



October 7-9, 2019
Benaroya Hall
Seattle, WA

Grid FWD 2019

Accelerating the path
for solutions that
transform the regional
energy system

Presented by:

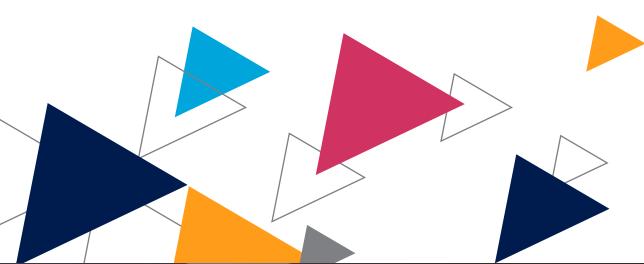


Host Utility:



Register at bit.ly/GridFWD2019

#GridFWD www.gridfwd.com



Come to GridFWD 2019 and Help Accelerate Grid Innovation

GridFWD 2019 is the premier event for accelerating the path for solutions that transform the regional energy system. Join us for two full days of keynotes, discussions and collaboration organized around the top priorities of our electric grid - plus a full day of training and tours to see first-hand new technology and deployments for grid modernization.

This year's event will build on the success of the inaugural GridFWD 2018 in Vancouver, B.C. at which utilities from both the US and Canada, solution providers, regulatory agencies, governments and other stakeholders came together to plot the best paths to progress the region's energy systems.

**Over a dozen CEOs from major utilities will be presenting.
Shouldn't you be there?**

Who Will Attend GridFWD 2019

- **Utility executives, leaders and employees**—learn and share new sources of value and best practices for advanced grid modernization solutions that deliver more flexibility, resiliency and sustainable energy systems.
- **Executive and technical leaders of solution providers**—collaborate with key power sector stakeholders to learn about deploying new technologies and processes that modernize distribution systems in the region, as well as innovative solutions for transmission, microgrids and more.
- **Regulators and government officers**—explore the latest ideas, opportunities, deployments and best practices that point the way to economic, equitable and efficient power systems and workforce development in the new energy age.
- **NGOs and advocates**—build the knowledge base and relationships to influence new programs that promote progress on regional energy systems.

High Quality Content

Our attendees confirmed the value of GridFWD 2018 through an exit survey:

88%

of respondents said they **learned information** about energy solutions directly applicable to their jobs.

100%

of respondents said the Summit was a **good use of their time**.

97%

of respondents said they met people who can help them **better achieve their job responsibilities**.



"Taking charge of the opportunities and challenges in today's electrical grid requires the commitment and participation of organizations across the region. GridFWD is unique in its collaborative model that focuses on inclusiveness and shared outcomes. We're very excited about the enthusiasm from our sponsors, speakers, Grid Forward members, and the group that will be with us in Seattle. Join us!"

– BRYCE YONKER, EXECUTIVE DIRECTOR AND CEO, GRID FORWARD



**MONDAY
OCTOBER**

7



Workshops

Engaging and Empowering Consumers

Smart Energy Consumer Collaborative

1:00-5:00pm

This workshop will help attendees understand how to engage and empower consumers around smart energy technology and programs. Led by the Smart Energy Consumer Collaborative (SECC), this workshop will highlight research findings for programs and services that support consumer wants and needs. We will also share information on what has worked in the field, as well as discuss concerns and barriers to consumer engagement. The agenda includes:

- Consumer Engagement Strategies – recent research findings
- Data Analytics for Consumer Benefit - Three such programs in the field
- Successful AMI Deployments: Voices of Experience
- Consumer Voices: Deepening the Relationship - patterns that matter

OpenADR Introduction and DER Applications

2:30-4:30pm

The OpenADR Alliance will be holding a workshop to introduce the OpenADR standard technology specification for connecting distributed energy resources to the utility grid. The presentation will include an introduction to the basics of the OpenADR technical protocols, utility case studies, and a look at how the spec is being extended to particular use cases such as renewables generation, storage, and electric vehicle infrastructure.

SIGN UP FOR WORKSHOPS WHEN YOU REGISTER FOR GRIDFWD 2019

Tours

TOUR OPTION #1:

Amazon AI and Technology Tours

1:00-5:00pm

We'll meet at the Amazon Spheres, and then proceed to the Day 1 building to be taken deep into some of the cutting-edge technology that is helping Amazon redefine markets. You'll meet with the company's Power Procurement team to learn about Criteria for Amazon Data Center Siting. You'll also hear first-hand about Alexa Voice Services for Consumer Engagement, Computing and Machine Learning at the Edge, and Training an AI to Drive. The tour ends at the Amazon GO store.

TOUR OPTION #2 – STOP 1:

Denny Substation, Seattle City Light

1:00-3:00pm

Seattle City Light has recently been upgrading Denny Substation. The project has a number of components critical to the operation of the utility's grid and the resiliency of Seattle's energy system. Join us for a tour of this modern, urban substation to see how the completed effort has come together. See more on the project [here](#).

TOUR OPTION #2 – STOP 2:

Washington Clean Energy Testbeds, University of Washington

3:00-5:00pm

On the tour, we will see recent developments in flexible solar materials and exciting battery technologies. UW experts will also discuss the Testbeds' advanced capabilities for developing and demonstrating the most effective ways to integrate renewable energy innovations into the electric grid and smaller systems, including buildings and vehicles. More on the Testbeds can be found [here](#).

