



EMerge Alliance 2022 Year-end Report of Activities

As we draw toward the close of 2022, EMerge Alliance would like to provide a brief overview of accomplishments for the year. Below are highlighted areas where we have collectively made progress in the mission...

“To lead in promoting the greater use of direct current in DC and hybrid AC/DC power systems that provide greater inherent resilience, safety, operational surety, and sustainability.”

Through promotion and demonstrations at major trade shows and industry conferences, we seek to simplify and accelerate market adoption of EMerge Alliance standards and recommended system architectures. These achievements would not be possible without the support of EMerge Alliance members and their companies.

Standards Update

EMerge Alliance develops and maintains open standards that integrate renewable and non-renewable power sources, power conversion, storage, circuit protection, wiring infrastructures, controls, and a wide variety of loads, from lighting, appliances, desktop and plug loads all the way up to building and campus level HVAC and other support equipment including the array of connected Internet of Things. We support a common platform that adds flexibility, resiliency, safety and sustainability to new and existing projects.

The DC & Hybrid AC/DC Microgrids Committee consists of a main group and seven use case working groups, each dedicated to a market application for microgrids, e.g., Residential, Commercial/Industrial, Information & Communications Technology, EV Charging Infrastructure, Military/Defense/Security, Healthcare, and Remote Access. The core group is comprised of members, led by a chair, dedicated to developing standards where none currently exist in the marketplace. The work groups input marketplace use cases to the core group for consideration of inclusion of their unique requirements in the general standard. A second committee is working on a standard for the interconnection of microgrids to facilitate the formation of a “grid of grids’ architecture at the grid edge. This group’s work is closely coordinated with the core microgrid group to assure seamless interoperability.

These vanguard standards can then be used by EMerge Alliance members and forwarded to appropriate standard setting bodies, e.g., IEEE, IEC, ANSI, NFPA, NEMA, SCTE, who can then consider them to include in their own formal standards for industry compliance. Participating in a standards committee or working group, allows your company to participate in the groundbreaking work required to set forth anticipated standards for the industry.

In addition, there are special DC Device sub-committees dedicated to DC Metering, AC/DC Dual Input, DC Connectors and DC Circuit Protection standardization. Their work is targeted to provide specific DC device related input to the core Microgrids Committee like the application use case groups, except their input addresses device technology as opposed to system technology.

Each group is looking for engaged members to participate in the coming year. Meetings are typically one hour in length, held virtually once or twice per month, and are generally limited to EMerge Alliance members only. To express interest or to learn more about the standard setting process, reach out to Brian Patterson (bpatterson@emergealliance.org) or Tim Martinson (tmartinson@emergealliance.org).

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EMerge Alliance on the Road

1. Solar and Energy Storage Northeast: Boston- Feb. 23-24
 - Exhibit booth – Promoted EMerge membership
 - Interactive Electric Avenue Display
 - Facilitated “Grid Edge Opportunities” Business Lab Session
2. RE+ Southeast: Atlanta- May 11-12
 - Exhibit Booth – Promoted EMerge membership
 - Interactive Electric Avenue Display
 - Facilitated Business Lab on Microgrids
3. RE+: Anaheim-Sept. 19-20 (the largest renewable energy show in North America)
 - Designed and implemented Grid Edge Theater on RE+ show floor. The outside of the theater showcased a live residential microgrid and Electric Avenue info graphics. The inside hosted education sessions throughout the event, a grid-of-grid demonstration, and space to conduct membership meetings.
 - Built a live residential [microgrid](#), powered by a solar array outside of the Anaheim Convention Center. It contained technologies from our partners Emera Technologies/Block Energy, Duke Energy, Direct Energy Partners, Rectify Solar, LG Appliances and Solar Panels, Trane HVAC, Cisco Systems PoE & FMP, POMCube iCan Energy Storage, Nextek Power Systems, ATX LED, IronRidge Solar Mounting, Alencon Optimizers, Entelligent EV Charging, Heila/Kohler, and CE+T America Power Systems.
 - Provided microgrid content and booked speakers for two pre-conference workshops (including pre-show VIP tour of the live microgrid), panelist in general education session, and 24 educational sessions in the show floor Grid Edge Theater. Pictured below is the Grid Edge Theater and official “unplugging” ceremony.





