Introduction to Perception Advisors

Helping Companies Manage the Transition to Resilient, Decentralized Cost Saving Utility Strategies

Perception Advisors (PA) advises, develops, and assists in the implementation of decentralized utility strategies that integrate energy, water, and waste solutions in order to deliver reduced operating costs, increased resiliency and environmental protection.

Decentralized solutions are designed to adapt to the needs and objectives of:

- Industrial Plants
- Residential & Commercial Buildings
- Campuses
- Communities

Integrated decentralized energy, water and wastewater, and solid waste technologies allow all stakeholders to exceed objectives for:

- Operational Efficiency
- Financial Performance
- Resiliency
- Sustainability

The Future is Decentralized Technologies

Centralized systems are expensive, inefficient, and failing

Energy:

Centralized power is inefficient & non-resilient

- $27 billion of business losses from outages
- In 2018, 196 prolonged outages vs. 23 in 2002
- Sustainable variable power complicates demand / supply

High investment and maintenance costs for centralized grids result in overpayment for inferior utility services and divert investment away from environmentally friendly, efficient processing

Solid Waste:

Current solutions are non-sustainable

- 265 million tons/year of MSW
- Increased landfill closures extend trucking distances
- China/Asia not taking waste
- Traditional incinerators are carbon intensive

Water & Wastewater

Centralized solutions are failing & harmful to local communities

- Approximately 80% of assets are focused on distribution vs processing & quality improvement
- Buried grids are failing and disruptive to repair
  - 240,000 water main breaks annually
  - Two trillion gallons of treated drinking water is lost to leaks annually
- Leaking pipes contaminate drinking water
- Blue-Green algae is common and toxic
- In this decade, the EPA issued 97,800 citations for unsafe municipal water
- We experience 1,006 large scale unsafe water outbreaks annually; 50% chemicals and toxins, 29% parasites
- Nano plastics in almost all source waters
- 75% of antibiotics end up in water supplies--not removed in treatment

Our Approach Provides...

Resiliency

Fewer costly and disruptive shutdowns with reliable power from integrated CHPC distributed power, water and waste strategy.

Reduced Operating Costs

Integrated, decentralized solutions significantly lowering utility operating costs

Community ESG Benefits

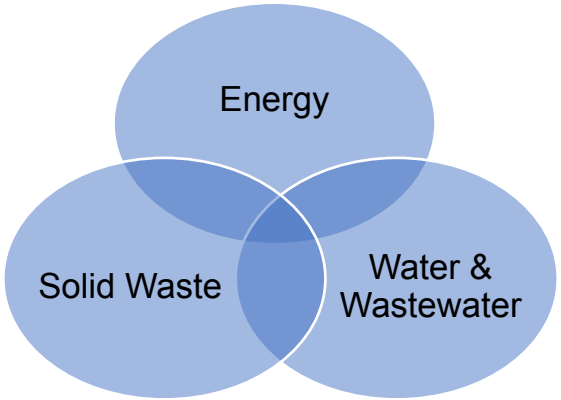
Less pollution, lower water stress, local employment and reduced pressure on loyal employees and supportive communities

Reputation Insurance Through Action

ESG initiatives that mitigate health risks, protect the environment, raise community awareness, and increase earnings

...and Addresses Core **ESG** Policy Issues

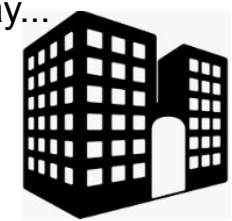
Integrated Decentralized Solutions



Energy efficiency & carbon reduction	Environmental Benefits
Elimination of solid waste & wastewater pollution	
Effective plastic waste control	
Resilient power supply for local communities	Social Benefits
Clean water for healthcare	
Potable drinking water	
Greater control over complex issues	Improved Governance Controls

The Perception Solution

A typical building today...



contains

- Centralized electricity, water, sewer, gas utilities
- Solid waste goes to landfills
- Traditional electric or gas heat and HVAC systems
- Limited solar PV / backup generator

Decentralized Water/Wastewater Tech

Recycle 90% to 95% of wastewater for potable and/or non-potable reuse, improve potable water quality and increase available water supply by at least ~10x while dramatically reducing water related costs

Decentralized Solid Waste CHP/Destruction

Recycling or pyrolization destruction of solid waste, including hazardous electronic and biowaste, produce H2E and CHPC replacing landfills

Decentralized Power Tech Including CHPC

Supplement solar PV with load following, flex fuel SOFCs, providing CHPC, self controlled demand and supply response, energy savings, carbon reduction, and business interruption resiliency