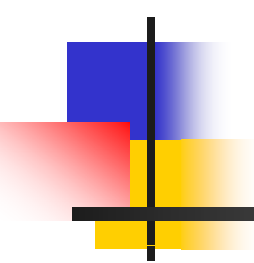


Healthcare Materials Management Society of New Jersey



Electric Deregulation in New Jersey

New Energy Concepts, LLC



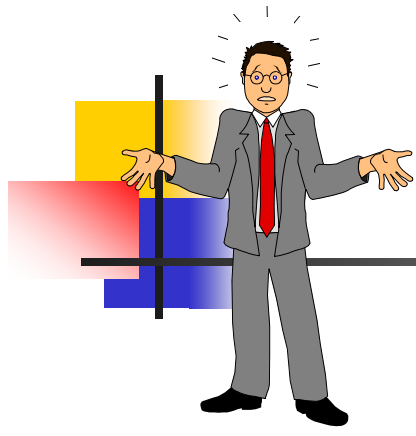
Jay Fuess - Ken Mara

June 18, 2003



New Energy Concepts, LLC

- Consultants for electric and gas in mid-Atlantic region
 - Manage procurement of energy
 - Provide advice, assist in energy management
 - Optimize generation assets
- Contracts with several suppliers
 - Able to supply commodity directly
- Active in PJM meetings
 - Participate in Working Groups to determine PJM policy



What is your capacity obligation?

Is load factor important?

Should I aggregate?

What is the process?

What is capacity?

PLC ?

Why is this important now?

Is this similar to California?

What is the wires charge?

How do I pick a supplier?

What is PJM?

What do consultants do?



Electric Facts

- In 1998 - IT used 8% of US electricity
- In 2010 - IT load will grow to 50%
 - Annual growth rate of 17%
- 4% of servers needed for 2005 are on line today
 - In 5-8 years, the world will be linked by one billion connected computers through tens of millions of servers.
- Electric grid provide 99.9% reliability
 - eight hours per year



AGENDA

- Terms
- Billing
- NJ Status
- Process
- Questions



TERMS

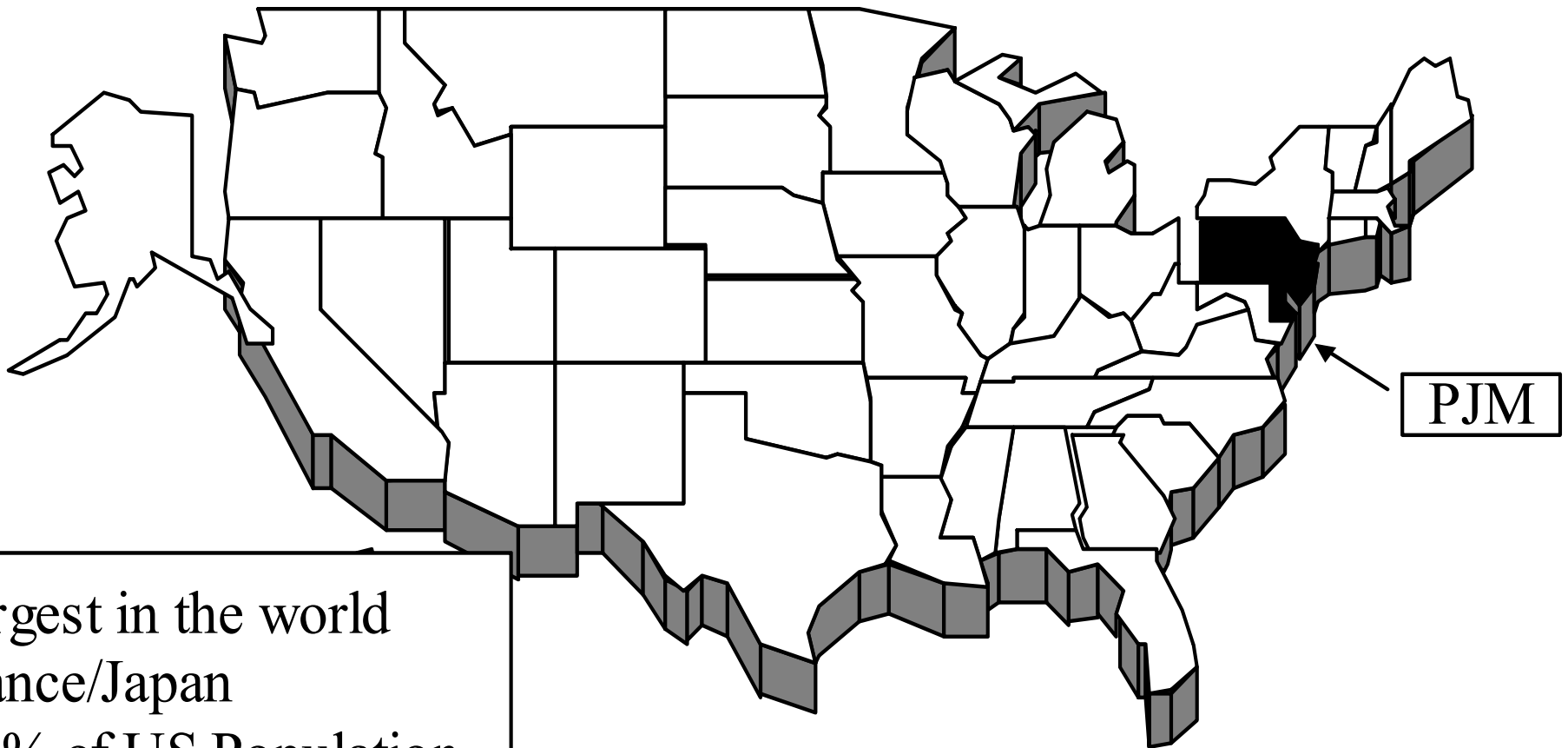
- EDC - Electric Distribution Company
 - PSE&G, JCP&L, Conectiv
- BGS - Basic Generation Service
 - NJ EDC Supply Service
- Transmission - PJM lines, Expressways
- Distribution - Utility lines, Streets, Roads



