

# Energy Efficiency & Demand Response at KCP&L

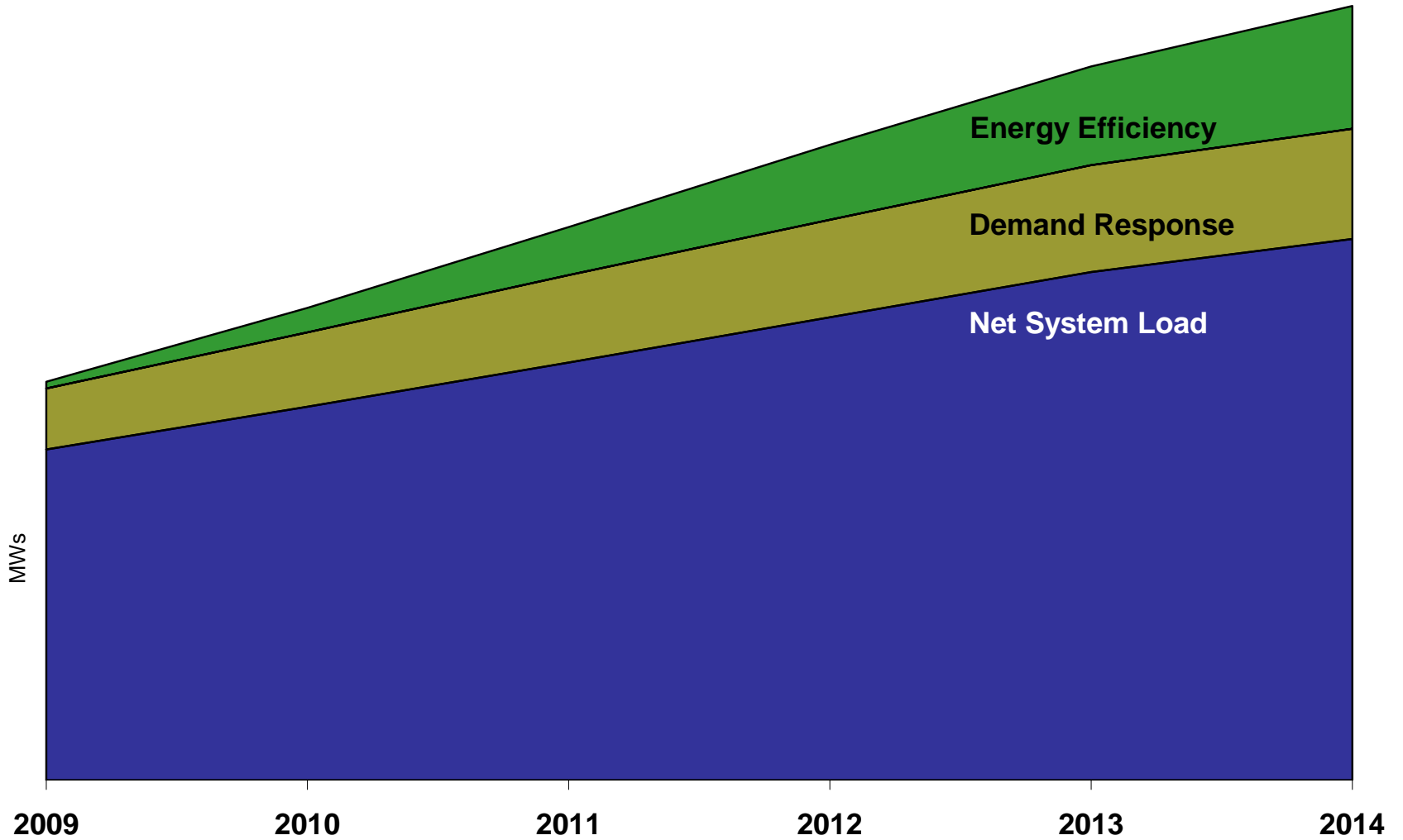
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11/07/08



