

The Institute for Regulatory Policy Studies
Illinois State University

“Moving Towards Greater Reliance on Wholesale Energy Markets”

Session 1:

**Price Volatility in Wholesale Electric
Markets: Causes and Solutions**

Customer Approaches to Hedging Volatility in Wholesale Markets

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Outline

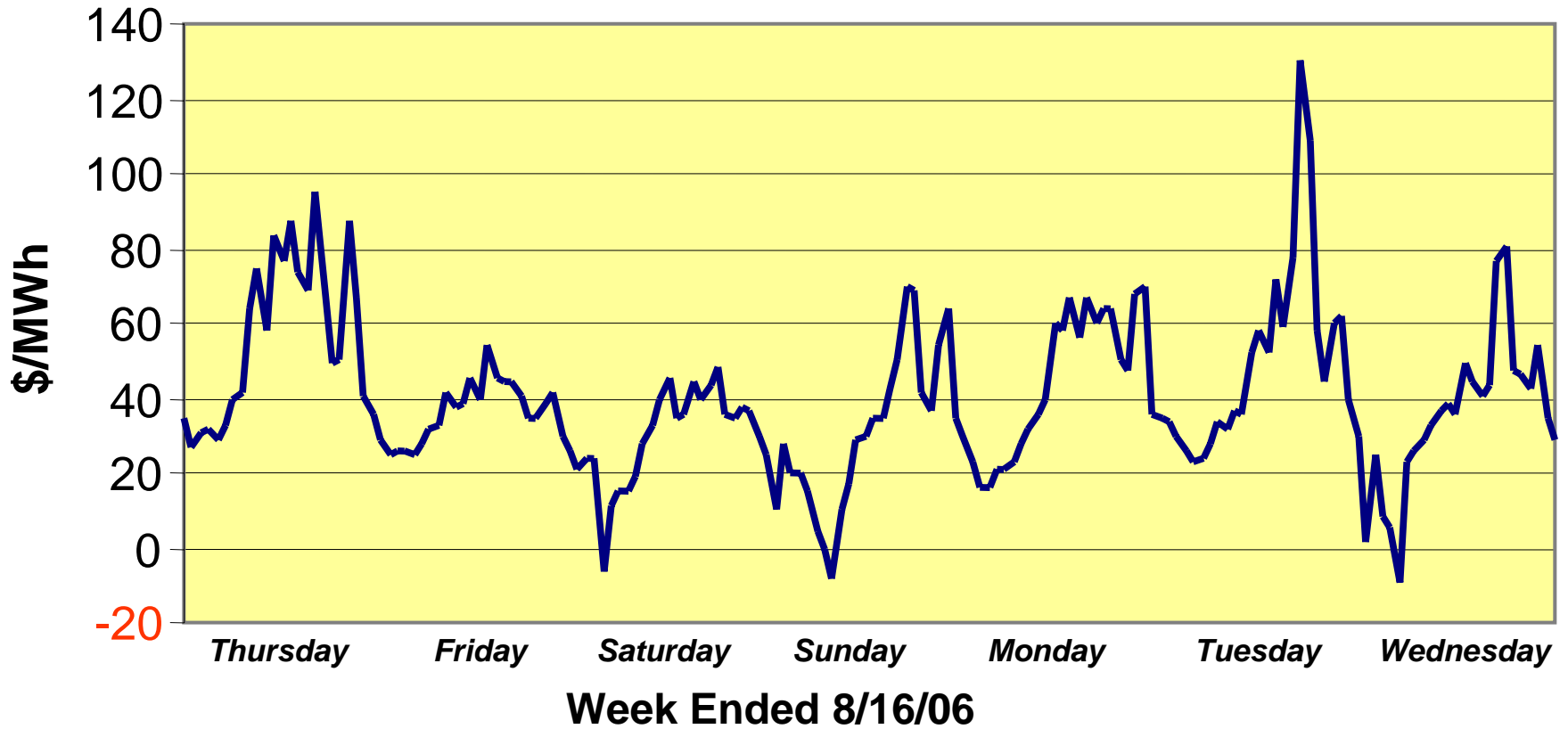
- I. Nature of Wholesale Power Markets**
- II. “Standard” Customer Options to Hedge**
 - A. Utility Supply**
 - B. RES Supply**
- III. “Advanced” Customer Approaches**
 - A. Retail Options**
 - B. Wholesale Options**
 - C. Financial Options**