PJM

- Pennsylvania, New Jersey, Maryland, DE, DC
- Expanding to OH, VA, WV, IL,
- Coordinates movement of electric in grid
 - Balances needs of wholesale, retail, gen, trans
- Operates largest wholesale elec market in world
 - Operates like a stock exchange, matches buyers/sellers
- Regional planning process: Trans & Generation
- Will double in size in next few years
 - More efficient and liquid

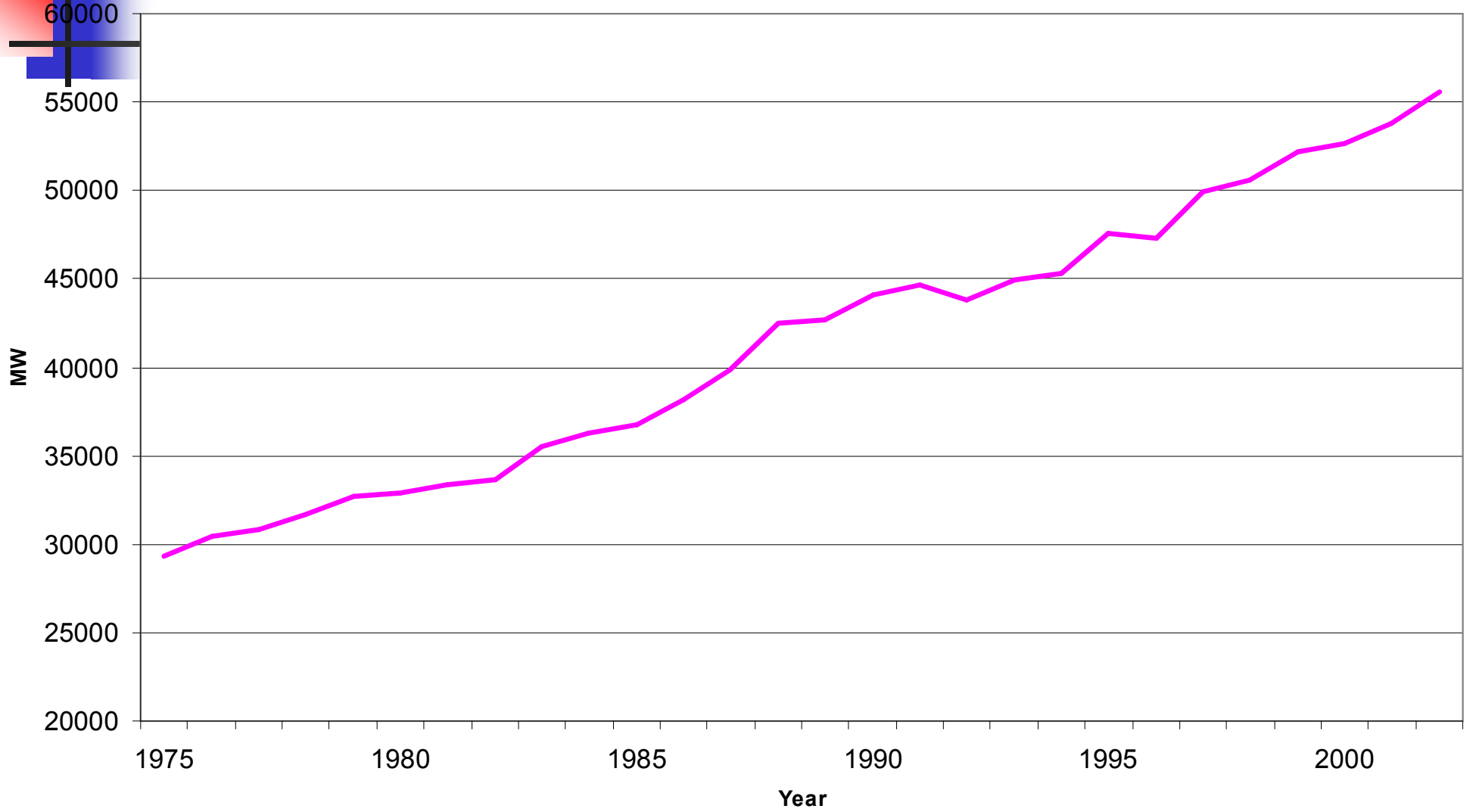
PJM Power Pool Today



Largest in the world
France/Japan
8.6% of US Population

