



What is Demand Response? Why is it important? Why should I care?

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What is Demand Response?

- Customers reducing their electricity consumption in response to either **price** or **system reliability** events, and
- Customers being **paid** for performance based on wholesale market prices.

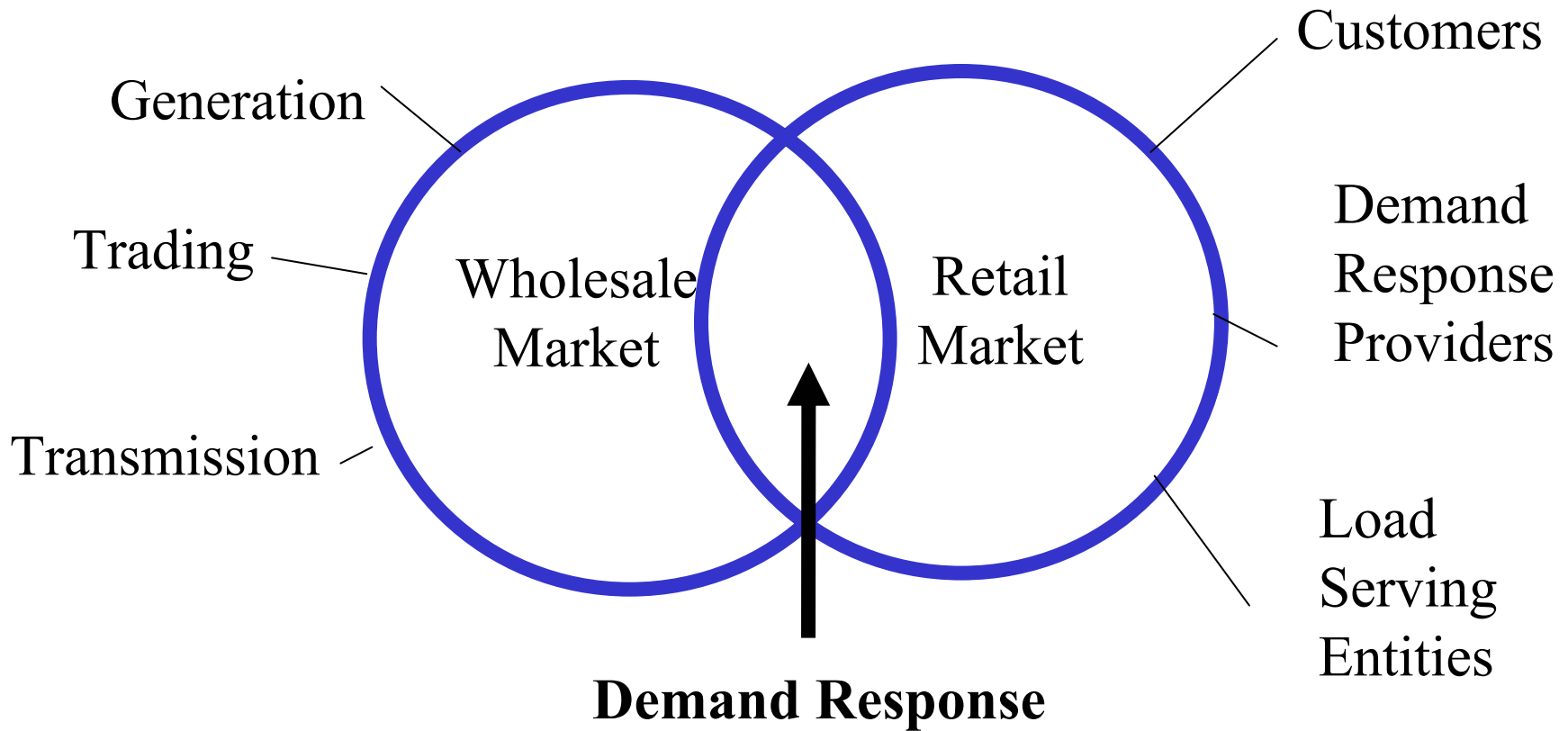
Demand



Supply



Role of Demand Response





Why is it Important?

