



Customers – Active Partners in Energy Markets

NZ Energy Conference
October 2002

Conventional Customer Participation

- ❑ Energy Efficiency for all customer types
 - Awareness and education
 - Incentives/rebates to reduce paybacks of upgrades
 - Performance contracts with 3rd parties for projects
 - 7x24 benefits to customer, retailer benefits vary
- ❑ Curtailable/Interruptible Rates for larger customers
 - Prepaid call option
 - Customers loved them when supply was plentiful
 - Customers rebelled when exercised frequently
- ❑ Direct Load Control for residential/small commercial customers
 - Water heaters, A/C, pool pumps, etc automatically cycled
 - Prepaid call option or paid by the event



New Technologies, New Approaches

- ❑ AMR – frequent reads of increasingly applied and more cost effective interval meters
- ❑ Internet access to meter data for near real time energy consumption information
- ❑ Internet communications platforms for program administration
- ❑ Smart thermostats and home automation provide new options for residential customers
- ❑ Distributed generation, including remote dispatch, offers new capabilities



So, Now Customers Can Do More

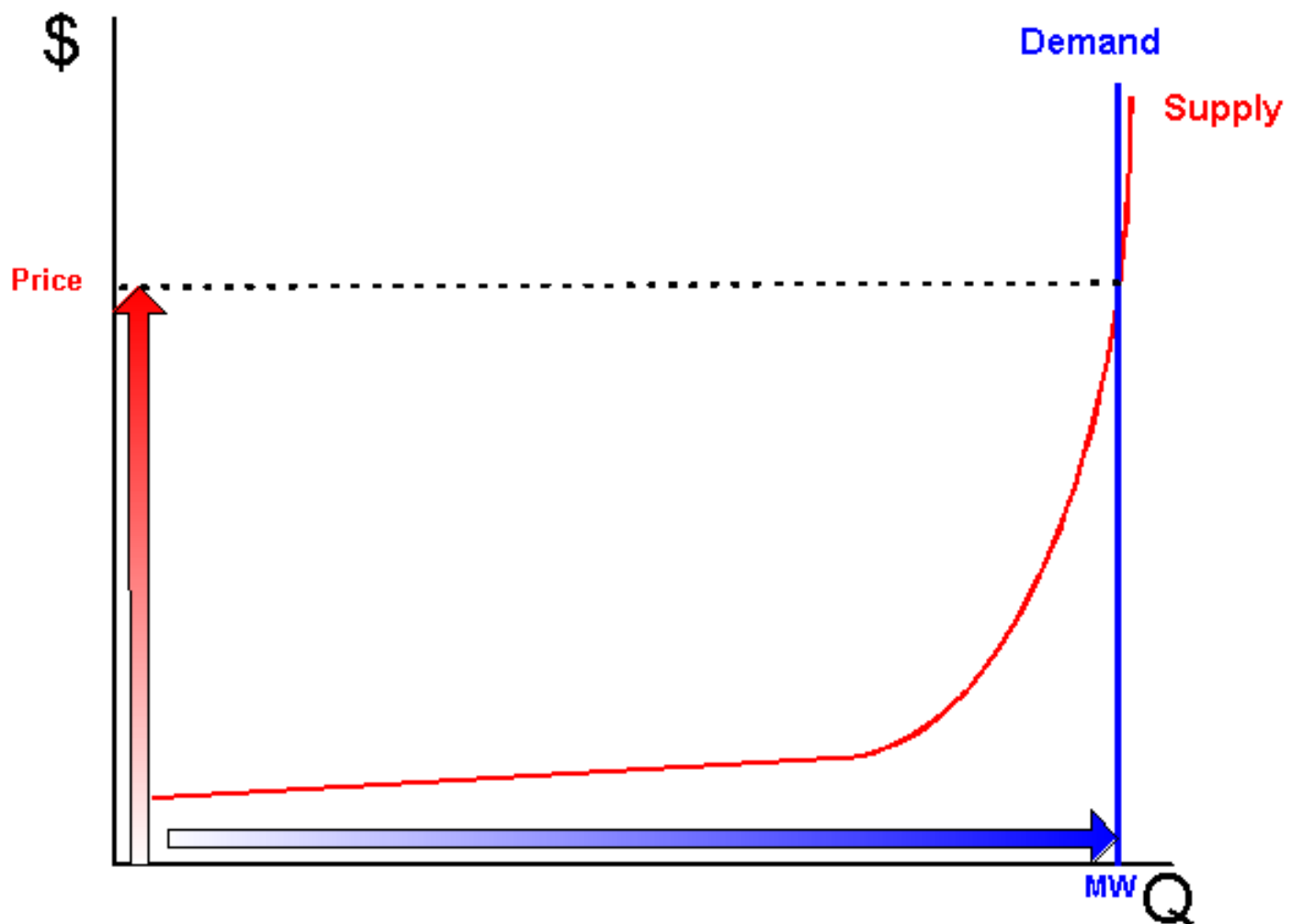
- ❑ Residential customers – signal the price and automate the response, ala Gulf Power
- ❑ Industrial customers – “real time pricing” for customers with usage flexibility
- ❑ Commercial/Industrial customers – voluntary demand response, demand bidding

