

# **Board Strategic Development Committee Meeting and Special Board of Directors Meeting**

Date: Tuesday, January 12, 2021  
Time: Scheduled to begin at 5:30 p.m.  
Location: Virtual Meeting, Online

# AGENDA

## BOARD STRATEGIC DEVELOPMENT COMMITTEE MEETING AND SPECIAL SMUD BOARD OF DIRECTORS MEETING

Tuesday, January 12, 2021

Scheduled to begin at 5:30 p.m.

Zoom Webinar Link: [Join Strategic Development Committee Meeting Here](#)

Webinar ID: 160 090 0153

Password: 176808

Phone Dial-in Number: 1-669-254-5252

In accordance with the Governor's Executive Order N-29-20 and the Emergency Board Meeting Procedures adopted by the SMUD Board of Directors, the regular Board meeting and other public meetings are closed to the public to align with state, local, and federal guidelines and social distancing recommendations for the containment of the coronavirus.

Live video streams and indexed archives of meetings are available at:

[http://smud.granicus.com/ViewPublisher.php?view\\_id=16](http://smud.granicus.com/ViewPublisher.php?view_id=16)

Members of the public may register to provide verbal comments at an upcoming Board or Committee meeting by emailing a request to speak to [PublicComment@smud.org](mailto:PublicComment@smud.org). Please include the date of the meeting, name, and topic or agenda item the requestor wishes to speak on. The request may also be submitted while the meeting is in progress during the standard time for the agenda item or topic. **Pre-registration is strongly encouraged by no later than 3:00 p.m. on the day of the meeting.**

Members of the public may provide written public comments on a specific agenda item or on items not on the agenda (general public comment) by submitting comments via e-mail. Comments may be submitted to [PublicComment@smud.org](mailto:PublicComment@smud.org) and will be placed into the record of the meeting.

Members of the public that are listening to or watching the live stream of a Committee meeting and wish to comment on a specific agenda item as it is being heard may submit their comments, limited to 250 words or less, to [PublicComment@smud.org](mailto:PublicComment@smud.org), noting the agenda item number in the subject line. The Committee Chair may read comments for items on the agenda into the record, in her discretion, based upon such factors as the length of the agenda or the number of e-mail comments received. General public comment for items not on the agenda will not be read into the record but will be provided to the Board and placed into the record of the Board meeting if it is received within two hours after the meeting ends.

This Committee meeting is noticed as a joint meeting with the Board of Directors for compliance with the Brown Act. In order to preserve the function of the Committee as advisory to the Board, members of the Board may attend and participate in the discussions, but no Board action will be taken. The Policy Committee will review, discuss and provide the Committee's recommendation on the following:

## **INFORMATIONAL ITEMS**

1. Scott Martin Provide the Board a brief overview and introduction to external Industry Experts for panel discussion on **Visions, Solutions & Technologies for a Zero Carbon Future.**  
  
Janet Gail Besser, Managing Director  
SMART ELECTRIC POWER ALLIANCE (SEPA) Introduction to panelist presentations and agenda for the first of three Industry Expert panels.  
  
Mark McGranaghan, Vice President, Innovation,  
ELECTRIC POWER RESEARCH INSTITUTE (EPRI) Provide presentation, **Creating the Roadmap for a Sustainable Energy Future.**  
  
Caitlin Murphy, Senior Energy Policy Analyst,  
NATIONAL RENEWABLE ENERGY LABORATORY (NREL) Provide presentation, **Insights from NREL's Energy Sector-Wide Modeling Studies.**  
  
Christopher Clack, PhD, Chief Executive Officer,  
VIBRANT CLEAN ENERGY, LLC Provide presentation, **Visions, Solutions and Technologies for a Zero Carbon Future: Reliable, Robust, and Resilient Modeling.**  
  
Mark Dyson, Principal, Electricity Practice  
ROCKY MOUNTAIN INSTITUTE Provide presentation, **Racing to the Starting Line, Opportunities for a Carbon-free Grid in 2030 to Unlock Cost Savings, Resilience, and Deep Decarbonization.**

Moderated Panel Discussion on **Visions, Solutions & Technologies for a Zero Carbon Future.**

Moderator:

