

THE CONDUCTOR

News & Activities of SGIP



June 11, 2015

President's Update



The latest report from Clean Edge rates California, Massachusetts, Oregon, Colorado and New York as the top five states for clean energy adoption. Hawaii is our first state to pass a renewable energy goal of 100% by 2045 through their state legislature. We see growing interest not just in connection of clean energy sources centralized but also decentralized. When one looks at customer adoption of solar, for example, various costs including interconnection come into play. SGIP and members of PAP25 are responding to a funding opportunity through DOE called "Solar Bankability Data to Advance Transaction and Access." The focus is to define and utilize standard data for transmitting financial and other solar project

data in order to reduce costs of deploying solar projects. Anyone interested in joining our PAP25 efforts should contact [Stuart McCafferty](#).

I am pleased to announce that we have added another member to our staff, John Gillerman. You will find a brief introduction on him later in this newsletter. With the changes we see coming with distributed energy resources, and continued automation of systems, we knew that having an architect on staff to work with the various projects was key. We are pleased to have John on board. He brings a wealth of experience.

The staff has been diligently responding to the NIST Funding Opportunity for the "Smart Grid Interoperability Standards Cooperative Agreement Program." We are in the midst of finalizing it this week and will be submitting our response in early June. Thank you to the SGIP Board Directors who have provided input to our draft.

Every month you will hear me talking about our focus on growing our membership base. New members and new ideas are always healthy. In May, we added 6 new members which brings our total new members for the year to 21. Join me in welcoming Southern California Edison Electric Utility, Opus One Solutions, National Instruments, Inman Technologies, Xtensible Solutions, and GridIntellect.

SGIP continues to stay active and visible and spoke at the recent Utilities Telecom Council annual meeting about standards and interoperability.

Feel free to shoot me an email or give me a call to share anything on your mind. Our organization is only as strong as the members and staff make it. If you have a great idea that you would like us to

consider, reach out and let me know. We are always open to hear your ideas and look for ways to make SGIP of value to your organization and our industry.

Warmest Regards,



Sharon Allan
President & CEO



BECOME A SPONSOR! VIEW SPONSORSHIP OPPORTUNITIES >>

Registration is now open for our Annual Conference in New Orleans, Louisiana from November 3rd through November 5th 2015!

The conference theme of “Advancing through Collaboration” will be realized through 3 days of thought leader discussions, networking, seminars, working group meetings, and technology exhibits focusing on the critical need for interoperability and sharing knowledge to accomplish the objectives of modernizing our power grid.

We expect 300 attendees and speakers comprised of member and non-member utility, vendor, and industry senior executives. Throughout the conference our vendor, utility and technology partners will demonstrate the interoperability of grid devices and their progress on collaborative microgrid projects. [Click here for a link to the agenda.](#)

We have a Sponsorship program and it is a key part of our event. Sponsorship options vary in size and cost to allow every company to participate in branding and promotion at the SGIP2015 Annual Conference. If you plan to be a sponsor, please be sure to sign up for sponsorship before you register as sponsorships may include sponsor codes that you need for registration. [Click here to review our Sponsor Prospectus](#) Or [Click here to sign up for a sponsorship.](#)

[Register now and sign up for early bird rates! Please click this link to find out more about our Annual Conference and to register for it now!](#)

The venue for the Annual Conference is the beautiful Intercontinental Hotel which is coveted for its location and Four-Diamond status. For our conference we have access to the entire third floor of this contemporary and elegant venue. Because of this meeting space reservation we are

contractually committed to a certain number of hotel rooms. **So although you may have reward points at your favorite hotel, it is important for all conference attendees to book their lodging at the InterContinental to satisfy the SGIP room night commitment.**

SGIP has a discounted room rate of \$219 per night. To get this discounted rate, you must make reservations through the link on our conference registration site using the SGIP2.0 reservation code. Our conference rate is available from Oct 29 to November 8th so please feel free to come early and spend Halloween in this amazing city, or stay late and tour the historic sites.

In addition we have secured a limited number of per diem rooms for our government attendees. If you would like a per diem room, please book early, by contacting **Amanda N. Thaxton** directly.

She can get your hotel taken care of for you. **[Click here to make hotel reservations.](#)**

If you have any questions regarding your conference registration, hotel reservations, or need any help; please do not hesitate to contact Amanda N. Thaxton at **athaxton@sgip.org**.

