

**BOMA FL**  
**Energy Sub-Committee**  
**Prepared by D.K. Mink**  
**12-16-09**

**State of Florida's Renewable Energy**

**I. Renewable Energy Associations**

A. There are approximately 10 Associations working on renewable energy in the State of Florida. The top three are as follows:

- **FARE** – Florida Alliance for Renewable Energy – They're associated with the national organization known as the Alliance for Renewable Energy. ([www.farenergy.org](http://www.farenergy.org))
- **FLASEIA** – Florida Solar Energy Industry Association – This is a Florida Chapter associated with SEIA, however, the FLASEIA has recently aligned themselves with off-shore drilling, which has caused dissonance and many members and directors have resigned. ([www.flaseia.org](http://www.flaseia.org))
- **Clean Energy Florida** – (AKA FREA) They are associated on a national level with ASES-American Solar Energy Society. <http://www.cleanenergyflorida.org/>

B. Information

- There is installation of solar on windows. Windows work generally ABOVE -the 45<sup>th</sup> parallel because the sun is closer to the horizon up north. For Florida they are not nearly as efficient as rooftops and do not hold much future promise.
- In Florida, the sun is positioned as such that the roof is used. Flat roofs generated approximately 6 – 15 DC watts per sq. ft. of roof space utilized.
- If the roof top has a parapet wall, the solar cannot be installed up to the edge of the parapet wall. There is a set back of approximately double the height of the parapet wall.

C. Net Metering vs. Production Based Incentives - The State of Florida has passed legislation for Net Metering. The Owner is credited with the full retail credit of solar energy up to the point (where the owner's meter has been zeroed out on an ANNUAL basis for public utilities FP&L, Progress, etc). If per chance the Owner would produce excess power than the Owner consumes then the utility company would only have to pay a wholesale price, which is 30-50% less than the retail.

D. Production Based Incentives (PBI) – go to [www.FAREENERGY.org](http://www.FAREENERGY.org) to see more details.

**II. Example #1: Net Metering in today's funding – Case Study**

A. A 2009 Case study of an actual solar installation on a building, including cost and usage. Logistics:

- Two story building
- Located in Broward County, Florida
- 14, 000 sq. ft.
- Ground Floor of 7,000 sq. ft. is not built out and has no air conditioning

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- Second Floor of 7,000 sq. ft. is fully utilized with air conditioning
- B. Background: Owner installed 26,000 watt solar roof installation on 6, 000 sq. ft. of roof.

Based on approximately 25, 000 watts.

\$200, 000	Cost
\$100,000	Recoup from State rebate (A1)
<u>\$ 60,000</u>	Recoup from ITC or Grant (B1, B2)
\$ 40,000	Net Cost

\$102,000	Depreciation Year 1 - $\$200,000 \times 85\% \times 60\%$
\$17,000	Depreciation Year 2 - $\$200,000 \times 85\% \times 10\%$ per annum

Current Utility Bill SAVINGS on property per Net Metering:

\$5,000	Year 1
\$5,500	Year 2
\$6,000	Year 3

C. Footnotes:

- **A1** - The State of Florida has an existing but underfunded rebate that maximizes out at \$100,000 installation cost. \$15 million was funded by the federal government to the State. As of September 2009, the State has refunded all applications received up to and through April 2009. The question that remains is will there be sufficient funds to pay the current applications and any future applications.
  - Applications can only be submitted after the job has been completed. (In New Jersey and some other states, a building owner may apply earlier in the permit process to start the application.
- **B1** – The owner may also obtain from the federal government either a Grant or an Investment Tax Credit (ITC). Grant – a for profit company (not making a year end tax profit) can still apply for a 30% grant from the federal government. In the above case, 30% of \$200,000 equals \$60,000 reimbursement. This funding is soon to expire, however, there may be pending legislation to extend it through 2010.
- **B2** – Investment Tax Credit (ITC) – a for profit company (that does make a year end tax profit) can still obtain a 30% tax credit. In the above case, 30% of \$200,000 equals \$60,000. This is in existence for the next five years per federal legislation.