SIGN UP FOR WORKSHOPS WHEN YOU REGISTER FOR GRIDFWD 2019

Register for GridFWD2019

TUESDAY
OCTOBER
8

Agenda at a Glance

For a detailed description of each session, see pages 6-10.



| TIME | NORDSTROM RECITAL HALL | FOUNDERS ROOM |
|----------------------|--|--|
| 7:30-8:30am | Registration & Light Breakfast (Lobby) | |
| 8:30-9:00am | Welcome: The Path to Washington's 100% Re Commitment | |
| 9:00-9:45am | Featured Session: Aligning Modernization Efforts to Overall Utility Strategy | |
| 9:45-10:25am | Featured Session: Capturing the Promise of Electrification | Who Will Actually Build the Real DERMS? <i>Modernization Best Practices</i> |
| 10:25-10:45am | Break (Lobby) | |
| 10:45-11:35am | Where Will Transformation Happen? <i>Modernization Best Practices</i> | Journey to Putting Modernization into Practice <i>Modernization Best Practices</i> |
| 11:40-12:30pm | On The Ground - How to Shape the Right Team and Skills <i>Culture of Innovation</i> | Oh DER! Utilities and DER Providers Talk <i>Modernization Best Practices</i> |
| 12:30-1:30pm | Lunch (Lobby) | |
| 1:30-2:20pm | Grid Modernization and the Platform Economy <i>Markets & Models</i> | Capital Efficient, Capacity Sufficient <i>Markets & Models</i> |
| 2:25-3:15pm | Embracing the Voice of the Customer <i>Culture of Innovation</i> | Solution Matchmaker: What's the Celebrity DER Coupling? <i>Modernization Best Practices</i> |
| 2:25-3:30pm | Speed Pitches (Lobby) | |
| 3:15-3:30pm | Break (Lobby) | |
| 3:30-4:20pm | Pathways for Deep Decarbonization <i>Modernization Best Practices</i> | New Infrastructure Investment Landscape <i>Markets & Models</i> |
| 3:30-3:55pm | Keynote: Digital Strategy and Innovation Applied (Lobby) | |
| 3:55-4:20pm | Keynote: Lessons from Alberta (Lobby) | |
| 4:25-5:05pm | Speed Pitches (Lobby) | |
| 4:25-5:05pm | Expanding Early Success into Full Deployment <i>Culture of Innovation</i> | The Role of Digitization in the Decarbonized Grid <i>Markets & Models</i> |
| 5:10-6:10pm | Deep Dive Sessions (Lobby) | |
| 5:10-5:30pm | Keynote: Avoiding Death by Pilot | |
| 5:30-5:50pm | Keynote: Positive Energy Buildings Powering the Grid | |
| 5:50-6:10pm | Keynote: Google Deep Mind and AI for Deep Decarbonization | |
| 6:10-7:30pm | GridFWD 2019 Reception (Lobby) | |



GridFWD 2019 Reception

(Lobby)

Grid FWD
2019

#GridFWD

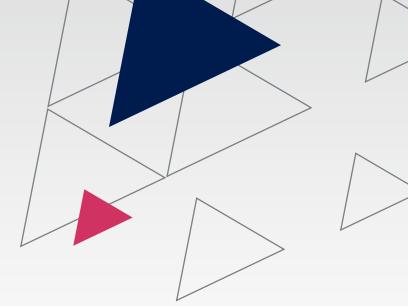


WEDNESDAY
OCTOBER

9

Agenda at a Glance

For a detailed description of each session, see pages 6-10.



| TIME | NORDSTROM RECITAL HALL | FOUNDERS ROOM |
|----------------------|---|--|
| 7:30-8:30am | | Breakfast (Lobby) |
| 8:45-9:30am | Featured Session: Deep Decarbonization and the Role of Modernization | |
| 9:30-10:15am | Featured Session: Models that Embrace the Best Solutions | Cybersecurity: How Can We Be Ready? And Ready For What? <i>Modernization Best Practices</i> |
| 10:15-10:40am | | Break (Lobby) |
| 10:40-11:30am | Getting Started in the EIM: Updates from the Field <i>Markets & Models</i> | Where to Get a Toehold in Resilience <i>Modernization Best Practices</i> |
| 11:35-12:20pm | Creating a Culture that Embraces Innovation <i>Culture of Innovation</i> | The Dilemma and Promise of Telecom for Grid Modernization <i>Modernization Best Practices</i> |
| 12:20-1:15pm | | Lunch w/ Speed Pitch Finals (Lobby) |
| 1:15-2:00pm | How Renewable Energy Commitments are Shaping Markets <i>Markets & Models</i> | Featured Session: Lessons from Public Power on Deep Modernization |
| 2:00-2:45pm | Regulation & Innovation <i>Markets & Models</i> | Getting to Gigawatts of DER <i>Markets & Models</i> |
| 2:45-3:15pm | Closing Remarks: Creating the Business Case | |

Make the Most of Your Time at GridFWD 2019

Registration & Light Breakfast

Registration opens at 7:30am in the Benaroya Hall atrium. Light breakfast will be provided both days in the morning starting before the first session.

Networking Reception

After the first full day of plenaries and sessions on Tuesday October 8, join our speakers and all fellow attendees for a hosted bar, heavy hors d'oeuvres, networking and music in the beautiful Benaroya Hall lobby.

Wi-Fi

GridFWD attendees will enjoy complimentary wifi; details provided at registration.

Social Media

Please share your insights and experience at GridFWD 2019 using the hashtag #GridFWD.



TUESDAY OCTOBER 8

Comprehensive Agenda

TIME NORDSTROM RECITAL HALL

FOUNDERS ROOM

7:30am Registration & Light Breakfast (Lobby)

8:30am Welcome: The Path to Washington's 100% Clean Energy Commitment



Sen. Reuven Carlyle,
Environment, Energy &
Technology Committee
Chairman, State of
Washington



Rep. Joe Fitzgibbon,
Environment & Energy
Committee chairman,
State of Washington

9:00am Aligning Modernization Efforts to Overall Utility Strategy



John Haarlow,
CEO and GM,
Snohomish
County PUD



Jackie Flowers,
Director,
Tacoma Public
Utilities



Debra Smith,
GM & CEO,
Seattle City
Light



Bryce Yonker,
Executive
Director & CEO,
Grid Forward

9:45am Capturing the Promise of Electrification



Emeka Anyanwu,
Energy Innovation
& Resources
Officer, Seattle
City Light



John McFarland,
Vice President &
Chief Customer
Officer, Portland
General Electric



**Heather
Rosentrater,**
Vice President –
Energy Delivery,
Avista



Ashley Horvat,
Vice President
Partnerships,
Greenlots

Who Will Actually Build a Real DERMS?

Modernization Best Practices

Cut through the noise and find out what's real in this DRMS vs ADMS vendor face off. Find out if ADMS vendors can bridge the gap to consumer assets or if DRMS vendors bring the consumers to the table. Or maybe they can learn to work together...?

