells and wind turbines in SGIP is 30 kW. The CEC Emerging Renewables Program (ERP), which is funded by ratepayers from PG&E, SCE, SDG&E, and BVE, offers incentives for the same technologies under 30 kW.

- SGIP incentives are available to natural gas powered fuel cells of all sizes because the CEC's ERP program does not fund them. Fuel cell applications for residential customers are currently being introduced on the market. For example, a company called ClearEdge is marketing a residential fuel cell (5 kW), and this product is being offered an incentive under SGIP.

- If additional technology flexibility was added back into the SGIP program, the CPUC would continue to ensure that all customers could participate in the SGIP program. There is no need for the SGIP program to directly overlap with the ERP program.

- Makes customers receiving SGIP incentives responsible for system maintenance: A recipient of state incentives shall be held responsible for maintaining the integrity of their respective system. This maintenance must ensure that the system meets or exceeds efficiency and GHG emissions standards established in Public Utilities Code Section 379.6 (c) 1 and (c) 2 as well as the standard established by the Commission for a load-serving entity pursuant to Public Utilities Code Section 8341. This provision appears to be aimed at maximizing the operating efficiency of CHP systems.

LEGISLATIVE HISTORY

- AB 44 (Blakeslee, 2009) is pending in the legislature and also addresses the need for storage technologies.

- SB 1012 (Kehoe, 2008), which was supported by the Commission last year but was ***not*** adopted, similarly attempted to allow the CPUC to determine eligible technologies.

- AB 1470 (Huffman, 2007) authorized the Commission to create a solar hot water incentive program for gas displacing solar hot water systems. AB 1470 does not provide Commission authority to fund non-hot water solar thermal technologies such as solar heating and cooling that displace natural gas. These other solar thermal technologies are supported by the CSI program but only if they are electric-displacing, so there is a gap in the incentives offered by the Commission.

- AB 1613 (Blakeslee, 2007) gives the Commission authority to establish a feed-in tariff program for CHP facilities. The Commission's implementation of that legislation is underway in R. 08-06-024. AB 1613 is designed to support CHP facilities that exceed

onsite load, and in that key respect is different than CHP for onsite load supported by SGIP.

- AB 2778 (Lieber, 2006) adopted by the legislature on August 31, 2006 extended the SGIP through 1/1/12 and removed photovoltaic technologies eligible for CSI incentives from participating in the SGIP as of 1/1/07. AB 2778 also restricted technologies eligible for SGIP beginning 1/1/08 through 1/1/12 to wind and fuel cells.

- AB 1685 (Leno, 2003) required gas-fired SGIP projects to meet stricter emission standards.

- AB 970, adopted on August 31, 2000, gave the Commission the authority to develop a program to pursue load control. In adopting D.01-03-073, the Commission relied on Section 1(d) of AB 970 to create the SGIP:

> (d) The purpose of this act is to provide a balanced response to the electricity problems facing the state that will result in significant new investments in new, environmentally superior electricity generation, while also making significant new investments in conservation and demand-side management programs in order to meet the energy needs of the state for the next several years.

PROGRAM BACKGROUND

- In response to AB 970 (Ducheny, 2000), Decision (D.) 01-03-073 established the Self-Generation Incentive Program as a peak load reduction program.

- D.04-12-045 modified the program on December 16, 2004 in response to AB 1685 (Leno, 2003), extending the program through January 1, 2008 and adopting thermal efficiency standards for participating CHP.

- The SGIP program was modified as of January 1, 2007 to no longer allow solar to be funded by SGIP; all solar funding was transferred to the CSI program.

- Since January 1, 2008 SGIP has been limited by statute to providing incentives for wind and fuel cell technologies only. Prior to that time, SGIP provided incentives to combined heat and power (CHP) technologies, including microturbines and internal combustion engines. The legislation that eliminated CHP from the SGIP, AB 2778 (Lieber, 2006), simultaneously eliminated the CPUC’s flexibility in allowing any other new or emerging technologies into the program. The SGIP program is now limited to wind and fuel cells by statute.

- R.08-06-024 is considering implementation of AB 1613 (Blakeslee, 2007) related to CHP. AB 1613 creates a feed in tariff for CHP systems that optimizes the size of the CHP generator according to the thermal heat needs of the customer, and does not limit the system to onsite load generation only. SGIP has and would foreseeably continue to limit CHP system size to onsite load, and therefore AB 1613 fills a slightly different niche than SGIP. AB 1613 helps CHP installations that will be net electricity generators, whereas SGIP's CHP incentives are aimed at CHP generators that are not net producers of kWh on an annual basis.

- R.08-08-003 is considering implementation of AB 1470 (Huffman, 2008) related to funding gas displacing solar thermal technologies. AB 1470 is limited to only solar hot water. Other gas-displacing solar thermal technologies, such as solar heating and cooling are not considered under AB 1470 or CSI.

- The AB 32 Scoping Plan of the California Air Resources Board identifies the need for an additional 4,000 MW of combined heat and power facilities by 2020 to meet the AB 32 goals.

FISCAL IMPACT ON THE CPUC

None.

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