THE U.S. TECH FOR CLIMATE ACTION CONFERENCE 2023

March 16, 2023 / **Washington D.C.**

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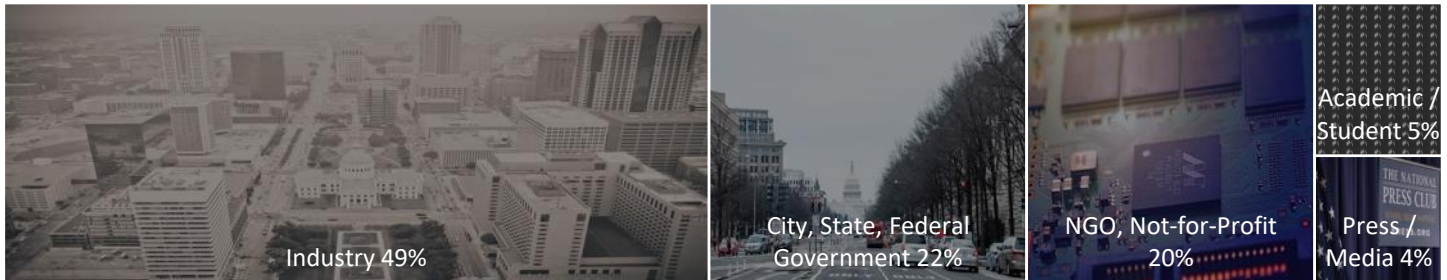| Associate Partners		Strategic Partner	Media Partner
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OVERVIEW

The U.S. Tech for Climate Action conference featured close to 200 delegates and a notably diverse forum of speakers. The conference successfully explored concepts, ideas, challenges and opportunities as to how the U.S. can advance ambitious programs by embracing innovation and technology led by a steadfast vision from multiple stakeholders across government, city, venture capital, industry and technology. Additionally, the conference recognized that there is a big global effort required and the U.S. is ready to be a leader using technology and innovation advancements to combat climate change. The key focuses included:
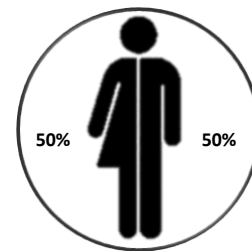
- Future Networks and Enabling Technologies
- U.S. Climate Change Recovery
- Climate Action Leadership in Business and Government
- Funding the U.S. Climate Goals

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DEMOGRAPHICS

Industry 49%

City, State, Federal Government 22%

NGO, Not-for-Profit 20%

Academic / Student 5%

Press / Media 4%

C-Level / Owner – 23%
Director & VP – 28%
Head of – 7%
Manager - 17%
Advisor – 14%
Other – 13%

50%   50%

ABOUT OUR CONFERENCE RAPPORTEUR
Rika Nakazawa

Rika is a senior leader, technologist, best-selling author, investor, and frequent public speaker on technology-powered business transformation. She is Group Vice President within NTT's New Ventures & Innovation team where she is building the Agile Innovation practice for emerging technologies like Edge Computing, 5G, AR/VR and IoT. She is also the co-founder and board chair of the impact venture Strides AI which powers diversity in senior leadership and has been awarded CRN's "Women of the Channel Power 70" recognition for her achievements in supporting diversity in the tech industry.

Trilingual in Japanese, German and English, Rika grew up in Japan and moved to the US to attend Princeton University. Rika has since worked deep in the technology sector for over two decades globally, across senior executive roles in strategy, business development, consulting, and marketing with Fortune 500 companies – NVIDIA, Accenture, Capgemini Sony, NTT – and Silicon Valley startups in next-generation computing. She is a Digital Transformation veteran and has served on multiple start-up boards in Next-Generation Computing, Blockchain, and AI ecosystems.

Throughout her career, Rika has been an avid advocate for Sustainability / ESG – with a particular focus on the role of innovation and technologies in advancing these agendas. Her next book, "The White Swan" will feature some of her recent discoveries on the intersection of the Pandemic, Sustainability, and Digital Transformation across businesses, governments and communities globally.

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THE CONFERENCE RAPPORTEUR REPORT

In August 2022, the Biden administration passed the Inflation Reduction Act, the most significant climate legislation in the history of the U.S., with a bold focus on cutting U.S. emissions by 40% by 2030 and a net-zero economy by 2050. Given the unprecedented level of funding – more than $360B – and programming intended to incentivize industry, businesses, and communities to transition to a clean energy economic ecosystem, this legislation is viewed as foundational to activating Climate Action for the leading economic superpower, and hence the rest of the world.