Nature of Wholesale Power Markets

- Prices are volatile!!
 - ↳ Real time: > \$100 per MWh swings in a few hours

Index Price

Northern Illinois Hub Real-Time LMP

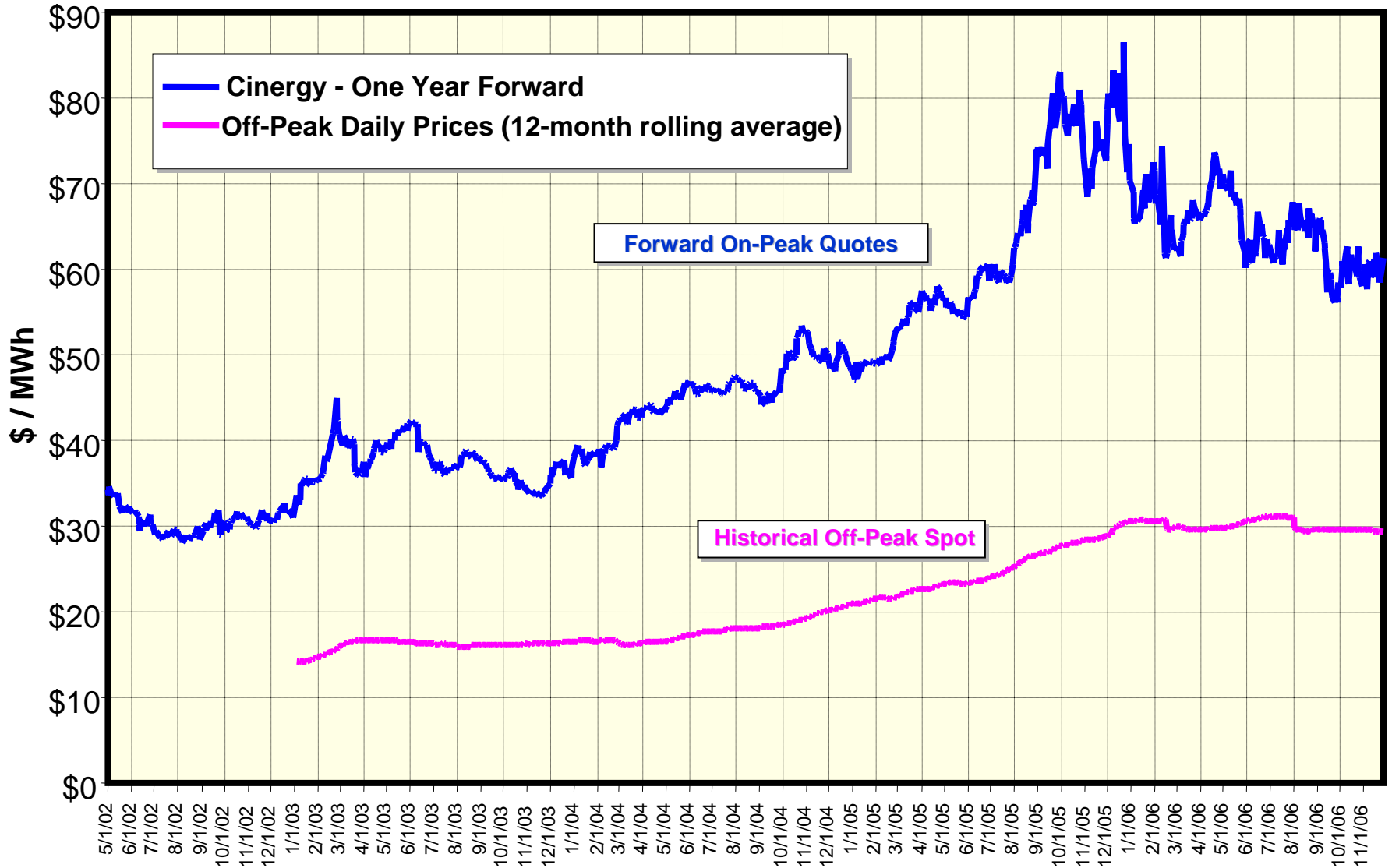


Source: www.pjm.org

Nature of Wholesale Power Markets

- Prices are volatile!!
 - ⌚ Real time: > \$100 per MWh swings in a few hours
 - ⌚ Forward: 100% increase in 4 years

