Future Electric Utility Regulation Series Report #9:

# *Value-Added Electricity Services: New Roles for Utilities and Third-Party Providers*

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**Berkeley Lab Electricity Markets and Policy Group**

# Agenda

- About the series
- Webinar housekeeping items
- Three perspectives on value-added electricity services enabled by grid modernization and new roles for utilities and third-party providers (15 min. each)
  - Utilities – Jonathan Blansfield
  - Third-party providers – Ryan Katofsky
  - Consumers – Robert Mork
- Q&A (25 min.)

# Future Electric Utility Regulation Series (1)

- A series of reports from Berkeley Lab taps leading thinkers to grapple with complex regulatory issues for electricity
- Unique multi-perspective approach highlights different views on the future of electric utility regulation and business models and achieving a reliable, affordable, and flexible power system to inform ongoing discussion and debate
- Funded by U.S. Department of Energy's Grid Modernization Initiative
  - Office of Electricity Delivery and Energy Reliability
  - Office of Energy Efficiency and Renewable Energy
- Expert advisory group provides guidance and review (next slide)
- Berkeley Lab also provides technical assistance to states in this area — and on other topics (*see end of slide deck*)

FUTURE ELECTRIC Utility Regulation

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# Advisory Group

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- Rich Sedano, Regulatory Assistance Project

# Reports to date

1. *Distributed Energy Resources (DERs), Industry Structure and Regulatory Responses*
2. *Distribution Systems in a High DER Future: Planning, Market Design, Operation and Oversight*
3. *Performance-Based Regulation in a High DER Future*
4. *Distribution System Pricing With DERs*
5. *Recovery of Utility Fixed Costs: Utility, Consumer, Environmental and Economist Perspectives*
6. *The Future of Electricity Resource Planning*
7. *The Future of Centrally-Organized Wholesale Electricity Markets*
8. *Regulatory Incentives and Disincentives for Utility Investments in Grid Modernization*
9. *Value-Added Electricity Services: New Roles for Utilities and Third-Party Providers* (**Today's topic**)
10. *The Future of Transportation Electrification: Utility, Competitive Market and Consumer Perspectives*

- Additional reports forthcoming: **feur.lbl.gov**
- **Reports, webinar slides and recordings at feur.lbl.gov**

# Webinar Housekeeping Items

- We're recording the webinar and will post it on our web site.
- Because of the large number of participants, everyone is in *listen* mode only.
- **Please use the chat box** to send us your questions and comments any time during the webinar. You may want to direct your question to a specific author.
- The report authors will each have 15 minutes to present.
- Moderated Q&A will follow, with the report authors responding to questions typed in the chat box.
- The report and webinar slides are posted at **feur.lbl.gov**

# Today's Speakers

**Jonathan Blansfield** is the Senior Manager of Strategic Alliances for Institute for Electric Innovation. He is responsible for day to day operations, programming and strategic growth of IEI's Technology Partner Roundtable, a select group of innovative technology firms that work with electric utility companies to deploy distribution-level, smart grid and renewable energy technologies and customer solutions. Previously, he held positions with the U.S. Department of Energy, the Federal Energy Regulatory Commission, the Solar Energy Industries Association, and a private energy regulatory law firm.

**Ryan Katofsky** is Vice President of Industry Analysis at Advanced Energy Economy, where he is responsible for supporting its various initiatives with data-driven analysis, research and thought leadership. He oversees AEE's regulatory work and is playing a leading role in AEE's 21st Century Electricity System Initiative, which is focused on accelerating regulatory and business model change in the electric power sector. Prior to joining AEE in May 2013, he spent 20 years consulting to the advanced energy industry, utilities and the public sector.

**Robert Mork** is Electric Committee Chair, National Association of State Utility Consumer Advocates. He has served the Indiana Office of Utility Consumer Counselor since 2000 as Deputy Consumer Counselor for Federal Affairs, representing Indiana ratepayer interests before both FERC and the Federal Communications Commission. He now spends much of his time working for the effective development of electric wholesale markets under regional transmission organizations. Mork was active in the development of the Consumer Advocates of PJM States organization and currently serves as its president. He also is a representative of the Public Consumer Sector on the MISO Advisory Committee.

