

# The Future of Integrated Distributed Energy Resources

**EI Strategic Issues Roundtable – Pittsburgh, PA – October 11, 2018**

**Paul Miles, PECO, an Exelon Company - Eduardo Guerra, Consolidated Edison**

**Moderator: Ed Thomas, PLMA**

# Voice of Load Management Practitioners

1. Advanced Energy
2. Alectra Utilities
3. Ally Energy Solutions
4. AESC
5. Ameren
6. American Public Power
7. Apogee Interactive
8. APS
9. Aquanta
10. Austin Energy
11. AutoGrid Systems
12. BGE, an Exelon Company
13. Berkshire Hathaway Energy
14. Bidgely
15. Bonneville Power Admin.
16. BPL Global
17. BTES
18. Buffalo Niagara Medical Ctr
19. Carina Technology
20. CaSA
21. Central Hudson G&E
22. CLEARResult
23. COI Energy Services
24. Commonwealth Edison
25. Con Edison
26. Consumers Energy Co.
27. CPower
28. CPS Energy
29. Crius Energy
30. Customized Energy Solutions
31. Dairyland Power Co-op
32. DTE Energy
33. Duke Energy
34. E Source
35. E4TheFuture
36. Eaton
37. Ecobee
38. EcoFactor
39. Ecotagious
40. Edison Electric Institute
41. Electric Ireland
42. Emerson Climate Tech.
43. Encycle
44. Energy Datametrics
45. Energy Federation
46. EnergyHub
47. Energy Solutions
48. Enel X
49. EnerNex
50. EnerVision
51. Engie
52. Entergy
53. E.ON
54. EPRI
55. ERS
56. Extensible Energy
57. Fairbanks Morse
58. FleetCarma
59. Franklin Energy
60. Georgia Power
61. Google (Nest)
62. Great River Energy
63. GridOptimize
64. Hawaiian Electric
65. Honeywell Smart Grid
66. Hydro One
67. ICF
68. Idaho Power
69. IGS
70. Illume Advising
71. Indianapolis Power & Light
72. Integral Analytics
73. IPKeys Power Partners
74. Itron
75. Jackson EMC
76. JouleSmart Solutions
77. KCP&L
78. Landis & Gyr
79. Lockheed Martin
80. mClimate
81. Message Broadcast
82. Modesto Irrigation District
83. Mosaic Power
84. National Grid
85. NRECA
86. Navigant
87. NB Power
88. New Hampshire Electric Coop.
89. Nexant
90. Next Energy Party
91. NJR Homes Services
92. North Carolina EMC
93. Northwestern REC
94. NRG Curtailment Solutions
95. NTC Corporate
96. Oglethorpe Power Corp
97. Okla. Gas & Electric
98. Olivine
99. Omnetric
100. Oncor Energy Delivery
101. Opinion Dynamics
102. Orange & Rockland Utilities
103. Pacific Gas and Electric
104. PECO, an Exelon Company
105. Pepco, an Exelon Company
106. Portland General Electric
107. Powerley
108. Rappahannock Electric
109. Research into Action
110. RF Demand Solutions
111. SMUD
112. Salt River Project
113. San Diego Gas & Electric
114. Schneider Electric
115. Scope Services
116. Sensus USA
117. Simple Energy
118. Skipping Stone
119. SEPA
120. Snohomish PUD
121. Southern Calif. Edison
122. SoCal Gas
123. Steffes Corporation
124. Tacoma Power
125. Tantalus
126. Tendril
127. Tenn Muni Electric Pwr Assn
128. Tenn. Valley Authority
129. Threshold
130. Tokyo Electric Power
131. Tri-State G&T Assoc.
132. Tucson Electric Power
133. United Illuminating
134. Utility Load Mgmt Exchange
135. Vectren
136. Waseda University
137. WaterFurnace
138. Westar Energy
139. Whisker Labs
140. Xcel Energy
141. Zen Ecosystems
142. Zeuthen Mgmt Solutions
143. ZOME Energy Networks



