

1. Accenture
2. Advanced Energy
3. Alectra Utilities
4. Ally Energy Solutions
5. Alternative Energy Systems Consulting
6. Ameren
7. American Public Power Association
8. Apex Analytics
9. Apogee Interactive
10. Applied Energy Group
11. APTIM
12. Aquanta
13. Arizona Public Service
14. Armada Power
15. Austin Energy
16. Baltimore Gas and Electric
17. Berkshire Hathaway Energy
18. Black & Veatch Management Consulting
19. Bonneville Power Administration
20. Bristol Tennessee Essential Services
21. Buffalo Niagara Medical Campus
22. Cadmus
23. Calico Energy
24. Central Hudson Gas & Electric
25. Chelan PUD
26. City of Tallahassee Utilities
27. Clean Power Research
28. CLEAResult
29. COI Energy Services
30. Colbun
31. Commonwealth Edison
32. Con Edison
33. Connected Energy
34. Connected Energy Limited
35. Consumers Energy Company
36. Contract Callers
37. CPower Energy Management
38. CPS Energy
39. Customized Energy Solutions
40. Dairyland Power Cooperative
41. DTE Energy
42. Duke Energy
43. E Source
44. E4TheFuture
45. Eaton
46. ecobee
47. Edison Electric Institute
48. Efficiency Vermont
49. Elocity
50. Emerson Commercial & Residential Solutions
51. EMI Consulting
52. Enbala
53. Encycle
54. Enel X
55. Energy Federation
56. Energy Solutions
57. EnergyHub
58. EnerVision
59. Entergy
60. EPRI
61. ERS
62. Evergy
63. Eversource
64. Extensible Energy
65. FirstEnergy
66. FleetCarma
67. FPL
68. Franklin Energy
69. GDS Associates
70. Generac
71. Georgia Power Company
72. Google (Nest)
73. Great River Energy
74. GridFabric
75. GridOptimize
76. GridPoint
77. Guidehouse
78. Hawaiian Electric Company
79. High West Energy
80. Honeywell Smart Energy
81. ICF
82. Idaho Power
83. IGS Energy
84. Illume Advising
85. Indianapolis Power & Light Co.
86. Integral Analytics
87. IPKeys Power Partners
88. Itron
89. Jackson EMC
90. Landis+Gyr
91. Leap
92. Modesto Irrigation District
93. National Grid
94. National Rural Electric Cooperative
95. NB Power
96. New Braunfels Utilities
97. New Hampshire Electric Cooperative
98. New York Power Authority
99. Nexant
100. North Carolina Electric Membership Corporation
101. NTC
102. OATI
103. Oklahoma Gas & Electric
104. Olivine
105. Oncor Electric Delivery
106. Open Systems International
107. OpenADR Alliance
108. Opinion Dynamics
109. Opus One
110. Oracle Utilities
111. Orange and Rockland Utilities
112. Pacific Gas & Electric
113. PECO, An Exelon Company
114. Pepco, an Exelon Company
115. Portland General Electric
116. Powerley
117. PPL Electric Utilities
118. Public Service Company of Oklahoma
119. Rappahannock Electric Cooperative
120. Resideo
121. RF Demand Solutions
122. Sacramento Municipal Utility District
123. Salt River Project
124. San Diego Gas & Electric
125. Santee Cooper
126. Schneider Electric
127. Scope Services
128. ScottMadden
129. Seattle City Light
130. Shifted Energy
131. Skipping Stone
132. Smart Electric Power Alliance
133. Smartenit
134. Snohomish County PUD
135. Southern California Edison
136. Southern California Gas Company
137. Steffes
138. St. John Energy
139. Sunverge Energy
140. Tantalus
141. Tennessee Municipal Electric Power Association
142. Tennessee Valley Authority
143. Tetra Tech
144. The Brattle Group
145. Threshold
146. Tierra Resource Consultants
147. TRC
148. Tri-State Generation & Transmission
149. Trickle Star
150. TROVE
151. Tucson Electric Power
152. Uplight
153. Utility Load Management Exchange
154. Vectren
155. Warranty Design
156. Waseda University
157. West Monroe Partners
158. Xcel Energy
159. Zen Ecosystems
160. Zeuthen Management Solutions