- **Maintain System Reliability**

- Demand response is a *resource* that is available in the short-run to meet short-run planning and operational reserves.
- From the Control Room Operator's perspective
1MW of Demand Response = 1MW of Generation

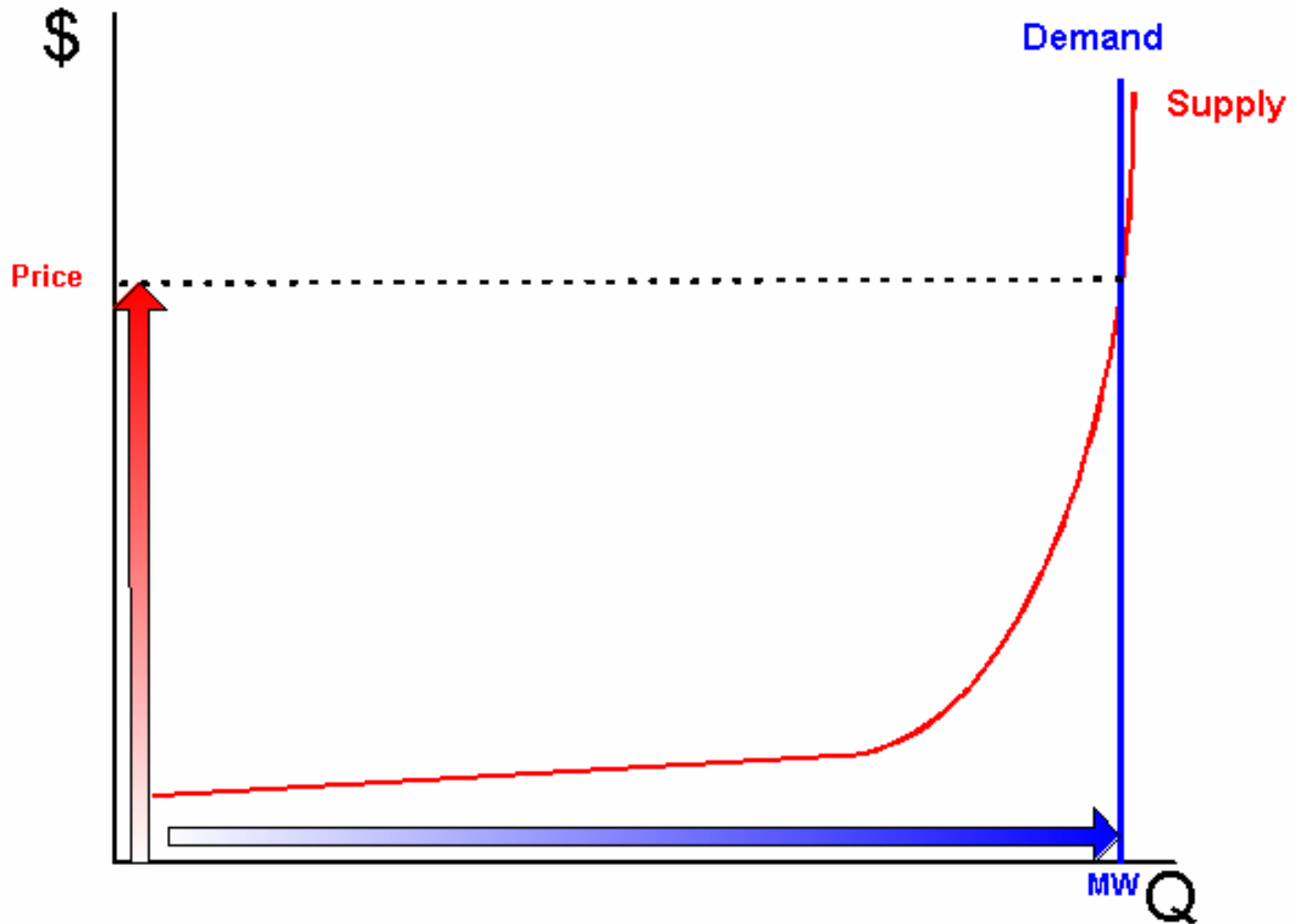


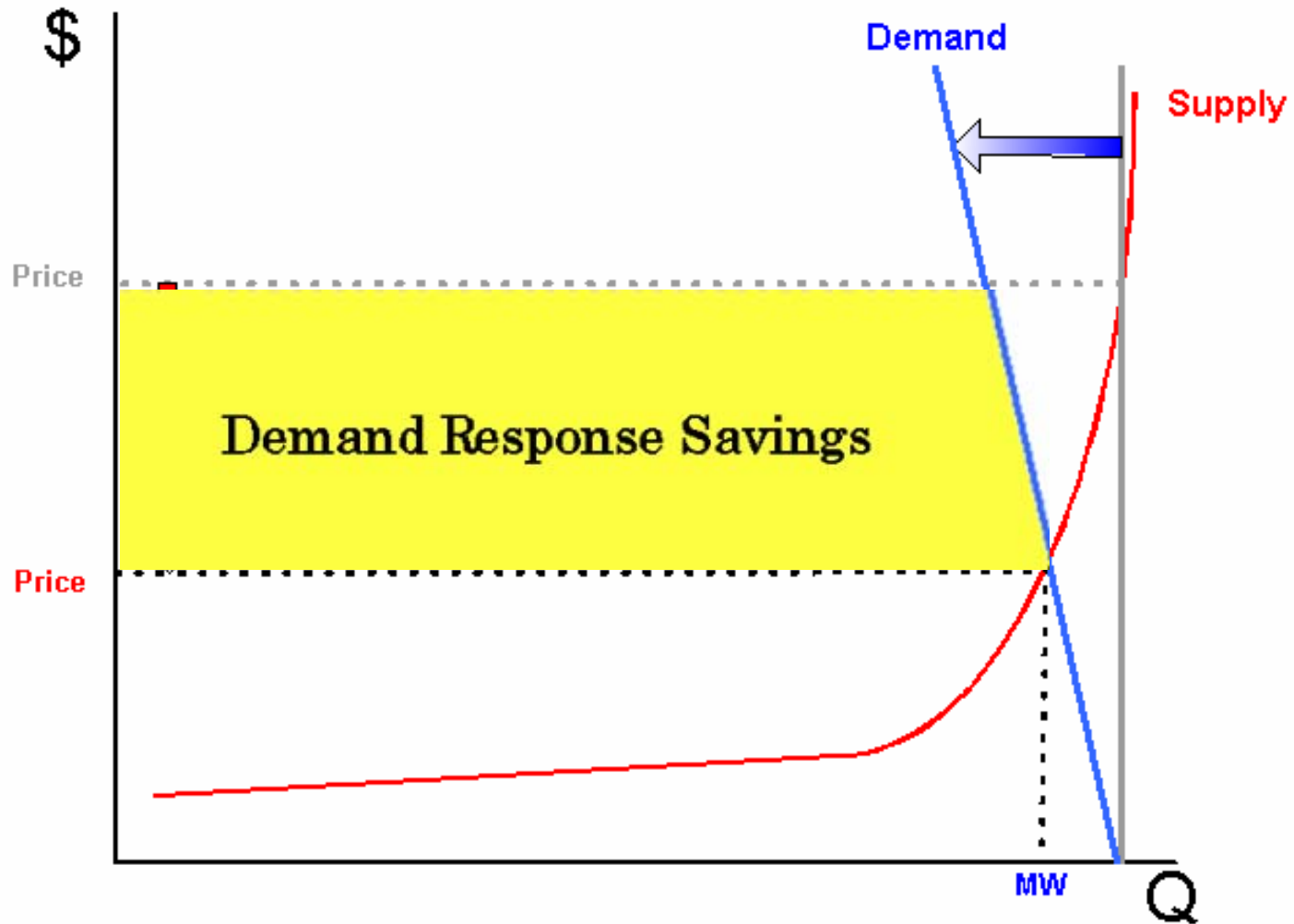
Why is it Important?

- **Regional Economic Benefits**

- Markets work better when customers are able to respond to prices.
- Customers regulate prices through their buying behavior.
- Demand response can mitigate “price spikes”
 - Limits suppliers market power
 - Lower market clearing prices. EPRI study determined a **2.3%** reduction in demand during peak days can reduce spot prices by **24%**

D E M A N D R E S P O N S E







Why should I care?

- Customers are **paid** for managing consumption in response to reliability or price events.
- Customers can receive **hourly usage information** that can be used to manage demand and energy charges year round.
- Customers who can manage their demand may be able to negotiate **lower retail electricity prices** from their competitive supplier.



How can Demand Response help Lower a Customer's Retail Price?

