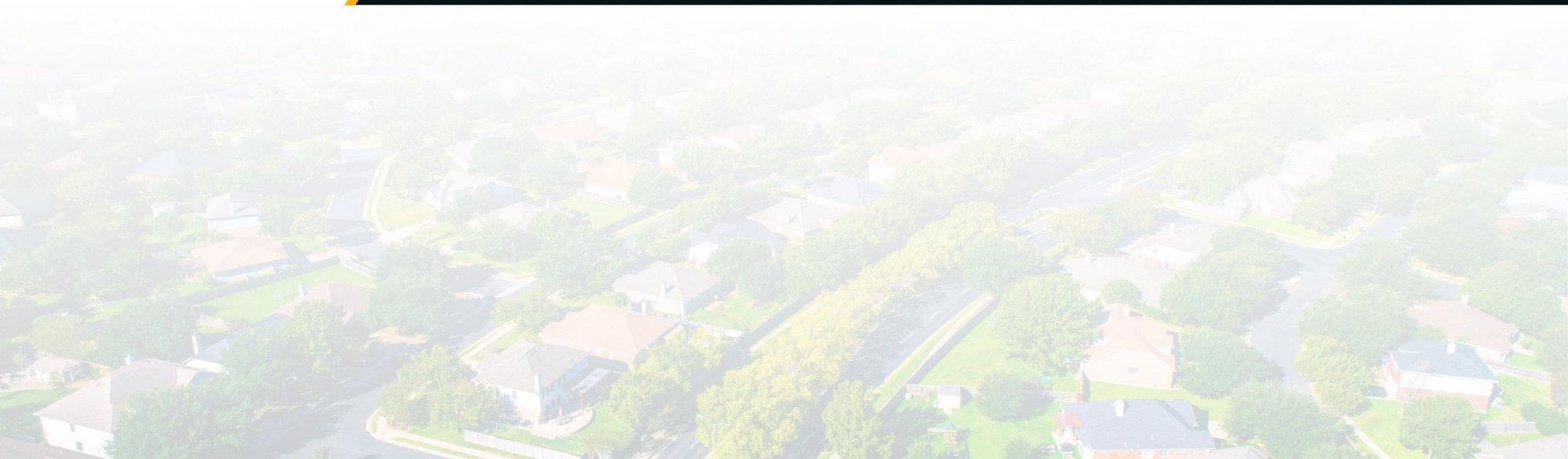




Beneficial Electrification is
Strategic Load Growth!





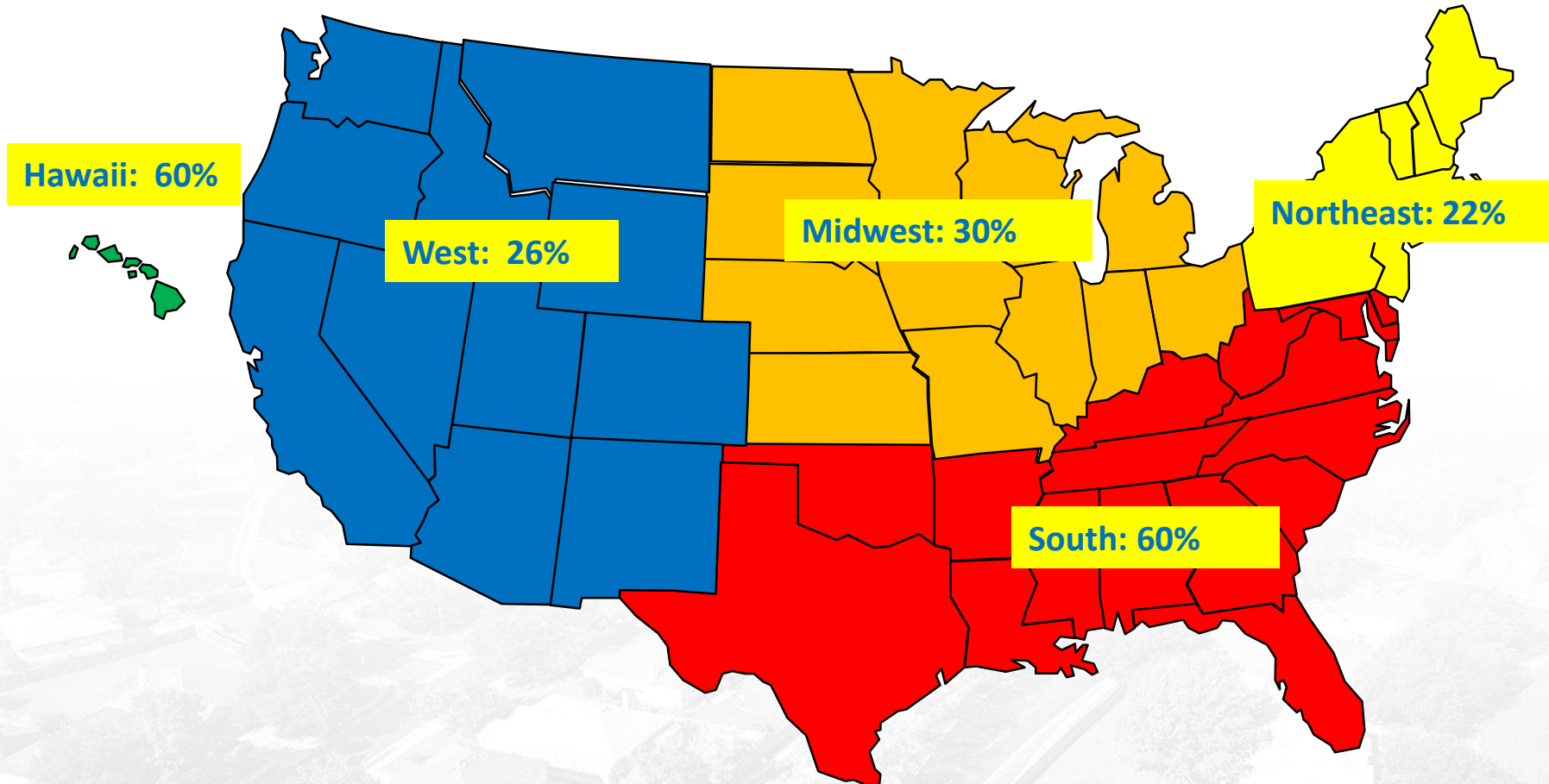
It Started With Electric Water Heating!