SGIP Releases Two New White Papers



This past month, SGIP has been hard at work educating the industry by hosting webinars and releasing white papers. We released two white papers in May, "Smart Grid System Stability with Broadcast Communications" and "Implementing the

IEC 61850 Substation Automation Standard." To view these white papers and to learn more about ways that SGIP is helping the industry, **[please click here.](#)**

H2G DEWG Whitepaper

The Home to Grid (H2G) Domain Expert Working Group (DEWG) has completed work on "Smart Grid System Stability with Broadcast Communications." The focus on the paper is on the issues of system stability when using smart grid broadcasting methods as described in the H2G white paper, "Broadcast-based H2G Communication Solutions" (published last year). Basic systems theory along with control variables and factors contributing to system stability and performance are explored. Practical considerations and use cases are offered as part of the paper.

IEC 61850 with Broadcast Communications

61850 is not just a communications protocol, it is a holistic view of designing and managing utility substation and field device communication, automation systems, and applications. It is a collection of multiple protocols, concepts, and component standards. It can be considered a platform for designing, implementing and operating utility automation systems. 61850 provides a methodology for adding needed context and structure around what historically was simple, unformatted data. It is a "way of life" for utility automation.

GETTING TECHNICAL
UPDATES FROM THE SGIP PROJECT MANAGEMENT OFFICE

The EMII WG is currently drafting a short application note for the IEEE Std. 1613.1 (2013) standard. This standard supplements the environmental tests defined in IEEE Std. 1613 (2009) and updates EMC testing requirements for communications networking devices installed in transmission and distribution facilities. The application note is intended to provide general guidance on the use of IEEE Std. 1613.1 for various stakeholders (e.g. manufacturers, test laboratories, and utilities). Several members of the EMII WG are directly involved with the IEEE work. The likely timing for the release of the application note is later this summer.

The plan looking forward (after the application note) is to reevaluate the activities of IEC and IEEE related to smart grid EMC and decide if there are any new and worthwhile projects this working group should consider. We are also tracking the work of the SGTCC to lend support when appropriate. Anyone interested in joining the EMII WG efforts should contact smccafferty@sgip.org.

GET INVOLVED

Learn about SGIP
volunteer opportunities
for the various committees
and contact the PMO
for more information.
By working together,
we get there faster.

Vehicle to Grid (V2G) Domain Expert Working Group Drives Submetering Interoperability

Led by George Bellino, President of Infrastructure Technology, Inc. and Chair of the Electric Vehicle (EV) Fueling Sub Metering Requirements Priority Action Plan (PAP-22) is making significant progress. The PAP team is collaborating with other stakeholders on the U.S. National Work Group (USNWG) Chaired by Tina Butcher and Technical Advisor Juana Williams (NIST Office of Weights and Measures). The USNWG is working on national adoption of new legal metrology requirements in NIST Handbook 44 to address the sale of electrical energy through commercial EVSEs to recharge

EVs. This national metrics handbook has been managed and published annually by NIST since 1949 and is a part of NIST's statutory mandate for "cooperation with the states in securing uniformity of weights and measures laws and methods of inspection."

The PAP team has been a key player in the development of the HB 44 draft EVSE System Tentative Code and corresponding modifications to the Timing Devices Code through its reviews and many comments/changes provided to NEMA's original script for modifying the codes. The proposed code changes to HB 44 were submitted in January 2015 to the National Conference on Weights and Measures (NCWM) and were approved to be voted on for adoption at the NCWM's Annual meeting in July 2015.

If adopted in July 2015, compliance with HB 44 legal metrology code requirements for commercial EVSEs and Timing Devices will be further defined and used as the basis for a set of criteria that establishes the EVSE manufacturer's conformance for type evaluation certification for commercial use of an EVSE. The NCWM National Type Evaluation Program (NTEP) will develop the checklists of test procedures and select a national lab to perform compliance testing that may include conducting stages of the test at the manufacturer's site, a recognized or accredited laboratory(s), in the field or at similar sites.

Two NEMA standards documents are under development to harmonize with the HB 44 requirements. Once completed and ratified, they will be approved and published through ANSI.

Next steps include:

- Adoption of Modifications to HB 44 and Timing Device Code by the NCWM - July 2015
- Established field test procedures/equipment to verify compliance with HB 44 - Aug/Sep 2015
- Release of draft NEMA standards - Aug/Sep 2015
- Development of the NCWM NTEP Certificate of Conformance Procedures and Checklist - Jan/Feb 2016
- Final draft of NEMA standards - Jan/Feb 2016
- ANSI approval of NEMA standards - Apr 2016
- Submit NEMA standards to CoS - May 2016

For more information on participation in this activity, contact the [Chair](#) or visit the [PAP-22 Kavi home page](#).