# Questions the Report Addresses

- What new value-added services does grid modernization enable, and what are the appropriate roles for utilities and third-party service providers? Should utilities directly compete with competitive providers of new value-added services or provide new platforms and procurement mechanisms to enable third-party services?
- What policy and regulatory changes may be needed in the face of increasing competition for electricity services from third-party providers?
- How should regulators address utility costs for new value-added services, considering customers who do not participate in these offerings?
- What policy and regulatory approaches best balance promoting innovation with consumer protection?

**Please use the chat box** to send us your questions and comments any time during the webinar. You may want to direct your question to a specific author. We'll address as many questions as we can following the presentation.

The report and webinar slides are posted at feur.lbl.gov

# A Utility Industry Perspective on Value-Added Electricity Services

Presented by: Jonathan Blansfield, Senior Manager, Strategic Alliances
Institute for Electric Innovation

*Report Co-Author: Lisa Wood, Vice President, Edison Foundation &*
*Executive Director, Institute for Electric Innovation*

# About the Institute for Electric Innovation

The Edison Foundation Institute for Electric Innovation focuses on advancing the adoption and application of new technologies that will strengthen and transform the power grid. IEI's members are the investor-owned electric utilities that represent about 70 percent of the US electric power industry. The membership is committed to an affordable, reliable, secure, and clean energy future.

IEI promotes the sharing of information, ideas, and experiences among regulators, policy makers, technology companies, thought leaders, and the electric power industry. IEI also identifies policies that support the business case for the adoption of cost-effective technologies.

IEI is governed by a Management Committee of electric industry Chief Executive Officers. In addition, IEI has a Strategy Committee made up of senior electric industry executives and a select group of technology companies on its Technology Partner Roundtable.

# IEI Technology Partner Roundtable



















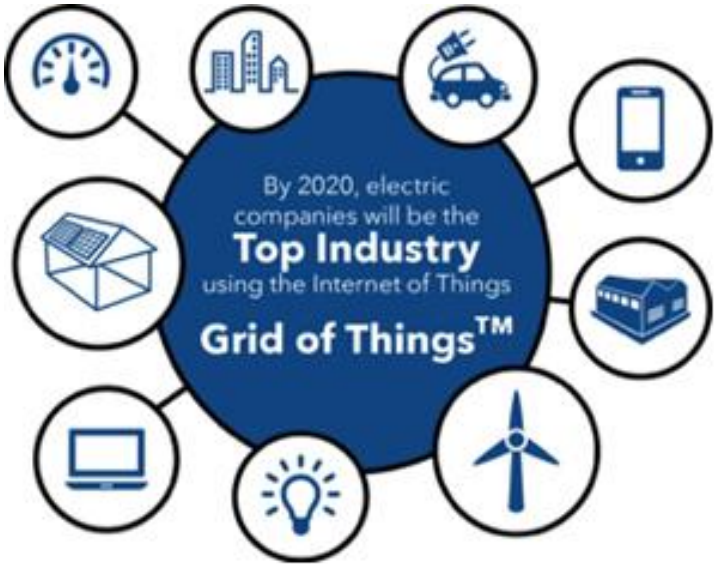




# Grid Modernization Enables Energy Services

In an increasingly digital and distributed energy landscape, the demarcation between so-called “value-added services” and other services can be fuzzy.

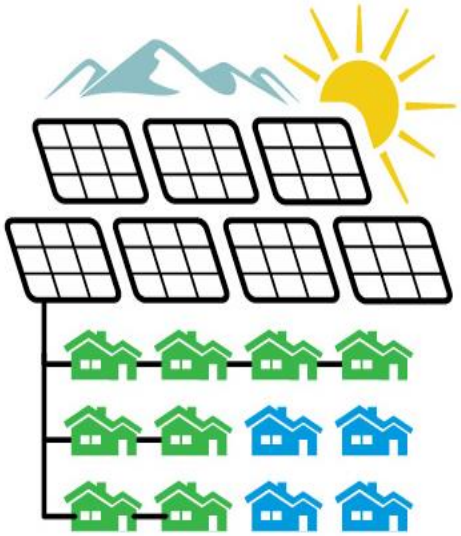
Grid modernization efforts — underway for the past decade in the United States — are enabling a host of new customer-facing energy products and services. Without the energy grid, these value-added services would not be possible.

