



RATEPAYER COST IMPACT OF PA HOUSE BILL #1580

HB1580 was introduced on October 3, 2011 by Rep. Chris Ross, which now includes 109 co-sponsors as of November 10, 2011. This bill does not increase the overall solar share requirement but instead simply helps mitigate the current problem with the alternative energy credits market for solar, usually referred to as solar energy credits (SRECs).

BOTTOMLINE - This bill will cost residential customers less than ½ penny a day for only five years.

SUMMARY OF THE PROBLEM

The solar industry and its customers are currently experiencing a dramatic drop in the price of solar credits due to the lack of market demand for the credits. Because of the massive oversupply of solar credits compared to the very small requirement, the credit value has dropped over 90% in about nine months from over \$300/SREC to *under* \$30/SREC. This situation is getting worse and it is not going to improve for the next few years because the number of solar credits utilities are required to purchase by law is currently set too low for the number of projects in operation and those being planned. As a consequence, there is virtually no market for Pennsylvania’s solar alternative energy credits which means the solar projects, as well as the overall solar workforce has virtually come to a standstill, either causing massive layoffs, closing down of businesses, or relocating businesses and jobs out of Pennsylvania.

As of November 7, 2011, Pennsylvania has 120 MW of solar PV capacity, with an additional 38 MW of PV capacity installed out of state registered in the PA Alternative Energy Portfolio Standard (AEPS) program. Below shows a graph of the current solar share requirement between reporting years (RY) 2009 and 2012, compared to the SRECs that have been generated and reported into GATS from these solar PV systems so far.