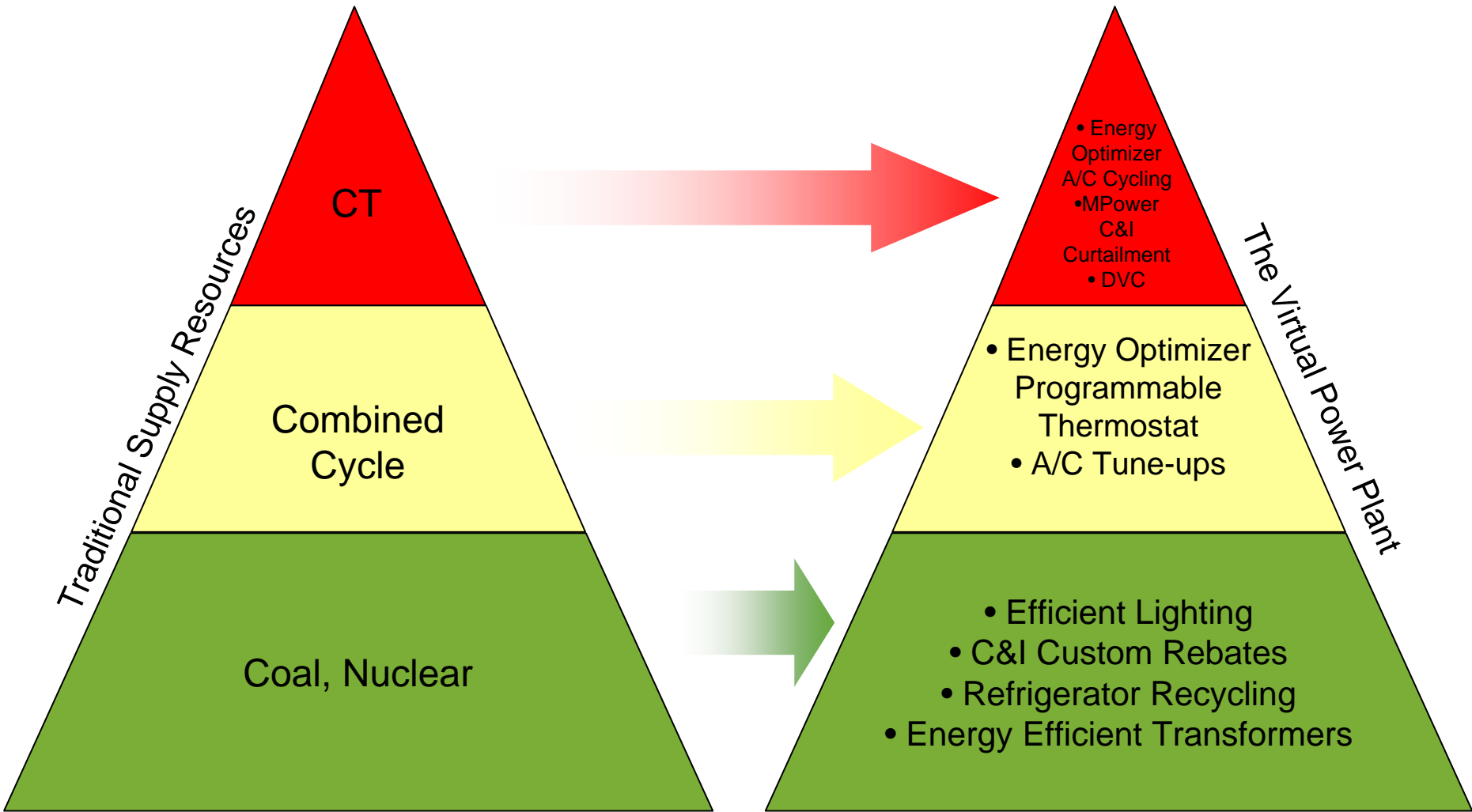
# KCP&L's Commitment to Sustainable Supply



# DR & EE as a Real Supply Resource



# DR + EE + Smart Grid = Virtual Power Plant



- Affordable New Homes Program
  - Energy efficiency incentives for builders
  - Renewed promotional efforts with cap agencies
  - Moving from 60% guideline to 80% guideline
  - Expected to gain traction
- Low Income Weatherization
  - Provides supplemental funds to CAP agencies for weatherization measures
  - Renewed efforts with cap agencies
  - Increased promotion
  - Uptick in numbers

# Energy Efficiency

- Home Energy Analyzer
  - Web-based program that provides energy efficiency recommendations and paybacks based on historical usage patterns
  - Recently completed a KC Royals promotion
  - Participation exceeds expectations
- Home Performance With Energy Star®
  - Pays rebate for making at least one energy efficiency improvement recommended by a qualified contractor
  - Completed email campaign to MO customers – generated over 100 hits to website
  - Program sponsored energy tip in KC Star and on metro radio stations
- Change A Light– Save The World
  - Instant in-store rebate on up to six CFLs Oct through Dec
  - Considering offering rebate year-round
  - Identifying new technologies to include in promotion
- Cool Homes
  - Re-commissioning and early replacement of cooling equipment
  - Equipment brought up to spec, or up to \$850 rebate for purchase of high-efficiency unit
  - Participants also receive a six-pack of CFLs
  - Program exceeding goals

