GSGF

>>NEWLETTER

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GSGF
Global Smart Grid Federation

CHAIRMANS COMMENTS

We have received some good feedback on our first edition and we are going to work very hard to make this newsletter an informative guide to the work of GSGF and the current issues.

My colleague Ronnie Belmans will cover the outcomes of his meetings in the USA and for my part I wanted to share with you the smart grid issues that impact on our member organization the India Smart Grid Forum. I visited New Delhi in January to be part of the national smart grid day forum event. It was great to share the platform with some global thought leaders and to take part in many discussions on the topics of current relevancy. I was particularly delighted to meet Terry Mohn of General Microgrids and to learn more about his work with the United Nations Development Agency in propagating the use of microgrids as a means of making DG an effective contributor to solving problems of communities in underdeveloped countries.

The visit re-inforced the sheer breadth of the technology span in the smart grid sector.It also challenges the GSGF in that as we try to share the learning outcomes we do have to take into account that each country is at a different stage of maturity and develop our communications accordingly. So the fact that India has over 300 million people still not connected to any form of electricity is far removed from the other end of the deployment spectrum where we talk about the higher end challenges.

One final comment, as in every other similar event no one ever shares the experiences from projects that failed yet we know that is where the best lessons are learned. Lets see if we can practice what I preach and use our joint conference with EDSO in March to break new ground by sharing those failed projects.

EXECUTIVE DIRECTOR: THE USA VISIT

Over the last month a lot has happened in the Global Smart Grid Federation world. As you can see further in this newsletter, the collaboration with EDSO for Smartgrids to organize a joint conference in Brussels, is well on its way. The working groups are delivering and I am looking forward to see their first results at the Brussels conference. I want to stress that contributions are still very welcome: please urge your specialist to join the working groups so we can have a wide and really global support of the results.

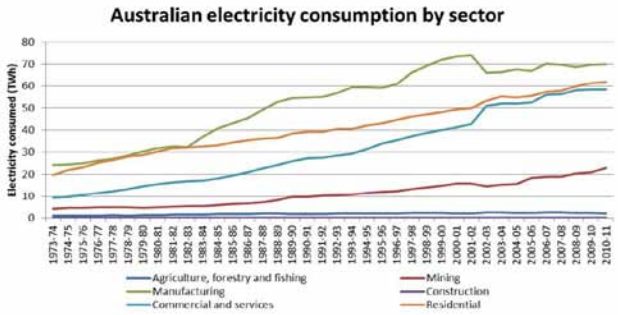
As I wish to interact as much as possible with the members, I was honored to be invited to participate in the GridWise Alliance board meeting on January 14, in Washington, DC. The interaction with the members of the board was very interactive and the personal relationships forged will certainly be very beneficial for the future. I showed how the Global Smart Grid Federation can be the driving force for exchanging ideas and results from projects (both positive and negative) to efficiently and effectively deploy smartgrid technology in the years to come. For those who are interested, my presentation can be found on the website.

On January 15, Becky Harrison and Bryan Nicholson from the GridWise Alliance and I met with DoE representatives, Eric Lightner, Chris Irwin, Joe Paladino, Akhlesh Kaushiva, and Debbie Haught from the Office of Electricity Delivery and Energy Reliability. We exchanged ideas on the impact of the collaboration between ISGAN and GSGF. Furthermore, we explored how DoE might contribute to the conference in Brussels. On Thursday January 17, I met John McDonald of GE and Chairman of the NIST SGIP PANEL to discuss common interests. Clearly this will be very beneficial for both organizations and we will continue our interaction.

Linked to a visit by a high level governmental representation to the European Commission, a visit was paid to the Belgian grid operator Elia and the research centre Energyville. Reji Kumar Pillai, President, India Smart Grid Forum was member of the delegation. We discussed on possibilities to get more links and a visit to India is under consideration. So you can see that things are moving within the GSGF world.

I look forward to see you in March in Brussels at our Board meeting linked to the joint GSGF/EDSO conference. Be certain, that I am available to guide you to the appropriate place in Brussels to enjoy chocolates and Belgian beer.

