



Minnesota Cleantech Innovation Day

3M Innovation Center
2350 Minnehaha Ave E, St Paul, MN 55119

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(workforce event on June 8)





Minnesota Cleantech Innovation Day

3M Innovation Center

Welcome 9:00-9:15



NINA AXELSON

President & Founder,
Grid Catalyst



BILL WEBER

Director, Business
Building, 3M Ventures

Opening Panel - Cleantech Trends & Opportunities 9:15-10:15

Bios on page 9 of program



MIKE KESTI

3M
SVP Corporate Research
& Development



**DR. MARK
SANDERS**

University of MN -
Technological
Leadership Institute



**JENNIFER
WAGNER-LAHR**

Agricultural
Utilization Research
Institute



**DR. PETE
WYCKOFF**

Assistant Commissioner
Dept of Commerce
State of MN



**GREGG
MAST**

Moderator,
Clean Energy
Economy Minnesota

Keynote Speaker 10:15-10:45



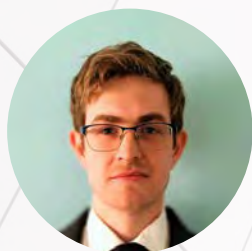
Taj Ahmad Eldridge is a 25+ year investment professional whose career has included high level executive roles in banking, asset management, alternative investments, and entrepreneurship. Taj serves as Managing Director of Climate Innovations at Jobs for the Future, leading the work around climate and the future of work.

In addition, as General Partner of Include Venture Partners and former Senior Director of Investments at the Los Angeles Cleantech Incubator (LACI), Eldridge has built a longstanding career with expertise in the fields of fintech, media, energy, transportation, and the circular economy. Eldridge is also one of the 70 Black Investors in Bevy.com - a \$325 million virtual conference platform as noted in AfroTech.

Break 10:45-11:00

PowerNorth Incubator Pitches 11:00-12:00

Room 1



ENERZA - Presented by Anson Maitland, Founder & CTO

ENERZA empowers utilities to proactively manage threats to their physical grid. Providing an army of autonomous robots to traverse and inspect overhead distribution lines. The data captured powers a conditional risk assessment engine that can predict outages down to the pole. They are on a mission to improve grid resiliency via novel robotics and predictive analytics.

Anson holds a PhD in Systems Engineering from the University of Waterloo with an expertise in autonomous systems, controls and optimization. He is a mathematician by training holding both BMath and MMath degrees and has held research positions spanning many areas, including, autonomous vehicles, anti-submarine warfare, gene function prediction and the classical limits of quantum gravity.



enerza.ca



ALD Technical Solutions - Presented by Davoud Zamani, CEO & Co-Founder

ALD Technical Solutions, a cleantech woman-owned enterprise, is commercializing patented Composite WiRe Wrap™ and GridWrap™ technologies that increase grid infrastructure strength and integrity while doubling power transmission capacity -- with no downtime. This is a key requirement for achieving safe, cost-effective, resilient, and reliable 100% renewable energy goals.

Prior to founding ALD, Davoud was Global Business Development Leader for one of the JVs of Dow Chemical for US and Europe. Davoud earned his PhD in Chemical Engineering and Material Science from University of Arizona and a Master of Science in Nano Polymer Engineering and Composite Materials.



aldtechnicalsolutions.com

Room 1



VESSYLL

vessyll.com

VESSYLL - Presented by Zahra Iliff, Co-Founder

Zahra Hargens Iliff started her career over 25 years ago working in the Chicago real estate and construction industry. Her ventures have taken her from the mountains of Colorado building eco-lodges and running a real estate firm to the beaches of New Zealand building sustainable homes using North American standards able to withstand earthquakes. She landed back in her hometown of St. Paul running large affordable housing portfolios for the Twin Cities' non-profits. During this time, she discovered the huge opportunity for energy storage to play a large part in the renewable energy ecosystem. Along with husband, she co-founded a residential and commercial battery energy storage company, Vessyll, to meet this growing need. She's excited to be a part of an emerging industry just getting its start as our planet transitions away from its reliance on fossil fuels.



 **NeoCharge**

getneocharge.com

NeoCharge - Presented by Spencer Harrison, CEO and Co-Founder (Virtual)

NeoCharge, established with the vision of facilitating cleaner, simpler, and more affordable home EV charging, embarked on its path with the innovative Smart Splitter - a plug-and-play solution that removes the necessity for expensive panel upgrades. As CEO and Co-Founder, Spencer has led utility pilot programs and rebate initiatives with many top utility companies in California and has secured numerous grants to guide the company to its current standing. NeoCharge is now aiding in optimizing home energy use through software and a grid-connected smart charging app, aiming to lower utility bills, enhance grid reliability, and provide valuable insights into home energy consumption.