# Energy Efficiency



- **Energy Star® New Homes**
  - Incentives for builders who exceed 2004 International Residential Code for energy efficiency by at least 15%
  - Focus on HVAC, hot water use and building envelope
  - 23 homes in process
  - 2009 marketing plans being developed in conjunction with Greater KC HBA
- **Business Energy Analyzer**
  - Web-based tool that provides energy efficiency recommendations and paybacks based on historical usage patterns
  - Allows benchmarking against like businesses
  - Slow uptake; considering redesign options
- **C&I Energy Audit and Energy Savings Measures**
  - Audit
    - Covers 50% of audit cost up to \$500 if audit recommendation implemented
    - Slow uptake; considering redesign options
  - C&I Retrofit and New Construction Rebates
    - Rebate = lesser of two-year buy-down or 50% of incremental cost
    - High participation rates in retrofit; lower in new construction
- **Building Operator Certification Program**
  - Energy efficiency training for building operators
  - Pays half of tuition and certification cost
  - Seven-class course; two levels
  - Program has proven very successful

# Demand Response

- MPower
  - Load curtailment program
  - Fixed and variable payment
  - 425 participants
  - 80 MW of load reduction
  - Partnered with Energy Curtailment Specialists in 2008 to penetrate small to mid-sized commercial customers
  - Program exceeding expectations
- Energy Optimizer
  - A/C cycling program
  - Free Honeywell programmable thermostat; no financial incentive
  - 30,000 participants
  - Just starting installations in commercial market
  - Program exceeding expectations



*Energy Optimizer*





# DR as a “Gateway” to EE

## DR as the “Gateway” Measure

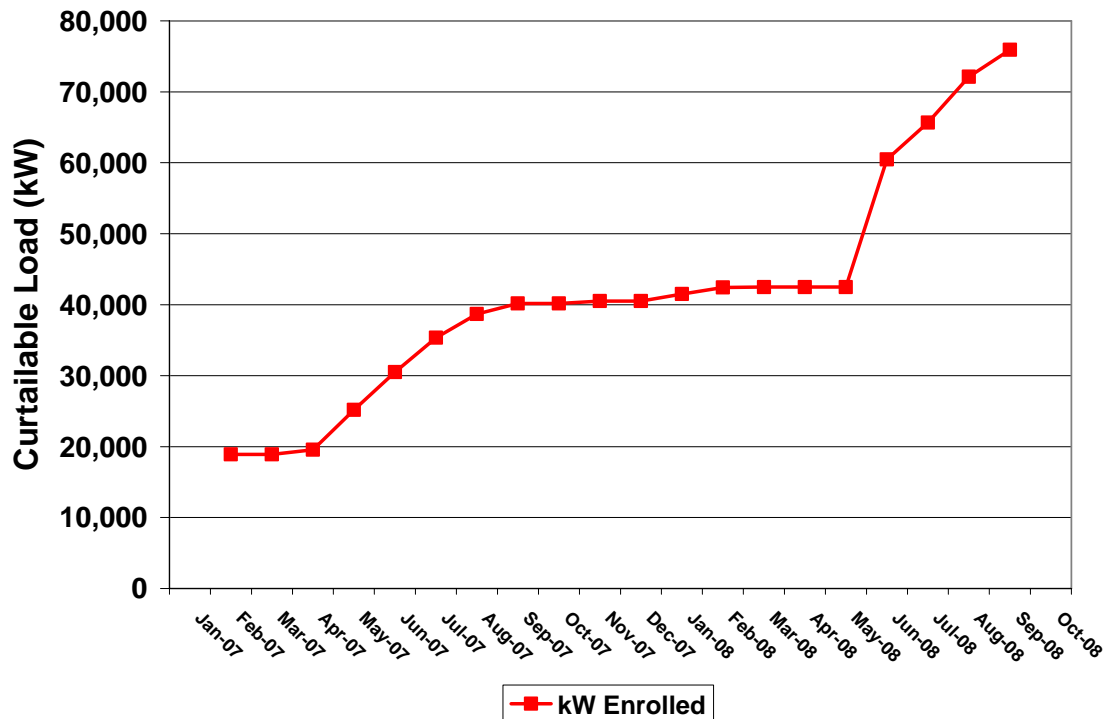


- DR benefits are immediate and substantial
- Energy efficiency benefits accrue over time and are harder to recognize
- “Front-line” decision makers recognize value of DR
- Easy win for utility and customer
- DR provides capital for energy efficiency projects