Hardly a week goes by in Australia without significant media attention to the challenges that Australian consumers – both residential and business – are facing as the cost of the electricity on which they have come to depend rises. There are multiple drivers for these price rises, and it is encouraging to see an informed discussion developing about how best to limit future price rises.



Source: Bureau of Resource and Energy Economics, Australian Energy Statistics – Energy Update 2012.

As noted in a recent report from the Australian Energy Market Commission (AEMC's "Power of Choice" report), one of the significant contributing factors is the ongoing rise in peak demand. If the consumer expectation of unlimited power being available at the flick of a switch is to continue to be met, both generation and distribution capacity need to be upgraded. The costs of such upgrades need to be recovered over the average number of kWh consumed – and since the trend in average consumption is stable or falling, the combination is creating a double-edged driver of price increases.

The sensitivity over prices comes at a time when the operators of electricity distribution networks are facing other major challenges in their businesses. The growing penetration of distributed generation resources (in particular, rooftop solar arrays) has great "green appeal", but is fundamentally changing the pattern of electricity flows in the grid.

As a result, traditional capacity planning rules are becoming less relevant, voltage stability is being undermined, protective mechanisms are at risk of being compromised and losses may be increasing due to greater phase imbalances.

The incentives that were given to early adopters are also one of the factors contributing to price rises. Whilst these have generally been discontinued, the uptake of solar arrays continues with a life of its own as the capital cost of systems falls and electricity prices continue to rise.

Electric vehicles may still be something of a novelty today, but few would dispute that their time is coming. The prospect of large numbers plugging in at differing locations and sucking enthusiastically on the grid adds to the challenge of ensuring capacity is available where and when it is needed – and without suitable controls, recharging could exacerbate critical peaks.

Since network costs are such an important factor in price rises, there's an understandable and instinctive appeal in the idea of freezing network investment. However, that's not an option if Australia is to advance socially, economically and environmentally with an electricity supply system that supports modern lifestyles and vibrant business activity. It may be possible to restrain investment in some areas, but going too far down this path is a recipe for sliding into a third world power environment where black-outs and brown-outs are common.

Instead, the focus needs to be on investing in upgrades that will transform the grid to cope with the trends that have emerged, and that will lay the foundation for minimising prices rises in the longer term. Smart grids (incorporating smart meters) need to be seen as part of the solution rather than part of the problem.

I see parallels between the transformation that got underway in telecommunications with the advent of broadband, and the transformation that is now starting to gather momentum in the electricity sector. In the earliest days of the "broadband revolution", there was a big focus on network upgrades – introducing DSL and cable modems to achieve higher speeds than could be supported over dial-up lines. Progress on the network front continues today, with the emphasis moving to further lifting speed limits by pushing fibre closer to the end-user.

However, the real excitement that broadband has unlocked has little to do with raw network capabilities! It's all about the new applications and services that have become possible on the back of the network upgrades. It's these applications and services that are totally transforming the way our society operates – from simple things like email, electronic commerce and banking, distance education and medicine all the way through to the profound impact that social networking is starting to have on political systems around the world.

In much the same way, our electricity networks need upgrading – but the more exciting progress is likely to unfold in the consumer domain, in the way we generate, store and use electricity. As consumers, we want a grid that will support appliances that can automate our energy use decisions – saving money and alleviating demand at peak times.

We want a grid that will support our choices in electric vehicles, distributed generation and storage assets, smart buildings and the like.

Now is the time to be steering our network investment to lay the foundations for a bright energy future!

Smart Grid Australia (SGA) was established to promote the modernisation of Australia's electricity supply infrastructure with the goal of achieving improved consumer choice, supply efficiency, reliability, capacity, sustainability and power quality in a changing energy landscape.

In November 2012, the two Federal Government ministers responsible for Energy and Communications participated in the formal launch of two new SGA reports:

- "Towards Australia's Energy Future – the Enabling Role of Smart Grids" sets out the agenda for SGA's advocacy role, and
- "Unlocking Consumer Values – Actionable Insights for Australian Energy Industry Participants" presents the findings of a major survey on consumer perceptions and looks to facilitate discussion as to how best to engage consumers and enlist their help in realizing the full potential benefits of smart grid investment in Australia.