*PLMA Load Management Dialogue*

# APS and EnergyHub for APS Distributed Energy Resource Aggregations (Rewards Programs and Solar Communities)



**Tom Hines**  
Arizona Public Service



**Renee Guillory**  
Arizona Public Service



**Ben Bunker**  
EnergyHub

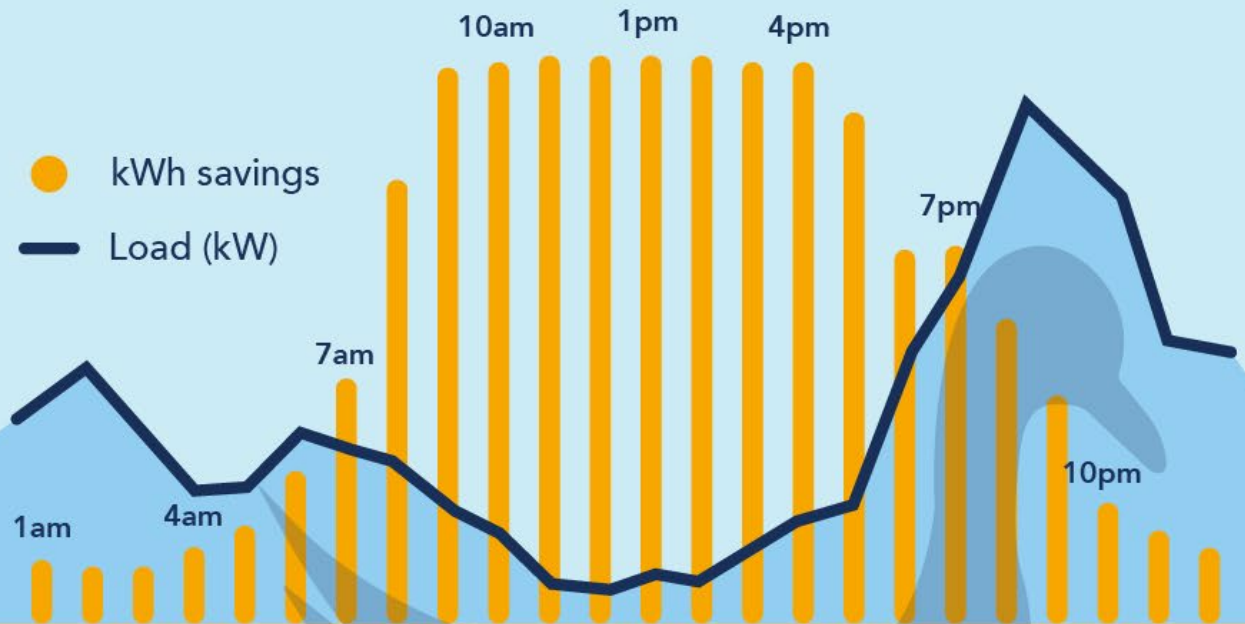


**Brett Feldman**  
Guidehouse Insights  
& PLMA Award Cochair

# Reimagining the relationship between a Utility and DERs

Arizona Public Service and EnergyHub managing DERs at scale

# Why did we act?



Traditional DSM portfolio exacerbates the “duck curve”

**“We see incredible things ahead for Arizona, and are excited to power our state’s future with electricity that is 100 percent clean”**

Jeff Guldner, Chairman and CEO

JANUARY 22, 2020



1.2MM+ residential customers



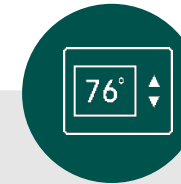
Started with BYOT, transitioned to a multi-DER deployment

System and feeder load relief

System and feeder voltage support

Renewable smoothing

On-demand capacity



Cool Rewards



Reserve Rewards



Storage Rewards



Solar Communities





## Clean

Reducing emissions  
matching load with  
renewable generation



## Affordable

Lowering costs for all  
customers by reducing  
peak demand



## Reliable

Reliable and measurable load  
flexibility to increase reliance  
on solar resources



## Customer focused

Compelling incentives for  
customers helping to  
minimize grid's  
environmental impact



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# Upcoming PLMA Webcasts



- June 11** Global Supply Chain Impacts to Grid Modernization in the Age of COVID-19
- June 18** Connected Energy (UK) Ltd for Battery Recycling in Belgium
- July 9** Austin Energy for Austin SHINES Project
- July 16** CPS Energy for Public Engagement
- Aug. 13** City of New York, Dept of Citywide Admin Services for Building Operator Engagement