# KCP&L's View/Experience

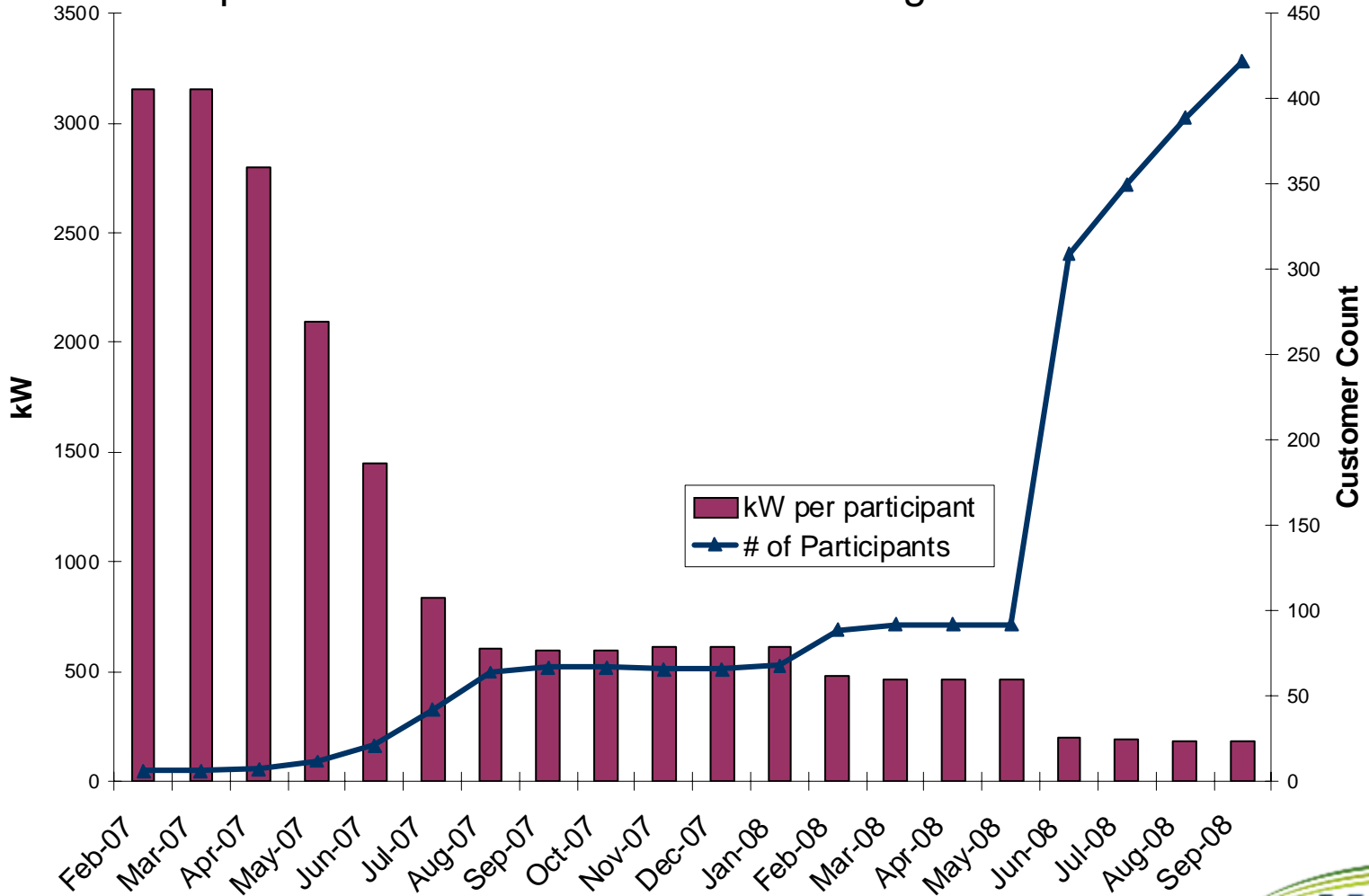
- Because it is such a natural lead-in to EE, DR efforts should be “turbo-charged”
  - Aggregators
  - Infrastructure
  - Get as many customers in as quickly as possible, to start laying groundwork for energy efficiency

**KCP&L MPower Participation Growth**





...But...beware: the “turbo-charged” approach presents a whole new set of challenges...