Now, I would like to focus on voluntary demand response keys for larger Commercial/Industrial customers

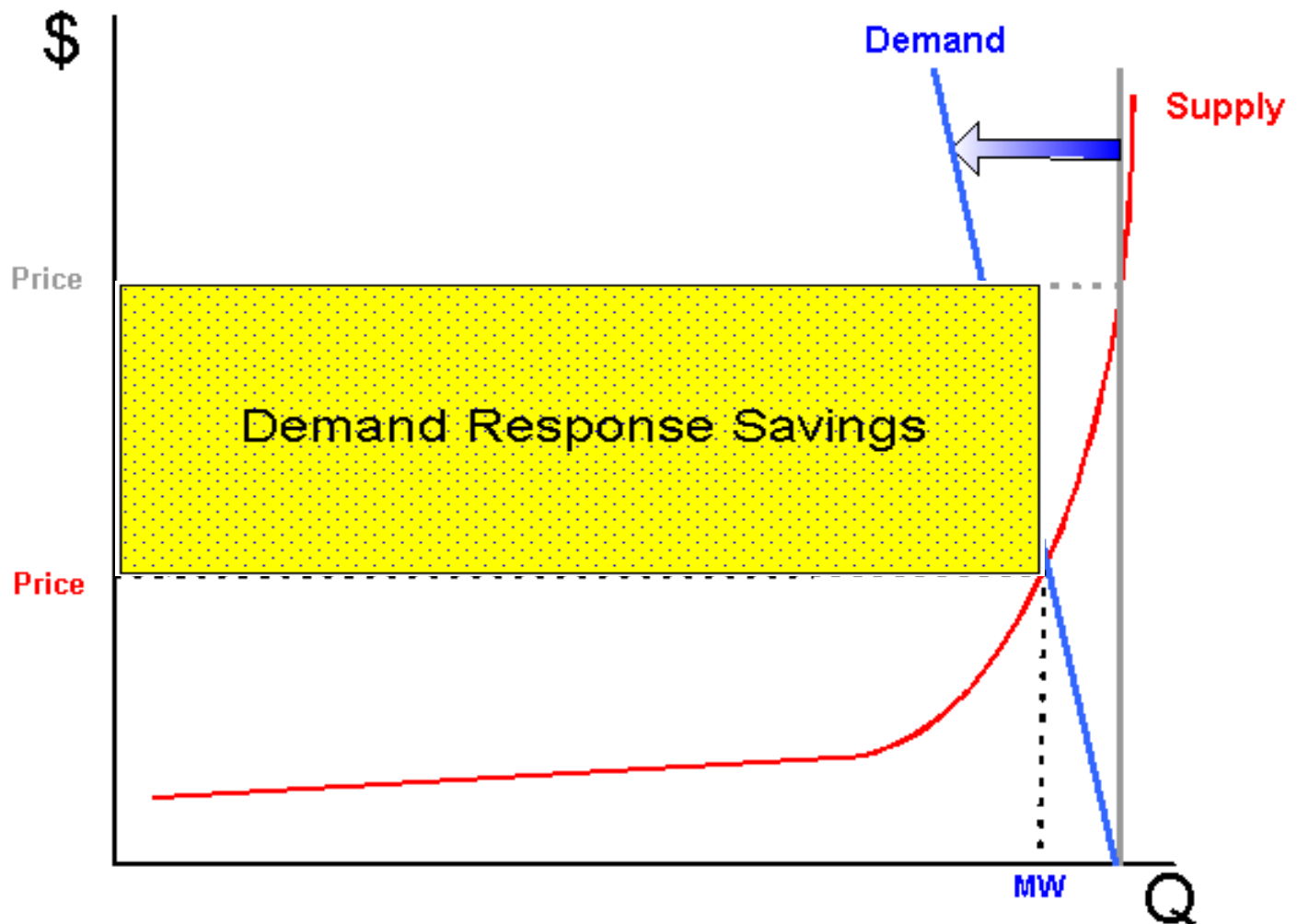
- Customers prefer it to Curtailable/Interruptible
- Large amounts of capability exist