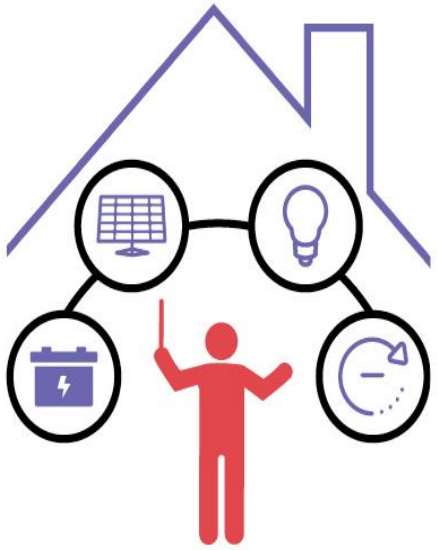


# Four Primary Reasons Why Electric Companies Should Have the Option to Participate in the Value-Added Services Market

1. Electric Companies Are Well Positioned to Grow the Market for Value-Added Services.

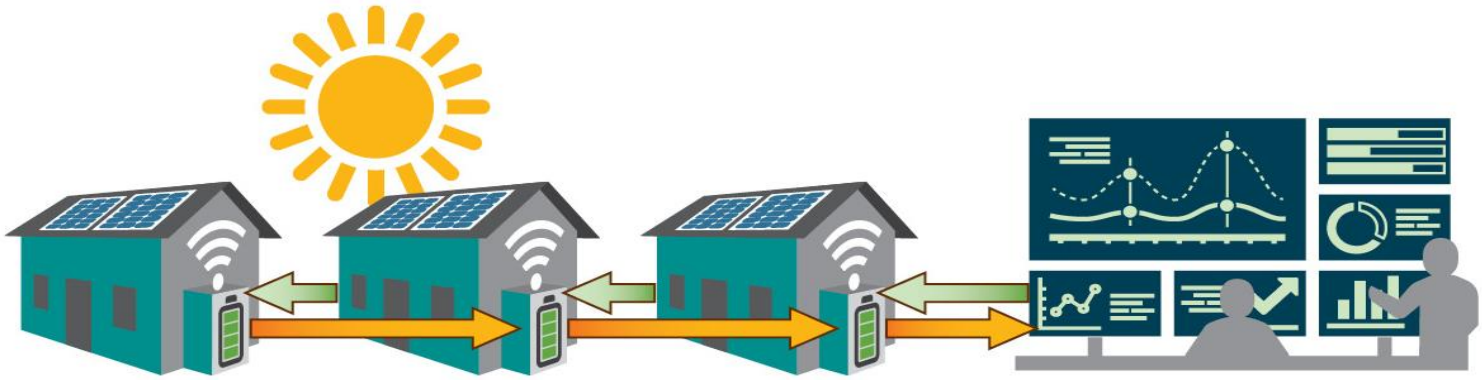
2. Electric Companies Will Expand Customer Access to Value-Added Services.





# Four Primary Reasons Why Electric Companies Should Have the Option to Participate in the Value-Added Services Market

3. Electric Companies Can Build Visibility Into the Energy Grid and Extract the Most Value From Value-Added Services.



4. Electric Company Participation Yields More Competition and Lowers Costs to Customers.

# Value-added electricity services can have benefits and costs for both the energy grid and the customer.

It may be useful to identify at least two categories of value-added services:

(i) Services primarily meeting customer needs; and

(ii) Services primarily meeting energy grid needs.

Value-added electricity services

- can meet a particular customer want or need such as lowering energy bills, optimizing energy use, being a "prosumer" that produces and consumes energy, or choosing a specific energy mix.

Electric company-owned, customer-sited assets may

- meet a particular energy grid need by acting as resources that provide energy, capacity, and/or other services to the power system.

