



# **CIGRÉ-UK Next Generation Network (NGN) Paris Session Report 2014**

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FINAL – 2014-10-08

## 0 CONTENTS

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1	Executive Summary .....	2
2	Young Member Activities .....	3
2.1	Young Member Stand.....	3
2.2	Young Member Forum.....	4
2.2.1	YM Best Practice Guide.....	4
2.2.2	Russian YM Group Update .....	5
2.2.3	Student Members .....	5
2.3	Young Member Technical Event.....	5
2.4	Young Member Chairpersons Meeting.....	5
2.5	Social Events.....	5
3	NGN Member Experiences .....	6

## 1 EXECUTIVE SUMMARY

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Following on from the CIGRÉ Sessions in 2008, 2010 and 2012, this year's edition was again successful for the UK NGN and for Young Members (YMs) globally. There are now more than 900 Young Members worldwide, with Young Member groups in at least 9 countries. Many of these groups were represented at the Session.

The German YM group organised the YM activities at the Session, which included:

- The Young Member stand
- The YM Forum, which included the launch of a Best Practice Guide on initiating and running YM groups, and the introduction of the Student Member category
- A YM technical event, which was a visit to RTE's R&D centre
- A meeting of YM Chairs

From the UK, 10 NGN Members attended the Session and took part in the whole gamut of technical and social activities that were on offer. Each NGN Member found the Session a very worthwhile experience, as can be evidenced by the individual reports in Section 3 below. It was very encouraging to see the positive attitude of the Study Committees towards Young Members and by the end of the week 3 UK NGN Members had been able to sign up to Working Groups.

## 2 YOUNG MEMBER ACTIVITIES

The following YM groups were represented at the Session, in addition to the UK NGN:

- Australia
- France (group just forming)
- Japan
- Germany (VDE Young EnergyNet)
- New Zealand
- Russia
- United States

For this Session, the German YM group (VDE Young EnergyNet) had the responsibility for organising YM-related activities, including the YM stand. This was the role that the UK NGN took in 2012.

### 2.1 Young Member Stand



Figure 1 – Young Member stand at the Session

The German YM group organised the YM stand, including designing and producing posters and flyers for the stand, setting up the stand, manning the stand throughout the Session and dismantling the stand at the end of the week. Before the Session they requested content from each of the known YM groups, and these contributions were combined to create the different posters for the stand:

- A large world map showing the locations of the YM groups and some essential information on each
- “Country Focus” posters with details for each YM group, including origin, structure and contacts
- “Case Studies” posters containing YM experiences of Working Groups
- “Events” posters containing photos and brief descriptions of YM events from around the world

There was also a large TV screen displaying various presentations and videos contributed by the YM groups. The posters had been professionally designed and were printed on a thick glossy material, which resulted in an attractive-looking stand. The stand also contained seating and a quieter area including a table for holding meetings and more in-depth discussions.

The stand was located on one of the main exit routes from the Palais des Congrès, which meant almost all delegates will have passed it at some point. The addition of a water cooler helped to entice delegates into the stand, which encouraged chance interactions with delegates who were not familiar with the YM activities. The stand also served as a useful meeting place for YMs.

## 2.2 Young Member Forum



Figure 2 – Young Member Forum

The YM Forum was held on the Wednesday afternoon. Three presentations were made followed by a discussion between the presenters and the audience:

- Andreas Kubis, from VDE Young EnergyNet, gave an overview of global YM activities and launched the YM Best Practice Guide
- Andrey Gofman, from the Russian YM group, gave a talk on that group's progress
- Chris Jones, from the UK National Committee, introduced the Student Member category

### 2.2.1 YM Best Practice Guide

The Forum served as the launch event for the YM Best Practice Guide, which the German YM group had produced with input from the UK NGN and the YM groups in Australia, Japan, the Netherlands, New Zealand and Russia. The Guide shares knowledge and experience from those YM groups, in order to help with the development of both new and existing groups.

The Guide contains:

- A summary and comparison of the YM groups (Chapters 1 and 2), including details such as initiation, membership structure, fees, organisation structure, benefits, events and budget control.
- Recommendations (Chapter 3) for forming YM groups and future work (Chapter 4) to help further develop YM groups and activities worldwide.
- Detailed information provided by each of the YM groups that contributed to the Guide.
- Case studies of Working Group involvement from a number of YMs (Chapter 6).

As well as providing helpful information to new and existing YM groups, the Guide also serves as a useful snapshot of the different practices adopted by YM groups worldwide. The Russian group, for example, is unique in that they hold regular competitions ("Power Engineering Olympiads") within universities. Some groups, such as the Australian group, do not hold regular events but use webinars instead, which are ideal for such a large country. A regular email newsletter is a unique capability of the UK NGN and was highlighted as a particular example of best practice.