Econ 101, Supply and Demand Lesson



The Solution – Demand Response



Marketing 101, Meet Customer Needs

- ❑ To capture the benefits of demand response, we must;
 - Understand customer business dynamics, and
 - Design demand response programs to accommodate customer business
- ❑ Our experience in the US
 - Day Ahead provides opportunities for customers to plan to contribute, allow several hours to decide
 - 4 hour, or larger, blocks work best
 - Web site with scenario analyses is valuable
 - Price offers that can be countered work well
 - Near real time data improves response
 - Experience leads to “upselling” and increased participation



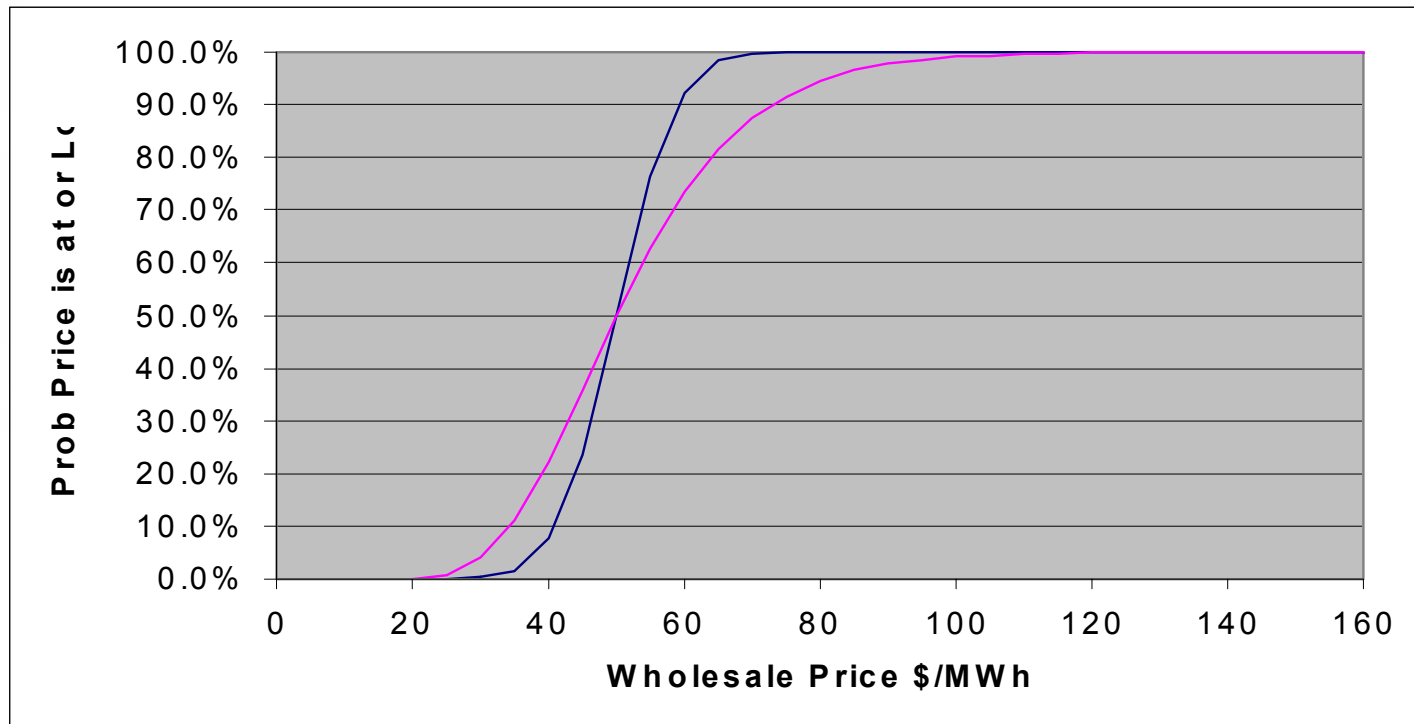
Business Dynamics 101, Profitability

- ❑ Customer partnership in the market must make business sense to the retailer, or lines company
- ❑ For the retailer, benefits include;
 - Lower customer acquisition and retention costs
 - Increased margins from value added services
 - Opportunity to sell at times of surplus
 - Traders like to buy – gives them additional market insight
 - Reduced risk from volatility

