

Distributed Energy Resources GOALS

MADRI WORKSHOP
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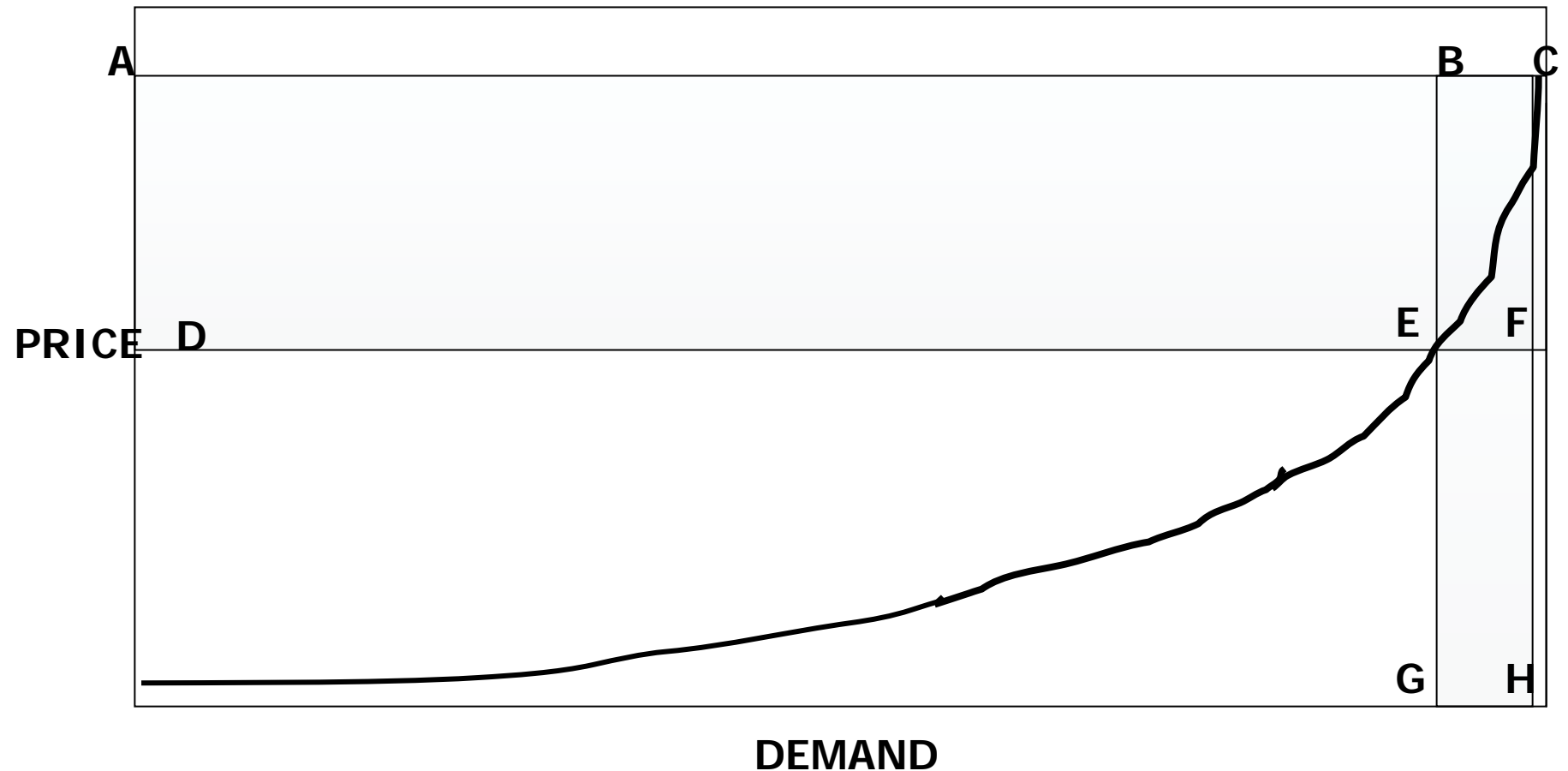
OVERVIEW

- WHY ARE GOALS DESIRABLE
- WHAT IS INVOLVED IN SETTING GOALS
- HOW TO GO ABOUT SETTING GOALS

WHY ARE GOALS DESIRABLE

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- Private benefits from DR much smaller than public benefits

