

PLMA Fall 2011 – Chattanooga

E3 Greentech Enterprises Next Generation Energy Managed Services

Stephen D. Cook
Vice President, Service



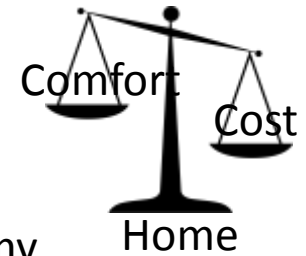
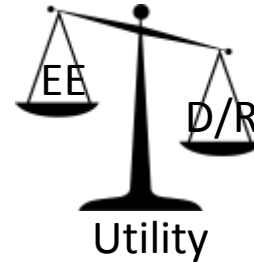
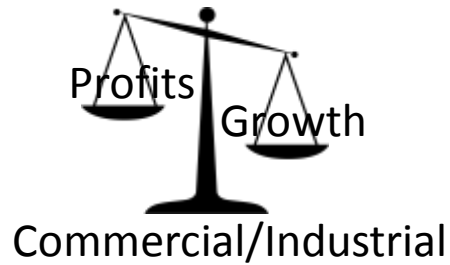
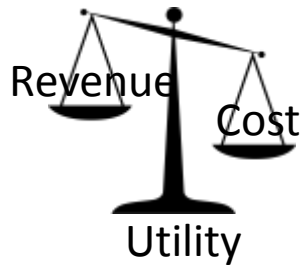
Greentech
Enterprises



energy. efficiency. environment.



Balancing Act



- Homeowner desires comfort at an affordable price..... worst economy in many years
- Utility desires revenues from selling affordable power.....but faces peak challenges
- Government desires clean energy & economic growth
- Industry desires profitable growth with “cheap” energy....., but faces rising energy costs
- Typically energy efficiency comes at the cost of peak demand, & vice versa
- We NEED energy efficiency & Peak Management



E³ NexGEMS™

Virtual Peaking and Power Plant

Continuously monitors & models

- Consumer's demand patterns
- Home's thermal characteristics
- Equipment's heat transfer efficiency
- Local weather
- Utility market conditions
- HAN/HEMS/Load devices
- Meter data

**Real-time
Analytics**

**Home
Optimization**

**Smart
Demand
Response**

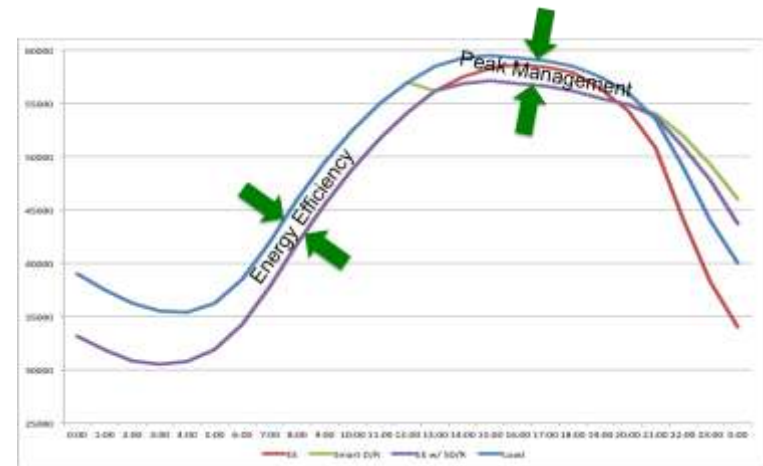
**Energy
Analysis**



Smart Demand Response & Energy Efficiency

Employ schema matched to weather & demand:

- **Moderate day** – focus on EE in the home
 - Employ set point & schedule setbacks
- **Hot day** – work to avoid the peak
 - Employ weather-based resets
 - Pre-condition home as needed
- **Peak event** – predictively reduce the peak
 - Employ Smart D/R set point adjustments
 - Employ equipment load control as needed





Pilot

- 23 homes around LaFayette, TN
- Demonstrated savings, validated solution & service
- Pursuing funding for expansion

