



US CIGRÉ

Next Generation Network

How to Write a Technical Synopsis/Paper and Get it Accepted by CIGRÉ

John McDonald

CIGRÉ USNC

VP, Technical Activities

March 19, 2015



What is the US Next Generation Network (US NGN)?

CIGRÉ (International Council on Large Electric Systems)

www.cigre.org/What-is-CIGRE

- US NGN Membership
 - Power systems industry experience of 10 years or less
 - Students (FREE) or professionals (50% Reduction Young member)
 - Become a CIGRÉ US NGN member
 - <http://cigre-usnc.tamu.edu/membership/>
- Provide opportunities for technical and personal development
 - Networking opportunities
 - Advance Technical Skills
 - Collaborate with peers across US and abroad



2015 US NGN Executive Committee

Position	Individual
Chair	Jessica Lau – ISO New England
Secretary/Treasurer	Kyle Thomas – Dominion
Vice Chair of Mentoring	Christopher Mertz – Dominion
Vice Chair of Marketing	Christin Domian – MEPPI Ryan Quint – Dominion
Vice Chair of Symposium	Josh Snodgrass – Duke Energy
Vice Chair of Professional Development	Diana Lee – VELCO
Vice Chair of Communication	Amanda Olson – Burns & McDonnell
Member-At-Large	Jason MacLeod – Burns & McDonnell



2015 Upcoming Events & Ways to Get Involved

- **Participate in our industry webinars**
 - Gain Professional Development in Technical and Leadership skills
- **Receive mentoring through participating in Technical Working Groups**
 - Wide range of topics
- **Volunteer in the Executive Committee**
 - Help us organize events
- **Attend the Grid Of The Future symposium**



Grid of the Future Symposium 2015

**Mark Your Calendar for
Chicago on October 11 - 13, 2015**

Local Host: S&C Electric

More information will be posted on:

<http://cigre-usnc.tamu.edu/>



Join CIGRÉ!

Questions or suggestions?

Contact Diana Lee at

dlee@velco.com



Success with CIGRE Synopsis (Abstracts) and Papers

John McDonald
CIGRE USNC
VP, Technical Activities

March 19, 2015

Overview

- CIGRE Paris Synopsis/Paper Process
- CIGRE USNC Grid of the Future (GOTF) Symposium Paper Process
- CIGRE USNC Study Committees (SCs)/Work Groups (WGs)

CIGRE Paris Synopsis/Paper Process

- Schedule of Major Milestones
- Synopsis Preparation and Submittal (by USNC)
- Synopses Evaluation and Selection Process (USNC and Paris)
- Paper Preparation and Submittal (by USNC)
- Paper Evaluation and Selection Process (USNC and Paris)
- Example => Paper Submittals for the 2014 Paris Session



Schedule of Major Milestones for CIGRE Paris General Session 2016

- February 19, 2015: USNC VP, Technical Activities Issues Call For Papers (Includes Synopsis Template, Preferential Subjects, Preparation and Submittal Instructions)
- April 24, 2015: Paper Synopses Due to USNC VP, Technical Activities (Primary Author Must be USNC Member with Dues Paid)
- End of April to June 2015: Evaluate and Score Synopses of Proposed USNC Papers by USNC Study Committee Representatives and their Advisory Committees
- By June 30, 2015: USNC VP, Technical Activities Submits Selected USNC Synopses to CIGRE Paris Office (National Committee Allotment, International Allotment, Additional Allotment)



Schedule of Major Milestones for CIGRE Paris General Session 2014

- October 12, 2015: Primary USNC Author Notified of CIGRE Selection Results by USNC VP, Technical Activities and/or CIGRE Paris Office
- October 12, 2015 to November 30, 2015: USNC Authors Complete their Full Papers
- By November 30, 2015: Full Papers Due to USNC VP, Technical Activities
- November 30, 2015 to February 8, 2016: Review of Full Papers by USNC Study Committee Representatives and their Advisory Committees (Rejection Still Possible)
- By February 15, 2016: USNC VP, Technical Activities Submits Selected USNC Papers to CIGRE Paris Office