Room 2



 **carba**

carba.com

Carba - Presented by Linda Hofflander, Head of Strategy & Business Development

Linda is a seasoned strategist and business development executive who has expanded Carba's carbon dioxide removal partner ecosystem. As Head of Strategy and Business Development, she represents the voice of the customer and industry and promotes Carba's global offerings through sales and marketplaces. Linda's leadership and growth experience at Activated Research Company (ARC), Skykit, and Samsung Electronics demonstrate her expertise. She holds an Economics degree from the University of Minnesota, sits on ARC's advisory board, and is a notable author and speaker.

Carba's carbon dioxide removal process is the culmination of Dr. Andrew Jones and Prof. Paul Daunhauer's 30+ years of shared passion for alternative energy, catalysis, and innovation. Utilizing advances in modeling, design, and monitoring equipment, the team has developed a modular reactor system that improves performance, efficiency and reduces cost. Our Biomass Torrefaction and Burial™ (BTB™) process is the most efficient use of biomass for carbon sequestration and reduces costs to improve scalability.

Room 2



Kelvin

kel.vin

Kelvin (formerly Radiator Labs) - Presented by Matthew Isaacs, Vice President Of Business Development

Matthew is a seasoned entrepreneur and business development professional with vast experience in the real estate, prop tech and hospitality sectors. Matthew is comfortable producing results within constrained resources and under pressure. He has demonstrated success in business development, consultative sales & partnerships, raising debt and equity, construction & project management, navigating regulatory environments and orchestrating exit strategies.

Kelvin designs energy management systems and electrification platforms for radiator-heated buildings. The Kelvin System includes insulated, smart, thermostatic radiator covers networked to central heating plant control. Buildings outfitted with this system save up to 45% on heating costs, and residents with Kelvins' smart radiator covers are able to control their heating temperatures for the first time in the history of this building stock. Kelvins' hybrid electrification pathway enables buildings to electrify up to 80% of their heating requirements for less than 10% of the cost of full electrification.



agrometricsolutions.com

AgroMetric Solutions - Presented by Bryan L. Sherman, Co-Founder, CEM, MFBP, EBCP

Bryan Sherman is an energy engineer with almost 5 decades in the HVAC industry. He has proven success guiding sizable, cross-functional teams in the implementation of construction design, build, operations & maintenance, and engineering processes required for environmental control of industrial processes.

His focus is on delivering optimal life-cycle cost and net-present-value, especially in the emerging area of energy efficiency for controlled environment agriculture (CEA). Sherman helps growers eliminate fungus, mold, spores and the need for excessive pesticides for indoor plant growth. He helps them maintain climate control while reducing energy use. He designs environmental control systems using Psychrometrics and available technologies to efficiently and economically create spaces with optimal indoor environment. His forte' is finding a way after all the experts say there is no way.



sorbiforce.com

Sorbiforce - Presented by Kevin Drolet, fractional Chief Marketing Officer (Virtual)

Kevin Drolet is a certified marketing and sales expert with over 25 years experience in company growth strategies. He is a serial entrepreneur, husband, father and passionate about climate innovation advocacy. Benefiting from insights of marketing and sales strategies built for thousands of companies, today he is driven to impact climate innovation. Kevin joined SorbiForce as a fractional Chief Marketing Officer. Through storytelling and connecting he seeks to amplify business opportunity, talent and investment. His mission is to enable climate impact companies to do what they do best, faster and more effectively for the benefit of the future.

SorbiForce is a US startup company that is a commercial evolution of the famous Ukrainian scientific and technology startup. We created the first non-metallic sustainable battery, made from renewable raw materials, the most cost-effective, safe and with zero environmental impact.

Investor Perspectives Panel: 1-2 PM

Bios on page 11 of program



**TAJ AHMAD
ELDRIDGE**

Include Ventures
Jobs for the Future



**DR. CHRIS
BROOKS**

Brown Venture
Group



**SUSANNA
GIBBONS**

University of MN,
Carlson School of
Management



**SHAWNTERA
HARDY**

Moderator,
Amethyst Consulting

2022 Demonstration Cohort Presentations 2:00-3:30



**Darcy Solutions - Presented by Director of Strategic Marketing and Shane Stennes,
University of Minnesota, Chief Sustainability Officer**

Robert J. Ed is Darcy Solutions' Director of Strategic Marketing, responsible for commercialization of the technology and scaling the business. He was most recently overseeing strategy and marketing for an industry leading solar photovoltaic organization and has many years of experience in renewable energy and climate tech. Robert is very passionate about solving the climate crisis and improving the economy simultaneously by deploying existing technology. He joined Darcy to focus specifically on the challenge of decarbonizing buildings. His educational background includes an BS in business and communications and an MBA from the University of Minnesota.