In the wake of the formal release of these reports, SGA has been meeting with many key stakeholders in the energy and electricity sector to discuss key issues and share its perspective on how to accelerate the transformation of Australia's electricity supply chain to best meet the needs of the future.

Robin Eckermann, President, Smart Grid Australia

Work Group 1

The Grid Connected Distributed Generation work group has continued to make progress in the New Year. We have now finalized an outline of our target white paper, which will be further detailed to guide the next phase of research, review, and writing. In our early February call, we have agreed to conduct research and develop the white paper by focusing on the principal drivers for distribution-connected DG systems, namely (1) Economics, (2) Technology, and (3) Policy & Regulatory issues. Each of these three sections will provide a comparison and contrast of key issues under this topic across international geographies. At this point, we are still continuing to have monthly calls, but will consider the possibility of more frequent calls of the full work group or of sub-group teams. Research and writing assignments will be discussed during our next monthly call, but all members are being asked to contribute relevant public materials before then, in terms ofprevious reports, white papers, or work artifacts we can reference for our topic.

Work Group 2

In accordance with the course of activities based on the discussions and determination in the Board of Director meeting at Brussels last fall, the Grid User Interactions and Interfaces Work Group (GUII-WG) focuses on EV/PHEV as a grid user. More specifically, we aim to sort out the present situation and potential subjects for future developments regarding activities toward EV/PHEV diffusion, interaction between EV/PHEV and the power system, and their interface. We will study and analyze the outcomes to increase the people's buying intention, in other words, demand, for EV/PHEVs, considering situations of each member's own country and region.

Based on the vision mentioned above, the secretariat of the GUII-WG drew up a draft charter in December 2012 and distributed it to the WG members late December. Comments were received and then a revised charter was distributed. After finalizing its charter in mid-January, the work group is now going forward to set list of priority deliverables by March and to have completed its paper by November.

Currently, in preparation for the Session2 of the EDSO-GSGF Conference in March, the secretariat is collecting members' answers to the following questionnaire:

1. What information the GUII-WG members can share
   - Case Study, lessons learned
   - Financial-supporting system
   - Policy and regulatory
2. What you consider as challenges/issues to address from the viewpoint of EV mass introduction and interfaces between EV and the power system.

The GUII-WG consists of 10 representatives from 8 countries: Australia, Canada, Denmark, Ireland, Japan, Korea, and Norway. We are communicating with each other mainly in an email basis.

Additional volunteers would always be welcomed. If you are interested, please contact the secretariat of GUII-WG.

Work Group 3

"Referring to the general description of the Inter-operability work, presented shortly in the last newsletter, the objective of the work – to identify areas where further work is needed, where standards are being or should be developed, where other measures are needed and to bring forward a reference to best practices for smart grid interoperability – has been further defined by the group:

- To base the work on the already presented and on-going activities on standards and inter-operability,
- To focus on the customer side/smart metering programmes and demand response/on distribution rather than transmission,
- To take on the Cyber security issues focusing on the consumer end, from the smallest device, linking up to the data centres, and
- To be as concrete as possible, focusing on areas where our findings actually can make a difference.

On the 23 January the European Commission and CEN/CENELEC/ETSI published the Smart Grid standardisation work, containing the first set of Smart Grid standards as well as documents on the basis reference architecture, sustainable processes and information security, which you can find here: www.cencenelec.eu/standards/HotTopics/SmartGrids/Pages/default.aspx

Focus for Inter-operability working group is now to gather information from the different areas represented in the working group regarding on-going standardisation activities – what is being done on a regional/country level – and to highlight gaps and hurdles to be tackled.

Preparations are also being made in front of the first physical inter-operability working group meeting in Brussels linked to the EDSO-GSGF conference in March and the material on the outline and work plan to be presented at the conference.

We are looking for further volunteers to join the group in order to present a global view, and would be very pleased if you or a colleague would have a possibility to join."

ROB MCNAMARA

SmartGrid GB has kick started 2013 with a busy programme of activities reflecting our growth in size, resources and expertise. Notable activities include plans to release new reports as part of our continued work to promote the economic and consumer benefits of smart grid development in Great Britain, as well as workshops with all of Great Britain's major Distribution Network Operator's about their smart grid projects.