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4. RE+ Florida: Miami-October 11-12
 - Electric Avenue info graphics formed a self-guided tour in exhibit hall
 - Conducted two breakfast sessions
 - *Weathering the Storm of System Resiliency – in an Electricity Hungry World*
 - *Weathering the Storm of System Resiliency – A Hurricane Ian Microgrid Survival Story*
 - Panelist in *Developing Clean Energy Projects in Latin America and the Caribbean*
 - Promoted membership in EMerge Alliance
5. Electricity Transformation Canada: Toronto-October 26-28
 - EMerge Alliance booth in exhibit hall with Electric Avenue info graphics
 - Conducted two show floor theater sessions
 - *Utility Owned Microgrid Platform Providing Distributed Energy at Community-Scale*
 - *The Grid-of-Grids Energy Network Doing for Energy what the Internet did for Information*
 - Promoted membership in EMerge Alliance

Note: EMerge participation in RE+ events is promoted to over 40,000 RE+ followers. It is also promoted on the RE+ website and via special news releases to all RE+ media partners and social media outlets throughout the year.

Educational Webinars

The Electric Avenue Webinar series was launched this year, with attendance ranging up to 2,500 participants per webinar. The series mirrors the microgrid applications that were virtually displayed at the various RE+ events during the year. Thank you to EMerge Alliance members who shared their expertise and uses cases on these virtual events.

- July 12 – *The Grid-of-Grids*
- July 26 – *Personal Power – Microgrids for Residential Applications*
- August 16 – *Sneak Preview of the Live Microgrid Demonstration at RE+ Anaheim*
- October 4 – *Electrified Transportation: Microgrid EV Charging Infrastructure*
- November 8 - *Food and Supply-side Energy Assurance: Microgrids for Commercial, Industrial & Agricultural Applications*

Six remaining webinars of this series will be held in 2023:

- January 17 – *In the Interest of National Security: Microgrids for Military and DHS Operations*
- January 31 – *A Grid's Best Friend: Microgrids for Utility Scale*
- February 14 – *Critical Power for Essential Services: Microgrids for Remote & Rural Access to Electricity*
- March 14 – *Critical Power for Essential Services: Microgrids for Health Emergency, and Municipal Services*
- March 28 – *Power to the People: Microgrids for Neighborhood and Community Applications*
- April 11 – *Cyber Surety and Security: Microgrids for Information and Communications Applications*

To register for the webinar series or view archived recordings, click [here](#).

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Communications

Press Releases

The following were released in 2022:

- June 3 - [*EMerge Alliance to Facilitate Duke Energy DC Home Demonstration Participation by Original Equipment Manufacturers*](#)
- August 26 – pv Magazine: [*Nano-grid Home Runs Solely on DC Power*](#)
- September 1 – [*EMerge Alliance to Facilitate Fully Operational Residential Microgrid at RE+ Event in Anaheim*](#)
- September 7 – pv Magazine: [*Fully Operational Residential Microgrid will Help Power Exhibits at RE+*](#)
- September 14 – [*EMerge Alliance Annual Meeting at RE+ 2022*](#)

Interviews

- Transformer Technology at RE+: [*Interview with Brian Patterson of EMerge Alliance*](#)
- RE+ Anaheim Videos: [*https://vimeo.com/replusevents/micgrid2022*](https://vimeo.com/replusevents/micgrid2022)

Monthly Updates

EMerge Alliance began sending monthly activity updates to its mailing list of over 7,000 member and nonmembers this quarter. October and November updates have been issued, with December’s planned for the next two weeks. These monthly newsletters provide readers with the latest updates on standards development and EMerge Alliance’s participation at RE+ events, in addition to promoting the Electric Avenue webinar series and encouraging nonmembers to join the organization.

Looking Ahead to 2023

Making a significant difference in 2023 will be our expanded partnership with RE+ Events. RE+ Events (formerly Solar Power Events) is the producer of the country’s largest renewable energy trade show - RE+ (formerly SPI, ESI, & The Smart Energy Week). Like the industry as a whole, they have grown and expanded their scope to include the complete array of distributed energy technologies, including microgrids, and to expand the number and geographic coverage of



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their regional conference events. The EMerge Alliance is the first of their industry partners to integrate their marketing, membership relations, and show management activities directly into their business. This will provide greater opportunity for EMerge to expand our participation at RE+ events throughout 2023, and to conduct dedicated microgrid events in the future.

EMerge Alliance will continue to build upon its raising awareness and work in dc and hybrid ac/dc microgrid education and vanguard standards development, in addition to heavily promoting membership. We have new initiatives in the development for 2023 and will share the news once finalized. Thank you and your company for continued support of membership, speaking engagements and standards committee involvement. We look forward to a strong start to 2023!