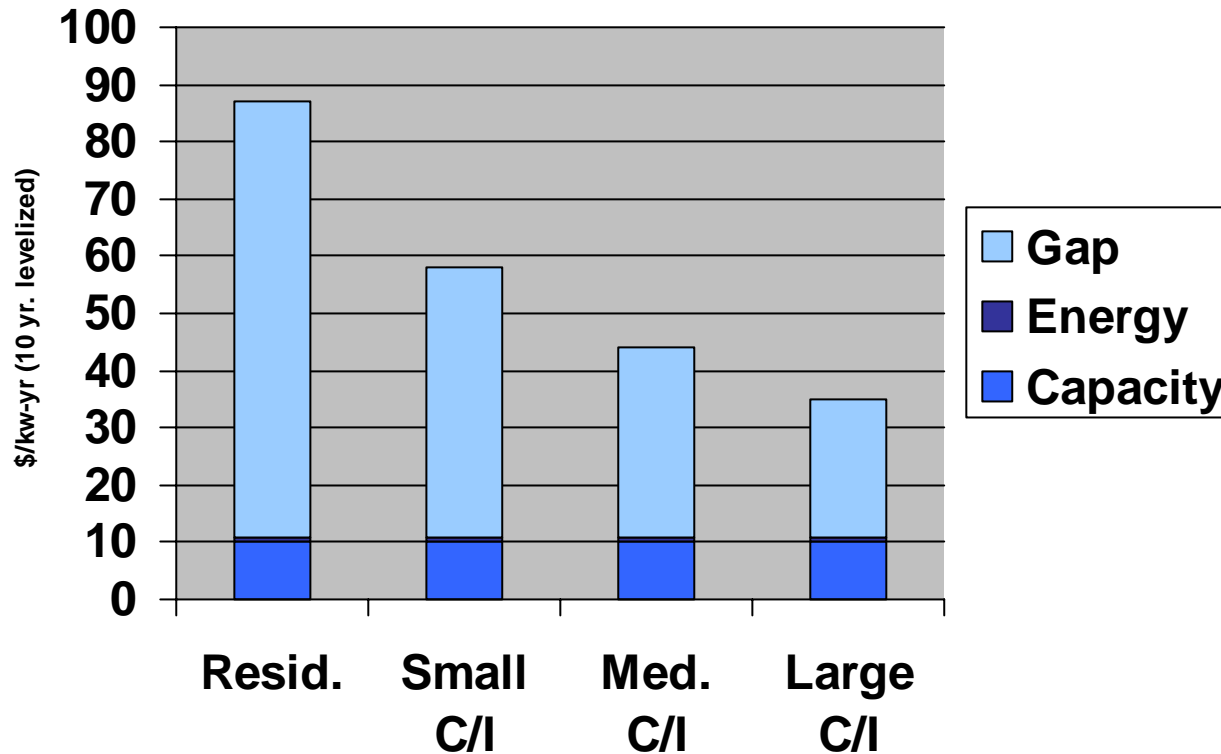


WHY ARE GOALS DESIRABLE

- Private benefits = Rectangle BCGH
- Public benefits = Rectangle ABED

WHY ARE GOALS DESIRABLE

DER Gap Analysis by Market Segment
(Annualized level 10 yr NPV
\$/kW/Yr)



WHY ARE GOALS DESIRABLE

- Private benefits are not sufficient to cause investment in most DER
- Without some sort of transfer or coercion the public benefits of DER will not be realized

WHY ARE GOALS DESIRABLE

- A goal is a starting point to measure progress toward reaping the public benefits.
- A modest goal is important because individual companies and individual Commissions need to develop their own expertise and comfort with DER if it is to be effective in the MADRI jurisdictions.

WHAT IS INVOLVED IN SETTING GOALS

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- A goal is something to strive for and measure progress against, but with no guarantees that it will be accomplished.
- A goal is not a mandate.
- Conceptually it is straight forward to look at some maximum demand and calculate a percentage decrease. But it might not be that simple

WHAT IS INVOLVED IN SETTING GOALS

- Different DR programs affect how demand is reduced
- Some programs act as if they have a switch, on or off (binomial), e.g., energy efficiency, or the PJM ALM program.
- These programs are often used for reliability purposes.
- These programs shift the vertical demand curve to the left and are relatively easy to verify demand reductions.

