Florida Chapter ★ Southern Section
PALM BEACH COUNTY DIVISION

International Association of Electrical Inspectors

The March 17, 2009 meeting of the Palm Beach County IAEI was called to order at 2:50 PM by Palm Beach County IAEI President, Debbie Nutter, who conducted the Pledge of Allegiance to our flag. A motion to dispense with regular business and devote the meeting to our guest speaker was made and passed.

Dr. Roger Messenger presented a 2 hour class (for CEU credit) on photovoltaic electrical systems that when designed and installed correctly, will result in lower electric bills. There were approximately 100 in attendance with 69 signing up for the 2 hours credit. The room that had been reserved for the meeting would not accommodate all those that arrived so Richard Gathright of Palm Bch Co Building Dept secured a larger room and assisted Dr. Messenger with getting the power point presentation operating correctly.

There are 3 main types of photovoltaic systems, the “stand alone” system, the “utility interactive” system, and the “utility interactive with battery backup”. The stand alone is not connected to any other electric or utility system and provides power for small remote lights, controls, etc. The utility interactive system reduces the utility bill by supplementing a few thousand watts of power when in full sun. There are no batteries with this system and it has no “standby power” ability.

The utility interactive with battery backup for standby power is the best but is more complicated and expensive than the other two types. The most popular system now is the utility interactive with no standby power.

Dr. Messenger gave us many pointers on NEC requirements and correct installation. You are not permitted to use wire nuts on DC circuits. The DC wiring on the roof is routed from the group of photovoltaic roof panels to a central Junction box. From there it penetrates roof in a metal raceway and must be run in metallic raceway in the attic until it reaches the 1st readily accessible disconnect.

The inverter changes the DC to AC for connection to the utility at the panel. The inverter usually contains GFDI (ground fault detection and interruption) protection of the DC circuits as required by NEC 690.35(C).

In addition to electrical installation problems on many PV systems, the anchoring of the photovoltaic panels to the roof is where many installations have problems, both at plan review and at inspection time. The engineered anchoring detail must address the specific roof type such as tile or standing seam metal, and the installer must closely follow the engineered anchoring detail. This usually involves some attic work.

For more information on upcoming photovoltaic seminars by Dr Messenger, call VB Engineering at 561-750-8677 or www.VBEngineering.com. They have several courses on photovoltaic systems approved for credit for inspector, contractor, and engineering licenses.

Meeting adjourned at 5:35 PM
Respectfully Submitted by Dan Prater, Secretary

The next regular meeting will be at 3 PM on Tuesday, April 21 at the Palm Beach County Building Dept in the Vista Center**, 2300 N Jog Rd,** West Palm Beach**.** Our guest speaker will be Bob Hahn, from Detroit, Michigan, who will discuss Lumecon’s LED parking lot lights.

Mark your calendar, make sure to attend, and bring an electrical friend!