

Judging by responses from all attendees, the **2014 IEEE Engineering Colloquium** held by the **Schenectady PES Chapter** on September 19 was a great success. This was the first conference organized by the Schenectady chapter and it is now planned to be an annual event. Several of the seven presenters (see photos) often speak at national or international conferences, are published in textbooks or technical papers, and all are considered experts in their focus areas. Continuing education credits were provided for each presentation which encompassed the following topics:

- National Grid interconnection process and requirements for load customers
- National Grid interconnection process and requirements for DG
- New York ISO interconnection process and requirements for generation
- Engineering ethics
- DG grounding and overvoltage
- Substation grounding
- Open source tools for engineering analysis



Speakers pictured left to right are: Stephen Dean, National Grid; Christopher Vance, National Grid; Philip Barker, Nova Energy Specialists; James Barrett, NYISO; Vincent Forte, Chapter Chair; John Golde, Golde Engineering



Speaker: Thomas Short, EPRI

The interconnection processes for National Grid load and distributed generation customers were explained. Also discussed were when various standards, codes, and guides should be consulted such as those from IEEE and UL as well as the NEC and NESC. Also how applicable PSC, FERC and other regulatory rules impact the interconnection processes of National Grid and the NYISO were discussed. National Grid has developed a series of bulletins to make the process easy to understand and follow for their customers. The types of studies National Grid and also the NYISO conduct or their respective customer's engineers need to conduct were described. Representatives from both organizations also explained why these are important for safe and reliable power service.

The IEEE code of ethics was reviewed as well as one significant aspect of the New York State professional engineering licensing law. A process aid for ethical decision making was described and used in example cases pulled from real world engineering cases.

The types of overvoltages and their effects on equipment were reviewed as well as effective grounding and other solution techniques. Substation grounding calculations using IEEE 80 were reviewed in detail with example cases highlighting proper use and also discussing possible mitigation measures.

New open source tools that can be used for power system modeling were identified and described. How these new and continually developing tools can aid in making calculations and simulations was explained and examples were shown and discussed.

Schenectady chapter chair, Vincent Forte, noted that planning for the 2015 colloquium is beginning. If any chapter members would like to suggest topics and speakers, or to volunteer to help with the 2015 conference, they can contact him at Vincent.J.Forte@ieee.org with their ideas and contact information. The next colloquium will be held September 2015 on the Union College campus in Schenectady, NY.