DOCKETED	
Docket Number:	19-IEPR-10
Project Title:	Climate Adaptation
TN #:	229273
Document Title:	Updated Meeting Schedule IEPR Lead Commissioner Workshop Climate
Description:	***SUPERSEDES TN 229229** Updated Meeting Schedule of the August 8, 2019 IEPR Joint Agency Workshop
Filer:	Raquel Kravitz
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	8/8/2019 8:37:32 AM
Docketed Date:	8/8/2019

Meeting Schedule: IEPR Lead Commissioner Workshop
Climate Adaptation in California's Energy Sector

Thursday, August 8, 2019 – 10:00 am
California Energy Commission
1516 Ninth Street
First Floor, Art Rosenfeld Hearing Room
Sacramento, CA 95814

Updated 8/7/2019

(Listed times are general guidelines only)

Introduction (10:00-10:05)

Heather Raitt, Assistant Executive Director, Policy Development

Opening Comments (10:05-10:15)

Janea A. Scott, Vice Chair, California Energy Commission
J. Andrew McAllister, Commissioner, California Energy Commission
Karen Douglas, Commissioner, California Energy Commission
Patty Monahan, Commissioner, California Energy Commission
Liane J. Randolph, Commissioner, California Public Utilities Commission

1. Fostering Community Resilience through Energy Sector Innovation (10:15-11:20)
Panel discussion will focus on two themes: first, the roles of energy innovation and the built environment in supporting community preparedness for, response to, and recovery from weather-related events; and secondly, encouraging energy sector adaptation investments to protect disadvantaged communities and vulnerable populations.

Moderator: David Erne, California Energy Commission

A. Nuin-Tara Key, Governor's Office of Planning and Research
B. Sylvia Chi, Policy Director, Asian Pacific Environmental Network (APEN)
C. Jasneet Sharma, San Mateo County Office of Sustainability
D. Vipul Gore, President and CEO, Gridscape Solutions
E. Alfredo A. Martinez-Morales, Managing Director and Research Faculty, Southern California-Research Initiative for Solar Energy, University of California, Riverside
F. Jess Maxcy, California Manufactured Housing Institute

2. Collaborative, Actionable Research to Foster Resilient Planning and Management (11:25-12:30)
Presentations will provide concrete examples of collaborative research on climate adaptation for the

energy sector and discuss how that research informs action to foster energy sector resilience in California.

Moderator: Guido Franco, California Energy Commission

A. David Saah, Spatial Informatics Group: “Next Generation Near and Long-term Wildfire Risk Forecast Models for Enhanced Electricity Grid Resiliency and Public Safety.”
B. Dorian Fougères, California Tahoe Conservancy: “Powerline Resilience Corridors: Leveraging Investor-Owned Utilities’ Ignition Prevention Efforts with Additional Fuel Reduction and Forest Health Activities that Benefit Local Communities.”
C. Brian D’Agostino, SDG&E: “Resilience Across Climate-Vulnerable Backcountry Populations: Anticipating Extreme Fire Weather and Providing Resources during De-Energization.”
D. Konstantine Georgakakos, Hydrologic Research Center: “Enhancing Resilience of the Energy and Water Sectors Management Through Integrated Management and the Use of Probabilistic Forecasts.”

Public Comments

Closing Remarks

Adjourn

Speaker Bios

Sylvia Chi, Policy Director, Asian Pacific Environmental Network (APEN): As APEN's Policy Director, Sylvia is committed to advancing transformative environmental justice policies. She worked at the U.S. EPA, U.S. Senate, and Environmental Law Institute before joining Verdant Law, where she practiced chemicals and green marketing law for four years. She earned her A.B. in History with a minor in Environmental Studies from Dartmouth College and her J.D. from the University of Maryland School of Law.

