January 9, 2012

The Honorable Robert W. Godshall
Majority Chairman
House Consumer Affairs Committee
150 Main Capitol Building
PO Box 202053
Harrisburg, PA 17120-2053

Re: Support for House Bill 1580

Citizens for Pennsylvania's Future (PennFuture) would like to thank the Consumer Affairs Committee for their interest in Representative Chris Ross' Solar Jobs Bill (HB 1580), and appreciates Chairman Godshall holding a hearing on the legislation. PennFuture strongly supports the passage of this bill, which aims to save and create jobs in Pennsylvania's solar industry by slightly increasing utility company solar energy requirements over a three year period. This bill will create jobs in Pennsylvania and will promote zero-pollution solar energy growth at an extremely low cost to ratepayers.

In brief, PennFuture would like the committee to consider the following:

- HB 1580 will save solar industry jobs and Pennsylvania supports 4,700 jobs in the solar energy industry.
- HB 1580 does not raise the overall 0.5% by 2021 solar energy requirement.
- New Jersey Governor Chris Christie's Master Plan for Energy has endorsed taking action similar to HB 1580 in order to address problems in New Jersey's solar market, problems that mirror Pennsylvania's challenges.
- HB 1580 will have a minimal impact on ratepayers, less than a penny per day for the average residential ratepayer.
- Solar electric installations deliver between 15 -40 cents per kWh of benefits to ratepayers and taxpayers.
- HB 1580 will not result in windfall profits to those that have already invested in solar energy; it will only prevent a negative impact on investors by stabilizing solar credit values.
- There is no free market with respect to energy in Pennsylvania and almost every form of energy receives some sort of subsidy from the state.
- Pennsylvania and its taxpayers have made strategic investments into growing the state's solar energy industry, HB 1580 will ensure these investments are not wasted.

With these points in mind, PennFuture urges the Consumer Affairs Committee to support HB 1580.

Pennsylvania's solar energy requirements, established in 2004 by passage of the Alternative Energy Portfolio Standard (AEPS) with overwhelming bipartisan support, require half of one percent of the state's electricity to come from solar energy by the year 2021. Solar energy deployment has grown faster than was anticipated by the AEPS in 2004. Currently, there is more than triple the amount of solar eligible to meet the AEPS than what is required by law, which has led to a drop in the value of the solar renewable energy credits (SRECs) that are generated by solar facilities and used for AEPS compliance. The tremendous growth in solar is the result of falling solar panel prices and the combination of state incentives and federal Recovery Act funding making solar investments very affordable. However, state and federal support programs are expiring at the exact same time that the solar market is oversupplied. The result is new solar energy investments have stalled, significant job losses have begun and will accelerate, and many existing investments in solar have become uneconomic.

New Jersey's solar energy market is experiencing problems very similar to the ones Pennsylvania is facing. As a result, part of New Jersey Governor Chris Christie's 2012 Energy Master Plan included several strategies to support the solar market in order to retain jobs and stabilize SREC prices, including: 1) a temporary three year increase in the solar energy requirement with a corresponding decrease in the later years, and 2) a reduction in the cost of the solar alternative compliance payment in order to limit concerns about ratepayer impacts. Legislation is currently being considered in New Jersey's legislature to implement the solar portion of this plan. Our neighbors in New Jersey are taking actions and using strategies similar to HB 1580 in order to prevent job losses and economic hardship. PennFuture urges the Consumer Affairs Committee to take similar actions.

The cost of HB 1580 is estimated to be less than a penny per day to the average residential ratepayer. This cost does not include the value of the employment, economic or numerous other benefits that ratepayers will realize through the development of solar energy. A 2011 study of New York solar energy found **that solar electric installations deliver between 15 -40 cents per kWh to ratepayers and taxpayers**, indicating compelling justification for the existence of ratepayer supported solar energy incentives.[1] Below are a few examples of quantified ratepayer benefits:

- Locally generated solar energy reduces the amount of power that utilities need to purchase on the wholesale market, resulting in a savings of 6-11 cents per kWh.
- Solar distributed energy generation results in savings from reduced energy losses in the distribution system, providing a value of up to 1 cent per kWh.
- Solar provides a valuable hedge against volatile fossil fuel price spikes, resulting in a 2-3 cent per kWh value.
- Grid security is enhanced by solar energy because the resource closely mirrors peak power demand, resulting in a 3-6 cent per kWh value.

[1] Thomas Hoff of Clean Power Research, Richard Perez of the University of Albany, Ken Zweibel at the GW Solar Institute, "Solar Power Generation in the US: Too Expensive or a Bargain",

- Health and environmental benefits of solar are significant, avoiding the land, air and water impacts of fossil fuel generation and resulting in a 3-6 cent per kWh value.