Moderator: **Rich Barone**, Director, DR,
Hawaiian Electric Company

Kyle Garton, Director of Product Development, AutoGrid

Sally Jacquemin, Sr. Director Distribution and
Smart Grid, OSI

10:15am Break (Lobby)

10:45am Where Will the Transformation Happen?
Perspectives From Wholesale, Transmission,
and Distribution

Modernization Best Practices

Where are breakthroughs most likely to move the needle on the energy transition? Will it happen at customer sites with DERs or will low-priced resources on the wholesale system save the day? This session will explore differing perspectives and talk about how different parts of the power system compete or complement each other.

Moderator: **Eita Kolo**, Research Manager,
Woods Mackenzie

Randy Berry, Vice President, Utilities, OSI

Stefan Bird, President & CEO, Pacific Power

Mark Dyson, Principal, Rocky Mountain Institute

Journey to Putting Modernization into Practice

Modernization Best Practices

Making complex solutions a reality that not only increase the capabilities of the grid but directly impact customers makes for quite a journey. Join this practical discussion that walks through phases of addressing real needs all the way through the pathways to successful completion. The conversation will touch on digital customer facing solutions as well as grid operational realities. One of the key elements will highlight how getting the right data to the right parties is critical.

Matt Schnugg, Vice President Data & Analytics, GE Power

Parvir Girn, Manager Customers & Energy Analytics, BC Hydro

Marie Wong, Manager Information Management &
Analytics, BC Hydro

TUESDAY OCTOBER 8

| | | |
|---------|--|---|
| TIME | NORDSTROM RECITAL HALL | FOUNDERS ROOM |
| 11:40am | On the Ground – How to Shape the Right Team and Skills <i>Culture of Innovation</i> | Oh DER!: Utilities and DER Providers Talk about How They Can Work Better Together <i>Modernization Best Practices</i> |
| | <p>It's a brave, new and ever-changing world for technology providers and utilities alike, one that demands a cross-pollination of skill sets instead of the traditional roles of "engineer" or "business analyst." As our industry embraces new challenges and ways of doing business, a different employee profile is emerging: a "jack or jill of all trades" innovator, ready with a growth mindset and an ability to adopt and integrate best practices from across a variety of industries. Moreover, executives are increasingly looking to incorporate new members into traditional teams: data scientists meet grid operators, cultural change agents are integrated with engineers. This revolution in skill sets and teaming has definite implications for higher education and R&D institutions, HR managers leading the training and hiring of employees, utility executives looking to integrate skills and teams, and those working in traditional "silo" roles.</p> <p>Moderator: Steve Wright, General Manager, Chelan PUD Scott Corwin, Executive Director, NWPPA Booga Gilbertson, Sr VP - Operations, Puget Sound Energy Debra Smith, GM & CEO, Seattle City Light</p> | <p>What can utilities learn from the best DER providers? What do DER providers need to know about how to successfully work with utilities? Explore the tussle between great program design for maximum customer satisfaction and maximizing the value of DER with experts from both sides of the table.</p> <p>Moderator: Devin Hampton, CEO, UtilityAPI Obadiah Bartholomy, Manager, Distributed Energy Strategy, SMUD Naren Yendluri, VP Engineering & Technology, Sunrun Don McPhail, Senior Product Marketing Manager, Uplight</p> |
| 12:30pm | Lunch (Lobby) | |
| 1:30pm | Grid Modernization and the Platform Economy <i>Markets & Models</i> | Capital Efficient, Capacity Sufficient <i>Markets & Models</i> |
| | <p>Utilities nationwide are investing in grid modernization technologies, creating new opportunities for advanced operations and, potentially, new markets. Especially with increasing adoption of distributed energy resources, grid modernization investments can also be used to establish new platforms for delivering services to consumers, procuring needed grid services from DERs and implementing innovative rate designs. What is the potential that these investments may fundamentally reshape market structures for utilities?</p> <p>Moderator: Chris Villarreal, President, PluggedIn Strategies Stina Brock, SVP North America, Electron Bryan Hannegan, President & CEO, Holy Cross Aram Shumavon, CEO, Kevala</p> | <p>The dynamics of the market are driving operators to make capital efficient solutions in their system from targeted DR and expanded EE to new pathways for integrating and optimizing DERs. But we all know that when demand spikes customers expect the lights to be on. How can we here in the West—where fossil-fuel based resources are coming offline quickly and variable renewables are the majority of resources coming on—be sure that we have sufficient capacity to meet the demands of customers?</p> <p>Moderator: Ed Burgess, Senior Director, Strategen Josh Keeling, Sr. Product Manager, LO3 Energy Jeff Ressler, CEO, Clean Power Research Debbie Reynolds, Energy Conservation, Assistant Director, Washington Utilities and Transportation Commission</p> |