Open FMB Updates

The OpenFMB team met at NREL in Golden, CO on May 14-15 to discuss the three microgrid use cases under development and for a kick-off of the NAESB OpenFMB Task Force standards development activities. Over 30 individual participants met in-person or through data conferencing to drive the completion of the use cases and to begin preparing for the modeling, test bed, and demonstration activities. The three use cases leveraged prior work from the SGIP's DRGS DEWG, EPRI, and Japan's NEDO. They include:

1. Unscheduled Islanding
2. Island to Grid-Connected Transition (Reconnect)
3. Optimization (in islanded and grid-connected configurations)

The use cases will be used in our modeling effort, which begins in June. The team's next Face-to-Face is scheduled for July 8-9 at EPRI's facilities in Charlotte, NC. The meeting will include project status and action item reviews as well as breakouts for modeling activities, test bed coordination, and demonstration event planning. In conjunction with the SGIP meeting, the NAESB OpenFMB Task Force team will also meet in Charlotte at Duke Energy on July 10.

The SGIP's OpenFMB Demonstration planning began in earnest with a kick off meeting on May 15. The current planning is extremely high-level, but is based around the use cases and the test bed efforts. Our plan is to demonstrate all three use cases at the November 3-5 SGIP Annual Meeting in New Orleans. Several vendors have already expressed an interest in demonstrating their OpenFMB-enabled products and we will begin recruiting for more participants this summer as our planning efforts solidify. Our plan is to have a vendor exhibit and sponsor area that will be available throughout the Annual Meeting event and will allow our vendor partners an opportunity to highlight their products. We also plan to have a special happy hour event within the vendor exhibit area where we will showcase the OpenFMB demonstration.

Test Beds

The SGIP's Test Bed focus area made great strides during the month of May. The survey is complete and two interviews have been completed and the process has been refined. More interviews are scheduled and a database of information is being developed that characterizes the capabilities of each test bed. The information gathered will help identify opportunities for collaboration across test beds and identify gaps in testing that need to be filled. The SGIP plans to assist its utility and vendor members to locate opportunities for hands-on interoperability field testing on their own systems and equipment.

Cybersecurity Task Force

The task force met on Thursday, May 22 to begin review of the framework case study outline. The document will contain real world experiences and leverage the DoE Risk Management Process which is summarized in the SGIP NISTIR 7628 Users Guide.

The framework outline will be sent to the SGCC membership for review and comment. Comments will be collected by Tanya Brewer for discussion at the next meeting. The next meeting is scheduled for late June.

Timeframe for case study:

- End of May - Consensus Outline
- End of June - Interview/discussion questions for the outline
- July/August - Interviews with utility volunteers, we can use call times to have a facilitated

- conversation with utilities.
- September - Initial draft

SGIP Would Like to Welcome Our New Hire, John Gillerman



Please welcome John Gillerman to the technical staff of SGIP. John is SGIP's new Director of Technology Development, supporting numerous committees, DEWGs, and PAPs, including the OpenFMB project.

John joins us from Cloud Systems where he was the Founder developing Platform as a Service (PaaS) for utility operations. John received his B.S. in Electrical Engineering from Rutgers University and has over 20 years' experience in utility-related solution architecture.

John is currently working from his New Jersey office.

Global City Teams Challenge Expo Showcases 63 Smart City Projects



At the Global City Teams Challenge (GCTC) Expo—held June 1, 2015, at the National Building Museum in Washington, D.C.—over 1200 attendees learned about smart city projects that are poised to be deployed this year in communities around the world. Each of the 63 projects was presented by a team built through collaborative effort between businesses, university researchers, and communities.

The purpose of the Global City Teams Challenge, launched nine months ago by the National Institute of Standards and Technology (NIST) and US Ignite, is to demonstrate how cyber-physical systems

and Internet of Things (IoT) technologies will enable communities to improve services, promote economic growth, and enhance their citizens' quality of life.