Beneficial Electrification Leadership Forum!



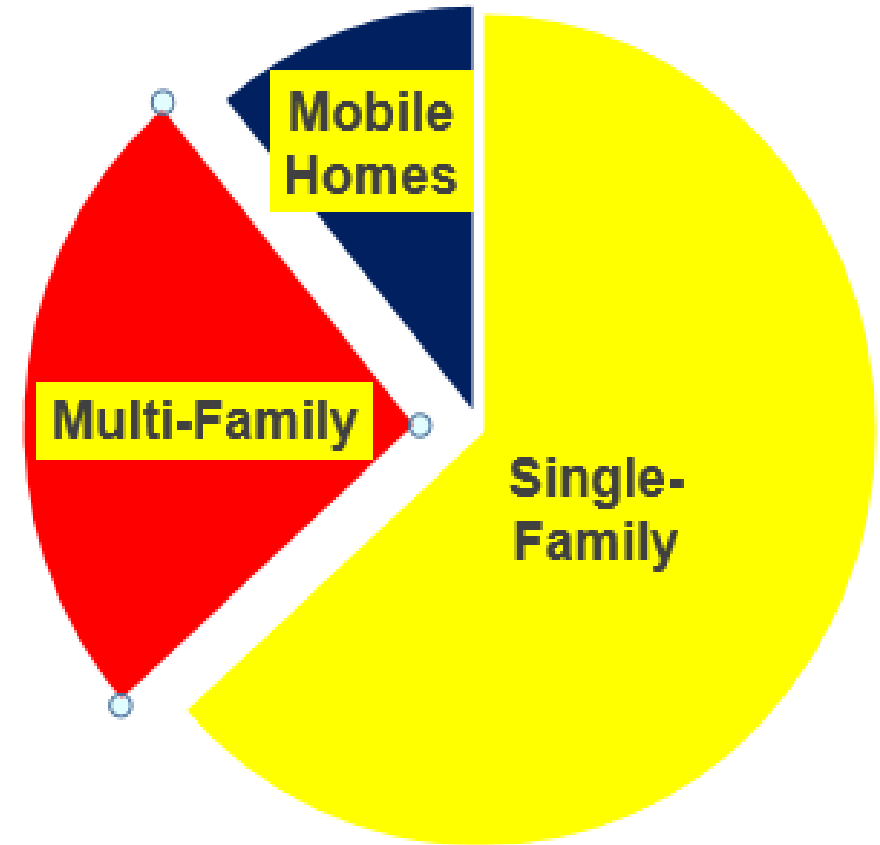
Electric Water Heating Market Share



Beneficial Electrification Leadership Forum!



45 Million Water Heaters		Total
Capacity	4.5kW/ea.	202.5 gW
Energy Storage Capacity	12kWh	540 gWh
Annual Energy	3800kWh/ea.	171 tWh