Synopsis Preparation and Submittal

- Review 2016 CIGRE Paris General Session Preferential Subjects (2 to 3 subjects for Each Study Committee)
- Novel and Innovative Technical Content (Concept with Implementation Results)
- Relevance to Preferential Subject
- Clarity (English Language Usage)
- Avoid Commercialism
- Use Synopsis Template (next slide)
- Synopses Submitted to CIGRE Paris Office by USNC VP, Technical Activities



Synopsis Template



<http://www.cigre.org>

2016 Paris Session

Type here the Study Committee and Preferential subject
to which your Paper Proposal refers

Type here the title of your synopsis
(Helvetica or Arial Bold size 12 and 5cm (2") from the top)

Type here the authors' names (initials, name in capitals, Times Roman, bold, size 12)

Type here the Company

Type here the Country

Type here the email address of the main author

Start typing here (synopses must be 500 words minimum)



2014 Synopses Selection Process

1. 47 Abstracts Received and Forwarded to USNC Study Committee Reps for their Advisory Committee Review
2. Abstracts Reviewed and Scored with Following Criteria:
 - Relevance to SC Preferential Subjects
 - Technical Content
 - Clarity of Synopsis
 - Avoid Commercialism
3. Abstract Recommendations Combined and Overall Ranking Created with the Following Criteria:
 - Balance Between SCs and Preferential Subjects
 - Highest Recommendations of Reviewers
 - International, National and Additional Commitment Allotments Requirements
4. 30 Synopses Submitted to Paris; 26/30 (87%) Accepted (NCA 10/10; IA 6/10; AA 10/10); 25/30 (83%) for 2012

Paper Preparation

- Read “Presentation Papers Session.pdf” for Structure of Papers, Format and Layout of Papers, Choice of Keywords, Recommendations on Symbols Which Should be Used, Preparation Template and Copyright Provisions
- Novel and Innovative Technical Content (Concept with Implementation Results)
- Unpublished Material of “Strictly Scientific or Technical Character”
- Relevance to Chosen Preferential Subject
- Clarity (English Language Usage)
- Avoid Commercialism
- Use Paper Template (next slides)

Paper Template (1 of 3)



21, rue d'Artois, F-75008 PARIS
<http://www.cigre.org>

Type here your Paper number
6 characters, 9 for joint meetings
(to be centred)

CIGRE 2016

Type here the title of your Paper
(Helvetica or Arial Bold size 12 and 5cm (2") from the top)

Type here the authors' name (initials, name in capitals, Times Roman, bold, size 12)
Type here the Company
Type here the Country

SUMMARY

Start typing here with the summary (about 500 words; Times or Helvetica, size 11 or 12 only, from 4.8" / 12 cm from the top). Do not remove or shift the title "SUMMARY", as Papers must have the same presentation for the CD ROM issue.

Paper Template (2 of 3)

KEYWORDS

3 to 10 words or phrases (Times or Helvetica, size 11 or 12 only). As for “**SUMMARY**”, please keep the title “**KEYWORDS**”.

Type here the email address of the main author as a footnote.

All pages after title page must start from this line, i.e. 1” (2,5 cm) margin from the top (Times or Helvetica, size 11 or 12). Pages will be automatically numbered.



Paper Template (3 of 3)

Paper Cont'd

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End of text

BIBLIOGRAPHY

Type here the bibliography at the end of your text, according to this presentation (see sample references below). Font to be used is always Times or Helvetica 11 or 12.

- [1] Working Group SC 22-12 CIGRE. "The thermal behaviour of overhead conductors Section 1 and 2 Mathematical model for evaluation of conductor temperature in the steady state and the application thereof" (Electra number 144 October 1992 pages 107-125)
- [2] T. Seppa "Fried Wire?" (Public Utilities Fortnightly, December 2003, pages 39-41)
- [3] Prospectiva del Sector Eléctrico 2002-2011. (Secretaría de Energía. Mexico, 2002).
- [4] Resolución sobre las Modificaciones a la Metodología para la Determinación de los Cargos por