The projects ranged over a number of different sectors, such as energy, health care, education, disaster response, and transportation. Smart grid-related projects and technologies were the centerpiece of several projects, using technologies such as microgrids, demand response, and "smart electric plugs." Utilities and vendors worked with city leaders—from Charlotte, North Carolina to Amsterdam, Netherlands, to Bandung, Indonesia—to solve civic challenges related to home/building energy efficiency, resilience, and electric vehicles.

The expo featured a full slate of high-profile speakers, guests, and exhibitors. Keynote speakers included Anthony Foxx, Secretary of Transportation; Tom Kalil, Deputy Director for Technology and Innovation at the White House Office of Science and Technology Policy; and Willie May, NIST Director and Under Secretary of Commerce for Standards and Technology. The event garnered attention from the international press because of a special visit to the Expo by Their Majesties, King

Willem-Alexander and Queen Máxima of the Netherlands. Several of the smart city projects on display involved companies and communities in the Netherlands, which has long focused on sustainable urban design and finding solutions to water- and energy-related problems. Peter Molengraaf, CEO of Alliander, which operates energy networks which distribute gas and electricity to large parts of the Netherlands, was also one of the Expo's keynote speakers.

For more coverage of the event, please check out [NIST Director Willie May's blog](#), as well as articles that appeared in the [IoT Journal](#) and at [Statescoop.com](#).

The Global City Teams Challenge program will be continuing in the coming months. In closing remarks at the event, Sokwoo Rhee, Associate Director of Cyber-Physical Systems Program at NIST, said that an important focus in the coming year will be to deploy multi-city solutions that are replicable, scalable, and interoperable.

For more details on the GCTC program and information on how to get involved, please visit the [GCTC website](#) or contact [Sokwoo Rhee](#).

Summary of the Grid 3.0 Webinar – May 12, 2015

On May 12, the Smart Grid Interoperability Panel (SGIP) hosted a webinar to present the results from the Grid 3.0 Workshop that was held on March 26 and 27, 2015 at NIST in Gaithersburg.

Here are some Key Grid 3.0 points discussed in the May 12th webinar:

The objective of the Grid 3.0 workshop was to identify issues and actions needed to achieve the resilient, flexible and highly-interactive grid of the future – Grid 3.0.

At the conclusion of the workshop, the Grid 3.0 Leadership Committee (G3LC) agreed to develop a roadmap for addressing these common needs.

The approach being taken to develop the roadmap is to develop aspirational “future states” for each “need” that identified in the workshop and prioritize the future states. Fourteen future states have been developed for Grid 3.0 thus far.

Participants are encouraged to take a survey to prioritize the futures states. [The survey can be accessed here.](#)

If you are interested in joining the Grid 3.0 activities you can:

- Join the Grid 3.0 Leadership Committee by sending an email to dvondoll@epri.com
- [Add your email address to the Grid 3.0 Listserv to receive email updates activities and notification of webinars.](#)
- [Sign up for the Grid3pt0 LinkedIn discussion group](#)
- [Visit the Grid 3.0 SharePoint site. All working documents are posted to the SharePoint site.](#)

Upcoming Events

June 18, 2015: Webinar: C2M2 and the NIST Cyber Framework: Applying DOE's NIST Cyber Security Framework Guidance

In February 2013, the President released Executive Order (EO) 13636 which called for NIST to develop a voluntary Cyber Security Framework for Critical Infrastructure Sectors. The Framework was to

provide a, “prioritized, flexible, repeatable, performance-based, and cost effect approach” to manage cyber security risk. This EO led to the release of NIST’s Cybersecurity Framework (CSF) in February of 2014.

Register for this webinar to for an Overview of DOE’s C2M2 and NIST CSF Implementation Guidance, lessons learned from

Southern Company’s implementation methodology, and a proof-of-concept demo of Southern Company’s automated C2M2 to NIST CSF tool.

This webinar will host Vicky Pillitteri, Advisor for Information Systems Security for the Computer Security Division at NIST, as moderator. Our panelist will be Christopher Taylor, a senior Engineering Analyst for Southern Company’s IT Security Team.

November 3-5, 2015: SGIP Annual Conference, New Orleans, Louisiana

Join SGIP at our Annual Conference this year in New Orleans! We'll be hosting three days of non-stop meetings for our members and other industry thought leaders.

The SGIP Annual Conference takes places in the vibrant city of New Orleans, Louisiana for 2015 at the centrally-located InterContinental Hotel. The 2015 Annual Conference promises to be filled with the latest in grid modernization and many networking opportunities for members and guests to reconnect and collaborate.

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