# Panel Discussion



**Paul Miles**  
Manager, Marketing Tech Services  
Load Management & CHP Programs  
PECO, an Exelon Company



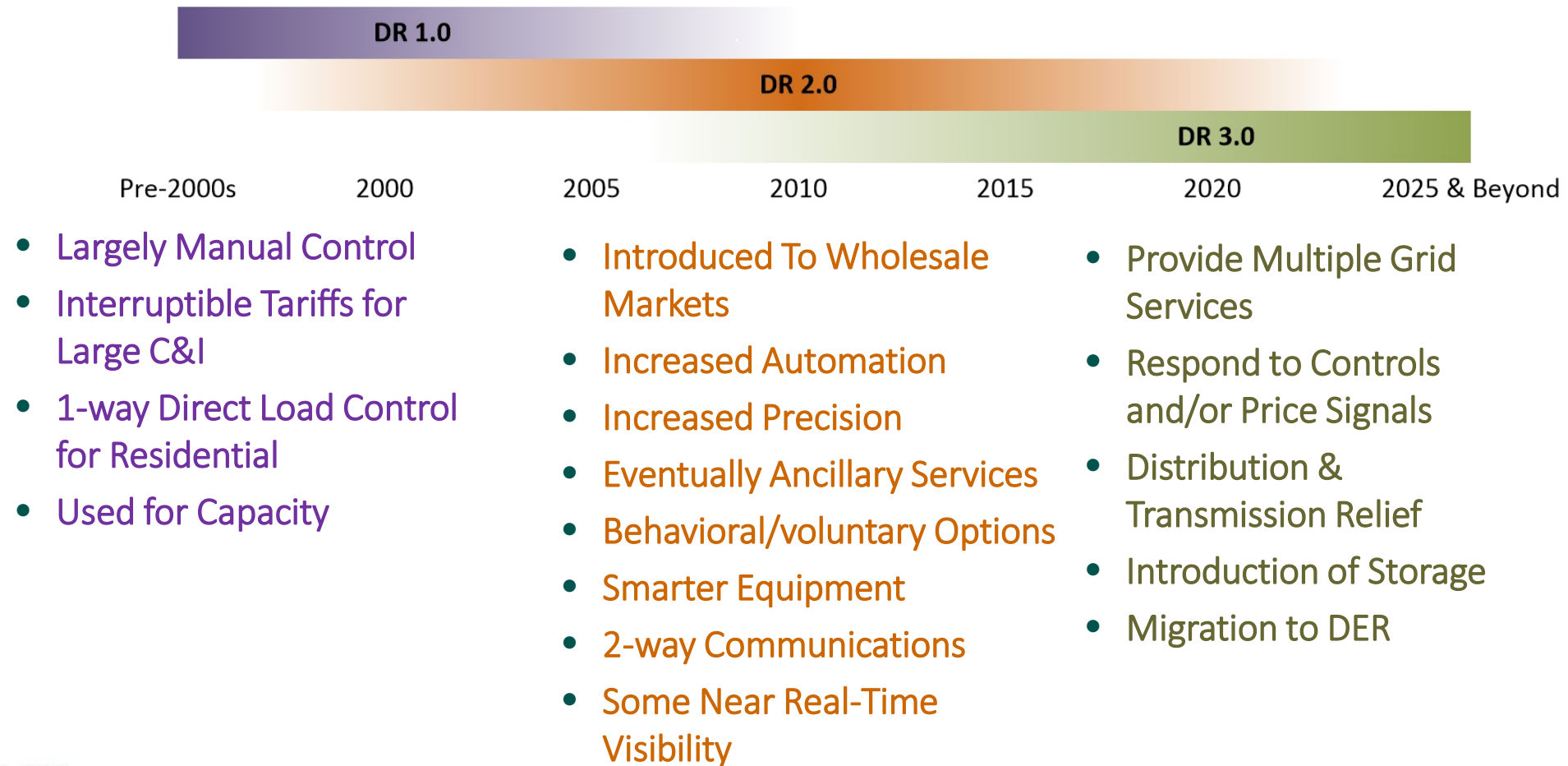
**Eduardo Guerra**  
Manager - Operations, Targeted  
Demand Management  
Consolidated Edison



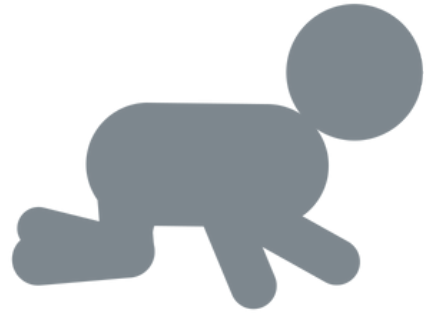
**Ed Thomas**  
Executive Director  
PLMA



# Demand Response Evolution



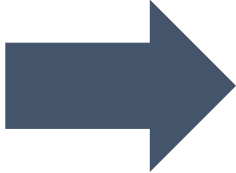
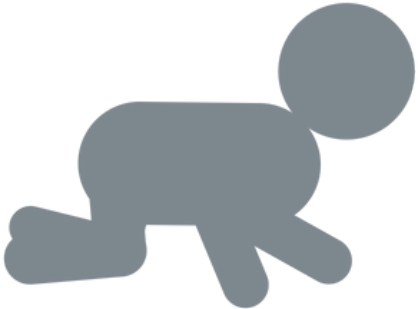
# Distributed Energy Resource Evolution



