

# DEMAND RESPONSE GAMING AND BASELINES:

## TOWARD INSIGHT TO DESIGN REMEDIES

Prepared for MADRI

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**How to see the forest for the trees?**

**We need collective vision**

# The Problem of Demand Response Baselines

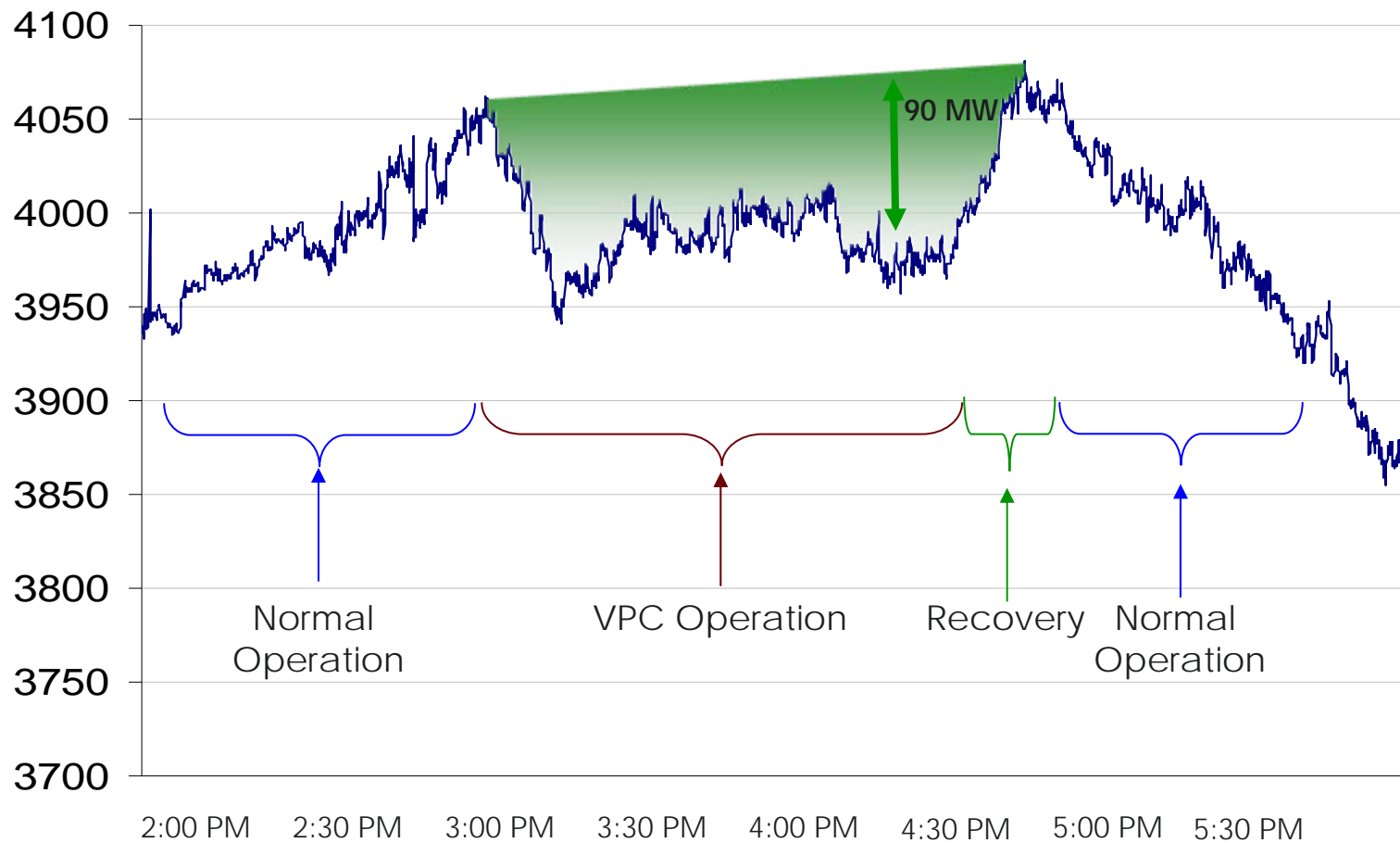
## Gaming of Demand Response (DR):

- Overstate the baseline and DR results
  - “Load was very high”
  - And, “the resulting demand was very low...”
- How much of the problem is the baseline?
  - Baseline can be gamed – but is this over stated?
  - Metered DR result cannot...

=> Baseline the major source of gaming however...