Brian D'Agostino, Director of Fire Science & Climate Adaptation, San Diego Gas & Electric: As Director of Fire Science and Climate Adaptation at SDG&E, D'Agostino is responsible for meteorology, fire science, the Community Fire Safety Program and climate adaptation initiatives. D'Agostino joined SDG&E in 2009 and oversaw the development of SDG&E's weather network, one of the nation's largest and most sophisticated weather networks. D'Agostino serves as an advisor and former chair of the American Meteorological Society's National Energy Committee and sits on several advisory committees specializing in climate adaptation and fire science. D'Agostino is a graduate of Plymouth State University with a bachelor of science in meteorology.

Dorian Fougères, Chief of Natural Resources, California Tahoe Conservancy: Dorian has worked for over 20 years on marine, water resource, and forest policy and management throughout California and overseas. Currently Chief of Natural Resources for the California Tahoe Conservancy, he manages the Conservancy's climate adaptation, forest landscape and watershed restoration, land management, and recreation and access programs. Prior to this Dorian worked for many years as a mediator at the Center for Collaborative Policy, CSU Sacramento, including founding and directing its Southern California office. He completed his PhD in Environmental Science, Policy, and Management at the University of California at Berkeley, specializing in political ecology and conducting extensive field research in Indonesia as a Fulbright-IIE Scholar and Sumitro Fellow. At Cornell University he specialized in participatory action research and completed his BA in Anthropology summa cum laude. Dorian is a member of the International Union for the Conservation of Nature's Commission on Ecosystem Management, serves as vice-chair of its Resilience Thematic Group, and authors the associated *The Promise and Practice of Resilient Landscapes* blog https://resilientlandscapes.blog. He also is a certified provider on the National Roster of Environmental Dispute Resolution and Consensus Building Professionals.

Konstantine Georgakakos, Founding Director, Hydrologic Research Center (HRC): Dr. Georgakakos is the Founding Director of the Hydrologic Research Center, a non-profit science-cooperation and technology-transfer center established in 1993 in San Diego, California. He is also an Adjunct Professor with the Scripps Institution of Oceanography of UCSD. Dr. Georgakakos' honors and awards include the Presidential Young Investigator Award from the U.S. National Science Foundation; the John W. Orvel Water Resources Leadership Award from the Water Resources Research Center at the University of Massachusetts, Amherst; the Advisory Committee Climate Services Award from the California DWR; and the NRC-NOAA Associateship Award from the U.S. National Research Council. Dr. Georgakakos is a Fellow of the American Association for the Advancement of Science (AAAS) and a Fellow of the American Meteorological Society (AMS). He has supervised several large-scale international science cooperation and technology transfer projects in North, Central and South America, Africa, Asia and Europe. He is the HRC Lead Investigator for the INFORM project in Northern California.

Vipul Gore, President and CEO, Gridscape Solutions: Gridscape Solutions is a leading smart grid company that specializes in designing and deploying innovative products and solutions for renewable microgrids and EV charging systems. It has implemented a project to support energy savings, grid reliability, and greenhouse gas emissions reductions through solar + storage microgrids at fire stations in the City of Fremont. Fremont's fire stations are located near the Hayward faults, which could endanger the stations' access to power in the event of an earthquake and handicap local emergency response. With EPIC funding from the Energy Commission, Gridscape and the City have installed microgrid systems – each consisting of rooftop photovoltaic panels and a 110kWh battery – to support three Fremont fire stations in the event of power outages. While generating utility bill savings and producing low-carbon power, these microgrids have ensured that critical infrastructure like fire stations are able to deliver services in times of emergency. Subsequent to Fremont Fire Station Microgrid

project, Gridscape is also now deploying solar emergency microgrids in the City of Fontana, Richmond, San Leandro and other CA cities through various EPIC funds and third party financing.

Nuin-Tara Key, Climate Resilience Program Director, Governor's Office of Planning and Research: Nuin-Tara Key is Climate Resilience Program Director with the California Governor's Office of Planning and Research where she leads the Integrated Climate Adaptation and Resiliency Program. ICARP serves to better align state and local adaptation and resilience efforts, with an eye towards supporting local implementation. In this role, Nuin-Tara chairs the ICARP Technical Advisory Council. Prior to joining OPR, Nuin-Tara co-founded an international initiative on community-based climate action and has worked in the public, private, and non-profit sectors on sustainable urban and regional planning and policy, with a focus on social equity and climate change. She has a Master of Urban and Regional Planning from Portland State University and a BA from Lewis and Clark College. She is interested in energy-related opportunities to enhance community preparedness. She is also engaged with efforts to prioritize adaptation investments for and engagement with vulnerable communities.