Wholesale Prices - Into Cinergy (for On-Peak 5x16 block purchases and 1x8 historical Off-peak)



Source: Platts MegaWatt Daily - Into Cinergy

Nature of Wholesale Power Markets

- **Prices are volatile!!**
 - ⌚ Real time: > \$100 per MWh swings in a few hours
 - ⌚ Forward: 100% increase in 4 years

Most customers want greater price certainty, i.e., a hedged price.

Nature of Wholesale Power Markets (cont'd)

○ Transparency

☞ Real time: very transparent

- PJM
 - MISO
- } Website publication

☞ Forwards: very little transparency

- No futures market (unlike natural gas)
- Bilateral trades
- ICC historical struggles
 - Neutral Fact Finder
 - Bloomberg, Altrade . . . “Index du jour”
 - ICE, Platts (survey)

Need a liquid, transparent forward/futures product akin to NYMEX Henry Hub Futures.

Customer Options to Hedge Price

Utility Supply

- Fixed price products from auction

- ↳ Blended

- ComEd: <400 kW

- Ameren: <1,000 kW

- ↳ Annual

- ComEd: 400 kW - 3 MW

- Ameren: 1 MW & up

- No utility fixed price option for > 3 MW customers in ComEd
- No economic utility option for most Annual Price customers

RES Power Supply Product Types

- Fixed Price Load Following Service

- ▣ Assumed usage profile

- ▣ Usage bandwidth?

- ▣ Price for excesses?

- Index Pricing

- ▣ Based on objective, transparent criterion

- ▣ Hourly, or longer periods

- ▣ “Pass-throughs --- challenge is to discern between quotes, estimates and “soft” quotes

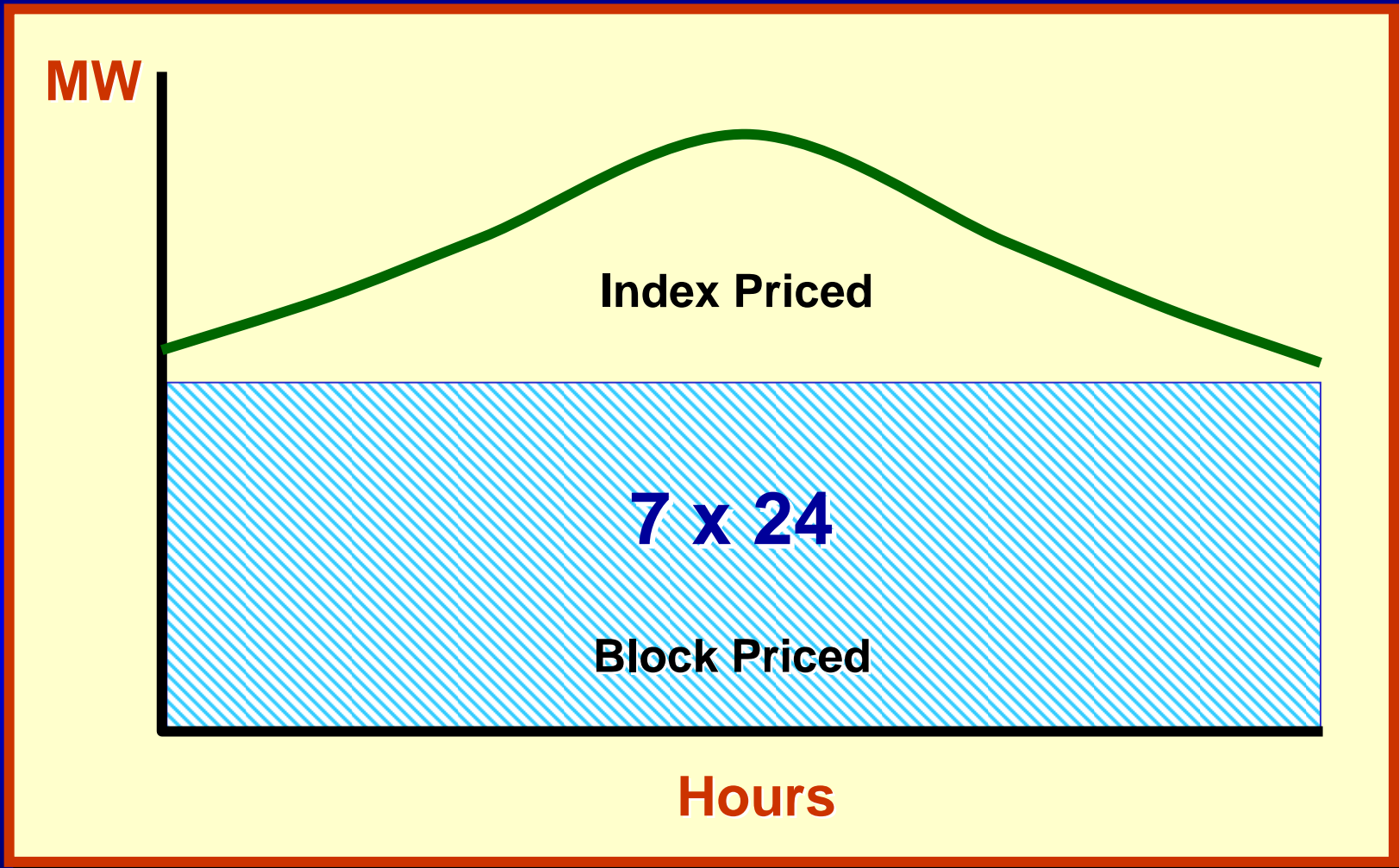
RES Power Supply Product Types (cont.)