# Sending Accurate and Transparent Price Signals Is a Necessary Condition for a Robust, Competitive Value-Added Services Market

- A first step is to ensure that the pricing of retail electricity supply and energy grid services is transparent, cost-based, and distinct from the pricing of competitive value-added electricity services.

- A second step is to ensure a level playing field among all participants (including consumer protections, etc.).

- A third step is to ensure that value-added services are paid for by those customers who benefit from them. Such services should not be paid for on a bundled basis with non-competitive services.

# Examples of How Electric Companies Are Offering Value-Added Services Today

- Electric vehicle charging infrastructure in California demonstrates how electric companies are well positioned to grow the market for value-added services.

- Private (or rooftop) solar PV in Arizona demonstrates how electric companies can expand customer access to value-added services.

- Customer-sited battery energy storage demonstrates how electric companies can build visibility into the energy grid and extract the most value from value-added services.

- Energy efficiency programs demonstrate how electric company participation yields more competition and lowers costs to all customers.

# In Conclusion…

- Electric company participation in value-added services benefits both customers and the energy grid, and it is critical to recognize the important role electric companies play.

- In defining the rules and regulations governing the participation of both electric companies and third-party providers, the starting point is simple: the customer.

# Third-Party Providers' Perspective on Value-Added Electricity Services

Ryan Katofsky

Advanced Energy Economy

# Summary

- VAS is a complex & nuanced issue that should be tailored to the needs of each jurisdiction
- Utilities & third parties both have critical roles in providing VAS
- Primary concern: avoid direct competition between regulated utilities and third parties in providing same VAS
  - Services that can be competitive should be competitive
  - Competition drives innovation and customer value over long term
  - Monopoly position of utilities can inhibit creation of level playing field
- Key role for utilities: create a platform for VAS, but also offer them when appropriate
- Utility incentives & regulations should evolve to support collaboration, innovation and market animation

Notice: AEE is comprised of a diverse membership. As such, the information contained herein will represent the position of many, but not all, of AEE's members.

# Our evolving expectations for the grid

## Core Attributes

- Universal access
- Safety
- Reliability
- Affordability
- Equitable cost allocation

## Additional Attributes

- Resiliency
- Adaptability/flexibility
- Greater customer control & service options
- Environmental sustainability

## Additional Pressures

- Aging infrastructure
- Flat/declining load growth
- Variable renewable energy integration
- Cyber and data security

# Definition of Basic and Value-added services

**Basic Services**

Provided by regulated utility as it carries out its monopoly functions

- Provided to all customers, with costs recovered from all customers
- Includes utility services mandated by policy, e.g., energy efficiency programs
- Some could be provided to third-parties as part of utility role in animating the market

# Definition of Basic and Value-added services

**Value-Added Services**

Optional, enhanced services provided by utility or competitive market

- Customers choose to receive VAS in addition to basic service, and pay separately for them*
- Some VAS may be monopoly utility functions; others provided by competitive market
- Some VAS can be provided by utility to third-party companies, e.g., enhanced AMI data services

* There are exceptions to this general principle.

# Appropriate roles for utilities and third parties

- Competition for VAS on a level playing field drives down costs & drives innovation
  - Utility, as monopoly provider, has advantages that are difficult to mitigate
- Utilities have essential role in VAS provision and should be rewarded for that role
  - Utilities evolve into a platform upon which transactions occur
  - Will take different forms in different jurisdictions
- Products & services deployed on the customer side of meter should generally remain domain of competitive market, subject to some exceptions
  - Does not preclude utility from engaging in revenue-producing activities related to services delivered on customer premises
- Unregulated affiliates of utility treated like other third parties, subject to codes of conduct to ensure fair competition

# General criteria for utility provision of VAS

- Services to customers enabled by utility's monopoly position
- Services to third parties to support development of an animated market for VAS to customers by third parties
- Services that address underserved segments of the market that could benefit from initial involvement until a competitive market emerges
  - Utility involvement should target barriers that impede development of a robust market within these segments
- Demonstration of new technologies and business arrangements