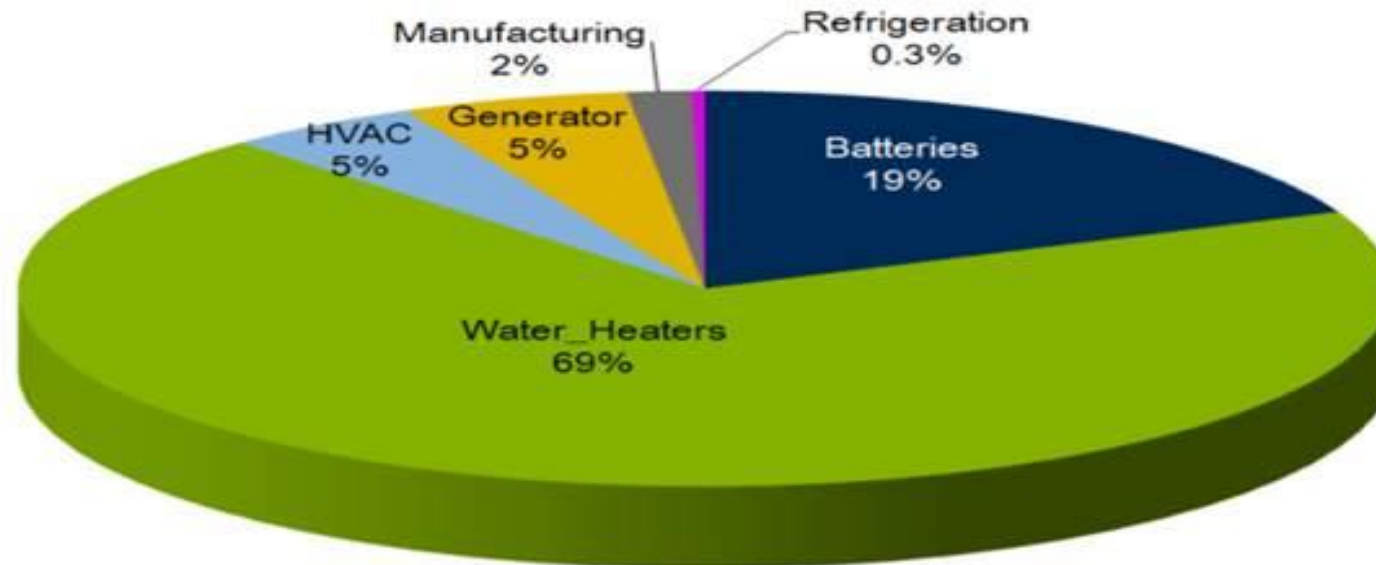
Beneficial Electrification Leadership Forum!

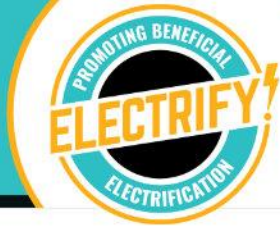


Regulation	Zone	Jan	Feb
Locations	RTO	414	428
Average Number of Unique Participating Locations per Month:		421	
MWs	RTO	64	65
Average MWs per Month:		65	

Capability represents total amount that may be offered. Actual offered and cleared volume may be significantly lower and is represented in subsequent figures/tables in report

Figure 10: 2017 PJM Demand Response Confirmed Regulation Registrations Load Reduction Methods





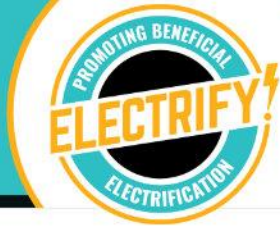
It Started With Electric Water Heating!

- Grid-Interactive Water Heating (GIWH)
- DOE HPWH Rulemaking
- ACEEE Hot Water Forum
- PLMA GIWH Interest Group - Webinars & Workshops
- 'The Hidden Battery' – NRECA/NRDC/PLMA
- NRECA Organized Stakeholder Group > Amendment Language
- Congressional Testimony > Bi-Partisan Support
- Energy Efficiency Act of 2015 > Grid-Enabled Product Category



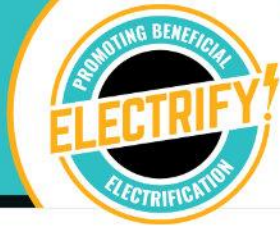
Riding the Storage Wave!

- Load Management > DSM > DER Integration
- PLMA Grid-Interactive Behind-the Meter Storage Interest Group
- GIWH / Thermal Storage (Hot/Cold) / Batteries / Etc.
- ACEEE HWF – GIWH > Community Storage > Beneficial Electrification
- The Community Storage Initiative



The Community Storage Initiative!

- The Community Storage Initiative – NRECA/NRDC/EEI/APPA/PLMA
- 2016 Community Storage Leadership Forum – Univ. of MN
- Website/Resources - www.communitystorageinitiative.com
- PUF Article on Community Storage
- Congressional Briefing on Community Storage
- Great River Energy – Community Storage Demonstration Project
- Community Storage – The Foundation of Beneficial Electrification



Beneficial Electrification!

- Environmentally Beneficial Electrification – Nov. 2015, July 2016
- ‘Beneficial Electrification’ RAP Whitepapers & Webinars
- PLMA ‘Beneficial Electrification’ Webinars & Workshops
- EPRI ‘Electrification 2018’ Conference
- CSI Beneficial Electrification Leadership Forum
- Website & Resources – www.beneficialelectrification.com
- ‘Mind Share Before Market Share!’
- **Beneficial Electrification League – BEL**
- **Beneficial Electrification Ambassador (BE-A) Program**



Thank You!





The Win-Win-Win of Beneficial Electrification!