PJM Growth

1975 - 2002





Generation Mix

- Coal and Nuclear 70%
- Oil and Gas 20%
- Hydro and Other Renewables 10%



Capacity and Energy

- Capacity - Instantaneous
 - Measured in kW or MW
 - Also called "Demand"
 - PJM Maximum Demand is 55,000MW's
 - Everybody has a portion of that -
 - Called Capacity Obligation
- Energy
 - Measured in KWh or MWh



LOAD FACTOR

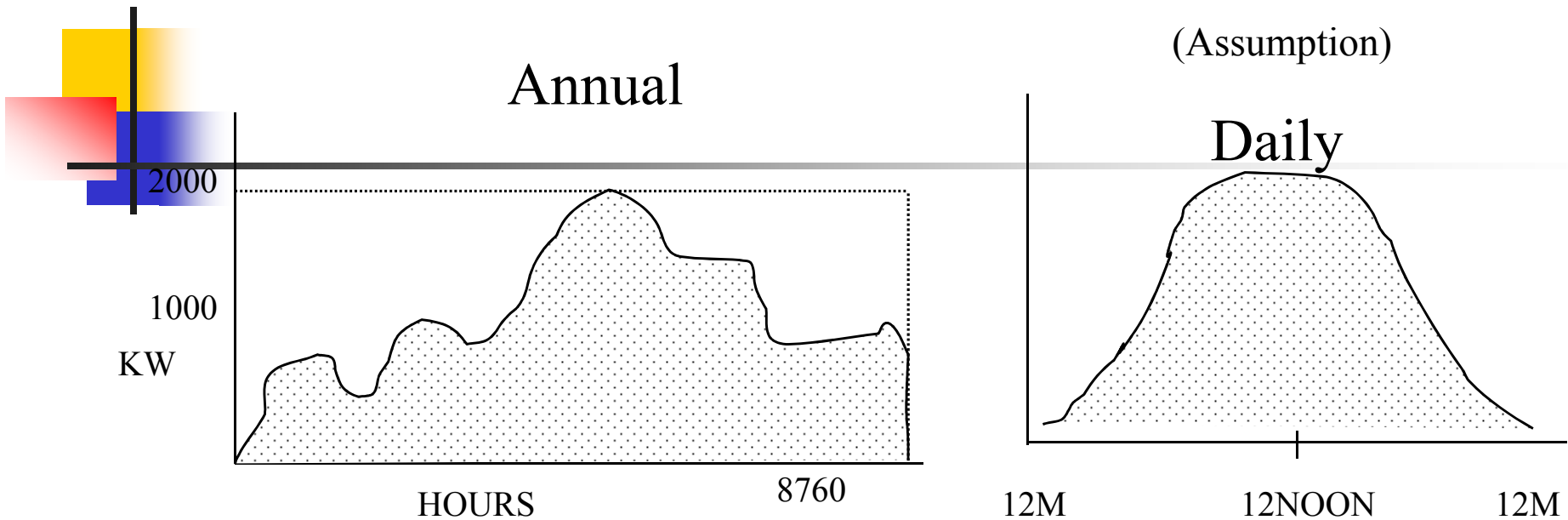
Load Factor

An energy measurement for determining the percentage of time one's peak demand (capacity) is utilized.