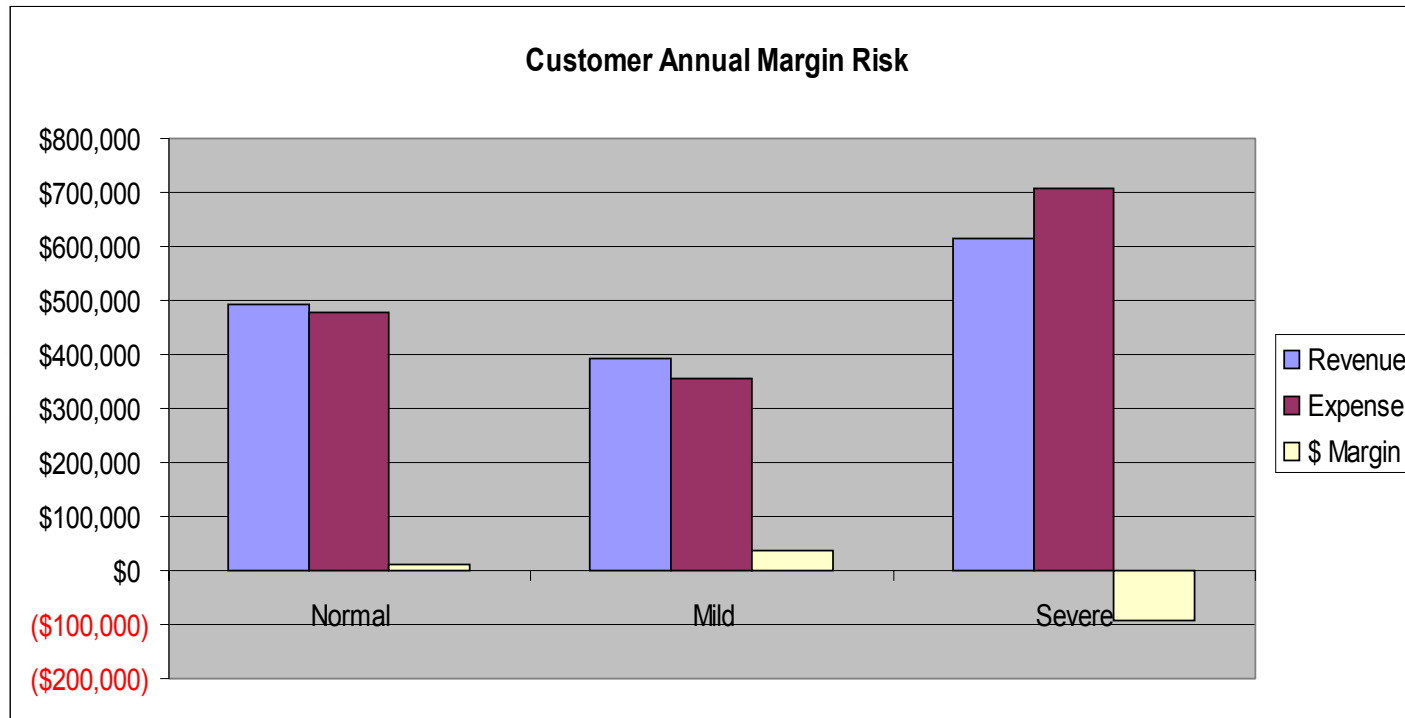


Assymmetric Risk Profile

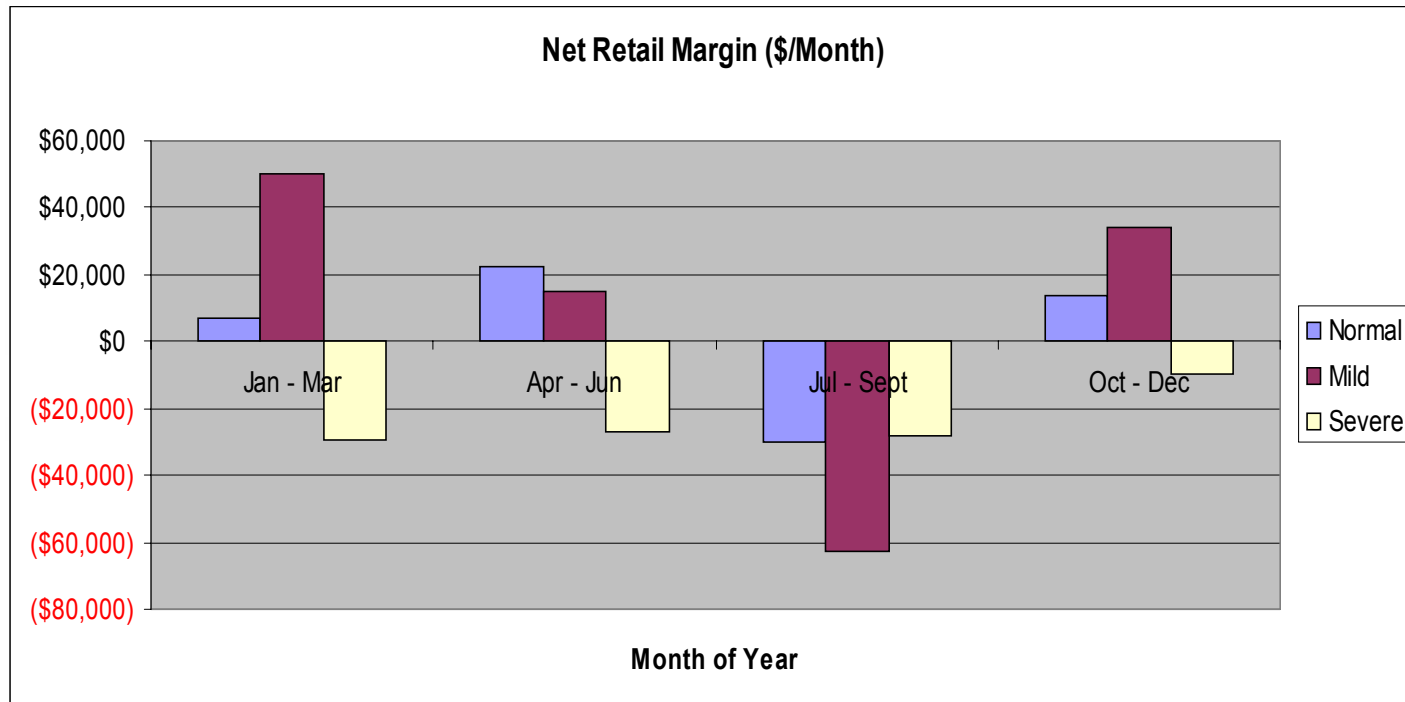
Commodity prices, log normal distributions



Retailer Profitability in PJM



Seasonal Profitability



Staying Power with a Hedge

- ❑ Cumulative cash required to stay the course can be reduced by adding customer demand response to the offering
- ❑ With severe weather one year in 6, and mild weather also one year in 6, the average margin is;
 - \$ 1,175,000 without demand response
 - +\$ 6,680,000 with demand response



Behold

TEN COMMANDMENTS OF DEMAND TRADING





Thanks to you and my sponsor on this trip, EECA, for the opportunity to present.

There appears to be substantial potential here to have customers participate as partners in the energy market – and I'm eager to provide whatever support seems reasonable.