Performance Excellence in Electricity Renewal

	Reliability & Resiliency	Energy Efficiency & Environment	Operational Effectiveness	Customer Contribution
PERFORMANCE *(Metrics & Outcomes)*				
DESIGN *(Capability & Considerations)*				
BEHAVIORS *(Proven Programs & Processes)*				

- Address the rising cost of electricity demand and peak power
- Reduce emissions and fossil fuel use
- Provide islanding capability
- Identify and mitigate power quality issues
- Significantly reduce water consumption

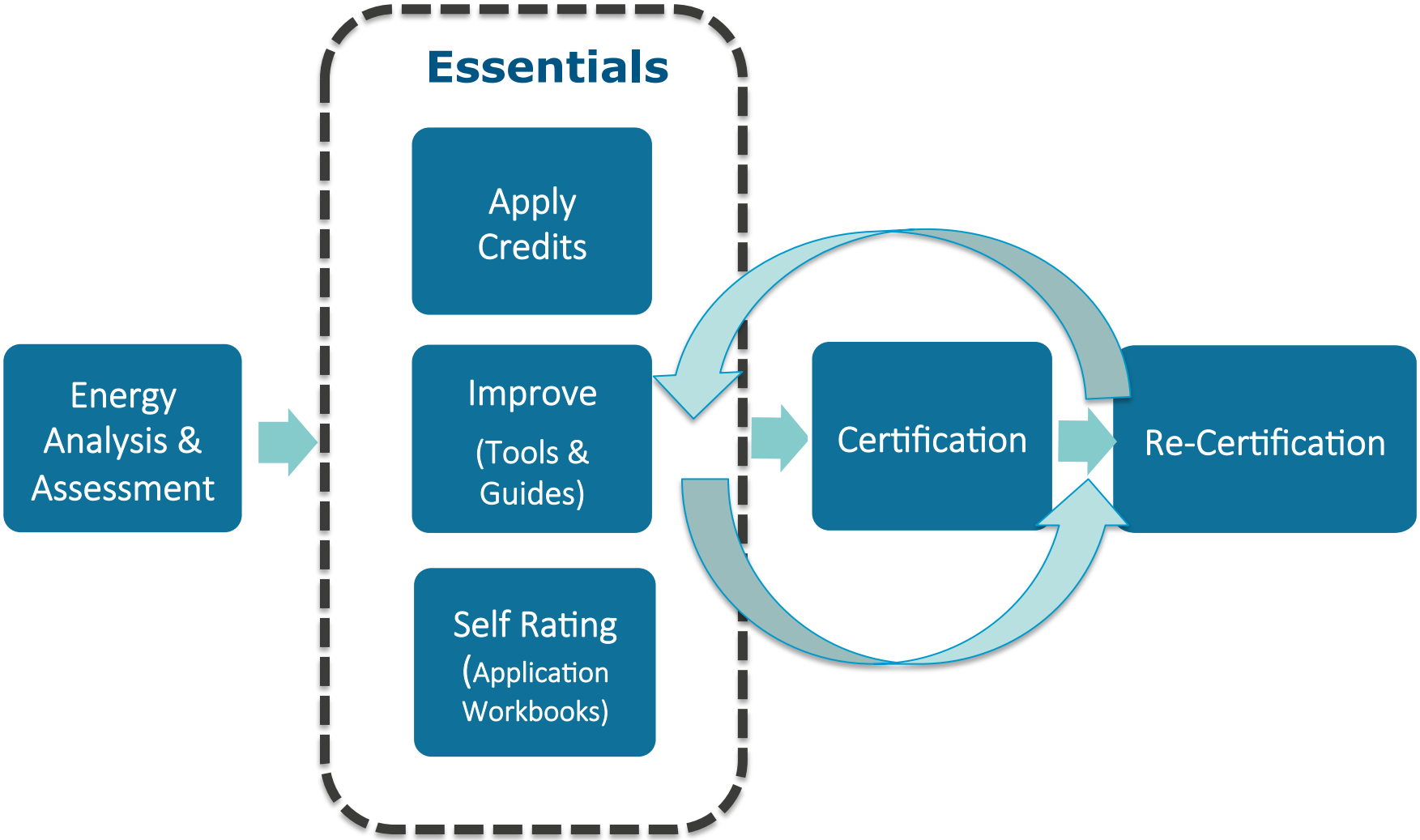
PEER Outcomes

Performance Criteria - Outcomes	Baseline or Benchmark	Current	Target
Cost Savings, $/MWh	**$150**	**$75**	
Outage Duration / Frequency	**270 min / 1.0**	**20 min / 0.1**	
Momentary Interruptions	**55**	**10**	
Power Quality Events	**120**	**25**	
Energy Efficiency and Environmental Index	**64**	**91**	
Energy Efficiency, MMBtu / MWh	8.2	5.8	
CO2 Intensity, lb. / MWh	1,100	700	
Water Intensity, gal / MWh	330	50	
SO2 Intensity, lb. / MWh	0.8	0.01	
NOX Intensity, lb. / MWh	1.0	0.2	
Solid Waste, % Recycled	77%	100%	
System Energy Efficiency	**60%**	**80%**	
Utilization	**52%**	**70%**	

