



**2023 Spring General Meeting**

March 27 – 28, 2023

Hosted by UNC Charlotte

Location: UNC Charlotte Marriott, Crown Room I-IV  
(Eastern Daylight Time)

**Theme:** “Engineering a Regional Hydrogen Hub”

**Agenda**

<b>Monday, March 27, 2023</b>	<b>General Meeting</b>	
12:30 - 1:00 pm	Registration	
1:00 - 1:15 pm	Welcome, Safety, Objectives of the Conference and In the News	Steve Whisenant CSC Chair Duke Energy
	<b>Plenary Session</b>	Mike Mazzola Center Director UNCC
1:15 - 1:30 pm	<i>What is a Regional Hydrogen Hub and why do we need one?</i>	Danielle Peoples Duke Energy
1:30 - 1:45 pm	Integration of Renewables - Lessons Learned	Mike Mazzola
1:45 - 3:00 pm	<b>Session I – Hydrogen Production Technologies in the Southeast</b>	Mike Mazzola Center Director UNCC
1:45 - 2:10 pm	Siemens - Energy Electrolyzer Technology & Systems	Jorge Lopez Siemens Energy
2:10 - 2:35 pm	High Temperature Steam Electrolysis - <a href="#">Virtual</a>	Hossein Ghezeli-Ayagh FuelCell Energy
2:35 - 3:00pm	Using Nuclear for Hydrogen Production	Caleb Tomlin EPRI
3:00 - 3:10 pm	<b>BREAK</b>	



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3:10 - 4:10 pm	<b>Session II - Building a Regional Hydrogen Infrastructure</b>	Badrul Chowdhury Center Co-Director UNC Charlotte
3:10 - 3:35 pm	Considerations tied to deployment and adoption of emerging alternative fuels	Jason Wager Centralina Clean Fuels Coalition
3:35 - 4:00 pm	The Hydrogen Supply Chain - <u>Virtual</u>	Mark Johnson DOE
4:00 - 5:00 pm	<b>Session III - CAPER Sponsored Sr. Design Project</b>	Steve Whisenant CSC Chair Duke Energy
4:00 - 4:20 pm	Clemson Team	Johan Enslin
4:20 - 4:40 pm	UNC Charlotte Team	Badrul Chowdhury
4:40 - 5:00 pm	NC State Team	Mesut Team
5:00 - 7:00 pm	<b>Reception (Crown V Room)</b>	
5:00 - 7:00 pm	<b>Career Fair (Crown V Room)</b>	
<b><u>Tuesday, March 28, 2023</u></b>	<b>General Meeting</b>	
7:30 - 8:00 am	Registration and breakfast	
8:00 - 8:10 am	Highlights from yesterday and objectives for today	Steve Whisenant CSC Chair Duke Energy
8:10 - 9:45 am	<b>Session IV - Engineering a Hydrogen Ecosystem</b>	Johan Enslin Center Co-Director Clemson
8:10 - 8:40 am	Hydrogen as a Carbon Replacement Fuel NC Carbon Plan	Clift Pompee Duke Energy
8:40 - 9:10 am	Low-Cost /High Power Density/Fuel Flexible Products, such as FDI's, the Fuel Cell & Electrolyzer Markets Are Poised to Explode	Maria Simpson FDI Energy

9:10 - 9:40 am	Workforce Development in the Energy Sector / Steps4Growth Program	Carolyn Keith EPIC
9:40 - 10:00 am	<b>BREAK</b>	
10:00 - 11:30 pm	<b>Session IV - Engineering a Hydrogen Ecosystem - Continued</b>	Johan Enslin Center Co-Director Clemson
10:00 - 10:30 am	Operational & Control - nodes, pool of Off-Takers, Why a hub in the SE	Will James Battelle
10:30 - 11:00 am	How Hydrogen is to be used at Gas Turbine Plants	Peter Hoeflich Duke Energy
11:00 - 11:30 am	The German Project HydroGrenBoost – a Research project within the German Energy Transition Plan.	Uwe Kühnapfel KIT
11:45 - 12:30 pm	<b>LUNCH</b>	
12:30 - 3:00 pm	<b>Session V- CAPER Project Updates</b>	Mike Mazzola Center Director UNC Charlotte
	<b><u>Base Projects:</u></b>	
12:30 - 12:50 pm	<b>PG-03:</b> AI based Arc Fault Detection for PV Systems	Tiefu Zhao UNCC/Clemson
12:50 - 1:15 pm	<b>PG-02:</b> Incorporating EV and EV Charging Stations into Integrated Resource Planning	Linquan Bai UNCC/Clemson
1:15 - 1:40 pm	<b>PU-01:</b> Comparative Power Flow Analysis and Power Flow Quality Criteria; <b>EHP-08-PU:</b> Comparative Power Flow and Phase III	Valentina Cecchi UNCC/NCSU
1:40 - 2:05 pm	<b>DM-03:</b> Integrated Grid Operations System for Controlling and Monitoring IBR	Johan Enslin Clemson/NCSU
2:05 - 2:25 pm	<b>PD-05:</b> Inertia Estimate Using Synchrophasor Measurements	Ramtin Hadidi Clemson/UNCC
	<b><u>Enhancement Projects:</u></b>	
2:25 - 2:50 pm	<b>EHP-09-PG:</b> DER Protection Guidelines and Settings	Johan Enslin Clemson/NCSU



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2:50 - 3:00 pm	<b>Closing and Next Meeting</b> - November 6th-7th, 2023 hosted by Clemson University - Adjourn	Steve Whisenant CSC Chair Duke Energy
3:00 - 3:15 pm	<b>BREAK</b>	
3:15 - 5:00 pm	<b>CLOSED MEETING-</b> IAB Members Meeting Open to all attendees of companies that are Industry Members of CAPER	Drew Clarke Duke Energy
	2023 Proposal Presentations	
	IAB Business items	
5:00 pm	Meeting adjourned	