2014 Paper Evaluation and Selection Process

1. 26 Papers Forwarded to USNC Study Committee Reps for their Advisory Committee Review
2. Papers Reviewed and Scored with Following Criteria:
 - Relevance to SC Preferential Subjects
 - Technical Content
 - Clarity of Paper
 - No Commercialism
 - Adherence to Required Formatting



Papers Selected – 2014 Session

National Committee Allotment (NCA)

PS	AUTHORS	SC	TITLE
PS2	R. Ahuja, R. Del Vecchio	A2	Analysis of 2 Core Transformer Designs
PS1	E. Udren	B5	Principles for Practical Wide-Area Backup Protection with Synchrophasor Communications
PS1	K. Andov, D. Kidd, B. Mehraban, B. English, S. Dutta, M. Neal	C4	Methods for Risk Assessment of SSCI Stability Issues between Renewable Generation and Series Compensated Transmission Systems
PS2	S. Samineni, C. Labuschagne, S. Chase, J. Hawaz	B3	Fault Location in Capacitor Banks – How to Identify Faulty Units Quickly and Restore the Bank to Service
PS1	A. Ramirez Orquin, V. Ramirez	A2	Addressing Ground-Induced-Current (GIC) Transformer Protection
PS2	N. Singh, S. Singh, R. Reyes, B. Choma, M. Uzelac, K. Zhou, T. Zhao	B1	US DGA (Dissolved Gas Analysis) Experience on High Voltage Extruded and Oil-Paper Terminations, Including their Differences
PS1	A. Makovoz, J. Ruth	B1	138kV Transition Joint between High-Pressure Fluid-Filled and XLPE Cables
PS3	N. McCord, F. Therby, J. Rostron, T. Speas	A3	Comparison of Short and Long Term Use of Synchronous Control versus Closing Resistor Switching Methods for Capacitor Switching
PS2	P. Myrda, S. Sternfeld, G. Chason	B5	Utility Perspectives and Challenges on Implementing IEC 61850
PS1	L. Kojovic, K. Argiropoulos	A3	Protection Devices and Solutions for Evolving Distribution Smart Grid

Papers Selected – 2014 Session

International Allotment (IA)

PS	AUTHORS	SC	TITLE
PS1	J. Rostron, N. McCord, T. Speas, F. Therby	A3	Interrupter Technology for Switching Shunt Reactors Evolves as the Frequency of Switching Reveals Weaknesses in Traditional Designs
PS3	L. Barthold, R. Adapa, D. Woodford	B2	Phase Displacement as a Prospective Means for Right-of-Way Upgrading
PS3	J. Taylor, V. Singhvi, A. Tarditi, M. Van Harte	C4	Application of Geomagnetic Disturbance Vulnerability Assessments using the Eskom Main Transmission System Model
PS3	J. Smith, M. Ahlstrom, J. Dumas, P. Eriksen, J. O'Sullivan, P. Sotkiewicz	C5	Market Evolution for RES Integration in the US and Europe
PS2	S. Bahramirad, M. Bollen, G. Clark, M. Shahidehpour, J. Svachula, A. Khodaei, G. Simard	C6	Smart Distribution Application Guide – IEEE Project P1854
PS1	J. Watson, J. Buchacz, V. Prykhodko, S. Skinner	A2	Interpretation of Data from On-Line Bushing Monitoring Systems

Papers Selected – 2014 Session

Additional Allotment (AA)