TUESDAY OCTOBER 8

| | | |
|--------|---|---|
| TIME | NORDSTROM RECITAL HALL | FOUNDERS ROOM |
| 2:25pm | Embracing the Voice of the Customer <i>Culture of Innovation</i> | Solution Matchmaker: What's the Celebrity DER Coupling? <i>Modernization Best Practices</i> |
| | This session presents lessons for utilities from the Amazons of the world on how to really engage customers. We'll delve into customer analytics, discuss how to move away from static segmentation, and analyze how data can and should drive engagement tactics. Moderator: Tom Martin , Managing Director of Product Management, Trove Patty Durand , Executive Director, Smart Energy Consumer Collaborative David Fanous , Principal Manager, Southern California Edison Ralph Kappelhoff , Executive, Power & Utilities Solutions, Amazon John McFarland , VP & Chief Customer Officer, Portland General Electric | There's a lot of conversation about DER couplings these days, from solar + storage to integrated DSM. But what pairing is the DER power couple that will help drive real results? This panel will feature a diverse set of experts explaining why they think they're the best resource matchmaker. Moderator: Uzma Siddiqi , Engineering Supervisor, SCL Lincoln Bleveans , Assistant General Manager/Power Supply, Burbank Water and Power Andy Marshall , Practice Director, DER Management, Landis+Gyr Dan Patry , Senior Manager Regulatory Affairs and Market Dev., Oracle Jigar Shah , Manager, Distributed Energy & Grid Services, Electrify America |
| 2:25pm | Speed Pitches (Lobby) | |
| | Preliminary Round of Innovation Speed Pitches. Hear growth companies quick pitch on why their solutions are game-changing for the grid. Join in this session to vote your favorite into the finals. Selected companies: BlueDot Photonics, Energsoft, Grid 20/20, MGX Renewables, Pacific Volt, ResilientGrid, TROVE | |
| 3:15pm | Networking Break (Lobby) | |
| 3:30pm | Pathways for Deep Decarbonization <i>Modernization Best Practices</i> | The New Infrastructure Investment Landscape <i>Markets & Models</i> |
| | It's Renewables vs EVs vs DER vs beneficial electrification in a drag-down, no-holds-barred respectful conversation on how we're going to get to a deeply decarbonized energy economy. Listen to practitioners and experts from across the spectrum explain where they're finding success cutting carbon. Moderator: Scott Reeves , Senior Associate, Cadmus Tina Jayaweera , Sr Energy Analyst, NWPCC Suzanne Leta , Sr Manager Global Market Strategy, Sunpower Bruce Nilles , Managing Director, Rocky Mountain Institute Andrea Pratt , Climate & Transportation Policy Advisor, City of Seattle | New participation from consumers and distributed energy resources hold the potential to fundamentally change how utilities invest in the infrastructure they need for the future. How are regulators considering non-wires alternatives to traditional infrastructure investments? Do new opportunities exist for markets to provide grid services? Moderator: Marissa Hummon , Chief Technology Officer, Utilidata Kristina Kelly , Sr. Consultant and Non-Wires Lead, DNV GL Martin Milani , CEO, Sunverge Vidya Vankayala , Director of Grid Modernization, Powertech Labs Ryan Fedie , Engineering Manager, BPA |
| 3:30pm | Keynote: Digital Strategy and Innovation Applied (Lobby) |  Gabe Mika , Manager Digital Strategy & Innovation, Sempra Utilities |
| 3:55pm | Keynote: Lessons from Alberta (Lobby) |  Mark Kolesar , Chair, Alberta Utilities Commission |

TUESDAY OCTOBER 8

| TIME | NORDSTROM RECITAL HALL | FOUNDERS ROOM |
|--------|---|--|
| 4:25pm | | Speed Pitches, Utilities Edition (Lobby) Innovation speed pitches, utility edition. Hear from utilities in a rapid fire format on their exciting programs and initiatives. Presenters from HECO, ID Falls, Portland General Electric, and Tacoma Public Utilities. |
| 4:25pm | Expanding Early Success into Full Deployment <i>Culture of Innovation</i> The real challenge for designing and implementing pilot programs is not their successful execution but rather scaling them up to full deployment. This session delves into the life cycle of pilot programs, from identification and implementation to bringing those new ideas, programs and technology to scale, including barriers and best practices. We'll hear from players from around the region and beyond—about their pilot successes, failures and lessons learned. John Gibson , Chief R&D Engineer, Avista Carl Imhoff , Manager, Electricity Market Sector, PNNL Mark Duvall , Director of Energy Utilization, EPRI Michael Pesin , Deputy Asst. Secretary for Advanced Grid Research and Development, US Department of Energy | The Role of Digitization in the Decarbonized Grid <i>Markets & Models</i> What's possible with the advent of low-cost IoT sensors, real-time analytics, and intelligent algorithms? We will dive into how these will power the future of distributed energy systems and the situational awareness needed to maintain reliability and increase resilience for an increasingly decarbonized energy grid. Moderator: Mischa Steiner , CEO, Awesense Scott Harden , Global Lead Energy, OSI Digital (and Grid Forward Board Chair) Sage McLaughlin , Manager New Products, Duke Energy Matt Schnugg , Vice President Data & Analytics, GE Power |
| 5:10pm | | Deep Dive Sessions (Lobby) Join and contribute to in-depth conversations with industry experts and peers. |
| 5:10pm | Keynote: Avoiding Death by Pilot  Josh Gould , Utility of the Future, ConEd | Implementing Change Within an Organization Led by Patricia Bourne , CEO, EQUS |
| 5:30pm | Keynote: Positive Energy Buildings Powering the Grid  Andres Carvallo , CEO and Founder, CMG | How to Merge the Worlds of Distribution Operations & Planning Led by Mark Hormann , VP Business Development, Opus One; Jason Zyskowski , AGM Distribution & Engineering, SnoPUD |
| 5:50pm | Keynote: Google Deep Mind and AI for Deep Decarbonization  Juliet Rothenberg , DeepMind Product Manager, Google | Getting the Most from AMI Deployments Led by Joe Tellez , CTO, Tacoma Power and Dale Knutson , Director of Engineering & Services, Mason Co. PUD3 How to Make Interoperability Work Led by Chris Tumpach , President & CEO, Rainforest; Rolf Bienert , Technical Director, OpenADR; and Shuli Goodman , Executive Director, LF Energy, Linux Foundation |

6:10pm

GridFWD 2019 Reception (Lobby)

Join all the speakers, attendees, sponsors and others in the Benaroya Hall for drinks, heavy appetizers, music to decompress by day one, make some new connections and get those remaining questions answered.



WEDNESDAY OCTOBER 9

Comprehensive Agenda

TIME NORDSTROM RECITAL HALL

FOUNDERS ROOM

7:30am Breakfast (Lobby)

8:30am Opening Keynote Speaker: TBA

8:45am Deep Decarbonization and the Role of Modernization



Elta Kolo,
Research
Manager/Senior
Analyst, Wood
Mackenzie



Mary Kipp,
President,
Puget Sound
Energy



Maria Pope,
CEO, Portland
General Electric

9:30am Models that Embrace the Best Solutions



Abigail Anthony,
Commissioner,
Rhode Island PUC



Brien Sheahan,
Chairman and
CEO, Illinois
Commerce
Commission



Herman Trabish,
Contributing
Editor, Utility Dive



Danny Waggoner,
Director
Regulatory
Transformation,
AEE

Cybersecurity: How Can We Be Ready?
And Ready For What?

Modernization Best Practices

There is a difference between a stolen credit card and an entire grid taken down. But is the risk real? How prepared is the distributed energy world to tackle the inevitable?