PEER Capabilities

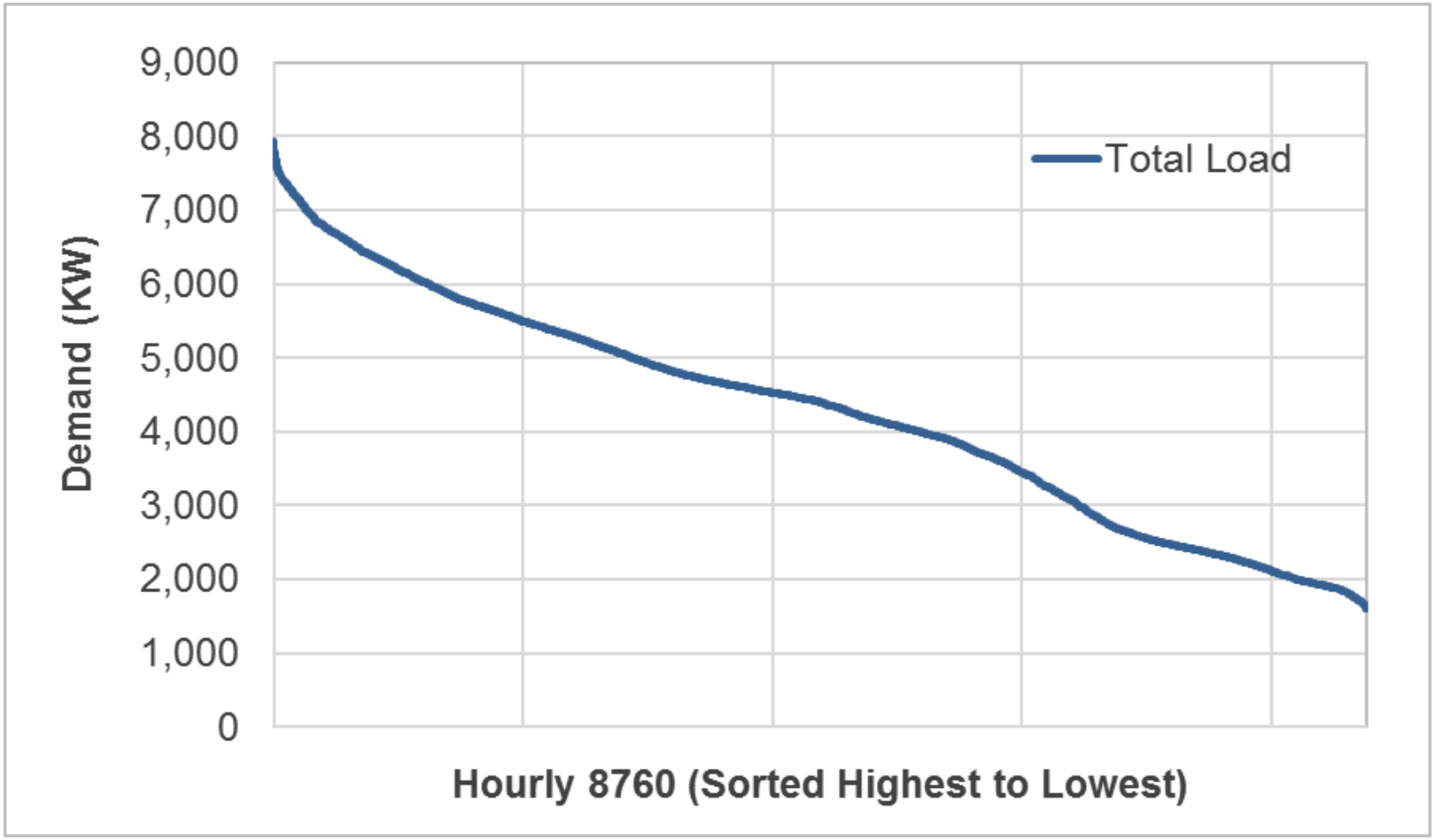
Performance Criteria - Capabilities	Baseline or Benchmark	Current	Target
Local Capabilities (DER: Solar, DR, Gen)	**25%**	**80%**	
Resiliency Capability and Grid Service			
Islanding	20%	80%	
Alternate Supply	0%	100%	
Distribution Auto Restoration	10%	80%	
Distribution Redundancy	40%	80%	
Damage & Exposure Prevention	60%	95%	
District Energy	**80%**	**90%**	
Customer Engagement (Behind the Meter)			
Demand Response (DR)	5%	15%	
Renewable	0%	5%	
Clean generation	20%	50%	
Advanced Metering	25%	100%	

PEER Participation



PEER Analysis

Annual Load Duration Curve from Interval Data



PEER Analysis
Electricity Rates

Distribution	Current	Upper Limit
Demand Charge - Summer, $/kW-mo	10.57	10.57
Demand Charge – Winter, $/kW-mo	10.57	10.57
Standby Charge, $/kW-mo	0	0
T&D Charge On-Peak, $/MWh	2.9	2.9
T&D Charge Off-Peak, $/MWh	2.9	2.9

Supply	Current	Upper Limit
Power Supply Cost, $/MWh	58	RTP
Natural Gas Fuel Cost, $/MMBtu	5	5
ISO Capacity Charge, $/kW-yr	47.45	47.45

PEER Analysis

Distributed Energy Operating Mode 2

Description	Sample Project ($000)	Sample Project ($/MWh)
Baseline Cost	**4,460**	**119**
Power Supply (Real Time Price)*	1,230	33
Demand/Standby Charge*	540	14
Capacity Charge (ISO)*	250	7
Electric Distribution*	30	1
Thermal Energy*	130	4
Ancillary Service	50	1
Conservation/Curtailment	140	3
Microgrid Operations	(180)	(5)
Savings	**~2,300**	**61**
% Savings and Simple Payback	**~50% / 3.8 yrs.**	
* Includes generation fuel and O&M costs		

Islanding Assets
4 MW Existing CHP
2 MW Gas Generation
1 MW Storage
500 kW Conservation
500 kW DR Curtailment
250kW Solar PV
Master Controller
Total Cost = $8.5 million

PEER Analysis
Operating Modes