DARCY
Sustainable Heating and Cooling

darcysolutions.com



Darcy Solutions was selected by the University of Minnesota and Otter Tail Power to explore a demonstration project for a heating and cooling system integration at the Morris and Twin Cities campuses. Darcy Solutions addresses the two biggest challenges currently limiting its broad adoption – cost and footprint. Their patent-pending approach harnesses the thermal advantages of water and the consistent temperature of shallow Earth to make sustainable heating and cooling feasible and financially attractive for commercial and residential buildings. This technology dramatically improves HVAC system efficiency and environmental impact, lowering energy use and reducing site footprint requirements up to 95%. Darcy Solutions is headquartered in Minnesota.



UNIVERSITY
OF MINNESOTA



INOVUES - Presented by Anas Al Kassas, Founder and CEO and John Morrow, 3M, Insights Lead, Corporate R&D



inovues.com

Anas Al Kassas is the founder and CEO of INOVUES, an award-winning climate-tech startup that is modernizing America's existing buildings and making them smarter, greener, and healthier for a sustainable future. Anas is an innovator and inventor with over 15 years of international experience in architecture and facade engineering. Prior to founding INOVUES and developing its patented, non-invasive insulating glass retrofit technology — securing Fortune 500 clients and strategic VC backing — he worked with leading architectural firms, facade and glass fabricators, and specialty glazing contractors on high-profile commercial real estate developments around the world. Anas holds a Master of Architecture degree from Boston Architectural College and a Bachelor of Architecture degree from Damascus University.



INOVUES was selected to install their patented Glazing Shield™ technology for a 2022 demonstration project with 3M and the University of Minnesota. INOVUES makes existing buildings more energy-efficient and sustainable by retrofitting their facades and windows with the latest energy-saving and smart glass innovations without removal, replacement, or disruption. Through its non-invasive insulating glass retrofits, INOVUES offers building owners a high-ROI low-carbon solution to save up to 40% on energy consumption, improve occupants' thermal and acoustic comfort, and increase the value and sustainability of the building. The company is headquartered in Houston, Texas.



Renew Power Systems, Inc. - Presented by Zach Emond, Co-Founder and CEO and Julian White, Nokomis Energy, VP of Operations



renewpower.us

Zach Emond is a co-founder and the CEO of RPSi. He drives innovation to accelerate the integration of renewable energy technology and microgrids for a more resilient and decarbonized grid. Zach has a Master's degree in Electrical Engineering from the University of St. Thomas, with an emphasis on power systems.

Since starting RPSi, Zach has served as an expert on renewable energy topics for multiple events and panels.



RPSi will be demonstrating this grid-forming technology in Minneapolis, Minnesota. RPSi has developed a revolutionary non-linear circuit that, when paired with an inverter, supports the formation of autonomous, decentralized grids at scale while increasing network stability and reliability. This technology can be used to create microgrids in areas without existing grid infrastructure, can improve grid performance in the fringe areas of grid service, and can make it more feasible to add renewable energy and storage to other existing grid scenarios.



GetGreen - Presented by Brian Ringer, Founder and CEO

Brian Ringer, the Founder and CEO of GetGreen, is on a mission to empower every organization and individual to take action on climate change. The GetGreen application is used by businesses, cities and universities to engage their teams, lower emissions and meet their sustainability goals.



getgreen.eco

Brian has been an executive and leader in the technology and innovation space for over 20 years. Prior to founding GetGreen, he served as the Chief Technology Officer of Rhapsody International where he directed all of Rhapsody and Napster's product, technology and operations and helped grow the company to over \$200M in annual revenue. He has been a passionate leader for the environment since 2010, when he served as the first VP of Environmental Programs for RealNetworks.



Brian holds a Master's Degree in Computer Science and Artificial Intelligence from UCLA.