With this as the backdrop, the U.S Tech for Climate Action conference in Washington D.C on March 16th converged a diverse cohort from Industry, Technology, Policy, Venture, and Cities. With more than 75 organizations represented, and 200 delegates in attendance, leaders from key sectors and communities explored the challenges and opportunities towards achieving various climate-related goals and demonstrated the urgent need to bring multiple stakeholders to the table. Connecting the dots across interdependencies will be the only way to achieve meaningful and realistic impact outcomes. Key discussion topics centered around: Future Networks and Enabling Technologies, Climate Action Leadership in Business and Government, Funding Climate Goals, and a Recovery Agenda for U.S Climate Change.

Views from Capitol Hill
Views from Cities
Views from Industry and Technology
Voices from the Venture / Startup Ecosystem
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Views from Capitol Hill

The morning sessions featured views from the House of Representatives, with Representative Marianette Miller-Meeks (R-IA), a Member of the Energy and Commerce Committee, and Representative Buddy Carter (R-GA), Member of the Select Committee on Climate Change and Vice Chair of the Communications and Technology Committee. Both representatives underscored the roles that their states, Iowa and Georgia respectively, play in responding to rising energy demands and the ways that they uniquely address alternative and renewable energy – including wind and nuclear. Moreover, both representatives reinforced the need for collaboration with industry to drive innovation forward.

With Transportation accounting for about 33% of total US Greenhouse Gas Emissions, Dr. Robert Hampshire's presentation was received with great attention. As the first Chief Science Officer to be appointed to the entire Department for the first time in over 40 years, Dr. Hampshire is a key figure in policy and action for how the agency constructs climate-related reports, program information, and other scientific and technical information. Starting with the statement that "every transportation decision is a climate decision", Dr. Hampshire addressed how the agency is deploying strategies to build a transportation system that mitigates GHG while simultaneously resilient to the current and further

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anticipated impacts while advancing climate and environmental justice. With a particular focus on the bipartisan Infrastructure Bill that was passed in August 2021, along with the Advanced Research Projects Agency for Infrastructure (ARPA-I), Dr. Hampshire called out the opportunity to leverage funding from the government to accelerate clean fuel, electrification, more sustainable construction. Dr. Hampshire gave equal gravity to the need to expand education and jobs in communities, in addition to addressing the disproportionate impact of climate change on under-served groups. He also emphasized the importance of consistently integrating science and research in the work for climate action, and the concurrent considerations on long term impact of science-based recommendations to humanity. Dr. Hampshire acknowledged the historic paradigm shift that the DOT will be navigating and leading in this next chapter of our collective history.

Congresswoman Eleanor Holmes Norton took to the stage with a call out of key bipartisan climate-impact policies that preceded the Inflation Reduction Act, such as the American Innovation and Manufacturing Act in 2020 that focused on phasing out the use of Hydrofluorocarbons. And as Chair of the Highways and Transit subcommittee, Congresswoman Norton was involved with the Infrastructure Investment and Jobs act, which contained initiatives to combat climate change. From $65B towards upgrading power infrastructure with resilient transmission lines for renewable energy, to $5B for public transit agencies to adopt no to low emissions buses in communities, to $3B towards zero-emission technologies and supply chains in ports. Congresswoman Norton emphasized the need to activate the funding with innovation and technology as "fighting climate and technology go hand in hand – both look to the future".

The relevance of technology was further expanded by Geoffrey Starks of the Federal Communications Commission (FCC). While the FCC was established by the Communications Act of 1934, and originally charged with regulating interstate and international communications by radio, television, wire, satellite, and cable, the influence that the FCC wields in enterprises and communities in our hyperconnected world is more profound than ever. Commissioner Starks reinforced the importance of leveraging the funding coming from private and public sectors towards innovation in technology. We are today, with the backdrop of Climate action against the dramatic rise in energy demands, "rewriting the American innovation story...with connectivity at the heart". In conjunction with the continued proliferation of connectivity technologies like 5G and IoT, we can harness new ways to drive productivity and efficiency across sectors. Moreover, connectivity and the ability to run computing at the 'edge' will help communities and enterprises to be more resilient. The FCC continues to advance the capabilities of spectrum – with 5G networks today demonstrating the ability to provide higher throughput at a lower per power (and hence energy) ratio, and yield use-cases that contribute to better energy and waste management in operations. In pursuit of continuous innovation to drive even more possibilities, and as a pointed demonstration of policy being informed by the public, Commissioner Starks encouraged the room to provide feedback to a recent request for comment on a National Spectrum Strategy, released by the NTIA (National Telecommunications and Information Administration). The strategy outlines a national economic imperative towards "advanced transportation technologies, smart cities, climate monitoring and forecasting, and industrial and commercial applications in the manufacturing, agriculture, and utility sectors". While 5G is taking center stage today, continued spectrum development and fundamental physics is already paving the path for 6G – with energy management of critical focus.