# Future: How do we achieve full DR/EE integration?

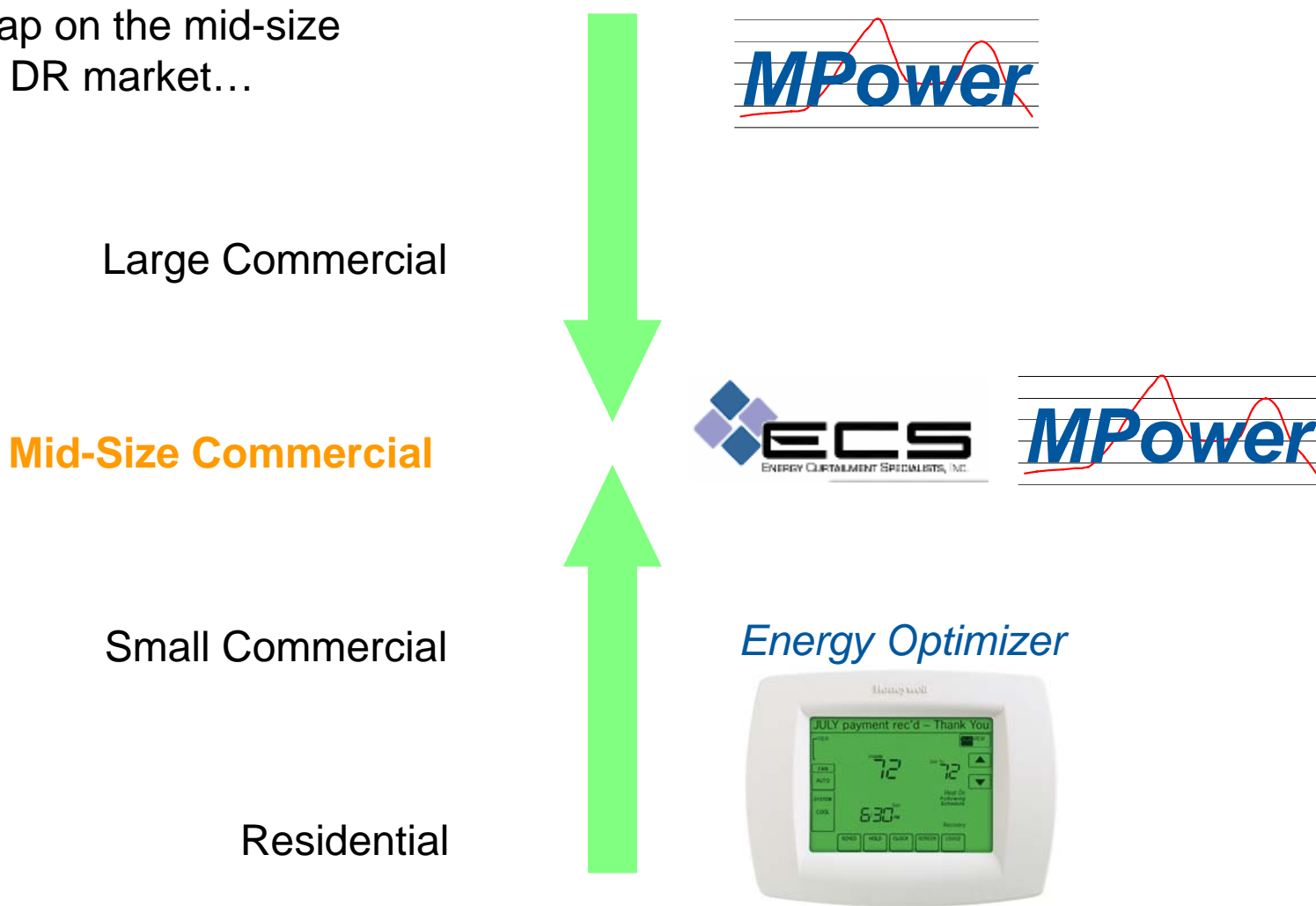


- Third parties and channel partners
  - Energy Curtailment Specialists – Delivering MWs **and MWhs**
  - Small commercial market – Deliver max value on **every** customer contact
  - HVAC Contractors – Delivering Energy Optimizer PCT program **in partnership** with Honeywell
- Building internal capabilities
  - As markets mature, they become less economical to serve
  - Building an internal sales capability allows utility to serve the mature market while entering new markets
- Technology
  - Commercial market – Real-time data and automation
  - Residential market – DR technologies enable price response and EE