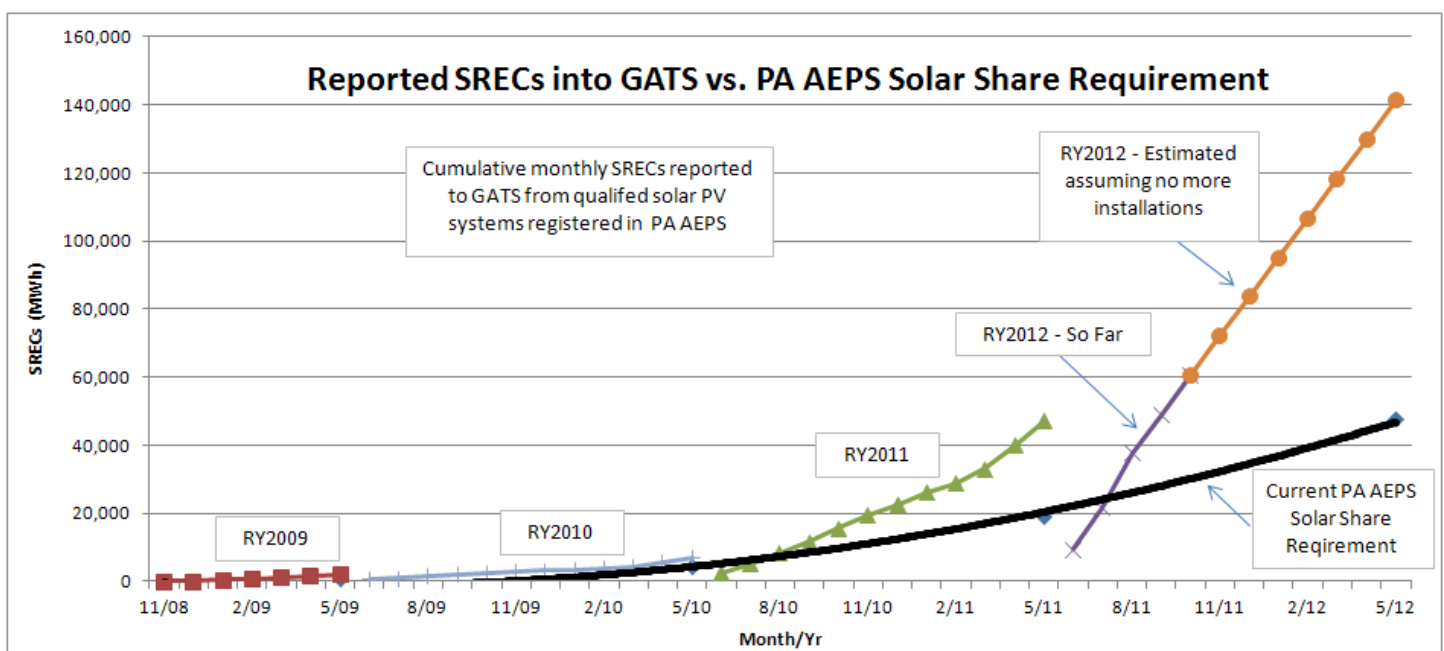


Figure 1. Reported SRECs vs Solar Share Requirement

As can be seen in Figure 1, the recent explosion of installed solar PV systems have been generating and reporting a substantial oversupply of SRECs into GATS, consequently resulting in the plummeting of SREC prices. The figure also clearly illustrates that this oversupply will remain for well into the future, if this problem is not corrected. Even if no more new solar systems register with the AEPS Program, it can be estimated by the end of RY2012 (May 31, 2012) there will be at least three times more SRECs reporting into GATS than what is required.

PROPOSED SOLUTION – HB1580

Representative Chris Ross’s HB1580 does two things:

1. Provides for a small adjustment to the solar requirement in the years 2012-2013 through 2014-2015 so the requirement more closely matches the growth in solar demand with the market. The Ross legislation will **not** increase the overall solar share requirement but simply moves the requirement forward.
2. Pennsylvania “borders” are currently open to out-of-state projects. This is contributing to the influx of projects from other states. Pennsylvania is the only state that accepts solar credits from any of the other 13 PJM states. Ohio also has open borders, but it is very limited. Pennsylvania ratepayers are currently supporting these out-of-state projects. The Ross legislation closes this loophole.

As described above, this bill is intended to help re-align the solar share requirement relative to the existing market of solar PV installations in Pennsylvania. This correction will allow for new solar projects, and those projects on hold, to move forward at a modest pace; otherwise, the solar industry expects that no more projects will be installed in PA for at least three years.

In this bill, the solar industry has proposed to increase the solar share requirement only for the next three years, but then continue with the existing solar share requirement percentage thereafter. The following table shows the existing and proposed solar share requirement percentages starting at 2010:

Reporting	Current Solar Share	Proposed Solar Share
Year	Percentage	Percentage
2010	0.0120	0.0120
2011	0.0203	0.0203
2012	0.0325	0.0325
2013	0.0510	0.1500
2014	0.0840	0.1700
2015	0.1440	0.2040
2016	0.2500	0.2500
2017	0.2933	0.2933
2018	0.3400	0.3400
2019	0.3900	0.3900
2020	0.4433	0.4433
2021	0.5000	0.5000

Table 1. Current and Proposed Solar Share Requirement Percentages

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Methodology

Although HB1580 proposes a solar share requirement increase for only three years, this analysis extends out two additional two years because it is assumed the SREC pricing will take that long to reach steady state, meaning that the average SREC price will be the same by 2018 regardless whether HB1580 passes or not.

Table 2 below shows six years of the estimated current solar share requirement in SRECs for RY2013 through RY2018, as well as for the proposed HB1580 scenario. The solar requirement percentages are multiplied by the forecasted total retail electric sales in Pennsylvania, which are based on the PA PUC report, *Electric Power Outlook for Pennsylvania 2011 - 2015* (July 2011).

Calendar Year	Reporting Year	Est. Elect. Sales MWH (RY)	Current Solar Share		Proposed - HB1580	
			Solar Share (%)	PV SRECs (MWh)	Solar Share (%)	PV SRECs (MWh)
2012-2013	2013	147,429,544	0.0510	75,189	0.1500	221,144
2013-2014	2014	148,824,315	0.0840	125,012	0.1700	253,001
2014-2015	2015	150,234,430	0.1440	216,338	0.2040	306,478
2015-2016	2016	151,660,076	0.2500	379,150	0.2500	379,150
2016-2017	2017	153,101,443	0.2933	449,047	0.2933	449,047
2017-2018	2018	154,558,725	0.3400	525,500	0.3400	525,500

Table 2. Current and Proposed Solar Share Requirement Percentages and SRECs

Table 3 repeats the SREC requirement in both scenarios, which are multiplied by the assumed SREC prices to come up with the total costs, thus yielding the estimated total increased cost to ratepayers for HB1580.