# Four examples of potential utility VAS

- Community solar for low- and moderate-income customers *(underserved markets)*
- Provision of customized AMI meter data to third parties, or customized analysis of the data *(market animation)*
- Renewable energy tariffs in vertically-integrated markets *(monopoly service)*
- EV charging infrastructure and charging services *(limited competitive options)*

# Other regulatory changes needed

- Shift in utility financial incentives to give greater flexibility and options for revenue & earnings
  - Revenue decoupling
  - Performance-based regulation (PBR)
  - Equalizing CAPEX and certain OPEX, to encourage use of services where more cost effective
  - Platform service revenues
  - Shared savings mechanisms
- Designed to encourage utilities to collaborate with third parties vs. compete against them

# Paying for utility VAS

- Pricing for utility VAS should be cost based with a regulated rate of return
- If utility uses regulated assets that provide basic services in VAS offering, the pricing of VAS should reflect the costs of those regulated resources
  - Costs for those resources embedded in price should be returned to ratepayers
  - The utility should neither subsidize cost of VAS, nor earn outsized profits on them
- Customers using VAS should pay for them
  - Exception: VAS with important societal benefits where utility involvement is to overcome market barriers, e.g., EV charging

# Promoting innovation & protecting consumers

- Maintaining strong competition is best way for regulators to ensure innovation and drive down cost
- Consumers must have confidence in market to engage with third parties in new ways
- There already exists an array of local, state and federal consumer protections that govern third-party providers
- Regulators should monitor development of market for competitive VAS & take appropriate actions if necessary
  - e.g., oversight to address a clearly identified problem vs. imposing broad rules that place undue burdens on third-party providers, especially smaller firms

# National Association of State Utility Consumer Advocates' Perspective

Robert Mork

Indiana Office of Utility Consumer Counselor

# Overview of NASUCA

- NASUCA is an association of 44 consumer advocates in 40 states and the District of Columbia.
- Its members are designated by the laws of their respective jurisdictions to represent the interests of utility consumers before state and federal regulators and in the courts.
- In 12 states, state attorneys general provide utility consumer advocate representation; while in 29 others, the governor appoints the consumer advocate.
- Names of offices include: People's Counsel, Public Counsel, Consumer Advocate, and Consumer Counsel.

# Overview of NASUCA's Process

- LBNL's 4 initial questions were sent to all NASUCA member offices for review and comment on April 26, 2017.
- NASUCA held five weekly member calls, directed to the Electricity Committee, on the four questions beginning April 26th with additional calls occurring May 3rd, May 10th, May 17th , and May 24th.
- On the calls, NASUCA members offered a range of views, as the organization was not necessarily in search of a NASUCA position or consensus.
- Overall, nearly 20 consumer advocate offices were represented on the calls or through emailed comments, edits, citations, and questions.
- Representation came from Connecticut, Delaware, Florida, Hawaii, Illinois, Indiana, Iowa, Maryland, Minnesota, Missouri, Montana, New Hampshire, New Jersey, Ohio, Pennsylvania, Texas, Utah, and West Virginia.
- NASUCA received comments from its member independent advocate offices, membership-based organizations (ex. citizens utility boards), and attorneys general offices.

# NASUCA Member Disclaimer

- Our contribution to this report represents a general consumer advocate perspective and does not necessarily reflect the views of any particular state office or NASUCA – *or my office in Indiana!*
- Generally, consumer advocates want to ensure the continuation of safe, affordable, and reliable electricity; that consumers are protected, empowered, and well-informed; and that appropriate valuation, transparency, and disclosures exist.

# What are “value-added” services?

- We “get” that there’s lots of neat, new stuff, and that there are a lot customers who will want to buy it or will otherwise benefit from it.
- But customers’ needs and wants vary, and our job as consumer advocates is to also represent the little guy, who may just want the cheapest basic service.
- So we need to talk about what we mean by basic services as well as “value-added” ones.
- Some customers really do just want the lights to come on, and they struggle to pay for the services they use now.
- Essential that their needs are not glossed over.