Janet Gail Besser, Managing Director  
SMART ELECTRIC POWER ALLIANCE (SEPA)

Panel Participants:

Christopher Clack, PhD, Chief Executive Officer  
VIBRANT CLEAN ENERGY, LLC

Mark Dyson, Principal, Electricity Practice  
ROCKY MOUNTAIN INSTITUTE

Mark McGranaghan, Vice President, Innovation  
ELECTRIC POWER RESEARCH INSTITUTE (EPRI)

Caitlin Murphy, Senior Energy Policy Analyst  
NATIONAL RENEWABLE ENERGY LABORATORY (NREL)

Presentation: 65 minutes

Discussion: 60 minutes





SSS No.  RSNBS 20-002
-----------------------------

# BOARD AGENDA ITEM

## STAFFING SUMMARY SHEET

Committee Meeting & Date Strategic Development – 01/12/21
Board Meeting Date N/A

TO		TO	
1.	Scott Martin	6.	
2.	Rachel Huang	7.	
3.	Frankie McDermott	8.	
4.	Gary King	9.	<b>Legal</b>
5.		10.	<b>CEO &amp; General Manager</b>

<b>Consent Calendar</b>		<b>Yes</b>	<b>No</b> <i>If no, schedule a dry run presentation.</i>	<b>Budgeted</b>		<b>Yes</b>	<b>No</b> <i>(If no, explain in Cost/Budgeted section.)</i>
FROM (IPR)	DEPARTMENT			MAIL STOP	EXT.	DATE SENT	
Scott Martin	Resource and New Business Strategy				6872	12/16/2020	

**NARRATIVE: Industry Experts Panel #1**

**Requested Action:** External Industry Experts Presentations with Panel Discussion on **Visions, Solutions & Technologies for a Zero Carbon Future.**

**Summary:** Moderated by the Smart Electric Power Alliance (SEPA), this agenda item will feature a panel discussion among four recognized energy industry experts, under the theme of “Visions, Solutions & Technologies for a Zero Carbon Future.” This is the first of three Industry Experts Panels that are intended to assist the Board and SMUD staff in its consideration and decision on the 2030 Zero Carbon Plan.

**Board Policy:** SD-9 Resource Planning; SD-10 Innovation  
*(Number & Title)*

**Benefits:** Provide insight into the current state of emerging technologies and business models that can help SMUD achieve Zero Carbon by 2030, as well as the vision and potential development path we may see for new technologies in the future.

**Cost/Budgeted:** N/A

**Alternatives:** N/A

**Affected Parties:** All SMUD Departments will contribute to the development of the Zero Carbon Plan

**Coordination:** Resource and New Business Strategy

**Presenter:** Scott Martin, Director, Resource and New Business Strategy  
*Moderator:* Janet Gail Besser, Managing Director, Smart Electric Power Alliance (SEPA)  
*Panel Participants:*  
Christopher Clack, PhD, Chief Executive Officer, Vibrant Clean Energy, LLC  
Mark Dyson, Principal, Electricity Practice, Rocky Mountain Institute  
Mark McGranaghan, Vice President, Innovation, Electric Power Research Institute (EPRI)  
Caitlin Murphy, Senior Energy Policy Analyst, National Renewable Energy Laboratory (NREL)

**Additional Links:**

SUBJECT	Industry Experts Panel on Visions, Solutions & Technologies for a Zero Carbon Future	ITEM NO. (FOR LEGAL USE ONLY)
---------	--	-------------------------------

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.

**Janet Gail Besser**  
**Managing Director**  
**Smart Electric Power Alliance**

As Managing Director, **Janet Gail Besser** oversees strategy for the SEPA Pathways – Utility Business Models, Regulatory Innovation, Grid Integration and Transportation Electrification – and leads content development and execution for Regulatory Innovation. She brings to this role broad energy industry experience as a regulator, clean energy business association leader, utility executive, developer, consultant, and consumer advocate.

Previously, she was Executive Vice President of the Northeast Clean Energy Council (NECEC), Vice President, Regulatory Strategy and Policy at National Grid, Chair and Commissioner of the Massachusetts Department of Public Utilities, where she led electric industry restructuring, and an executive and expert consultant at Analysis Group and Lexecon. She also held senior staff roles at the Massachusetts Energy Office and New Hampshire Public Utilities Commission, served as policy director for a DC-based national independent power association, and began her career as a small hydro developer and low-income consumer advocate.