PS	AUTHORS	SC	TITLE
PS1	N. Miller, M. Shao, S. Pajic, R. D'Aquila, K. Clark	C4	Frequency Response of the US Eastern Interconnection under Conditions of High Wind Generation
PS2	T. Goodwin, S. Aivaliotis, R. Mohr, R. Stelmak	B2	Integrating Enhanced Dynamic Line Rating into the Real-time State Estimator Analysis and Operation of a Transmission Grid Increases Reliability, System Awareness and Line Capacity
PS1	F. Becker, E. Hedges, K. Geisler	B3	Model Based, Substation-Centric Distribution Automation
PS3	J. Zhu, H. Li, M. Callavik, J. Pan, R. A. Gopalakrishnan, S. Aquiles-Perez, D. MacGregor, D. Coleman, P. McGuire, K.	C1	Economic Assessment of HVDC Grids
PS1	K. Patil	C2	Simulating the Smart Electric Power Grid of the 21st Century - Bridging the Gap between Protection and Planning
PS3	K. Patil	C4	Modeling and Evaluation of Geomagnetic Storms in the Electric Power System
PS1	B. Rajaraman, B. Vesovic	C5	Convergence of Prices and Efficiency of Day-Ahead Markets
PS3	P. Sotkiewicz, G. Helm, M. Abdur-Rahman	C5	A Forward Capacity Market as a Necessary Condition for Integrating Renewable Resources
PS2	M. Mynam, D. Finney	C6	Leveraging Radio Communication to Enable Effective Protection of Distributed Energy Resources
PS1	J. Ballance, B. Bhargava, P. Palayam, H. Chen, J. Hiebert	C2	Analysis of Power Systems Oscillations in WECC System Using Synchro-phasor Technology

Paris Study Committee Sessions

- At CIGRE Sessions Authors Do Not Present Their Papers
- The Delegates Read the Papers in Advance and Discuss Them Around a Set of Questions Given in a Special Report
- Delegates Can Have a Prepared Discussion or a Spontaneous Discussion
- Prepared Discussions Must be Registered with Study Committee Secretariat. Allotted Time for Discussion is Maximum of Five Minutes. Instructions for Preparing Discussions are on CIGRE Paris Session Web Site.



CIGRE USNC 2015 Grid of the Future (GOTF) Paper Process

- Call For Papers
 - Theme: Technology for the 21st Century Electric Utility
 - Symposium Scope (General Topics)
- No Abstract Step – Full Papers Only – Submitted by July 24, 2015
- Maximum Length of Six Pages
- Use Paper Preparation Template



GOTF Paper Evaluation Process

- Submitted Papers Forwarded to USNC Study Committee Reps for their Advisory Committee Review
- Evaluation Criteria
 - Novel and Innovative Technical Content (Concept with Implementation Results)
 - Clarity of Paper
 - No Commercialism
 - Adherence to Required Formatting (Use Paper Preparation Template)
 - Maximum Length of Six Pages



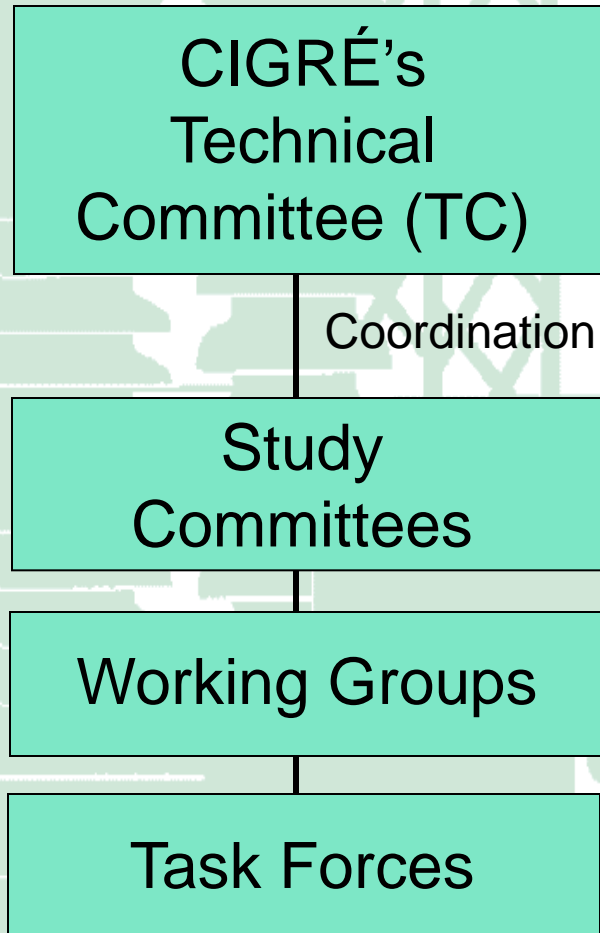
2014 GOTF Paper Sessions

- Approximately Five Papers Rewritten
- Fifteen Paper Sessions with Four Papers per Session
- Organized into Three Technical Tracks with Five Sessions per Track