- **Block and Index**

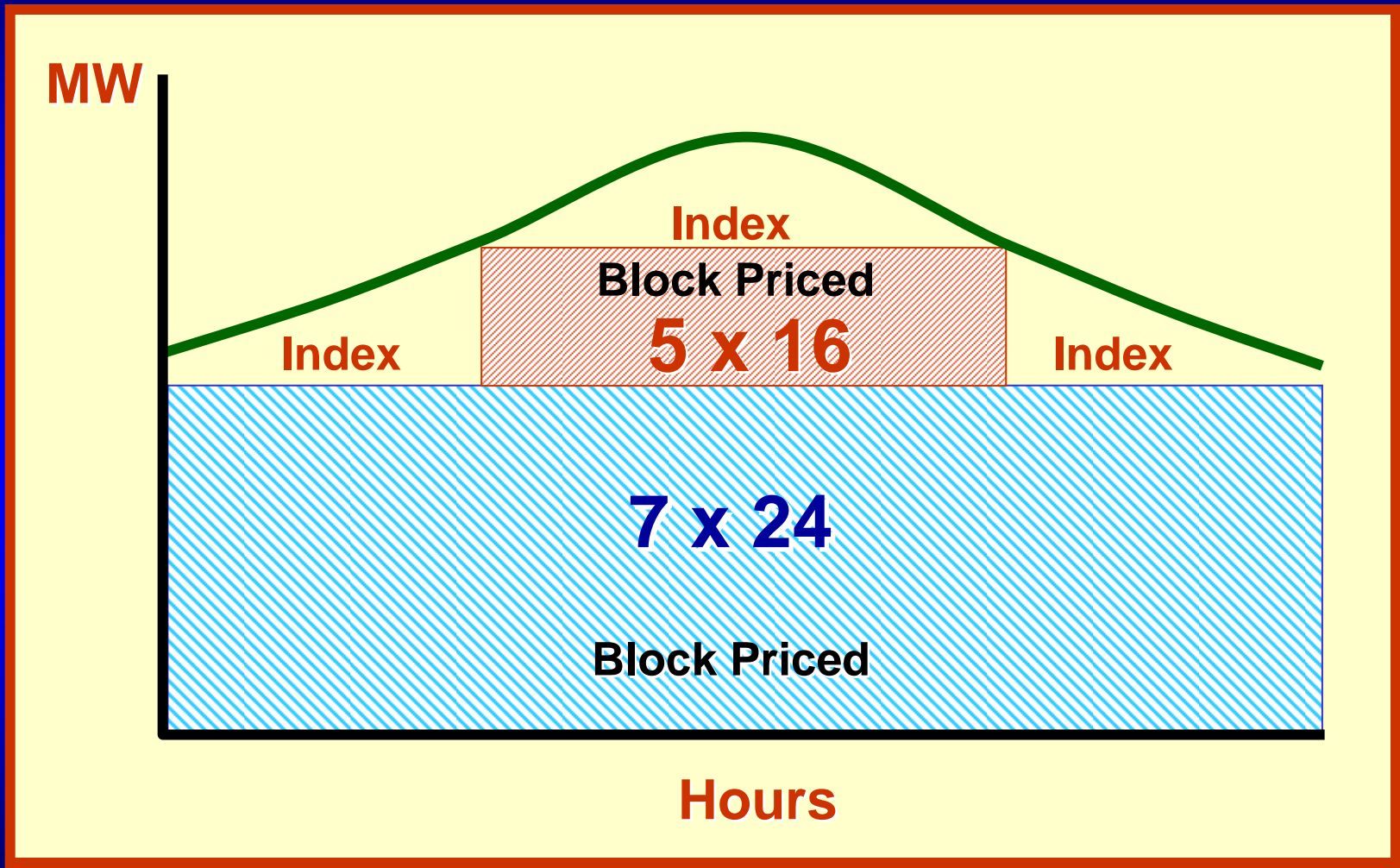
- ↳ Fixed price for fixed quantity

- ↳ Variable pricing for fluctuating load

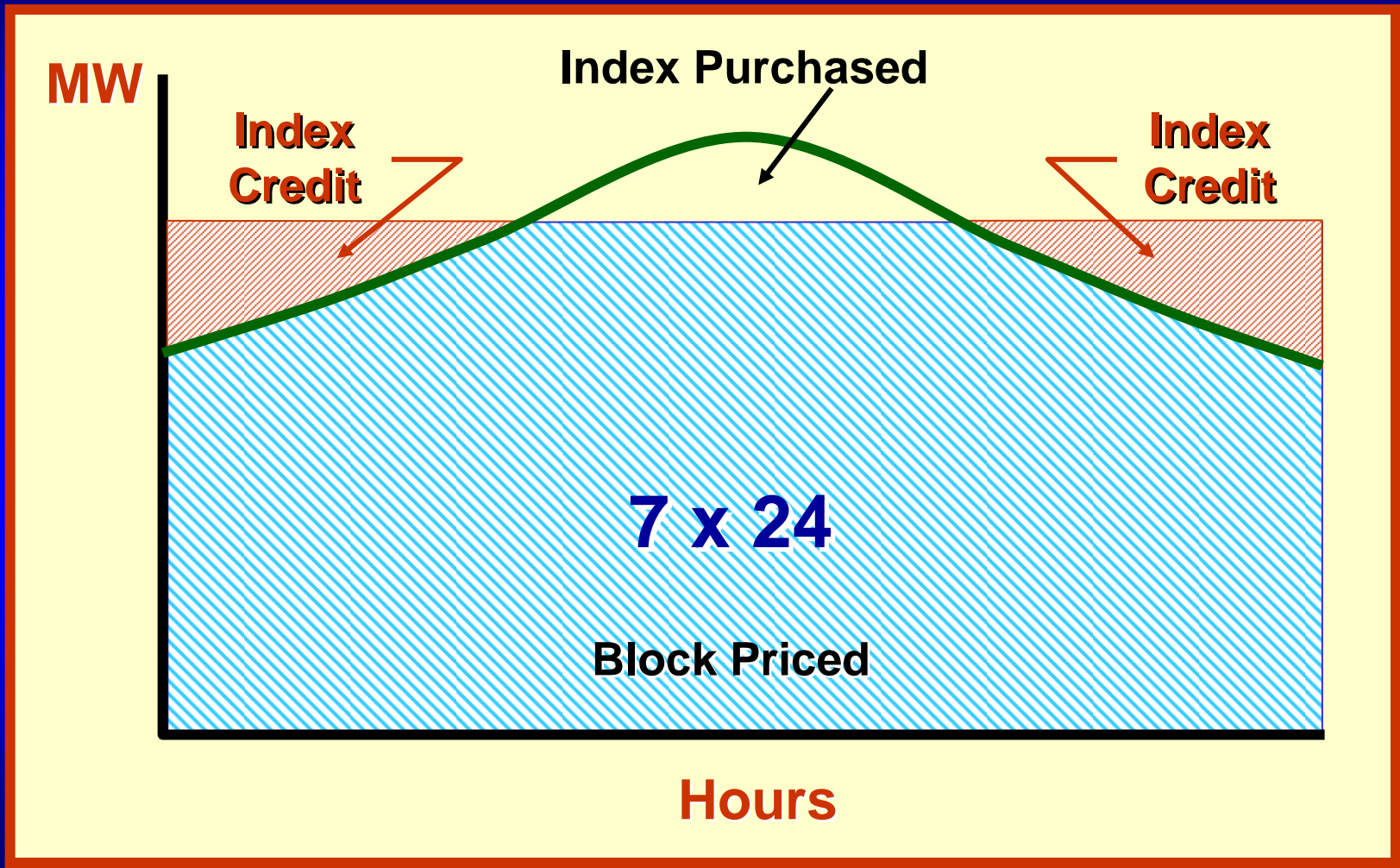
Block and Index Purchasing



Block and Index Purchasing



Block and Index Purchasing



“Advanced” Customer Approaches

Retail

- Partial Requirements – some from one RES / some from utility
- Fixed / float block index
 - ▮ Example: Customer load fluctuates from 22MW to 20MW
 - ▮ Block (20MW) / Index (hourly LMP)
 - ▮ Block could be structured in various ways
 - 10MW fixed long term / 10MW re-priced by month
 - 20MW fixed a month at a time
 - Combinations: layering and laddering

“Advanced” Customer Approaches

Retail (cont'd)

- Challenge is to ensure “true” market price for subsequent layers, when limited to same RES
- Multiple master agreements with periodic confirmation pages (one RES supply at a time)