Reporting Year	Current Solar Share Scenario			Proposed HB1580			Estimated Increased Cost
	PV SRECs (MWh)	SREC Price	Total Cost	PV SRECs (MWh)	SREC Price	Total Cost	
2013	75,189	\$50	\$ 3,759,453	221,144	\$190	\$ 42,017,420	\$ 38,257,967
2014	125,012	\$50	\$ 6,250,621	253,001	\$150	\$ 37,950,200	\$ 31,699,579
2015	216,338	\$50	\$ 10,816,879	306,478	\$125	\$ 38,309,780	\$ 27,492,901
2016	379,150	\$70	\$ 26,540,513	379,150	\$100	\$ 37,915,019	\$ 11,374,506
2017	449,047	\$80	\$ 35,923,723	449,047	\$90	\$ 40,414,188	\$ 4,490,465
2018	525,500	\$85	\$ 44,667,471	525,500	\$85	\$ 44,667,471	\$ -
Total	1,770,235		\$ 127,958,661	2,134,320		\$ 241,274,078	\$ 113,315,417

Table 3. Total Incremental Costs of HB1580

The assumed SREC prices for the current solar share scenario (without the passage of HB1580) are based what the oversupplied market is reflecting today. Based on feedback from several SREC aggregators and other solar professionals, as well as from SREC Trade (www.srectrade.com), Flett Exchange (www.flettexchange.com), and very recent average weighted PA SREC prices in GATS, it is assumed for this analysis the average SREC price is \$50 for the first three years, then slowly goes up to \$85 by 2018. Most of these sources indicate the current SREC price is down around \$10 to \$40, where GATS shows an average weighted price of over \$95.

However, SRECs are not selling right now, as SREC sellers are holding out towards the end of the reporting year waiting for higher prices; so it is assumed the price will probably spike a bit. As the current solar share requirement increases over the next few years and the oversupply diminishes, it is assumed the average SREC price will climb a bit more, assumingly to \$85 by 2018.

In the proposed HB1580 scenario, the average SREC price is assumed to be \$190 in RY2013, and is expected to continuously drop to \$85 by RY2018, to the same price as in the current solar share scenario. Although SREC prices in PA have been much higher in the past, there is strong agreement amongst many solar professionals that the day of the higher priced SREC is over. The passage of HB1580 will in effect bring the solar share requirement much closer to the SREC supply, consequently keeping the SREC price at bay. And as solar installation costs continue to drop, so will the average SREC prices, therefore they decline thereafter for this analysis.

Table 4 shows the cost impacts from HB1580 to the ratepayer in the form of an electric bill increase. As can be seen, the residential bill only increases less than 14 cents per month on average over the five years analyzed or *less than half a penny a day*; and under \$2 a month for commercial customers with an assumed annual electric usage of 150,000 kWh/yr.

10,716 <--Avg Residential kWh/yr Usage
 150,000 <--Assumed Commercial kWh/yr Usage

Reporting Year	Estimated Elect. Sales MWH (RY)	Estimated Increased Cost	Estimated Increased RIM \$/kWh	Increased Residential Cost		Increased Commercial Cost	
				Estimated Increased Res Cost (annual)	Estimated Increased Res Cost (monthly)	Estimated Increased Comm Cost (annual)	Estimated Increased Comm Cost (monthly)
2013	147,429,544	\$ 38,257,967	\$ 0.0002595	\$ 2.78	\$ 0.23	\$ 38.93	\$ 3.24
2014	148,824,315	\$ 31,699,579	\$ 0.0002130	\$ 2.28	\$ 0.19	\$ 31.95	\$ 2.66
2015	150,234,430	\$ 27,492,901	\$ 0.0001830	\$ 1.96	\$ 0.16	\$ 27.45	\$ 2.29
2016	151,660,076	\$ 11,374,506	\$ 0.0000750	\$ 0.80	\$ 0.07	\$ 11.25	\$ 0.94
2017	153,101,443	\$ 4,490,465	\$ 0.0000293	\$ 0.31	\$ 0.03	\$ 4.40	\$ 0.37
2018	154,558,725	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total		\$ 113,315,417		\$ 8.14	\$ 0.68	\$ 113.97	\$ 9.50
Average			\$ 0.0001520	\$ 1.63	\$ 0.14	\$ 22.79	\$ 1.90

Table 4. Increased Costs in Ratepayer Electric Bills

The unitary cost (\$/kWh) is calculated by dividing the total incremental cost by the total electric sales in PA; this is then multiplied by the average residential household electric usage in Pennsylvania, that being 10,716 kWh/yr (based on PA PUC report Electric Power Outlook for Pennsylvania 2010 - 2015 (July 2011)). The commercial customer example represents an assumed small to medium sized commercial customer. It is worth noting that these are pre-tax costs, so for-profit commercial and industrial customers will pay much less than these estimates based on their effective tax rate (ETR).