Solar energy creates jobs. Academic studies have found that solar energy sustains more jobs per kWh than conventional energy.[2] More jobs mean increased tax revenues, reduced unemployment and great consumer confidence in the economy, all which benefit ratepayers and taxpayers. In Germany, each MW of PA installed results in 10-15 module manufacturing jobs, 8-15 installation jobs and 0.3 maintenance jobs.[3] This represents more than ten times convention energy jobs per unit of energy produced (ten new solar jobs that would displace only one job in conventional energy sector). Pennsylvania supports 4,700 jobs in the solar energy industry, with average salaries per solar job ranging from $60,000 to $70,000.[4]

There is no free market with respect to energy. The US federal government subsidizes many aspects of renewable and traditional energy, including extraction, production, use, conservation and reclamation. Pennsylvania also subsidizes the production and use of both renewable energy and traditional fossil fuel energy. A recent report by PennFuture found that Pennsylvania provides about $2.9 billion in fossil fuel subsidies per year, mostly in the form of tax exemptions.[5]

Pennsylvania's legislature created a successful solar industry through the AEPS and funding incentives. In order to ensure that these state investments are not wasted, HB 1580 should be passed. This bill will prevent job losses and economic turmoil in an industry where Pennsylvania is strategically invested.

PennFuture would like to thank you for your attention to these urgent matters facing Pennsylvania's solar energy industry. We appreciate the time you are taking to consider the facts of the situation and urge that you support the passage of HB 1580.

Respectfully,

Christina E. Simeone
Director
PennFuture Energy Center

cc: The Honorable Joseph Preston

House Consumer Affairs Committee members

---

[2] Ban-Weiss G. et al., "Solar Energy Job Creation in California", University of California at Berkeley, and, Louw, B., J.E. Worren and T. Wohlgemut, (2010): Economic Impacts of Solar Energy in Ontario.
CLearSky Advisors Report (www.clearskyadvisors.com)
[3] Louw et al; Peters, N., (2010): Promoting Solar Jobs – A Policy Framework for Creating Solar Jobs in New jersey
[4] 2010 National Solar Jobs Census, The Solar Foundation, October 2010
[5] Christina Simeone, "Pennsylvania Fossil Fuel Subsidies: An Overview", PennFuture, December 2011, located at http://pennfuture.org/media_pfr_detail.aspx?MediaID=1379

PennFuture Costs Estimates for HB 1580
Costs less than a penny per day to residential ratepayers

HB 1580 was introduced by Rep. Chris Ross (R-Chester) and currently boasts a bi-partisan co-**sponsor list of 108 members.** The bill would slightly adjust the solar energy requirement in Pennsylvania's landmark Alternative Energy Portfolio Standards Act (AEPS) to address a current imbalance in the supply for solar renewable energy credits (SRECs) that has led to a crash in the SREC market, putting solar jobs and businesses at risk.

HB 1580 would:

- Protect thousands of jobs in the solar energy industry. Pennsylvania is ranked #4 in the nation for the total amount of solar jobs.[1]
- Increase the amount of solar in Pennsylvania which reduces strain on the local distribution system; offer cost benefits by lowering peak demand; and provides pollution-free energy.

Methodology:
PennFuture first calculated the number of SRECs required under the existing AEPS solar share from 2012-2015 and then for HB 1580.[2] For the current AEPS requirements an SREC price of $70 was used from 2012-2015, based on PPL's most recent long-term SREC procurement priced at $107.83 and current spot market prices hovering around $20.00.[3]

For the HB 1580 requirements, SREC prices are assumed to increase to $100 in 2012 and $200 in 2015, based on conversations with solar developers and experts working in Pennsylvania. However, these prices do not factor in the current practice of utilities banking low cost SRECs, which will have a downward effect on these SREC price estimates.

PennFuture then calculated the cost per kilowatt-hour (kWh) based on the projected electric sales for each of these three program years. These rates were then applied to the average monthly consumption for each EIA-defined customer class to determine the impacts on customer's bills. The increased annual costs of HB 1580 equal:

Program Year (PY) 2012/2013 = $0.000113/kWh
PY 2013/2014 = $0.000195/kWh
PY 2014/2015 = $0.000305/kWh

Costs to average residential ratepayers would be less than one cent per day.

PennFuture did not attempt to quantify the value of the co-benefits of HB 1580, but they are important to point out, such as: jobs saved or created, pollution avoidance, reduction in local distribution grid strain, lowering peak demand, wholesale price suppression, and reducing dependence on fossil fuels.

---

[1] 2011 Solar Census, The Solar Foundation
[2] Calculated from Energy Information Agency (EIA) electric retail sales data and growth rates from the PA PUC Electric Power Outlook for Pennsylvania 2009 - 2014 (July 2010)
[3] PPL Electric Utilities http://pplweb.mediaroom.com/index.php?s=12270&item=49199 and http://www.srectrade.com/