The Guide is available to download from: [www.vde.com/bpg](http://www.vde.com/bpg).

### 2.2.2 Russian YM Group Update

The Russian group is currently the largest YM group with over 350 members. It was initiated by the Russian National Committee and has a main objective “to educate and to train a new generation of Russian power engineers”. To this end it is deeply embedded in Russian universities, with cooperation agreements in place with 20, and appears to be primarily focused on undergraduate and postgraduate students. They hold several events each year including competitions – where the winners are awarded subsidised CIGRÉ membership – and workshops. In November 2014 they will hold an “International Student Olympiad on Electricity” to which YMs from around the world are invited.

### 2.2.3 Student Members

CIGRÉ’s Administrative Council had approved the proposal for a new “Student Member” category, which will be made available from January 2015. This will be a free membership available to anyone in full-time education on a relevant study programme of 1 year or more. National Committees have agreed not to add a levy to Student Memberships.

## 2.3 Young Member Technical Event

A visit to RTÉ’s R&D centre in La Defense was organised for the Thursday afternoon and was well attended by YMs. Through the comprehensive event participants learnt about the various innovative technologies that RTÉ are developing and deploying on their network, including an interactive demo of their market simulator.

## 2.4 Young Member Chairpersons Meeting

Following the YM Forum, a number of YM Chairs (Australia, Japan, Germany, New Zealand and the UK) met to share experiences and discuss combined initiatives. The group agreed the following actions:

1. To establish regular international meetings between YM groups
2. To petition for a YM web presence on the CIGRÉ CO office website, which would as minimum serve as a central directory of existing YM groups
3. To share the organisation of the YM stand for the 2016 Session across a number of YM groups, with one project manager (to be appointed)

During the meeting, the Australian National Committee’s impressive webinar facility was demonstrated. For example, they had recorded a technical talk at one of their events and posted this online. The video page allowed for comments and questions to be posted underneath. Some of these comments were then responded to in a follow-up video, so that members who could not attend on the day could still interact.

## 2.5 Social Events

Unlike 2012, there were no organised YM social events at the 2014 Session but there were plenty of opportunities for interaction at the main programmed events such as the Musée du Louvre event and the UK National Committee Networking Reception.



Figure 3 – Musée du Louvre event



Figure 4 – NGN Members at the UK National Committee Networking Reception

### 3 NGN MEMBER EXPERIENCES

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#### **Arslan Bhatti – Junior Electrical Engineer – Parsons Brinckerhoff**

I attended the CIGRÉ Paris Session for the first time and it was an amazing and unbelievable experience.

The Session is a wonderful platform to meet engineers, experts and suppliers from all over the world. I met various experts from different companies in the exhibition stand and shared many ideas.

I attended some of the technical Discussion Meetings on different topics including Overhead Lines, Substations, Transformers and HVDC. I also attended the poster sessions where I met with experts and discussed their posters, which I found very informative.

My particular thanks go to RTE for arranging a visit to their R&D centre for Young Members, where we received presentations and demos of their system and products. We also had a go at using their market simulation tool, where the Young Members each acted as companies trading electricity.

Overall I am satisfied with my visit to the 2014 CIGRÉ Paris Session and I would love to attend again in 2016.

#### **Lujia (Tony) Chen – PhD Student – Cardiff University**

Going to the CIGRÉ Session and presenting my paper was a great honour. The conference was very informative and a great place for networking with people from all over the world. I attended the Discussion Meetings of Study Committees A3, B3, and D1 as well as attending several poster sessions. The most interesting event I attended was the SF6 workshop on the final day. This is a subject I am working on and it gave me some insight to the challenge industry is facing with reducing and eventually replacing SF6 gas.

I would strongly recommend other NGN members to get involved with next Paris Session. The only down side of the Session is having too many events happening simultaneously and it was difficult to find extra time to visit the technical stands.

### **Stefie Cray – Graduate Engineer – National Grid**

Walking into the Palais des Congrès on the first day of the CIGRÉ Paris Session was almost overwhelming – just the number of delegates, exhibitors and security staff present was impressive in itself.. The week was an incredible experience and one I would recommend to anyone wishing to develop their technical knowledge or professional network, I would not pass up a chance to go back!

My highlights include attending the B5 (Protection & Control) Study Committee meeting and being invited to join a new Working Group: B3.41 'Mobile Substations Incorporating HV GIS – Design Aspects.' I have been part of a team at work looking into this area, so I should be able to make some useful contributions.

As well as supporting the Young Member (YM) stand, I also attended the YM Forum, which was a chance for open discussion with other groups from around the world. There was also a YM event that consisted of a tour of RTE's showroom and a demonstration of their market simulator. As an employee of National Grid, it was very interesting to see the differences between the French TSO and ourselves!