# What does “value-added” mean?

- Ok, so “value-added” - how could anyone be opposed to that???
- Might be new (or existing?), might be things customers will decide to buy, or might be less visible improvements that also benefit consumers.
- Consumer Advocates as the *Voice of Caution* - yes, “value-added” services can be great, but those who benefit should bear the costs.

# Question 1: Roles for Utilities and 3rd Parties

- We see pros – access to attractive new services, potential lower cost offerings, regulations and incentives, and existing service quality and reliability requirements.
- And cons – potential increases to consumer costs, affiliate transaction concerns, incentives and prohibitions, and potential unfair competitive advantages of utilities offering value-added services.
- Third-party service providers can play a range of potential roles: innovation; automation; ensuring consumers can understand and be protected on product and service offerings; interaction with the utility on behalf of the consumer; demand aggregation; energy management services; demand response; frequency regulation; and voltage regulation.

# Question 2: Policy and Regulatory Changes

- Consumer protection and education are important –

  Accountability must exist, individual personal consumer information must be protected from unauthorized disclosure, and privacy of such information should be the default.

- Issues highlighted in our discussions included regulators' consideration of data (including transparency and consumer privacy), uniform industry standards, appropriate valuation and compensation of value-added services, and potential inequities between utilities and third-party providers.

# Question 3: Costs

- With respect to costs, it is important that regulators ensure there is differentiation between basic electric service and value-added electric service and appropriately assign the costs of the two; otherwise, the costs will be assessed against all consumers, not just those utilizing the services.
- There is a long list of potential financial costs for regulators to consider, and importantly, a need for regulators to consider that not all costs are financial.

# “Life is Short and People are Busy…”

*“Life is short and people are busy…. For many people, life is good in part because a series of desirable default rules are in place, ensuring that if they do nothing at all, things will go fine. [O]ften we rely on the fact that choices are made by others, and we go about our business without troubling ourselves about them. This is a blessing, not a curse.”*

*— Cass Sunstein*

# Question 4: Policy and Regulatory Approaches

- Several potential policy and regulatory approaches were discussed, which were not meant to be mutually exclusive, and, in fact, most are complementary:
  - Jurisdictional,
  - Information, and
  - Analytical Framework.

# Consumer Advocates' Key Takeaways

Key takeaways and recommendations include:

- What best benefits the consumer and provides maximum benefit to the public?
- Recognition that regulated and deregulated states differ in relation to allowed market structures.
- Some consumer advocates may not oppose utilities offering new services, some may oppose, and some may be open with appropriate protective measures in place.
- Some utilities already offer value-added products and services.
- Stakeholders need to come to a consensus on the definition of basic and value-added services.
- Basic service is not a value-added service, and the electric utility should provide basic services to all consumers.

# NASUCA Takeaways (Continued)

- States should decide which entity is best positioned to offer value-added services and ensure appropriate consumer protections are in place.
- Costs and values of value-added services should be quantified.
- Regulators should attribute and charge the costs of value-added services to those who want and use them.
- There need to be assurances that the product offered actually provides promised benefits.
- A neutral, open, non-discriminatory platform should be provided for all competitors.
- Individual personal consumer information must be protected, and privacy of such information should be the default.

# Questions?

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The report and webinar slides are posted at feur.lbl.gov

# For More Information About the Report Series

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# Technical assistance for states

- Berkeley Lab's Electricity Markets and Policy Group provides independent and unbiased technical assistance to state utility regulatory commissions, state energy offices, tribes and regional entities in these areas:
  - Energy efficiency (e.g., financing, EM&V, utility programs, behavior-based approaches, cost-effectiveness, administrative options, program planning and design, cost recovery)
  - Demand response (e.g., time-varying pricing), smart grid and grid modernization
  - Utility regulation and business models (e.g., financial impacts to utility and utility customers)
  - Renewable energy resources
  - Transmission and reliability
  - Resource planning
- DOE's Solar Energy Technologies Office, in partnership with Berkeley Lab, Pacific Northwest National Laboratory and National Renewable Energy Laboratory, recently launched a three-year analytical support program for PUCs on topics related to distribution utility planning and regulatory, policy, programmatic and technology assessments of DERs.