Moderator: **Om Moolchandani**, Chief Information Security Officer, AutoGrid

Viral Trivedi, Sr. Director, Industrial Cybersecurity, GE

Rita Foster, Energy Sector Infrastructure Advisor, Idaho National Labs

Brian Foster, VP and GM, OT Security, Leo Cybersecurity

10:15am

Networking Break (Lobby)

10:40am Getting started in the EIM:
Updates from the Field

Markets & Models

The Energy Imbalance Market (EIM) has been moving forward for several years, with recent developments related to the feasibility of day-ahead markets, relevant decisions from FERC and updates from governing bodies in the region. What is the future of the EIM in the western states? How does this enable or affect other market development efforts?

Moderator: **Carl Linvill**, Principal, Regulatory Assistance Project

Mark Holman, Managing Director, Power, Powerex

Therese Hampton, Executive Director, Public Generating Pool

Steve Kerns, Director of Grid Modernization, BPA

Mark Rothleider, VP Market Quality and Renewable Integration, CallSO

Where to Get a Toe Hold in Resilience:
DA or DER? Customer or Grid? Microgrids
or Minigrids?

Modernization Best Practices

We are facing unprecedented loss of base-load and flexible capacity resources in WECC at a time when we are adding ever more intermittent resources. Will this lead to crippling shortages and brownouts? Or can we leverage DER and the bulk markets in innovative ways to create the flexibility and resiliency we need?

Moderator: **Rebecca Smith**, Sr Policy Analyst, RE Markets, OR Dept of Energy

Will Rambo, Business Development Director, Power Engineers

Rajit Gadh, PhD, Professor & Director SMERC, UCLA

Kate Hawley, Associate Director, TRC

WEDNESDAY OCTOBER 9

TIME NORDSTROM RECITAL HALL

11:35am Creating a Culture that Embraces Innovation

Culture of Innovation

Utilities are used to changing technologies and making improvements to the grid, but now they are challenged to change the way they think about innovation—leveraging best practices not just from other utilities but from industries like Tech and Design Thinking to create a new, innovative environment. To go along with this new environment, employees are being challenged to no longer just be the deep technical Subject Matter Experts, but to be able to flex across a number of topic areas and engage across many parts of the utility in ways they haven't before.

Moderator: **Alison Silverstein**, Alison Silverstein Consulting

Larry Bekkedahl, VP – Transmission & Distribution, Portland General Electric

Jeff Cook, VP Transmission Planning and Asset Management, BPA

Andrew Dillon, Senior Principal, West Monroe Partners, Energy & Utilities Practice

FOUNDERS ROOM

The Dilemma and Promise of Telecom for Grid Modernization

Modernization Best Practices

High bandwidth, secure data pathways are critical for the rollout of sensors, automation, and other smart devices on the modern grid. To increase reliability and resilience, some utilities are making significant capital investments in building their own private communication networks, while others are choosing to work with traditional service providers to lease or use public fiber and wireless infrastructure. Come explore the options, costs, and tradeoffs facing utilities as they grapple with the increasing need for communications capability.

Jenny Reitmeier, Manager, Networks, Integration & Automation, Burns & McDonnell

Bryan Hobson, Engineering & Modernization Leader, Idaho Power

Macky McCleary, Partner, Innogy Consulting

Callan Kirschner, Director of Energy and Utility Sales, Ericsson

12:20pm

Lunch w/ Speed Pitch Finals (Lobby)

Innovation Speed Pitches Finale. Over lunch we'll hear from the final companies selected from earlier in the event by votes from attendees and scoring from expert judges. You get to help decide who goes onto to be the GridFWD Innovation Pitch Champion.

1:15pm

How Renewable Energy Commitments are Shaping Markets

Markets & Models

Many corporations are pursuing commitments to purchase clean energy, leading them - in some cases - to pursue direct purchases or negotiate new agreements with the utilities serving them. At the same time, many utilities are incorporating commitments to clean energy in their long-term resources planning. Are these commitments reshaping markets energy markets in the western states? Or, will the falling costs of renewables provide new opportunities for utilities?

Moderator: **Elizabeth Willmott**, Carbon Program Lead, Microsoft

Eileen Quigley, Executive Director, Clean Energy Transition Institute

Vern Porter, Vice President, T&D Engineering and Construction and Chief Safety Officer, Idaho Power

Dave Ulozas, Senior Vice President, Renewable Energy and Origination, NV Energy

Lessons from Public Power on Deep Modernization



Lincoln Bleveans, AGM, Burbank Water and Power



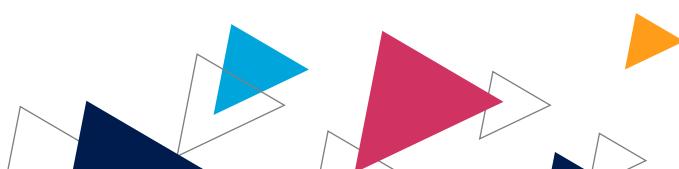
Mark Johnson, GM, Flathead Electric



Anita Decker, Former Executive Director, NWPPA



Wade Troxell, Mayor, City of Ft Collins



WEDNESDAY OCTOBER 9

TIME NORDSTROM RECITAL HALL

2:00pm Regulation & Innovation

Markets & Models

Markets are continually evolving, changing the options customers have and the ways that utilities and other companies meet their needs. It has always been true that energy markets are products of intentional design, but are the design objectives changing? Should they? What are the best new strategies for encouraging innovation while maintaining familiarity, trust and reliability?

Moderator: **Matthew McDonnell**, Associate Director, Navigant

John Gibson, Chief R&D Engineer, Avista

Shawn Marshall, Executive Director, LEAN Energy

James Sprinz, Head, Decentralized Energy, Bloomberg NEF

Kelly Crandall, Director Regulatory Affairs, Uplight

2:45pm Closing Remarks: Creating the Business Case



Abigail Anthony,
Commissioner,
Rhode Island
PUC



Erik Gilbert,
Managing
Director,
Navigant



**Bradley
Williams**,
VP Industry
Strategy, Oracle



Bryce Yonker,
Executive
Director &
CEO, Grid
Forward

FOUNDERS ROOM

Getting to Gigawatts of DER

Markets & Models

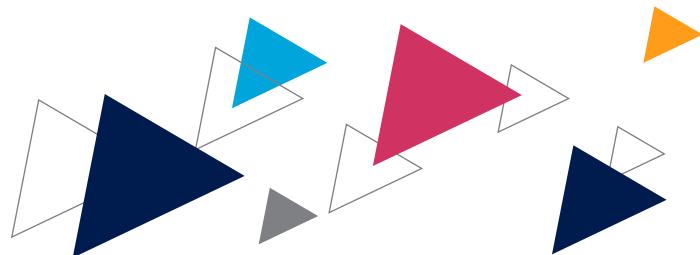
DER is not growing fast enough in WECC to meet emissions targets. And the DER we are seeing is not firm or reliable. The neck of the duck is getting longer. How can we procure, firm, shape, backstop and deliver DER at scale (GW scale) in WECC? This panel brings together a collection of visionaries.