GetGreen is the mobile application for people and companies that want to help solve the climate crisis. For their pilot project, they will be working with Ecolibrium3 in support of the Duluth Citizen Climate Action Plan. GetGreen learns about your lifestyle and interests, then suggests actions you can take and behaviors you can adopt. The app is location aware, recommending sustainable activities, goods and services in your neighborhood. Built in gamification in the form of green leaf rewards make your experience more fun, interesting and interactive, and the rewards can be used to support carbon removal projects around the globe. GetGreen is headquartered in Seattle. Learn more and start a free pilot for your organization today at www.getgreen.eco/.

Closing Program 3:30-5:00 PM

3:30-4:00 PM - Closing Remarks

4:00-5:00 PM - Closing Reception and Innovation Center Tours

The reception will include beer and wine service, along with light appetizers. We are proud to provide Invictus 1.7 Million Megawatts Summer Ale, thanks to our sponsor Connexus Energy.

Learn more about this special brew and the Invictus rooftop solar array.

<https://www.brewbound.com/news/invictus-brewing-celebrates-the-sun-with-new-1-7-million-megawatts-summer-ale>

Please join us June 8 for the Cleantech Pathways Career Event at Saint Paul College

<https://gridcatalyst.org/event/cleantechpathways/>

Panel Speaker & Moderator Bios

CLEANTECH TRENDS AND OPPORTUNITIES



MIKE KESTI



DR. MARK SANDERS



JENNIFER WAGNER-LAHR



DR. PETE WYCKOFF



GREGG MAST

Mike Kesti - Mike Kesti is the Senior Vice President of 3M's Corporate Research Lab. The Corporate Research Lab is responsible for development and deployment of new technology across the global 3M R&D organization. Mike attended Carleton College (BA degrees in Chemistry and Economics) and earned a PhD in Chemistry from Stanford University in 1992 (under Professor Bob Waymouth). Mike joined 3Ms Post-it® Note laboratory in 1993 where he developed new adhesives and waterbased technologies for Post-it® Note products. He then spent 16 years in 3Ms Commercial Graphics division working on new, wide-format, graphic film products, eventually becoming the division's Global Technical Director. During this time, the Commercial Graphics division merged with the Building Commercial Solutions Division to become the Commercial Solutions Division. In 2016, he became the Global Technical Director for the Personal Safety (PPE) Division. On March 1st, 2020, he was appointed Vice President of 3Ms Corporate R&D organization, replacing Greg Anderson (now retired). He has held board positions in the Signage Foundation (SFI) and the Sustainable Green Printing partnership (SGP).

Dr. Mark Sanders - Mark currently serves as the Gemini Chair in Engineering Entrepreneurship at the University of Minnesota. He has a great passion for helping cleantech entrepreneurs. After selling his own startup focused on environmental services technologies, he dived into supporting fellow cleantech entrepreneurs at Berkeley Lab and the Austin Technology Incubator. In addition, Mr. Sanders launched the first Circular Economy incubator in 2018 and has served on numerous pitch competition committees including SXSW and MNCup. Mark has been engaged with sustainability and cleantech for over 25 years. He will always prioritize entrepreneurs seeking to make an impact with cleantech and circular economy innovations. Mr. Sanders has a Ph.D. in engineering from the University of Texas at Austin and an MBA in innovation and entrepreneurship from Babson College.

Jennifer Wagner-Lahr - As Senior Director of Business Development and Commercialization, Jennifer Wagner-Lahr oversees projects in partnership with Agricultural Utilization Research Institute (AURI) staff members, commodity groups, state and federal agencies, and other collaborators and stakeholders that fulfill the AURI mission and advance the development of value-added agricultural products within Minnesota. Her time is also employed toward advocating as a spokesperson for AURI and presenting value-added opportunities to the public.

Prior to joining AURI, Wagner-Lahr worked as a Program Specialist and, later, Executive Director of Global Outreach, Inc. During her time in the latter position, she also took on an economics faculty member position at South Central College in Minnesota. She and her husband run a diversified crop and livestock farm in Central Minnesota and have three young children. Full bio -<https://auri.org/about-auri/staff/jennifer-wagner-lahr/>

Pete Wyckoff, Assistant Commissioner, State of Minnesota - Department of Commerce

Pete Wyckoff coordinates Commerce's efforts to bring millions in federal clean energy funds to Minnesota, and also oversees the Energy Affordability business unit, encompassing Minnesota's Energy Assistance and Weatherization Assistance Programs. Prior to joining Commerce in 2023, Wyckoff served as Senior Policy Advisor for Energy for U.S. Senator Tina Smith and worked for former U.S. Senator Al Franken. He is emeritus professor at the University of Minnesota, Morris, where he served on the faculty for 15 years, and was founding director of the UMM Environmental Studies Program.