Politically, January 2013 has been an important period for smart grid development in Great Britain. Activities around the UK Government's Electricity Market Reforms – a flagship part of the UK's 2013 Energy Bill legislation – continue to gather pace. Included in the reforms are efforts to increase the connection of renewable energy onto the grid by setting strike prices for renewables, and the introduction of a new Capacity Market scheme. All of this will have a profound effect on the way energy is generated, transmitted, and used in Britain in the future – necessitating the need for smart grid development. In January 2013, the Energy Bill became eligible for amendments from policy makers. As part of our efforts to ensure optimal smart grid development in Britain, SmartGrid GB is working to monitor the developments of the legislation and is voicing our opinion on it where appropriate.

In addition to these Government reforms, 2013 is also going to a pivotal year for smart grid development in Britain due to the actions of the UK's energy and gas regulator, Ofgem. Ofgem's LCNF (Low Carbon Networks Fund) – the £500m scheme which funds smart grid projects across the UK, is entering maturity this year meaning that greater learning about smart grid technology deployment is gradually spreading across the industry. Details of the Fund's latest projects can be accessed here. The LCNF runs until 2015 at which point it will be overtaken by a new fund – the NIC (Network Innovation Competition) – which will run for the duration of the next price control period from 2015 to 2023.

SmartGrid GB is, as always, is taking the opinions of our members on these developments and voicing concerns to policy makers as well as continuing our programme of activities for 2013 as set out in our business plan for the year. For a detailed insight into SmartGrid GB's plans for 2013 please visit our newly redesigned website at www.smartgridgb.org.

THE CONFERENCE IN BRUSSELS

"EDSO for Smart Grids and the Global Smart Grid Federation are inviting to the global conference on "How to Turn the Global Smart Grid Challenges into Successes", taking place at the Marriott hotel in Brussels on 21-22 March. We all know that the development of Smart Grids is a prerequisite for reaching key energy objectives on greenhouse gas emissions, energy efficiency and renewable energy – bringing us effectively and cost-efficiently to a more sustainable and competitive energy future.

This conference will highlight real-life Smart Grids projects from around the world, present and debate the challenges and best practices, the supply of Smart Grid equipment and services, and what is needed regarding market development, policy and regulatory frameworks. The conference will gather high-level Smart Grid thought leaders and speakers from around the world, representing utilities, ICT companies, system operators, manufacturers, research communities and policy-makers and revolve around four key themes:

- Integration of renewable energy resources, plug-in EVs and energy storage to the grid
- Smart metering and active demand management
- ICT control and data security
- Business objectives and market organisation

Smart Grid projects from around the world will be showcased during the conference and you will have an opportunity to gain insights from the project managers.

You can register for this event through this link: http://www.edsoforsmartgrids.eu/index.php?page=upcoming-events-on-smart-grids, where you will also find more information on the conference, the venue, and confirmed speakers."

GRIDWISE ALLIANCE HOSTS WORKSHOP TO EVALUATE THE IMPACT OF GRID MODERNIZATION TECHNOLOGIES DURING SUPER STORM SANDY

On January 24, 2013, the GridWise Alliance hosted a workshop to document the experiences of electricity providers using grid modernization systems during Super Storm Sandy and similar events. The goal was to gather real world experiences on how a modernized grid improved outcomes during events with large scale grid impact; to review what grid modernization capabilities would have been useful in improving the outcomes, even if these capabilities were not available during these events; and to describe what a modernized grid would not have done in improving outcomes. The event attracted 60 participants including representatives from 21 utilities from across the U.S.

The results from the Assessment Workshop will be synthesized into a workshop report that will also address what available grid modernization solutions could have done to improve the outcomes if they had been fully deployed, and what a modernized grid would not have done in:

1. reducing the incidence of power disruptions,
2. serving critical infrastructure such as gas stations, communications, etc.,
3. improving restoration times,
4. communication with consumers and other emergency stakeholders, and
5. reducing the societal and utility cost of the event.

A 5-10 page draft report will be completed by end of February, with publication of the final report by March 31, 2013.

For more information on GSGF and its members, and for previous issues of the Newsletter, please have a look at our website www.globalsmartgridfederation.org