Janet is a nationally recognized expert on a wide range of energy policy issues with deep relationships across the industry. She earned a Master in Public Policy degree from the John F. Kennedy School of Government, Harvard University and a B.A., magna cum laude, from Williams College.

**Christopher Clack, PhD, BSc (Hons), FRAS, FEAS**  
**Chief Executive Officer**  
**Vibrant Clean Energy, LLC**

**Dr Christopher T M Clack, PhD, BSc (Hons), FRAS, FEAS**, is the CEO of Vibrant Clean Energy (VCE®), the company that he founded to push the forefront of system planning, optimization, and modeling to address the intelligent transformation of the electric and energy system to meet the needs of the 21<sup>st</sup> century. With a PhD in applied mathematics and plasma physics from the University of Sheffield, Dr Clack is an expert in mathematics, statistics and optimization. He combines this expertise with numerical weather prediction, electrical engineering and economics to study future energy systems. Dr Clack and his team at VCE® created and utilize the WIS:dom® optimization model to investigate various future energy systems that includes high penetration levels of renewables, electrification of end uses, new advanced and novel technologies, and climate change resilience.



**Mark McGranaghan**  
**Vice President**  
**Innovation**  
**Electric Power Research Institute**

**Mark McGranaghan** is Vice President of Innovation at the Electric Power Research Institute (EPRI). He leads the institute's Technology Innovation program, addressing diverse areas of research and thought leadership and extending across EPRI research sectors. He also leads the strategy and coordination of all areas of the institute's innovation internationally. Important areas of focus include coordinating government research, and executive oversight of new technology demonstrations and related challenges.

From 2003 to 2010, McGranaghan was EPRI Director of Research for Distribution and Smart Grid. Priorities included restructuring distribution research, coordinating smart grid research with government and industry, creating the smart grid demonstration initiative, and bolstering the research teams' technical capabilities.

Prior to joining EPRI, McGranaghan was Vice President at Electrotek Concepts (1998-2003), where he led new business development for power quality and power system studies, turning the organization into a world leader.

From 1978 to 1988, he served as a Manager at McGraw-Edison/Cooper Power in Canonsburg, Pennsylvania, leading studies for the utility industry and internal studies for the application of McGraw-Edison products (power transformers, circuit breakers, arresters, distribution switchgear, capacitors). He directed a wide range of power system studies.

McGranaghan earned a Bachelor of Science and a Master of Science in electrical engineering from the University of Toledo and an MBA from the University of Pittsburgh. He has taught seminars and workshops around the world and is very active in standards development and industry organizations such as IEEE, CIGRE, and IEC. He is a member of the National Institute of Standards and Technology Smart Grid Interoperability Panel Governing Board, and he is Vice-Chairman of the Conference & Exhibition on Electricity Distribution U.S. National Committee.

**Mark Dyson**  
**Principal**  
**Electricity Practice**  
**Rocky Mountain Institute**

**Mark Dyson** is a principal with the Electricity Practice at Rocky Mountain Institute, where he has worked since 2008 and currently leads RMI research and collaboration efforts around the roles that distributed energy resources can play in grid planning and investment. At RMI, Mark has led cutting-edge research projects on the value that renewable energy, demand flexibility, and storage offer customers and the grid, and has advised clients including large utilities, regulatory commissions, oil majors, and clean-tech companies on distributed energy topics.

Mark's work focuses on several topics related to the changing nature of the electricity grid. Mark has contributed to RMI's work on new approaches to grid resource planning that better account for the expanding role of renewable energy and distributed energy resources. Mark also helped lead RMI's analysis of the potential of demand flexibility to reduce grid emissions and costs, and has engaged with several industry partners to launch new business models that take advantage of that potential.

**Background**

Prior to joining RMI, Mark worked at Ascend Analytics, helping deploy software for grid dispatch optimization and financial modeling to several large energy companies. Mark has also held research positions at the National Renewable Energy Laboratory working on improving regional electricity system planning models, and Lawrence Berkeley National Laboratory working on analysis of the potential for aggregated demand response programs to provide ancillary services.