“Advanced” Customer Approaches

Wholesale

- Illinois rules provide for customers to form “Self-ARES” to serve themselves or affiliates
- A Self-ARES customer can take:
 - Retail service via the previously discussed options, including via Self-ARES
 - Wholesale full requirements service

“Advanced” Customer Approaches

Wholesale (cont'd)

▣ Any combination of:

- Partial requirements service with host utility
- Service via multiple suppliers
- Self-wheeling from entitlements
- Service via RTO day-ahead and real-time markets

“Advanced” Customer Approaches

Service via Multiple Suppliers

- Utility Delivery Service tariffs limit you to one ARES
- However, as a Self-ARES you can have multiple suppliers
- With multiple suppliers
 - You can competitively bid each component of a blended supply portfolio
 - Potentially reduce your risk of supplier default
 - Maximize flexibility / gain leverage

List of Certified Self ARES

- Exolon Resources, L.L.C.
- ConocoPhillips Company
- Keystone Energy Resources, LLC
- IC Energy LLC
- Olin Resources, L.L.C.
- BOC Energy Services, Inc.
- GCW/USS Energy, LLC
- Aventine Power LLC
- L & P Electric Inc.

“Advanced” Customer Approaches

Financial

- Hedges / derivative contracts
- Utility or RES supply at hourly index price
- Third party guarantees cost to customer
 - Fixed for floating swaps, aka Contract for Differences
 - Caps and Collars
- May alter corporate reporting requirements (FAS 133)

“Advanced” Customer Approaches

Financial (cont'd)

- Are not regulated by either FERC or the ICC
- As noted previously, they can sell to anyone, effectively transcending the wholesale and retail markets
- Unfortunately, not yet well-developed for retail customers in Illinois

Questions?

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