# Residential Uses Clear Control Group

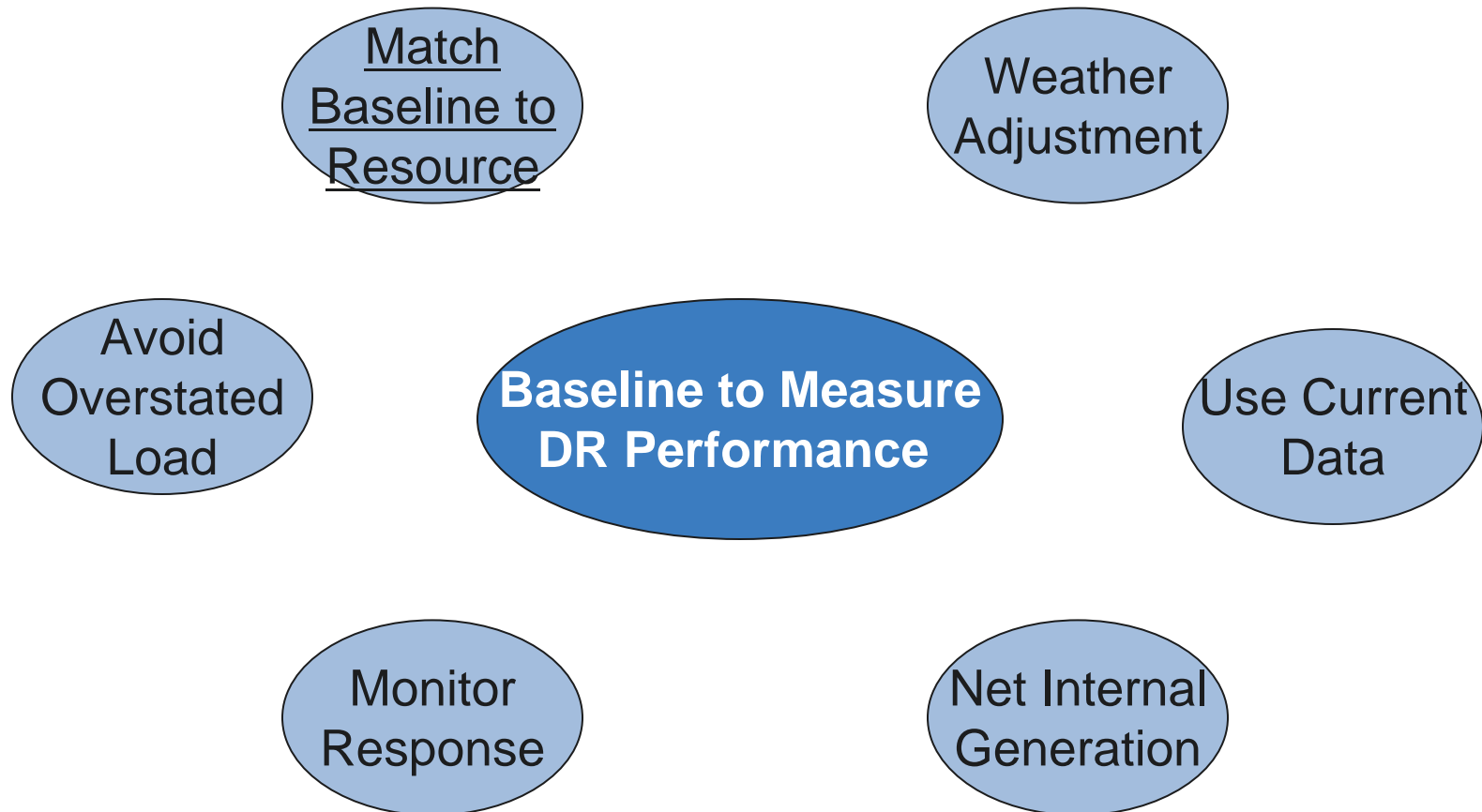
Direct load control and largely homogenous population



## C/I DR Space is More Anomalous

- Very different loads based on different customer end-uses
- Control groups may work for small commercial customers
- Baselines should reflect the customer loads they mimic
- Multiple baselines may be complicated and costly to administer
  - Proper match of customers and baselines – not so easy
  - Related settlement costs
  - Related DR system costs
- Tradeoffs exist between accuracy/validity and complexity
- So what is the right balance – more study is needed

# Key Elements of Gaming – How to Weight?



## Mismatch of Baseline With DR Resource?

- Method to define baseline load profile should match the resource
- The suggestion is to study the fit between baseline methods and DR resource types
- This is just one source of gaming, which suggests study of other problems that allow gaming
- Can most any kind of baseline be gamed?
  - What mechanisms can be used to reduce potential gaming?
- This suggests further review and analysis of gaming
  - Interview DR practitioners that have detailed insight
  - Review internal DR practitioner operations

# Recommendations

- Study the match of baselines and specific DR resources
- Analyze all sources of gaming in DR
  - Interview DR practitioners that have detailed insight
  - Review internal DR practitioner operations
  - Target specific gaming behaviors and advise on mitigation mechanisms
- Form an advisory committee to guide this review and analysis
  - Market monitors and regulators
  - DR customers and practitioners
- Fund and procure consultant assistance to address potential DR gaming head-on



A photograph of a dense forest with tall, thin trees and sunlight filtering through the canopy, creating a bright and airy atmosphere. The ground is covered in fallen leaves and tree stumps.

# Comments and Questions?

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