- **It's all about risk management!**
- Buying electricity is NOT like buying office supplies where the more units you buy the cheaper each unit gets.
- The price you pay for electricity is based on:
 - Your company's credit
 - Your timing (when you decide to shop)
 - **Your company's load profile (when you buy)**

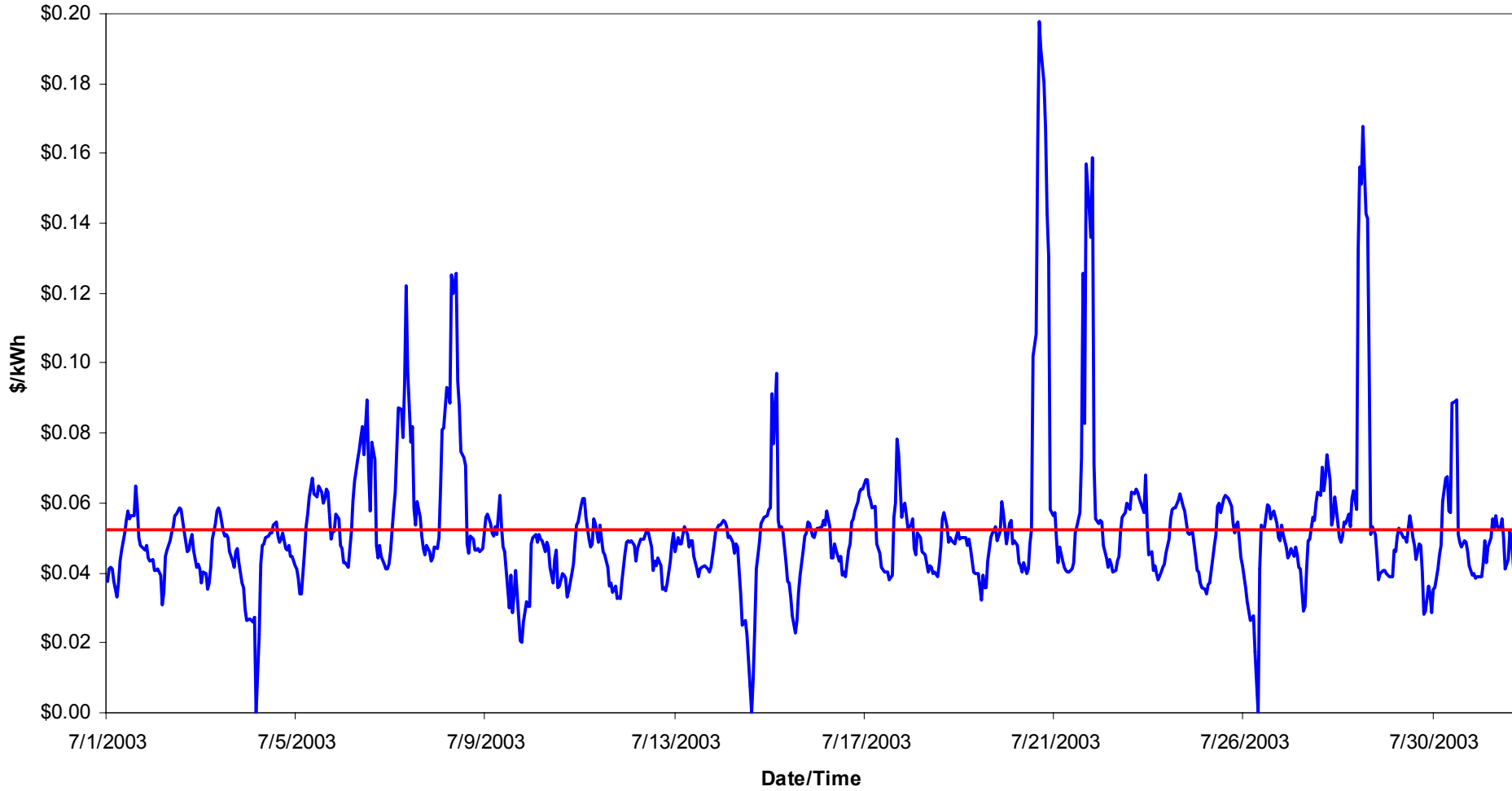


Retail Price vs. Load Profile

- It's simple.
- The more electricity you use when your supplier's costs are high, the higher your price.
- The less electricity you use when your supplier's costs are high, the lower your price.
- Your supplier's costs are based on the spot (real-time) and future market prices.
- **If you want to manage your retail price - manage your load profile.**