Study Committees/Work Groups

- Technical Committee Study Committees
- U.S. Representatives to CIGRÉ Study Committees & Appointment Dates
- Working Groups/Task Forces Member Selection Process

Technical Committee Study Committees



- Members nominated by National Committees
- Manage studies in their field of interest
- Working Groups and Task Forces are operational arms

CIGRÉ Study Committees

- A1 – Rotating Electrical Machines
- A2 - Transformers
- A3 – High Voltage Equipment
- B1 – Insulated Cables
- B2 – Overhead Lines
- B3 - Substations
- B4 – HVDC and Power Electronics
- B5 – Protection and Automation

CIGRÉ Study Committees

- C1 – System Development and Economics
- C2 – System Operation and Control
- C3 – System Environmental Performance
- C4 – System Technical Performance
- C5 – Electricity Markets and Regulation
- C6 – Distribution Systems & Dispersed Generation
- D1 – Materials and Emerging Test Techniques
- D2 – Information Systems and Telecommunication



U.S. Representatives to CIGRÉ Study Committees & Appointment Dates

- A1-Bill Moore (National Electric Coil) - 2014
- A2-Raj Ahuja (Waukesha Electric Systems) – 2012
- A3-Mietek Glinkowski (Schneider Electric) – 2008
- B1-Mohammad Pasha (United Illuminating) – 2014
- B2-Jennifer Havel (BPA) – 2014
- B3-John Randolph (PG&E) – 2012
- B4-Sebastian Achilles (GE Energy Management) – 2014
- B5-Rich Hunt (GE Energy Management) – 2014



U.S. Representatives to CIGRÉ Study Committees & Appointment Dates

- C1-Jeff Palermo (DNV-GL Retired) – 2014
- C2-Rick Gonzales (New York ISO) – 2014
- C3-Holger Peller (Power Engineers) – 2014
- C4-Theo Laughner (TVA) - 2014
- C5-Adam Keech (PJM Interconnection) - 2014
- C6-Jason Taylor (EPRI) – 2014
- D1-Andrew Phillips (EPRI) – 2012
- D2-Galen Rasche (EPRI) – 2012



Working Groups/Task Forces Member Selection Process

- Interested Candidates Must Have Dues Paid and Send CV
- Obtain Email Address for New WG Convener and Submit Candidates' CVs Directly to Convener
- Request Convener to Confirm Candidates' Membership
 - Can Have Two USNC Members on Each WG
- If No USNC Candidates Interested in a New WG, Will Ask New WG Convener for Knowledge of US Experts, and Will Contact Them to See if They are Interested in Joining
- If More Than Two Candidates are Interested in Same WG, Set up a “Shadow WG” Within the USNC