# Future: How do we achieve full DR/EE integration?



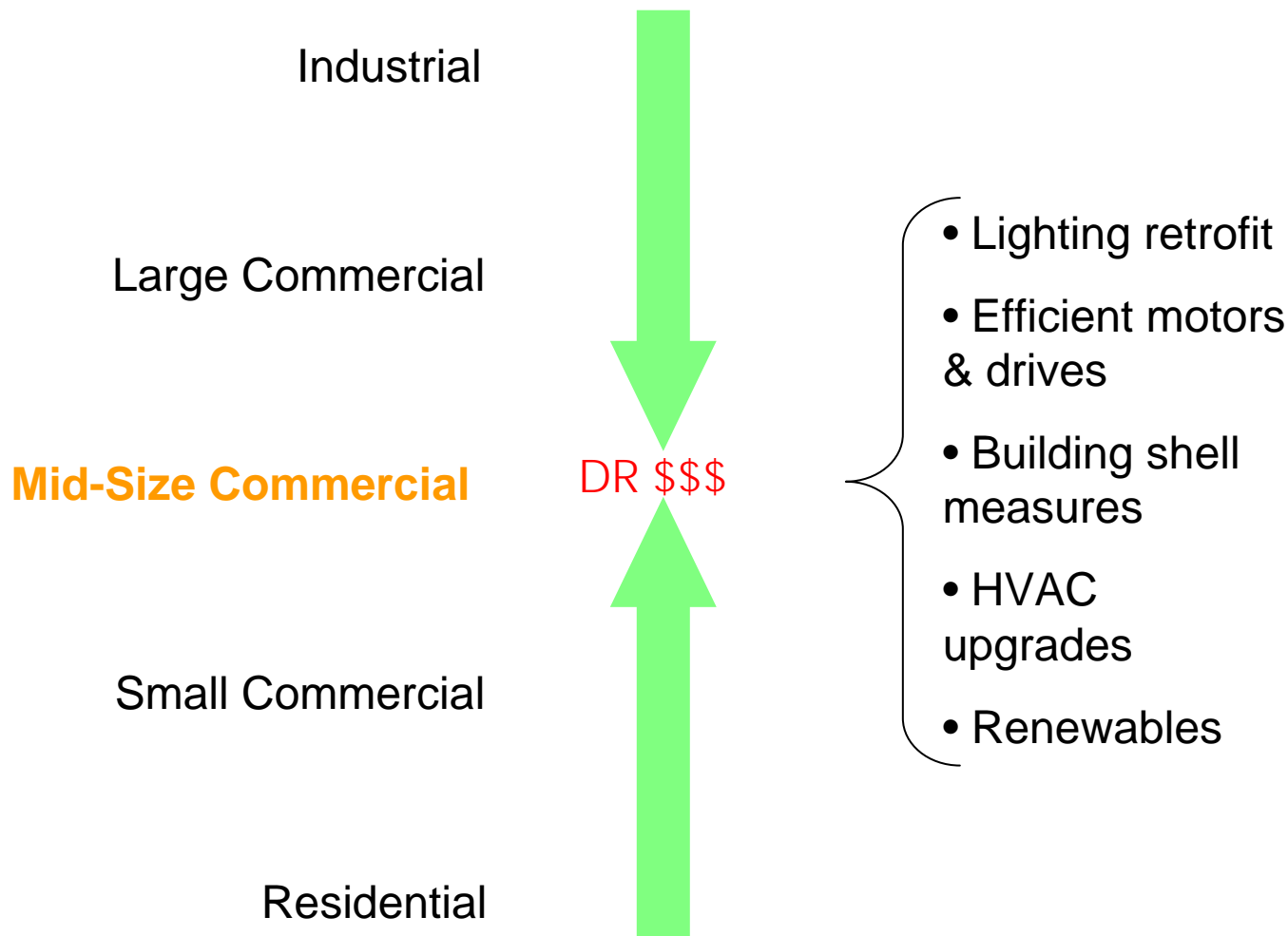
Close the gap on the mid-size commercial DR market...



# Future: How do we achieve full DR/EE integration?



...and energy efficiency will follow...



# What's next?

- RFP program
- Refrigerator bounty
- Prescriptive rebates
- In-home display
- Dynamic pricing

# Contact Information



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