**Education**

Mark received his bachelor's degree in computer science from Carleton College, and his master's degree in the Energy & Resources Group at the University of California, Berkeley. Mark has also worked in research roles at Lawrence Berkeley National Lab and the National Renewable Energy Lab, and for a half-dozen utility clients in several large consulting engagements.

M.Sc., Energy & Resources Group, University of California – Berkeley  
BA, Computer Science and Geology, Carleton College  
National Science Foundation Graduate Research Fellowship – Energy Engineering

**Caitlin Murphy**  
**Senior Energy Policy Analyst**  
**National Renewable Energy Laboratory (NREL)**

**Caitlin Murphy** is a senior energy policy analyst in the Economics and Forecasting Group within the Strategic Energy Analysis Center. Her expertise lies in evaluating how energy policies and technology innovation impact the evolution, operation, and environmental impacts of the U.S. energy system through quantitative analysis methods.

**Research Interests**

Evaluating the system and environmental impacts of federal- and state-level energy policies

Quantifying the resilience value of renewable energy

Assessing the impacts of technology innovation on the U.S. electricity sector

Education

Ph.D., Geophysics, California Institute of Technology, Pasadena, California, 2012

B.S., Earth, Atmospheric, and Planetary Sciences, Massachusetts Institute of Technology, Cambridge, Massachusetts, 2007

**Prior Work Experience**

Science and Technology Policy Fellow, American Association for the Advancement of Science, Washington, D.C. (2014–2017)

Postdoctoral Research Fellow, Carnegie Institution for Science, Washington, D.C. (2012–2014)

Graduate Research and Teaching Assistant, California Institute of Technology, Pasadena, CA (2008–2012)

**Featured Work**

[\*Energy CO2 Emissions Impacts of Clean Energy Technology Innovation and Policy\*](#), U.S.

Department of Energy Technical Report (2017)

[\*Environment Baseline, Volume 1: Greenhouse Gas Emissions from the U.S. Power Sector\*](#), U.S.

Department of Energy Technical Report (2016)





SSS No. BOD 2021-005
-------------------------

## BOARD AGENDA ITEM STAFFING SUMMARY SHEET

Committee Meeting & Date Strategic Development 2021
Board Meeting Date N/A

TO				TO						
1.	Gary King			6.						
2.	Frankie McDermott			7.						
3.	Paul Lau			8.						
4.				9.	<b>Legal</b>					
5.				10.	<b>CEO &amp; General Manager</b>					
<b>Consent Calendar</b>		<b>Yes</b>	<input checked="" type="checkbox"/>	<b>No</b> <i>If no, schedule a dry run presentation.</i>		<b>Budgeted</b>	<b>Yes</b>	<b>No</b> <i>(If no, explain in Cost/Budgeted section.)</i>		
FROM (IPR) Gregg Fishman / Donna Lofton				DEPARTMENT Board Office				MAIL STOP B307	EXT. 5079	DATE SENT 12/22/20

**NARRATIVE:**

**Requested Action:** Provide a summary of committee direction from the Board to Staff.

**Summary:** During a Board discussion at the January 2017 Policy Committee, the Board requested having an on-going opportunity to do a wrap up period at the end of each committee meeting to summarize various Board member suggestions and requests that were made at the meeting in an effort to make clear the will of the Board. The Committee Chair will summarize Board member requests that come out of the committee presentations for this meeting.

**Board Policy:** GP-4 Agenda Planning states the Board will focus on the results the Board wants the organization to achieve.  
*(Number & Title)*

**Benefits:** Having an agenda opportunity to summarize the Board's requests and suggestions that arise during the committee meeting will help clarify what the will of the Board.

**Cost/Budgeted:** N/A

**Alternatives:** Not summarize the Board's requests at this meeting.

**Affected Parties:** Board of Directors and Executive Staff

**Coordination:** Donna Lofton, Special Assistant to the Board

**Presenter:** Gregg Fishman, Strategic Development Committee Chair

**Additional Links:**

SUBJECT Summary of Committee Direction	ITEM NO. <i>(FOR LEGAL USE ONLY)</i>
---	--------------------------------------

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.