

ISGT NA 2022 Call for Panel Session Proposals

Moving to a 3D Energy Landscape: Decarbonized, Democratized, Decentralized

The thirteenth Conference on Innovative Smart Grid Technologies (ISGT 2022), North America, sponsored by the IEEE Power & Energy Society (PES), will be held in Washington, D.C., on February 21 – 24, 2022 with the theme “Moving to a 3D Energy Landscape”.

ISGT 2022 is a forum to discuss the latest issues, trends, and emerging and innovative technologies for the future **d**ecarbonized, **d**emocratized, and **d**ecentralized, or 3D, grid. The electric power system as we know it is undergoing a fundamental transformation in the face of dramatic increase in deployments of renewable and Distributed Energy Resources (DERs) and the emergence of new business and operating concepts and services. These changes are driven primarily by environment-friendly new technologies and regulations, increasing grid democratization opening up the grid to broad active participation, and new information technologies and analytical tools for decentralized decision and control.

The Conference will feature keynote and plenary sessions, panel sessions, and technical papers presented in poster sessions, as well as pre-conference tutorials. The conference is organized in three tracks: 1) Decarbonization of the grid, including renewable and DER technologies; 2) Grid democratization including technologies and tools for broad active participation; and 3) decentralized and distributed decision and control while maintaining grid reliability and resilience.

The Conference Organizing Committee invites practitioners and researchers to submit proposals for panel sessions for review and presentation (if accepted). The format of panel sessions typically consists of three to four speakers, and a session chair who also serves as the panel moderator. Proposals including presentations of electric utility experiences and practical implementations of novel concepts and solutions are encouraged.

The Conference scope covers the three tracks and includes the following general topics:

1. Track 1: Technologies and processes for grid decarbonization

- 1.1. Environmental issues and regulations
- 1.2. Renewable energy technologies
- 1.3. New DER technologies
- 1.4. Platforms and systems supporting grid integration with high DER adoption
- 1.5. Reliability and resilience considering a changing relationship between the bulk power system and distribution systems
- 1.6. Operational metrics for a decarbonized grid
- 1.7. Power electronics and inverter-based resources
- 1.8. Energy storage
- 1.9. Verification and validation of new technologies

2. Track 2: Technologies and processes for democratized participatory grid

- 2.1. Innovative grid architecture
- 2.2. Distribution markets and system platforms (DSP, DSO, etc.)
- 2.3. Smart transportation that integrates electrification and digitization including automated and electric vehicles (EVs) and EV charging infrastructure
- 2.4. Smart buildings including measuring energy use, pinpointing operations and maintenance problems, automating lighting and thermostats, and tracking building performance.

- 2.5. Transactive Energy Systems and emerging hardware/software technologies (Internet of Things-IoT, Blockchain, etc.) as well as tradable products, and incentive-compatible market design
- 2.6. Synthetic inertia from inverter-based generation, and their interface with customer's EMS
- 2.7. Applications of Big Data, advanced analytics and artificial intelligence techniques
- 2.8. New regulatory and business models
- 2.9. Grid cybersecurity
- 2.10. New planning processes that incorporate decarbonization, resilience, energy equity, or similar objectives

3. Track 3: Decentralized and distributed decision and control technologies

- 3.1. Edge computing, control, and analytics
- 3.2. Smart controls and sensors in end-use devices
- 3.3. Smart Cities grid interactions such as Smart Street Lighting, and data analytics that analyze data generated by sensors and monitors to monitor and manage energy use, pedestrian safety, traffic flows, air quality
- 3.4. Coordination of distributed, grid-edge functionality
- 3.5. Distributed systems and architectures for grid control
- 3.6. Autonomous grid control technologies
- 3.7. Opportunities for convergence with related areas, for example, with Internet of Things
- 3.8. DER modeling, forecasting, and flexible loads
- 3.9. Microgrids
- 3.10. Provision of grid services from grid edge assets and systems
- 3.11. Emerging substation and distribution automation technologies (advanced FLISR, Volt-VAR Optimization, outage management, restoration, etc.)
- 3.12. Applications of augmented reality in the power industry
- 3.13. Testbeds, datasets

Panel Session Proposal Submission

Panel session proposals are to be submitted by **July 30, 2021 (11:59 PT EST)** via e-mail to 2022isgt@ieee.org

Required Information

Name, Affiliation and Contact Information:

Please provide your name, title, affiliation, and contact information (e-mail address and mailing address).

Conference Track:

Please provide the Conference Track (and to the extent relevant the sub-topic(s) from the list above) for which the panel session is proposed.

Title of Panel Session:

Please provide the title of the panel session.

Panel Session Duration:

Please state the requested duration of the panel session. Panel sessions range between 1.5 to 2 hours in duration and consist of presentations by three or four speakers and a moderator with an opportunity for discussion (questions and answers). There are more time slots available in the program for 1.5 hour panel sessions.

Scope of Panel Session:

Please provide a discussion of the content and format of the panel session. The discussion on content should be sufficiently detailed to understand how it addresses one or more themes of the conference topics stated under the Conference Track of interest, and to enable reviewers to assess the proposal's merit against the conference theme and tracks noted above.

Proposed Panelists:

Please provide the names, email addresses, titles and affiliations of the proposed panelists with their presentation topic. An abstract of what they intend to cover is optional, but recommended.

The above discussion can range from 300 to 2000 words, approximately. Please use the panel proposal template to submit the above requested information.



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ISGTNA_template.doc

Conference Registration and Accommodation

Information on hotel reservation and conference registration will be available on the [ISGT 2022 website](#).

Please note that all panelists and panel moderators must register and pay the registration fee.

Conference Organizing Committee

- Conference Chair: Ron Melton
- Technical Chair: Farrokh Rahimi
- Technical Vice chair: Seemita Pal
- Publications Chair: Masood Parvania
- Publications Co-Chair: Raymond Byrne

Important Dates

- Panel Proposal Submission Site opens: **June 1, 2021**
- Submission Deadline for Panel Session Proposals: **July 30, 2021 (11:59 PM EST)**
- Notification of Panel Session Acceptance: **August 15, 2021**

Contact: 2022isgt@ieee.org

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