One of the greatest things about this event is the opportunity to network with people from around the world that work in our industry – both through the poster sessions, exhibitions and through social events. The challenges that other countries are facing now are often ones we will face in the future and as the next generation of engineers, this is something we should be involved with. At times the week seemed slightly surreal – drinking champagne in the Louvre on business was not something I pictured myself doing in the first year of my career!

### **Nathaniel Cowton – Electrical Engineer – Parsons Brinckerhoff**

As a HVDC specialist, I attended the B4 poster session and Discussion Meeting. This was my first time at a CIGRÉ conference and it was good to see the particular format that is used to present papers. Now that I am familiar with the format, I feel more confident in presenting at future sessions. The poster sessions provided a good opportunity to be able to interact with the authors and ask questions. I was also able to make use of the Technical Exhibition and spoke to a number of exhibitors. One of the most valuable aspects of the week for my day-job was being brought right up-to-date on the latest industry news, of which there was plenty!

At the Young Members' stand, I was able to meet a number of people from across the world and discuss how the NGN operates. I spent most of this time sharing experiences and best practice with representatives of the German and Russian Young Member groups. We found that we have almost opposite composition: the UK group is mainly industry-focused, whereas a number of the other groups, such as in Russia, are composed almost entirely of students. We were then able to utilise these differences, by discussing strategies for how to attract more of those who were lacking in our respective memberships.

The global nature of the Paris Session meant that I met people from countries that did not yet have Young Member groups. I was able to share a bit about what we do in the UK with some Canadian delegates. They hope to set up a Young Member group soon and we exchanged details, to be able to support them through the process.

The week provided almost unparalleled networking opportunities. I already knew a number of people who are active in CIGRÉ, and it is testament to the Paris Session's significance that almost all of them were in attendance. It is always enjoyable to catch-up with friendly faces from across the industry, but of course, I was inevitably introduced to a whole host of new contacts. I expect to see a number of these in other dealings, but certainly look forward to seeing them all again at the 2016 session!

### **Callum Maclver – PhD Student – University of Strathclyde**

As a PhD student I found the whole CIGRÉ Paris Session an extremely rewarding experience. I attended several of the Study Committee Discussion Meetings and poster sessions as well as making visits to as many of the industry stands as possible. An event like the Session gives an invaluable opportunity to get up to speed with the latest issues and trends in industry that you rarely get to hear about in the academic setting. I had a paper accepted to the B4 Study Committee and I found the poster session relating to this particularly fruitful. I received lots of interest and questions that kept me busy during the session, as well as receiving good suggestions and feedback on my work, from both industrial and academic delegates. The pertinent questions drawn out by the special reporters and subsequent responses given in the B4 Discussion Meeting were also very informative and will help shape the completion of my PhD work.

On top of the general content, the Paris Session is a great place to network with new people in some truly fantastic surroundings (the Louvre a particular highlight) and it was great to get to meet the other UK NGN members to hear about the sorts of work they and their companies or universities are involved in. The only downside was that my session clashed with the NGN technical event so I couldn't make it along to what I'm sure would have been another engaging afternoon. I will definitely be doing my best to get myself along to the next Paris session in 2016.

### **Yousef Pipelzadeh – Research Associate – Imperial College London**

As a research associate and industrial consultant from Imperial College who has attended and presented at over 15 international conferences in the past several years, I personally rank CIGRÉ amongst the top ones. I have presented at the CIGRÉ Bologna 2011 event and found it of the highest quality, and the CIGRÉ Paris Session 2014 wasn't short of that. The Session presented a fantastic opportunity to network with leading industrial experts, talk to the huge number of companies in the exhibition area (circa. 250) and the opportunity to discuss power system problems with the many delegates (of which there were circa. 6000). I was particularly active in talking to different companies at their booths, which was insightful. I found the workshop on 'system aspects of HVDC' and 'DC grid modelling' useful, and also found the technical sessions to be very good; but I would recommend that attendees review the papers of interest beforehand.

For young professionals, there were even job fairs and opportunities to discuss career prospects with companies at their booths. I found both the evening programme at the Musee du Louvre and UK networking reception near to the British Embassy remarkable.

### **Angela Rotheram – Assistant Engineer – Parsons Brinckerhoff**

I thoroughly enjoyed the CIGRÉ Paris Session in 2012 and so was very excited when my company invited to me to go again this year. Attending the conference is a fantastic opportunity and I would have to say that my second experience of the session was even better than my first!

As per my first session, I attended many fascinating technical meetings, including those of Study Committees B2, B3 and C6. I especially like the format of these meetings, where the Special Reporters' questions are answered through short presentations and spontaneous contributions. This format raises very interesting discussion points and I was very inspired hearing about the great deal of innovation taking place in the industry. I also really enjoyed attending the opening session and the workshop on large disturbances.