Gregg Mast - Gregg serves as the Executive Director for Clean Energy Economy Minnesota. Gregg has nearly 20 years of professional experience in project development, resource analysis, feasibility and financial analysis, and fuel risk management in the clean energy sector. He possesses deep expertise in the economic, marketing, financial, environmental, and policy aspects of clean energy. Gregg has served as Vice President of The BioBusiness Alliance of Minnesota where he was responsible for developing a long-term strategic direction for Minnesota in the areas of renewable energy and renewable materials. Early on in his career, Gregg worked in a variety of corporate finance and management capacities, including at Allianz Life, a wholly-owned subsidiary of Allianz SE and Target Corporation. Gregg received a B.A. from the University of Minnesota – Twin Cities, and a M.B.A. in Finance from the Opus College of Business at the University of St. Thomas

PowerNorth Incubator Pitches - Moderator

Amelia Cerling Hennes - Managing Director, Clean Energy Economy Minnesota



**AMELIA CERLING
HENNES**

Amelia serves as Clean Energy Economy MN's (CEEM) Managing Director. In this role, Amelia serves as a trusted liaison between staff and the Executive Director. She also serves as a key contact and spokesperson both internally and externally while providing strategic guidance and direction for the entire organization. Amelia is a storyteller at heart and has embedded the use of stories to help connect the dots between Minnesota lawmakers at all levels of government – and the economic benefits created by clean energy across the state.

Amelia holds degrees in broadcast journalism and Middle Eastern studies from the University of Minnesota-Twin Cities and serves on the Minnesota Solar Industry Energy Association's (MnSEIA) board of directors. Full bio - <https://www.cleanenergyeconomymn.org/about/who-we-are>



**TAJ AHMAD
ELDRIDGE**



**DR. CHRIS
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Taj Ahmad Eldridge - Taj Ahmad Eldridge is a 25+ year investment professional whose career has included high level executive roles in banking, asset management, alternative investments, and entrepreneurship. Taj serves as Managing Director of Climate Innovations at Jobs for the Future, leading the work around climate and the future of work. In addition, as General Partner of Include Venture Partners and former Senior Director of Investments at the Los Angeles Cleantech Incubator (LACI), Eldridge has built a longstanding career with expertise in the fields of fintech, media, energy, transportation, and the circular economy. Eldridge is also one of the 70 Black Investors in Bevy.com - a \$325 million virtual conference platform as noted in AfroTech.

Dr. Chris Brooks - Dr. Christopher Brooks brings wisdom from a diverse 25-year career serving as an executive, educator, and change agent. He held leadership roles in National (USA) and global organizations, and served as a Professor at undergraduate and graduate Institutions. He is co-Founder and Managing Partner of Brown Venture Group, a Venture Studio focused on BIPOC Technology entrepreneurs and the companies they start: investing in Brown Success. In this role he is actively involved in raising and deploying a \$50M inaugural fund. He is also co-Founder and Partner of Firehouse Commons, a business incubator in South Minneapolis. Full bio - <https://brownventuregroup.com/chris-brooks>

Susanna Gibbons - Susanna has over 30 years of industry experience across multiple asset classes - equities, alternatives, and fixed income; and multiple roles - analytical, portfolio management, asset allocation, and educational. She serves on the Investment Advisory Council for the Minnesota State Board of Investments, the Editorial Board for the CFA Society of Minnesota, and as chair of the Investment Committee for the Girl Scouts River Valleys. She is currently exploring the integration of Environmental, Social, and Governance (ESG) principles into decision making, is passionate about teaching sustainable investment practices, and is a fellow within the Institute on the Environment, University of Minnesota. She earned an MBA in Finance from the NYU Stern School of Business and is a Chartered Financial Analyst.

Shawntera Hardy (moderator) - Shawntera M. Hardy is a seasoned leader whose 20-year-career is rooted in a bias for equity, a focus on outcomes, and a penchant for design thinking. With extensive experience in public policy, economic and workforce development, healthcare, international relations, and environmental sustainability, she brings to each role a lens of proximity, through which she can see both connections and gaps between power, participation, and profits. Prior to becoming a full-time business owner, Shawntera served as the Commissioner of the Minnesota Department of Employment and Economic Development (DEED). Additional past leadership roles for Shawntera include deputy chief of staff over emergency management for Governor Mark Dayton; public policy and built environment director for Fresh Energy; government relations manager for HealthPartners; city planner for the City of Saint Paul and legislative assistant in the Ohio House of Representatives.

Full bio - <https://tinyurl.com/ShawnteraHardyAmethyst>