Jess Maxcy, California Manufactured Housing Institute: With more than 56 years of service in promotion and development of the manufactured housing industry, Jess has been involved in all aspects of housing manufacturing with three different manufacturers. He has dynamically led the California association as board member and president since 1986. Mr. Maxcy served in close liaison with the California department of Housing and Community Development on the development and implementation of Ignition-Resistant Construction System for manufactured housing (CCR Title 25, Chapter 3, Subchapter 2, Article 2.3, section 4200).

Alfredo A. Martinez-Morales, Managing Director and Research Faculty, Southern California-Research Initiative for Solar Energy, University of California, Riverside: As managing director of the Southern California Research Initiative for Solar Energy, Dr. Martinez-Morales directs an innovative collaboration between researchers, industry and government based at UC Riverside's College of Engineering-Center for Environmental Research and Technology. Dr. Martinez-Morales research focuses on solar photovoltaics, battery energy storage, energy management systems, and control algorithms. In particular, Dr. Martinez-Morales specializes in the development of technologies for the optimization of system design and the operation of microgrids. He has successfully developed and deployed several customer-side microgrids and/or integrated energy management systems in the field, including the Sustainable Integrated Grid Initiative (SIGI) microgrid testbed system at UC Riverside, the Chemehuevi Indian Tribe microgrid, and at the Victor Valley Water Reclamation Authority. Working with the Chemehuevi Indian Tribe and supported by EPIC funds, Dr. Martinez-Morales deployed a microgrid at the Chemehuevi Community Center, where community members congregate during emergencies. In addition to providing reliability and stability to the Chemehuevi community, the community-scale generation system also lowers demand at peak times, reducing utility costs and generating GHG emissions savings. The Chemehuevi tribe is located in the Mohave Desert where loss of power poses a substantial risk due to the community's remote location. Overall, the Chemehuevi experience a significantly larger number of power interruptions compared to the average SCE system wide and San Bernardino District 1 customers.

Jasneet Sharma, San Mateo County Office of Sustainability: Jasneet Sharma is the Acting Program Manager with the San Mateo County Office of Sustainability where she manages Climate Change Initiatives focused on reducing greenhouse emission and building resiliency to climate related risks. She also leads the recently launched Climate Ready SMC Initiative that strives to foster collaboration with cities, stakeholder agencies and community partners to create and implement solutions to address the climate change challenge. This includes implementing pilot projects to assess and plan for climate change impacts and develop neighborhood specific adaptation plans to increase community resilience. Prior to this, Jasneet was working with San Mateo County's Health Policy and Planning Program to advance health and equity across San Mateo County.

Jasneet has extensive experience providing technical assistance and training on land use and urban design, leading research and policy initiatives on smart growth, sustainability and health and undertaking community engagement and collaborative planning efforts. She has completed trainings on racial and social equity and is

always looking for ways to integrate and address issues of equity into her work. She has received a Bachelor's in Architecture from India and a Master's in Urban Planning from the University of Michigan.

David Saah, Spatial Informatics Group and University of San Francisco: Dr. Saah is an Associate Professor and Director of the Geospatial Analysis Lab (GsAL) at the University of San Francisco and the Managing Principal and Co-founder of Spatial Informatics Group, an international environmental think-tank. He has been broadly trained as an environmental scientist with expertise in several areas including: landscape ecology, forestry, sustainable agriculture, hydrology, geomorphology, ecosystem modeling, climate change, natural hazard modeling, remote sensing, geographic information systems (GIS) and geospatial analysis. He has used these skills to conduct research primarily at the landscape level in a variety of systems throughout the United States and Internationally. His academic research uses integrated geospatial science for multi–scale mapping, monitoring and modeling of environmental spatial heterogeneity. These efforts include quantification of change in landscape pattern, investigating the linkages between pattern and processes, and understanding the pattern–process dynamic within different environmental management regimes. To complement this, Dr. Saah's consulting research interest and experience include: developing holistic decision support systems for resource management, assessing natural hazards, and quantifying ecosystem service valuation. In addition, all his research addresses access, availability, and accuracy of geospatial and environmental datasets, and scale in natural resource and environmental research. Dr. Saah is committed to producing high quality research projects that integrate the most current science and technology. He is dedicated to the accurate dissemination of results from these endeavors through innovative presentations, publications, and workshops.