Being the previous International Liaison for CIGRÉ-UK NGN, I found the Young Member Forum particularly interesting. It was great to hear about how the other Young Member groups have developed and the activities they get involved in, and there were many fantastic ideas shared. The Young Member technical visit was also a great chance to get to know the other young engineers better and the visit itself was very informative. The



conference is a brilliant opportunity to talk to many engineers from all around the world, and this was something I especially enjoyed this year. I was surprised at how many familiar faces there were!

The highlight of the session for me was definitely attending the kick-off meeting for WG C6.30, which will focus on the impact of battery energy storage systems on the distribution network. I was nervous before attending this meeting as I am certainly not an expert in this fascinating area; however, I found the convenor and all of the members to be very friendly. I was extremely pleased that I was able to join the discussions and that going forward I will be able to contribute to the development of the Technical Brochure. I have even been nominated by one of the members to be a joint chapter lead. I am really excited that I have been given the opportunity to contribute to the workings of CIGRÉ and I am very much looking forward to the next Session!

### **Supipi Weerasinghe – Electrical Engineer – Jacobs**

I was pleased to get the opportunity to attend 2014 CIGRÉ Session and it was a great success. It was a great pleasure to meet delegates from the power industry from around the globe.

I managed to attend a broad spectrum of the activities at the Session ranging from Working Group meetings, opening panel discussions, workshops, Study Committee Discussion Meetings (B2 and B3) and poster sessions (A2, A3, B2, B3 and B5), as well as visiting the exhibition area. One of the discussions which stood out for me the most was the “Challenges of the Transition in Power Systems - Regional Perspectives”. It was very fascinating to see how TSOs with different power systems tackle similar challenges and how they are turning these challenges to new opportunities.

I was invited to attend ‘CIGRÉ Women in Engineering’ lunch held on Sunday afternoon. During the event I addressed the audience on my experience and expectations of being a female engineer in the power industry. This was a great opportunity for me to tell everyone my story of deciding to be a power engineer. I also had the chance to meet and speak with the CIGRÉ steering committee members and female engineers from around the world who attended the event.

I attended three WG meetings: A2.50, B5.43 and B5.50. During the A2.50 meeting I made a contribution based on my work experience and the WG Convener kindly invited me to join the WG. I have also been given the task of preparing a brief contribution for their upcoming Technical Brochure. I was also an invited guest at the Study Committee B3 private meeting where I gave a presentation about the work of CIGRÉ-UK NGN and how SC B3 can help us to develop further, particularly as NGN Members are willing and able to contribute to WGs.

One of the highlights of the week was the Young Members technical event to RTÉ. It was interesting to see the measures RTÉ has taken to deliver an efficient and better power grid to its consumers.

The 2014 Paris Session was a great opportunity for me to learn, network with experts and like-minded individuals in the electrical power industry and also develop my career by getting involved in WGs. It was a pleasure to be a part of such a high profile event in the power industry and I am looking forward to participating in future Sessions. CIGRÉ’s Paris Session is certainly the knowledge hub of power industry!

### **Tianning Xu – Senior Engineer – Alstom Grid**

It was a really enjoyable experience to attend the CIGRÉ Paris Session 2014. This is the first time I have attended the Paris Session and for me, it was not only a great conference technically but also great for meeting engineers, experts or even friends.

For the technical activities, I attended the opening panel and several Study Committee Discussion Meetings – B4 in particular (HVDC and Power Electronics), which is very relevant to my current work in Alstom Grid. I found all these meetings as well as the poster sessions very beneficial for me to have a better view on the

development of power industry worldwide. Also, I found that the technical exhibition provided an opportunity to understand more about different companies' new products and to build a good relationship with them for potential future collaboration.

I also supported or attended events aside from the technical activities. For example, I supported the Young Member stand and share my experience of the UK NGN with other Young Members. I made use of the several social events to expand my professional network and to catch up on the industry, both of which could be helpful for my daily work and for my career.

I think the CIGRÉ Paris Session 2014 was a very successful event and I wish the same success for the 2016 Session, which I look forward to attending and making more contributions.

## 4 LIST OF CONTRIBUTORS

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<b>Name</b>	<b>Organisation</b>	<b>NGN Role</b>
Arslan Bhatti	Parsons Brinckerhoff	NGN Member
Lujia (Tony) Chen	Cardiff University	NGN Member
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Nathaniel Cowton	Parsons Brinckerhoff	Communications Officer
James King	Parsons Brinckerhoff	Chairman
Callum MacIver	University of Strathclyde	NGN Member
Yousef Pipelzadeh	Imperial College London	NGN Member
Angela Rotheram	Parsons Brinckerhoff	Member Services Coordinator
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Tianning Xu	Alstom Grid	Vice Chairman