WHAT IS INVOLVED IN SETTING GOALS

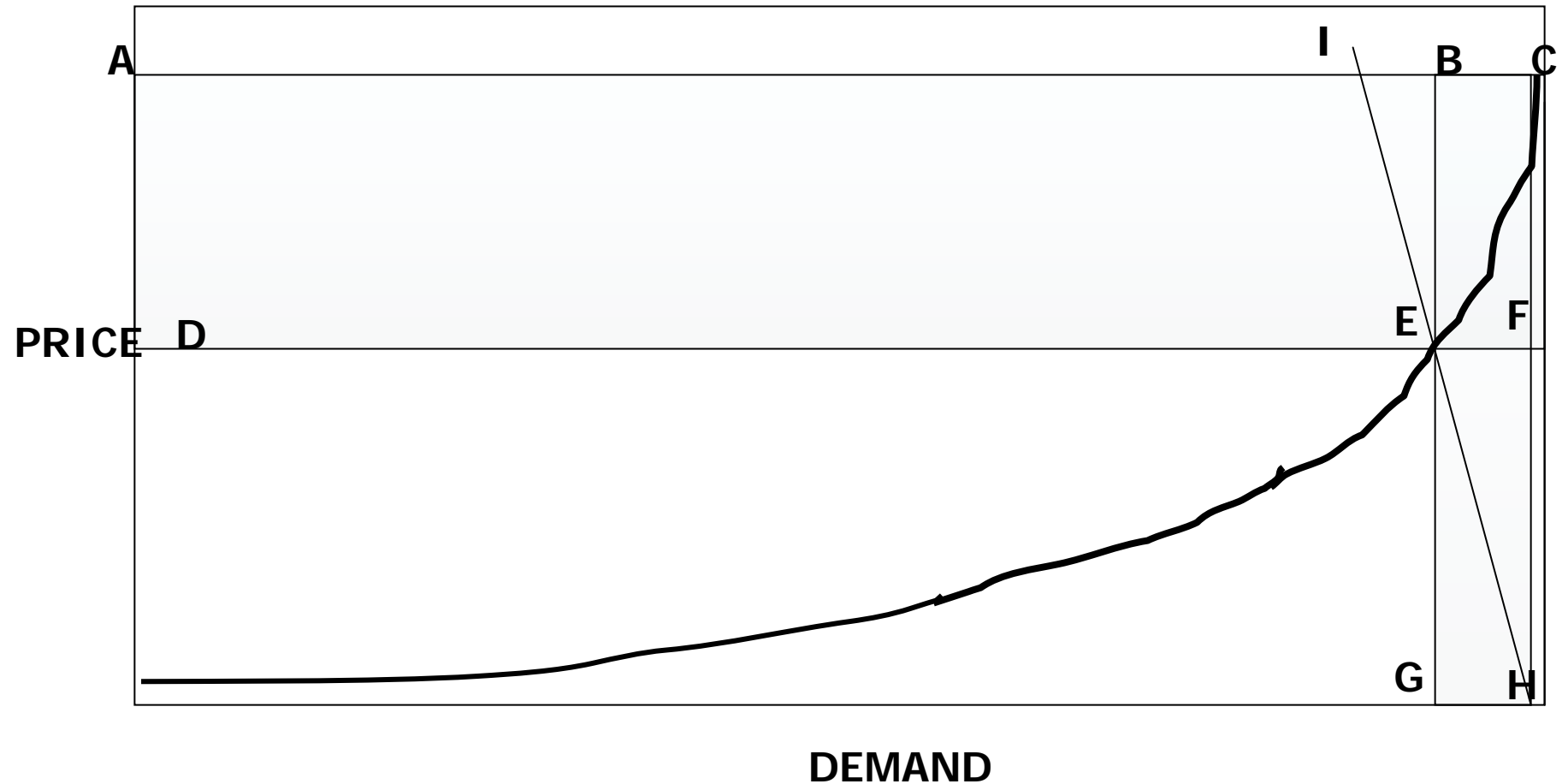
- DR that occurs due to customers being exposed to time varying prices in some fashion, e.g., CPP, or the PJM Economic DR Program make it more difficult to measure and verify reductions because the outcomes at any particular time, i.e. annual zonal peak, are less well known in advance than for non-price dependent (binomial/reliability based) programs.

WHAT IS INVOLVED IN SETTING GOALS

- These programs do not shift the demand curve but rather change its shape to a sloped demand curve introducing some measure of elasticity of demand (price responsiveness) into the market.

WHAT IS INVOLVED IN SETTING GOALS

- Change in slope (IH) versus change in location of Demand curve (BG)



WHAT IS INVOLVED IN SETTING GOALS

- In the MADRI jurisdictions there will be a combination of DR programs that shift the demand curve (binomial) and change its shape (economic).
- This complicates achieving any goal.

HOW TO GO ABOUT SETTING GOALS

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- The first and most logical step is to consider the specific MADRI initiatives:

DER Option	Related MADRI Activity
Smart Thermostat	Business Sub-Group/Comverge
CHP Initiative	Business Sub-Group/USCHPA/Mid-Atlantic CHP Application Center/EPA
Pricing Pilots & Models	Regulatory Sub-Group/Comverge
Internet Platform	Business Sub-Group/PHI
Model Decoupling Tariff	Regulatory Sub-Group
Targeted Distribution System Deferral Pilot	Business Sub-Group/Con Edison
AMI Action Plan	Advanced Meter Survey/AMI Workshop/AMI Tool Box/Commission Roadshows
Model Interconnection Agreement	Interconnection Sub-Group

HOW TO GO ABOUT SETTING GOALS

- Several of these initiatives are compatible with required EPart state commission actions.
- Beyond the initiatives there are several other strategies for reaching a 3% goal
- Encouraging participation (including financial incentives) in PJM programs, including new programs such as ancillary services and the Forward Energy Reserve (FER).

HOW TO GO ABOUT SETTING GOALS

- Some states, e.g. NJ and PA, use a portfolio approach
- A portfolio approach works best with binomial/reliability forms of DER
- Portfolio approaches are often combined with public benefit fund incentives to capture some of the public benefit and use it to finance DER which otherwise would not be undertaken

HOW TO GO ABOUT SETTING GOALS

- Most economic DER retail based programs require a rate initiative undertaken by state Commissions.
- Business models that promote participation by local distribution companies will be showcased by EEI later on today.