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Senator Sheldon Whitehouse addressed the forum with some of the challenges in powering bipartisan movements towards addressing climate change. While he acknowledged that there is some frustrating hostility in different pockets of trade, industry, and government, he waxed hopeful around some key initiatives that would advance carbon reduction. One concept that the Senator believes has legs is the notion of a Carbon Border Tax, which the EU has already initiated. A Carbon Border Tax would support American businesses in the global marketplace while lowering carbon emissions at home and abroad. And given that the UK and the EU, with indications of similar intent from Canada and Australia becoming more evident, the opportunity for a shared global platform around a Carbon Border Tax becomes more useful and likely. Meanwhile, 'carbon capture' and 'sequestration utilization' are other areas that have attention from both sides of the senate – although with a caution from the Senator that mitigating Carbon will not be enough. He encouraged further progress in 'clawback' technologies that would take carbon out of the air ("direct air capture") to ensure that we realistically achieve the carbon goals that will not just stop but decelerate the warming of the earth. More work needs to be done, and Senator Whitehouse is positive about the ability of the Senate and policymakers to find common ground that supports progress for the communities that the government serves.

Views from Cities

Both East Coast and West Coast cities were represented at the conference, with Shelby Rust Buso, Chief Sustainability Officer from San Diego and Sonia Brubhaker, Chief Resilience Officer from Miami, joining Daniel Conner from DC on stage. While the impact of climate change has differences across cities in the United States, and coastal towns feeling the greatest threat from rising sea waters, clearly cities across the country need to tackle the challenges of lower emissions, alternative energy pursuits, and waste management – all while managing the health and well-being of the urban citizenry. And though addressing the root cause of climate impact is top of mind, so is the call for building resilience, i.e., in what ways city officials can equip their infrastructure and systems to deal with, and adapt to, some of the changes that are likely inevitable and permanent. While there was a consistent alignment on the urgency and channels of action by the city leaders, there was also an agreement that access to funding must be made easier and simpler. With the greater funding that is released by agencies and governmental bodies, there must be a commensurate transformation on how the funds get allocated and accessed.

Views from Industry and Technology

The afternoon panel addressing, "Technology as an enabler to drive climate action throughout cities and across industries" demonstrated the rich discourse that emerges from converging leadership from multiple stakeholder groups. On the panel were: Dr. Vanessa Chan, US Department of Energy; Shiva Goel, FCC; Akshay Malik, City of Philadelphia; Denise Lee, Cisco; Alison Pascale, Volkswagen Group of America; and David Lieberman, Bentley Systems. Given the presence of, and clear articulation of opportunities and issues from Dr. Chan, unsurprisingly much of the discussions were around the roadmap towards climate action given the growing demand for energy in the US and the role that technology will play in navigating the path forward - especially with the accelerated digitalization during the pandemic and the trend away from fossil fuel usage. And there is no single silver bullet, but rather a

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suite of technologies. Or, as Dr. Chan colorfully explained that "it's like Pokemon", in that we cannot capture just one Pokemon. We need all the characters, and the total ecosystem to come together. From private networks, 5G spectrum, cloud, edge computing, generative AI, and more, Ms. Lee underscored how industries will need to work with cities and services providers that integrate these technologies into applications that achieve meaningful and real results. For example, Volkswagen has been diligently pioneering how the automotive industry continues to transform into a mobility industry, and perhaps even an industry that can transport energy through battery and grid systems. All work that starts to shift the paradigm of the "Art of the Possible". Plus, these shifts and this convergence will not happen overnight. Moreover, we must especially focus on workforce development so that there are equitable benefits derived from the transformation to new forms of energy, commensurate with new ways that society and business transform and thrive.