Moderator: **Graham Horn**, Vice President, Business Development, Enbala

Mark Dyson, Principle, Rocky Mountain Institute

Steve Widergren, Principal Engineer, PNNL

Louis Ting, Director of Power Planning & Engineering, LADWP



Register today at bit.ly/GridFWD2019

Early-bird rates are available until August 1, 2019

Thank You to All the Organizations Who Support GridFWD 2019



Thank You to our GridFWD 2019 Sponsors

LEAD SPONSOR



[Seattle City Light](#) is the 10th largest public electric utility in the United States. It has some of the lowest cost customer rates of any urban utility, providing reliable, renewable and environmentally responsible power to about 750,000 Seattle area residents. City Light has been greenhouse gas neutral since 2005, the first electric utility in the nation to achieve that distinction.

PREMIER SPONSORS



As the industry's first enterprise energy analytics and customer engagement platform provider, [Bidgely](#)'s utility artificial intelligence (AI) solutions transform utility meter data into business intelligence for optimizing shareholder value, personalizing the customer experience and modernizing the grid. Bidgely's mission to be a trusted AI partner helps utilities solve daily challenges related to home energy management, customer satisfaction, operational efficiency and new revenue models. With roots in Silicon Valley, the company has invested \$30M in R&D, retains 30+ data scientists and brings a passion for AI to utilities serving residential customers around the world.



[Burns & McDonnell](#) is a family of companies made up of 7,000 engineers, architects, construction professionals, scientists, consultants and entrepreneurs with offices across the country and throughout the world. Ranked No. 1 in Power and Transmission and Distribution by Engineering News-Record, we strive to create amazing success for our clients every day through innovative solutions including for utilities and power providers.



[Cadmus](#) delivers cross-disciplinary services and solutions that help clients achieve their goals while also creating social and economic value that improves people's lives. Their team of Energy Services Advisers provides expertise in energy policy, energy efficiency, demand response, renewables and distributed generation, potential studies, resource planning, finance, greenhouse gas emissions, smart grid technology, and sustainability.



[Clean Power Research](#) creates software that's powering intelligent DER decisions. Leading utilities use our solutions to capture DER data and build insightful analytics that help them thrive in the face of market changes. See how you can improve distribution system planning with integrated interconnection processes, customer-level DER adoption forecasting and behind-the-meter PV production.



[DNV-GL](#) is a global quality assurance and risk management company. Driven by our purpose of safeguarding life, property and the environment, we enable our customers to advance the safety and sustainability of their business. We provide classification, technical assurance, software and independent expert advisory services to the maritime, oil & gas, power and renewables industries. We also provide certification, supply chain and data management services to customers across a wide range of industries. Operating in more than 100 countries, our experts are dedicated to helping customers make the world safer, smarter and greener.

DNV GL delivers world-renowned testing and advisory services to the energy value chain including renewables and energy management. Our expertise spans onshore and offshore wind power, solar, conventional generation, transmission and distribution, smart grids, and sustainable energy use, as well as energy markets and regulations. Our experts support customers around the globe in delivering a safe, reliable, efficient, and sustainable energy supply.



[ecobee](#) empowers people to transform their lives, homes, communities and planet through innovative technologies that are accessible and affordable. The Company introduced the world's first smart Wi-Fi thermostat to help millions of people save energy and money without compromising on comfort. ecobee has since continued to expand its suite of technologies and services to deliver a state-of-the-art connected home experience to customers across North America. ecobee products combine the Company's pioneering sensor technology with the power of voice, machine learning and artificial intelligence to help customers control their home's comfort and energy consumption while effortlessly connecting them to the online streaming and service platforms they love.



[Enbala](#) exists for one reason: to create an energy future that's sustainable and balanced. Enbala does that by harnessing the power of distributed energy. Through the better management of distributed energy resources enabled by Enbala, reliance on fossil-fuel-based generators is minimized, greenhouse gasses are reduced, capital asset construction costs are deferred, the problems of renewable intermittency are solved, grid efficiency and reliability are improved, new revenue generation opportunities are created, and stronger utility-consumer partnerships are forged.



[GE Power](#) is a world energy leader providing equipment, solutions and services across the energy value chain from generation to consumption. Operating in more than 180 countries, our technology produces a third of the world's electricity, equips 90 percent of power transmission utilities worldwide, and our software manages more than forty percent of the world's energy. Through relentless innovation and continuous partnership with our customers, we are developing the energy technologies of the future and improving the power networks we depend on today. For more information please visit [www.ge.com/power](#), and follow GE Power on Twitter and on LinkedIn.

You can visit with many of these sponsors at their tables in the ballroom lobby area.



[Honeywell](#) provides utilities with industry-leading technologies and strategies from automated demand response and energy solutions to utility customer communications. Working with utility clients across the globe, Honeywell Smart Energy delivers innovative programs and solutions to help utilities exceed their demand management goals.



[Landis+Gyr](#) is the leading global provider of integrated energy management solutions for the utility sector. Offering one of the broadest portfolios of products and services to address complex industry challenges, the company delivers comprehensive solutions for the foundation of a smarter grid, including smart metering, distribution network sensing and automation tools, load control and analytics. Landis+Gyr operates in over 30 countries across five continents. With sales of approximately USD 1.7 billion, the company employs c. 6,000 people with the sole mission of helping the world manage energy better.



[Navigant's](#) Energy consultants collaborate with utilities and energy companies, investors and large corporations, and governments and NGOs to help them thrive in the rapidly changing energy environment. Navigant offers a custom approach to provide forward-thinking ideas and solutions in the critical, complex, and ever-evolving energy industry. Our specialized experience and advanced analytic approach to problem solving allows us to provide breakthrough insights for clients.