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- A for profit company, whether they are making a year end tax profit or not, can still obtain a depreciation. If they are not making profit, they can take the loss carried forward by utilizing this extra depreciation. Depreciation is considered a Capital improvements write off.

**III. Example #2: Production Based Incentives (PBI) – A Fictional Case Study**

A. A 2009 Case study, if Production Based Incentives did exist in Broward County, regarding solar installation on a building, including cost and usage. Logistics:

- Two story building
- Located in Broward County
- 14, 000 sq. ft.
- Ground Floor is not built out and has no air conditioning; 7, 000 sq. ft.
- 2<sup>nd</sup> Floor is fully utilized with air conditioning; 7,000 sq. ft.

B. Background: Owner installed 26,000 watt solar roof installation on 6, 000 sq. ft. of roof. Based on approximately 25, 000 watts.

\$200, 000	Cost
\$ 0	No State Rebate (A1)
<u>\$ 60,000</u>	Recoup from ITC or Grant (B1, B2)
\$ 140,000	Net Cost

\$102,000	Depreciation Year 1 - \$200,000 x 85% x 60%
\$ 17,000	Depreciation Year 2 - \$200,000 x 85% x 10% per annum
	Utility PAYMENT on property per Net Metering (assuming 40 cent PBI and 20 year contract) :

\$15,000	Year 1
\$15,000	Year 2-20

C. Footnotes:

- **A1** – The State of Florida does not fund rebates for Production Based Incentives.
- **B1** – The owner may also obtain from the federal government either a Grant or an Investment Tax Credit (ITC). Grant – a full profit company (not making a year end tax profit) can still apply for a 30% grant from the federal government. In the above case, 30% of \$200,000 equals \$60,000 reimbursement. This funding is soon to expire, however, there may be pending legislation to extend it through 2010.
- **B2** – Investment Tax Credit (ITC) – a for profit company (that does make a year end tax profit) can still obtain a 30% tax credit.

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In the above case, 30% of \$200,000 equals \$60,000. This is in existence for the next five years per federal legislation.

- For profit company, whether they are making a profit or not, can still obtain a depreciation. If they are not making profit, they can take the loss carried forward by utilizing this extra depreciation. Depreciation is considered a Capital improvements write off.

**IV. Summation of additional differences between Net Metering and Production Based Incentives –**

- A. Production Based Incentives - Exists in Vermont; Gainesville, FL; Germany; Spain. Approximately 20 of 27 European countries have Production Based Incentives.
- Production Based Incentives (PBI) can help facilitate a 3<sup>rd</sup> party finance agreement – the building owner, the bank, and the power company. Let's say the bank loans the owner and the power company makes payments to the owner for the power. If the owner defaults, the agreement is such that the power company pays the bank directly.
  - To create an PBI, either the power company has to agree to do it (like in Gainesville) or it must be legislated. The cost to put in a feed in tariff is approximately \$1.00 per month for residential or commercially 1% to instigate a production based incentive. It will take approximately 6-8 years to make it to a grid parity where obtaining solar energy equals the cost of production for nuclear coal and natural gas. This means that after 6-8 years the dollar per month residential and 1% commercial should not be necessary.
- B. Another example for Net Metering – Commercial buildings that are not full service and have individual meters
- Under net metering, if an Owner had 30 tenants in an office building and one house meter, the Owner could agree to install solar on the rooftop to take care of the hallway A/C and exterior lights. Florida law does not allow an Owner of a property to resell power. Only power companies are allowed to. However, the Owner could rent roof space to the Tenant and allow them to put solar on it which would then allow the Tenant to obtain net metering. But if the Tenant defaulted, the lien might be placed upon the Owner's property.
  - Under feed in tariff, the utility company would install the meter, however, not only would the Owner be able to produce more power, but anything of excess, he would be paid PBI contract price and it would never be metered out as per the net metering. If the Owner lost his Tenant, there would still be solar generated that the Owner would be paid by the utility company for.