**DER 1.0**  
Peak Load  
Emergencies



# Distributed Energy Resource Evolution

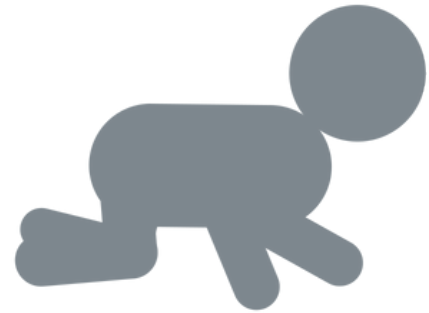


**DER 1.0**  
Peak Load  
Emergencies

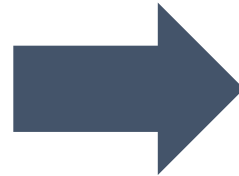
**DER 2.0**  
Market/System  
Economics



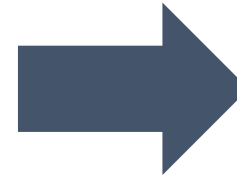
# Distributed Energy Resource Evolution



**DER 1.0**  
Peak Load  
Emergencies



**DER 2.0**  
Market/System  
Economics



**DER 3.0**  
Operational  
Management



# How do Demand Response, Energy Efficiency, & Renewables Fit in a DER Future of iDSM, NWAs, Storage & More

- Repositioning program resources designed for system-wide deployment to be targeted/locational
- Making the Business Process Changes Necessary to Evolve DERS from Emergency to Operations
- Demonstrating where DR fits today in a future DER construct relative to utilities long on generation with weak market/regulatory signals and potentially-stranded infrastructure costs
- Migrating current systems toward an enhanced DERMS platform to manage more complex power transactions
- Balancing customer satisfaction and customer acquisition issues



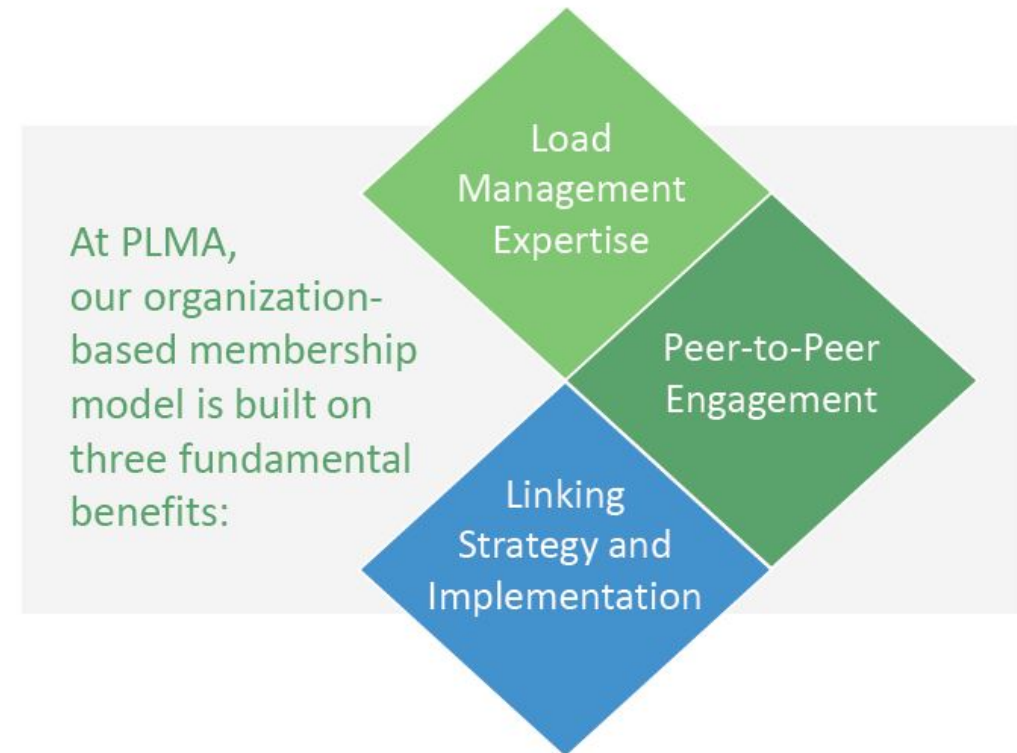
# Load Management Practitioner Perspective

PLMA is Practitioners from energy utilities, solution providers, and trade allies share expertise in demand response (DR) and distributed energy resources (DER).

- Over 140 member companies
- Conferences and Webcasts
- Networking and Industry Partnerships
- Training and Publications

Interest Groups help members exchange lessons learned.

- DER Integration
- Connected Devices
- Women in Demand Management
- Customer Engagement
- International



Learn More at [peakload.org](https://peakload.org)

# The Future of Distributed Energy Resources

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