Since its founding in 2011, [Opus One Solutions](#) has helped utility partners gain visibility into electricity distribution systems, and better manage DERs. Their GridOS solution is successfully deployed by utility partners across Canada and the U.S.A. From integrated planning to real-time distribution system state estimation using physics-based modeling and a limited number of data points, GridOS uses the Grid's DNA to perform advanced distributed energy analytics and to execute constraint management actions, while optimizing available grid resources and maximizing capacity.



[Oracle Utilities](#) delivers proven software applications – on premise or in the cloud -- that deliver reliability and agility, so that electric, gas and water utilities worldwide can enhance customer experience, increase operational efficiency and achieve performance excellence. Our customer care and billing, network management, work and asset, mobile workforce, meter data management, energy efficiency and analytics solutions integrate with Oracle's leading enterprise applications, BI tools, middleware, database technologies, servers and storage. We are the largest cloud provider in the industry today, serving the entire utility value chain from the grid to the meter to the end user. Our software enables customers to adapt more nimbly to market deregulation, meet ever-evolving customer demands, and deliver on environmental conservation commitments. Find out how we can become your trusted advisor – visit www.oracle.com/utilities.



[Open Systems International](#)—headquartered in Minneapolis, Minnesota—provides open, state-of-the-art and high-performance automation solutions to utilities worldwide. These solutions include Supervisory Control and Data Acquisition systems, Network Management Systems, Energy Management Systems, Distribution Management Systems, Outage Management Systems, Generation Management Systems, Substation Automation Systems, Data Warehousing Analytics, Distributed Energy Resource Management Systems, Situational Awareness Systems, Pipeline Network Management systems, individual software and hardware products, and Smart Grid solutions for utility operations. OSI's solutions empower its users to meet their operational challenges, day-in and day-out, with unsurpassed reliability and a minimal cost of technology ownership and maintenance.



[Portland General Electric](#) is a fully-integrated energy company serving 872,000 customers in 51 cities. For more than 125 years, PGE has been delivering safe, reliable, responsibly generated energy to Oregonians. With 2,700 employees across the state, PGE is committed to building a cleaner, more efficient energy future. Together with its customers, PGE has the number one voluntary renewable energy program in the U.S.



[POWER Engineers, Inc.](#) is a global consulting engineering firm specializing in integrated solutions for power delivery. As innovators, they encourage new ideas and fresh approaches. As trusted advisors, they help clients realize unique grid modernization solutions. These traits, combined with deep technical skill integrating renewable energy sources into electrical systems, allow POWER to deliver solutions that meet clients' requirements for electric power resiliency and sustainability. With over 2,500 employees in 45 offices across the U.S., POWER provides a one-stop shop for engineering in today's rapidly changing market.



[Sensus](#), a Xylem brand, helps public service providers, including utilities, cities, industrial complexes and campuses, do more with their infrastructure to improve quality of life in their communities. Sensus enables customers to reach farther by responding to evolving business needs with innovation in sensing and communications technologies, data analytics and services.



[Uplight](#) is an end-to-end technology suite for energy users and providers that unites all the key solutions required to deliver, manage and optimize the customer energy experience. Uplight brings together the leaders in utility-branded marketplaces, demand side management, analytics, home energy management, and utility personalization to form a complete customer energy experience system that's proven at enterprise scale, yet nimble enough to deliver innovative solutions quickly. Uplight already partners with more than 75 global utilities serving over 100 million homes and businesses, and is solely dedicated to creating a more sustainable and customer-centric energy experience.



The [West Monroe Energy & Utilities](#) team is committed to moving our industry forward. They obsess about meeting business objectives and managing by metrics. They understand what success looks like and how to make it repeatable. Equipped with an uncommon blend of business acumen & deep technological expertise, they partner with you, give you the tools, and work by your side on a journey to transform our industry. West Monroe does this with an abiding commitment to making their clients and our nation stronger.

You can visit with many of these sponsors at their tables in the ballroom lobby area.



SUPPORTING SPONSORS



[AutoGrid](#)'s DER flexibility management software allows utilities, electricity retailers, energy service providers and owners of large asset portfolios deliver clean, affordable and reliable energy by managing distributed energy resources in real time and at scale. AutoGrid's integrated suite of applications is built on a single platform and leverages its patented Predictive Controls™ technology. The company's flagship applications provide out of the box DRMS, DERMS, VPP and Energy Storage Management solutions for residential, commercial and industrial utility customers.



[Avista](#) is an energy company involved in the production, transmission and distribution of energy as well as other energy-related businesses. Avista Utilities is the operating division that provides electric service to more than 600,000 electric and natural gas customers. Its service territory covers 30,000 square miles in eastern Washington, northern Idaho and parts of southern and eastern Oregon. Alaska Energy and Resources Company, an Avista subsidiary, provides retail electric service in the city and borough of Juneau through its subsidiary Alaska Electric Light and Power Company.



CLEAResult®

[awesense](#) works with electric utilities to improve the reliability, reliance and efficiency of their grid through our cloud-based analytics platform, True Geospatial Intelligence (TGI). TGI allows utilities to modernize their grid by harnessing energy monitoring, geospatial data, SCADA, IoT, and analytics. Our goal is to transform the planet into one that is fueled by modern, reliable and clean energy.

[CLEAResult](#) is the largest provider of energy efficiency and demand response solutions in North America. Through proven demand side management strategies tailored to clients' unique needs, CLEAResult combines the strength of our energy experts and innovative technology to help over 250 utilities change the way people use energy. CLEAResult is headquartered in Austin, Texas, and has over 2,500 employees in more than 60 cities across the U.S. and Canada. For more information, visit [clearesult.com](#).



[Community Energy Labs](#) is an innovative grid modernization project developer for a carbon free, affordable and reliable energy future. Communities hold the key to a scalable solution to energy flexibility. They are an ideal living laboratory for commercializable grid modernization technologies and have the appropriate access and motivation to keep revenue generated from the use of such technologies local. Our stakeholder alignment model bridges the needs of: technology providers, utilities and communities. Our project design and technical assistance services provide the necessary frameworks for financing and executing complex and cutting edge projects with community buy-in and support.