Synthesis of the 2014 review

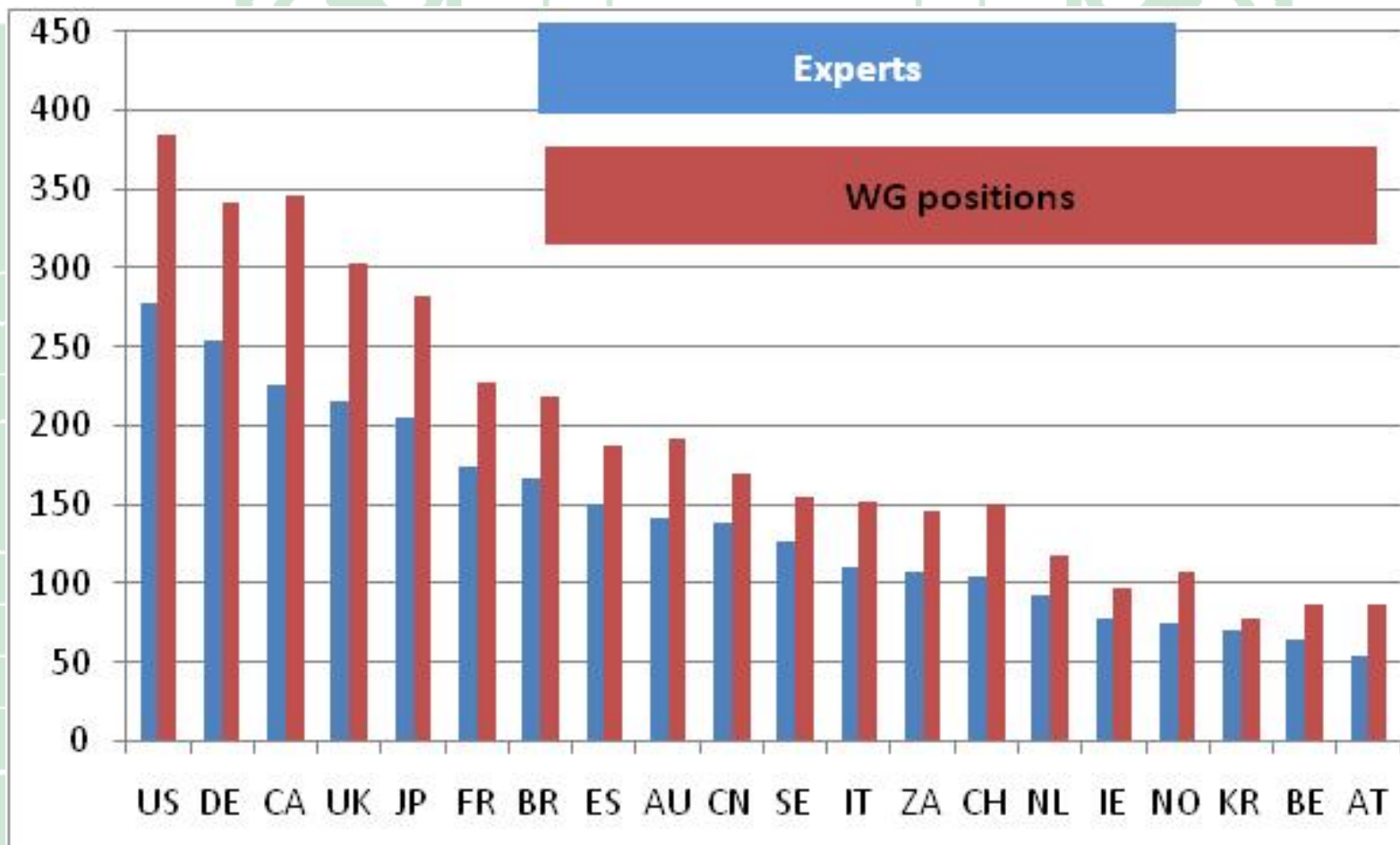
	All SC	WG		
	Country	Experts	Positions	Pos/Exp
1	US	292	352	1.21
2	DE	242	303	1.25
3	UK	237	269	1.14
4	CA	231	308	1.33
5	JP	229	283	1.24
6	BR	202	224	1.11
7	FR	190	225	1.18
8	ES	163	199	1.22
9	AU	143	173	1.21
10	CN	143	160	1.12
11	SE	126	147	1.17
12	IT	109	144	1.32
13	ZA	109	139	1.28
14	CH	107	141	1.32
15	NL	91	106	1.16