In the context of digitalization, a key sector that often is cited as a culprit in energy over-consumption is Data Centers. A topic that was also unpacked by leaders from Schneider Electric and Nautilus Data Technologies in a separate, dedicated session. By most measures, the Data Center industry is deemed accountable for about 1% of the world's GHG emissions, but is a hot topic given the continued dynamic growth of the sectors as all industries generate more data, and as more regions across countries continue to digitalize their operations. Both Amy Serpliss from Schneider and Jim Connaughton from Nautilus shared the key strides the industry is making – from water-cooling technologies to energy efficiencies derived in collaboration with hardware and software/virtualization partners in the landscape. Investment in innovation will be essential for how the industry balances the growth in demand for data management with greater energy utilization efficiencies, as well as ways to drive a circular economy and regenerative cycles of computing.

Voices from the Venture / Startup Ecosystem

While climate change is a long-term challenge that will require strategic investment over many decades, the good news is that the funding of Climate Tech is on a swift upward trajectory. The conference was appropriately end-capped with a discussion around public and private sources of funding, and an assessment on the current landscape of climate finance in the U.S. The good news story, as shared by James Maloney from Tiger Hill Partners, is that the addressable market is more than $22 trillion, and there is an unprecedented number of programs that are being funded at the Federal, State and federal level for organizations of all types. David Lu from the startup up Clarity, and Nathalie Capati from the startup Jasmine Energy acknowledged that this is a good time to match the funding with new innovations that will advance our collective progress. More good news is that the 'hubs' of where this innovation is happening is in different pockets of the region, ie. not confined to the usual hub of Silicon Valley. Nonetheless, the venture community could do more to ensure that the distribution of funding happens more equitably.

With previous public-private partnerships might have experienced the dynamic of "technology innovates while government regulates", the panelists admitted that the process seems to be moving faster on the climate tech / climate action agenda. Plus, given the interconnected and interdependent nature of climate impact, stakeholders need to look beyond their own borders, as everyone needs to

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benefit in the climate action arena, or no one does. James did highlight the paradox that funding tends to go to ventures that are further in their development process (with product market fit proven) where perhaps the greater need is to fund those ideas that may be much needed breakthroughs but need funding early to prove their value. Ultimately, while challenges remain towards optimal capitalization of new technologies, critical innovation for climate impact has a greater chance of being funded than ever, with a roadmap to success defined by new kinds of public-partner partnerships at scale.

In Closing

As the entire world looks to get to action over words, the U.S plays an essential role. With the insights shared, wisdom debated, and key points of convergence realized, the U.S. Tech for Climate Action conference demonstrated the ability for disparate groups to reach across the table and aisle and find powerful alignment. Diverse and disparate leaders found common ground and inspiration while aligning on key issues that will, and must, accelerate climate outcomes in the challenging decade to come. The demand for multi-partisan engagement and involvement led to the ability for the conference to commit to bringing the conference back to DC in March 2024, with much ACTION to be taken, and much work to be done between now and then.

Select Sound Bites from Attendees

"In a single day, I felt like I absorbed so much knowledge, inspiration, and encouragement that will last me for many years to come. I know I will refer back to this event in my mind, time and time again throughout my career. The Tech for Climate Action Event Series hit it out of the park with this one."
Analyst, Lux Research

"The U.S. Tech for Climate Action Conference brings together Washington DC's varied climate tech community—from government, industry, municipalities, and more—under one roof towards advancing and commercializing tech for the fight against climate change. I'm proud to have represented DOE in the 2023 event, which provided a great venue to discuss our new Pathways to Commercial Liftoff initiative." Dr Vanessa Chan, U.S. Department of Energy.

"It was a fantastic event! The organizers really did strike a balance by bringing the right group of people-Govt officials, private sectors, NGOs, and independent consultants from diverse areas. We look forward to the next one." Global Sustainability Leader, O-I

"I had a great time listening, learning, and seeing familiar faces as well as meeting new ones. I particularly enjoyed the range of topics covered and hope to attend again next year." Government Relations, Schneider Electric

"The conference convened an impressive group of experts for engaging discussions across public, private and policy sectors to move faster in the scale and use of technology for climate action." Communications Manager, Cisco

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"The speakers were all extremely knowledgeable and the subject-matter discussed was very timely. The room was filled with experts all excited to keep up our collective momentum on climate impact, so I look forward to the next opportunity to continue the conversation." Chief Sustainability Officer, City of San Diego

"The conference was a great opportunity to gather policy leaders and technology experts together to take stock of the situation, potential impacts and means of achieving lasting solutions for community and global resilience and mitigation." Public Sector Director, Dassault Systèmes

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2nd ANNUAL U.S. TECH FOR CLIMATE ACTION CONFERENCE

March 21, 2024 | Washington D.C.

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