[Google Nest](#) products work together to help you stay informed, feel more comfortable and safe, keep an eye on home when you're away, and connect to friends and family and with over 3,500 connected home brands that now work with the Google Assistant, you'll have endless possibilities for creating a more helpful home.

[Itron](#) enables utilities and cities to safely, securely and reliably deliver critical infrastructure services to communities in more than 100 countries. Our portfolio of smart networks, software, services, meters and sensors helps our customers better manage electricity, gas and water resources for the people they serve. By working with our customers to ensure their success, we help improve the quality of life, ensure the safety and promote the well-being of millions of people around the globe. Itron is dedicated to creating a more resourceful world.



[Opinion Dynamics](#): Emerging Questions. Insightful Answers. Opinion Dynamics is a leading consulting firm specializing in energy efficiency, renewable and demand response evaluation research. Based in Waltham, MA with offices in Oregon and California and throughout the country, we work to advance knowledge to address your emerging energy issues through sound and insightful research. Our knowledgeable staff can assist with program integration, evaluation, and customer engagement strategies for grid edge programs such as electric vehicles, batteries, and smart thermostat offerings as well as pricing and demand response programs.



[PNNL](#) advances the frontiers of knowledge, taking on some of the world's greatest science and technology challenges. Distinctive strengths in chemistry, earth sciences, and data analytics are the heart of our science mission, laying a foundation for innovations that improve America's energy resiliency and enhance our national security. We are a national lab with Pacific Northwest roots and global reach. Whether our researchers are unlocking the mysteries of Earth's climate, helping modernize the U.S. electric power grid, or safeguarding ports around the world from nuclear smuggling, we accept great challenges for one purpose: to create a world that is safer, cleaner, more prosperous, and more secure.



[Snohomish County PUD](#) is the second largest publicly owned utility in Washington. We serve over 350,000 electric customers and about 21,000 water customers. Our service territory covers over 2,200 square miles, including all of Snohomish County and Camano Island.



[TRC](#). Advancing how the world gets made. Groundbreaking yet grounded business consulting and applied technology that help our clients design, power, connect and fuel the world forward. TRC provides advanced energy services for integrative across-the-meter management – through energy efficiency, demand response, and distributed energy resources. We partner with utilities, agencies and businesses to make energy visions actionable, from initial strategy through technical design and implementation. Our real-world experience and forward-looking perspective are just a few reasons clients continue to partner with us long after the first engagement.



[TROVE](#) is a leading provider of predictive-analytics software and services, bringing utility clients the technology and expertise needed to make their data useful now – making their investments more productive, operations more efficient, marketing initiatives more effective, and customer relationships more profitable. Whether you have an advanced data-science function or are in the process of developing one, TROVE will improve your data and put it to good use, delivering quick return on investment and a long-term performance advantage across your operations through the power of prediction.



[Utilidata® Inc.](#), an energy software company backed by leading venture capital firms, is the industry leader in energy grid optimization. The company's patented technology captures real-time signals from the electric grid and provides actionable insights to save energy, integrate distributed energy resources, and better detect grid anomalies. The company is headquartered in Providence, Rhode Island.

MEDIA SPONSORS

BloombergNEF

BloombergNEF (BNEF), Bloomberg's primary research service, covers clean energy, advanced transport, digital industry, innovative materials and commodities. We help corporate strategy, finance and policy professionals navigate change and generate opportunities.



Clearing Up is the definitive news and information resource for electricity and natural gas in the greater Pacific Northwest.

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GridFWD 2019 in Beautiful Benaroya Hall

October 8-9

Located near the waterfront in Seattle, Benaroya Hall is the perfect setting for dynamic presentations and in-depth discussions about grid modernization in our region. This is not your familiar mega-hotel or convention center - GridFWD 2019 will feel and educate you in an entirely new way, building understanding and connections that no other event can.



Benaroya Hall opened its doors in 1998 as a home for the Seattle Symphony. It houses two performance halls and public meeting spaces in a complex that is thoroughly integrated into downtown Seattle. Occupying an entire city block at the very core of the city, the development celebrates the vital role of performance events while serving as a major component of Seattle's downtown revitalization. The address is 200 University Street, Seattle.



Benaroya Hall, 200 University Street,
Seattle, WA

You have several ways to get to downtown Seattle and Benaroya Hall, and make the most of your visit.

- The [Fairmont Olympic Hotel](#), [Hotel Monaco](#) and [Hotel Vintage](#) are just three of the many hotels within walking distance of Benaroya Hall.
- If you fly to the event, Sound Transit's Link light rail is the easy way from Sea-Tac Airport to downtown Seattle.
- The Downtown Seattle Transit Tunnel, served by bus and light rail, has a stop just below the Hall (University Street Station).
- Event parking at Benaroya Hall is just \$16/day.
- Once you're there, you have a short walk to Pike Place Market, the Seattle Art Museum and the rest of downtown. Uber and Lyft can whisk you to Seattle Center, the waterfront and much more.

Reserve your hotel now for preferred rates

These hotels are all close to Benaroya Hall and are offering GridFWD 2019 attendees special rates. Call to confirm and secure your room soon.

[Fairmont Olympic Hotel](#)

411 University Street

206-621-1700

\$269/night, ask for Grid Forward
Courtesy Block

[Hotel Monaco](#)

1101 4th Ave

(206) 621-1770

GridForwardMonaco2019
Standard Room - \$200/night

[Hotel Vintage](#)

1100 5th Ave

(206) 624-8000

GridForwardVintage2019,
\$190/night



#GridFWD

Why attend GridFWD 2019?

- Keynotes from utility CEOs and other grid modernization leaders
- Over 100 speakers from across the region, and beyond
- Two full days of sessions organized around Modernization Best Practices, Markets & Models, and Creating a Culture of Innovation
- Innovative technology in our Grid Modernization Speed Pitches
- Tours and workshops to showcase grid innovation

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"Seattle is pleased to host the 2019 GridFWD conference. We look forward to the diverse audience coming together who are all working on opportunities for smarter management of regional energy systems. And we will be happy to share many of the lessons we are learning on our pathway to modernization."

– DEBRA SMITH, GENERAL MANAGER & CEO, SEATTLE CITY LIGHT

Grid FWD
2019

Go Forward
October 7-9, 2019
Benaroya Hall
Seattle, WA

Presented by:



Register at bit.ly/GridFWD2019

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