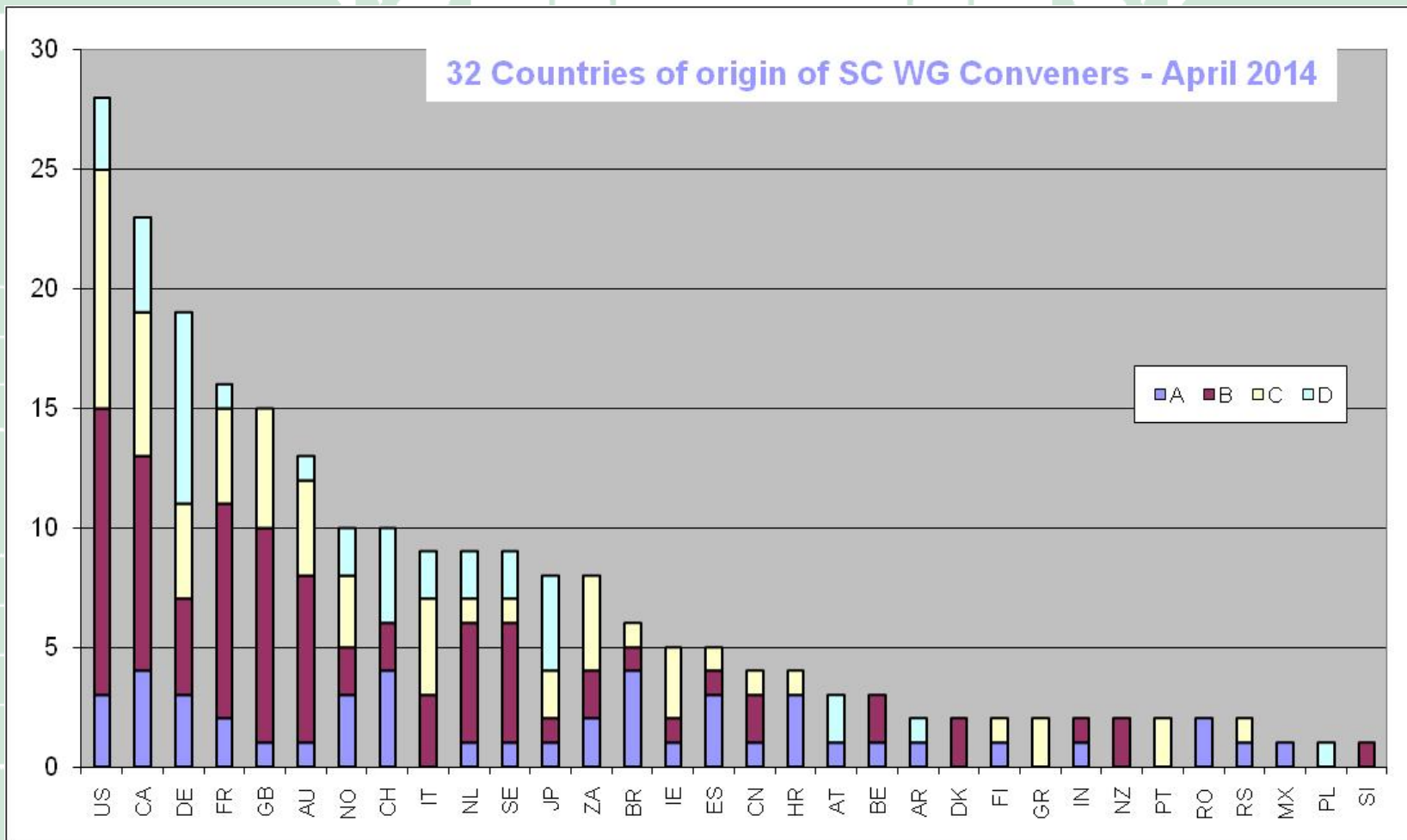
2013

	All SC	WG		
	Country	Expel	Positic	Pos/E
1	US	278	384	1.38
2	DE	254	341	1.34
3	CA	226	346	1.53
4	UK	216	303	1.40
5	JP	205	282	1.38
6	FR	174	227	1.30
7	BR	166	218	1.31
8	ES	150	187	1.25
9	AU	142	192	1.35
10	CN	139	170	1.22
11	SE	126	155	1.23
12	IT	110	151	1.37
13	ZA	107	146	1.36
14	CH	105	150	1.43
15	NL	93	117	1.26

Synthesis of the 2014 review



Working Group Conveners' origins



Documents

- **2016 CIGRE Paris General Session**
 - 2016 Paris Preferential Subjects
 - 2016 Paris Synopsis Preparation Template
 - CIGRE Copyright Provisions
 - 2016 Paris Paper Preparation Template
 - CIGRE Paris Presentation Papers Session
- **2015 CIGRE USNC GOTF Symposium**
 - 2015 GOTF Call For Papers
 - 2015 GOTF Paper Preparation Template
- **CIGRE USNC web site/Future Meetings**
 - <http://cigre-usnc.tamu.edu/meetings/>

Questions

Thank you!