Description of Talks in Session on Collaborative, Actionable Research to Foster Resilient Planning and Management

David Saah, Spatial Informatics Group: "Next Generation Near- and Long-term Wildfire Risk Forecast Models for Enhanced Electricity Grid Resiliency and Public Safety."

Many aspects of wildfires in California have changed in the past several decades, including climate patterns and increase development of human infrastructure near wildlands. Climate change has led to wildland fuel conditions that have increased the likelihood of fire behavior that exceed the assumptions of existing wildfire modeling systems. Available wildfire behavior models have not been adapted to predict extreme fire events typical of today's California forests, and near-term wildfire risk forecasts underestimate extreme weather events. For long-term planning, there is a lack of a comprehensive modeling framework to make mid- to late-century projections of wildfire risk relative future human development patterns.

To address these challenges, our Project Team will develop and deliver updated wildfire models for improved electric utility grid resiliency and safety. Our updated models will provide actionable information at fine-scale resolution (circa 30m) in the near term (0-7 day forecasts) and coarse-scale resolution (circa 5 kilometers) in the long term (to end-of-century). We will advance wildfire science by incorporating the dynamics of tree mortality and extreme fire weather into next-generation fire models. Our work aims to support California's Fifth Climate Change Assessment and will integrate risk forecast models into electric utility grid operations and mitigation planning through collaboration with Investor Owned Utilities across California.

Dorian Fougères, California Tahoe Conservancy: "Powerline Resilience Corridors: Leveraging Investor-Owned Utilities' Ignition Prevention Efforts with Additional Fuel Reduction and Forest Health Activities that Benefit Local Communities."

Managing California's forests under climate change requires matching the scale of treatments to the scale of disturbances like fire. Powerline resilience corridors (PRCs) – forested areas around powerlines where ignition hazards are managed in conjunction with fuels reduction and forest health treatments – are a new approach to doing this. By working at the landscape level, PRCs create planning, operational, and other efficiencies that increase the pace and scale of treatments, and more effectively restore and protect both the general forest and forest communities together. In this presentation you'll hear about the unique work in the Lake Tahoe Basin that is putting this concept into practice through a partnership between the California Tahoe Conservancy, Liberty Utilities, and the USDA Forest Service. The presentation will cover the concept of vegetative heterogeneity (variation in the vertical and horizontal structure of the forest) as a cornerstone of landscape resilience.

Konstantine Georgakakos, Hydrologic Research Center: "Enhancing resilience of the energy and water sectors management through integrated management and the use of probabilistic forecasts."

The presentation demonstrates that integrated management of energy and water resources driven by probabilistic forecasts of inflows as well as water and energy demands improves the management efficiency of both sectors. Integrated management tools for the Northern California system have been demonstrated and are currently in transition to operations. The tools are designed to inform an inclusive stakeholder decision process for full appreciation of inflow and demand uncertainty and probabilistic trade-offs of benefits and risks.

Brian D'Agostino, SDG&E: "Resilience across Climate-Vulnerable Backcountry Populations: Anticipating Extreme Fire Weather and Providing Resources during De-Energization."

The effects of climate change are making California's wildfire season longer and more intense, threatening our homes, lives and economy. During extreme fire weather events, SDG&E may implement a Public Safety Power Shutoff (PSPS). This talk will focus on the initiatives being developed to mitigate the impacts these PSPS events have on the communities we serve, touching on the role that weather monitoring and forecasts play and how research has informed the effort.