Connecticut Real-Time Wholesale Prices – July 2003





Option 1: Do Nothing

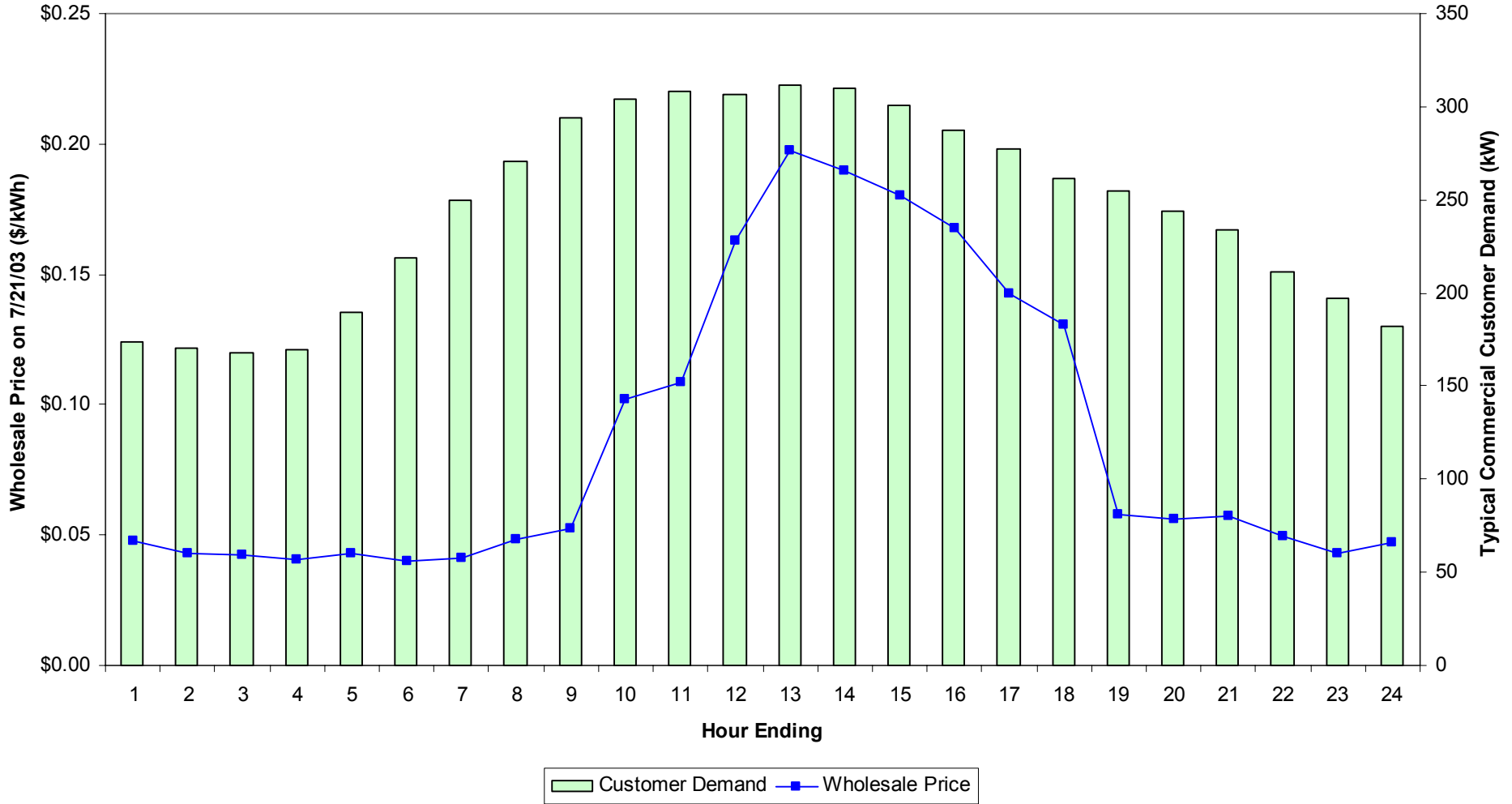
- Customers who can not control **when** they use electricity transfer risk to their electricity supplier.
- The supplier must assume the risk that at any point in time the customer can increase their consumption without any consideration for the supplier's wholesale costs.
- **Higher risk translates into a higher retail price**



Option 2: Participate and Save

- Customers who can demonstrate to their supplier that they can manage their hourly usage and respond to wholesale prices or reliability events can help lower their supplier's risk.
- **Lower risk translates into a lower retail price.**

DEMAND RESPONSE





Retail Pricing Options

	Fixed Price	Fixed Price with Demand Response	Real-Time Price
Customer's Risk	Lower	Same as Fixed Price	Higher
Supplier's Risk	Higher	Same as Fixed Price	Lower



Summary of Customer Benefits

- **Paid** for managing consumption in response to reliability or price events.
- **Hourly usage information** that can be used to manage demand and energy charges year round.
- Customers who can manage their demand may be able to negotiate **lower retail electricity prices** from their competitive supplier.
- Help ensure the **reliability** of the region's electrical grid.
- Help **mitigate supplier power** in setting wholesale prices.