Load Factor Formula =

$$\frac{\text{Annual kWh}}{\text{Peak Demand (kW)} * 8760 \text{ hrs}}$$

LOAD FACTOR

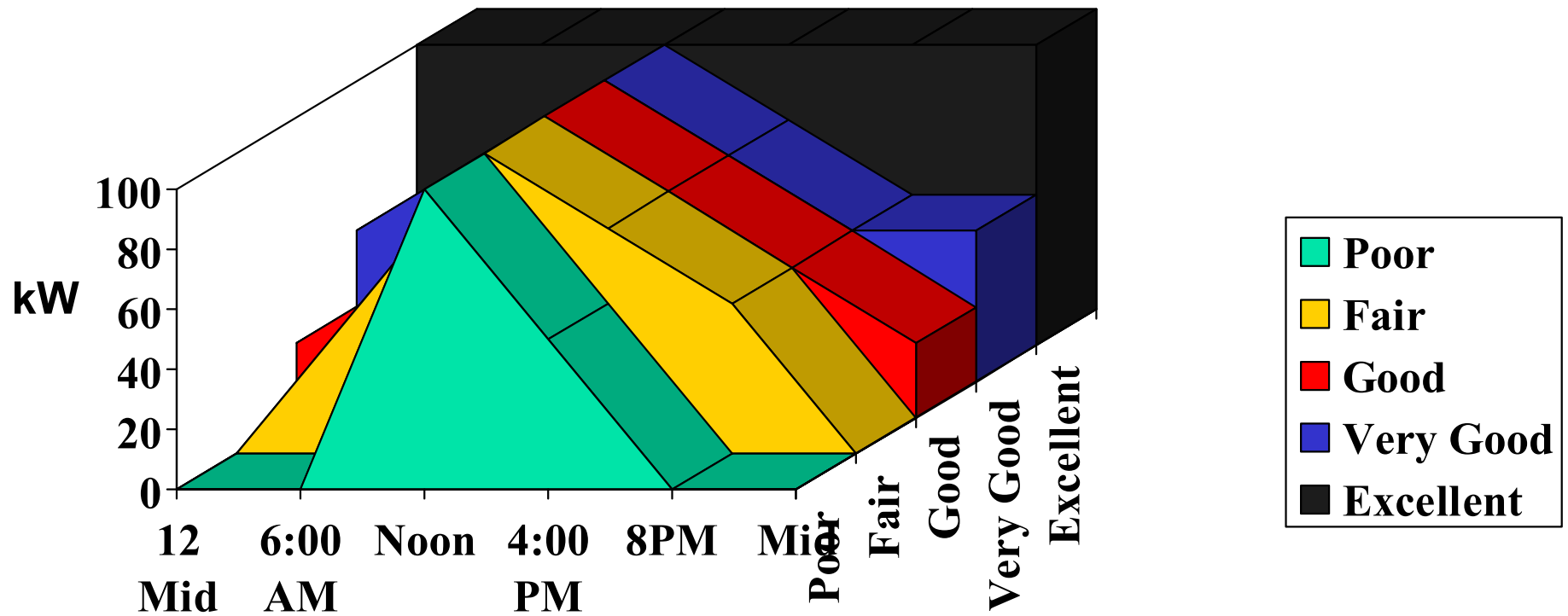


Total Kwh = Integrate to get 11,388,000 Kwh

(read meters)

$$\text{Load Factor} = \frac{\text{Kwh}}{\text{KW} \times 8760} = \frac{11,388,000}{2000 \times 8760} = 65\%$$

Load Profiles





New Jersey Deregulation

Current Status



New Jersey

- Electric Discount & Energy Competition Act (EDECA)
 - August 1, 1999
- Installed price caps
- Price caps have been lower than the market
- Participation limited



New Jersey Change

- Frozen price caps are gone,
 - Replaced with market pricing (read “hourly”)
- Two general classes
 - FP - Fixed Energy Price, also FEP
 - HP - Hourly Energy Price, also HEP/CIEP
 - Split is about at 750kw
- Two Options for Both
 - Stay with EDC - BGS
 - Find a Third Party Supplier (TPS)



Basic Generation Service

- Also known as BGS
- EDC must provide an option for customers
 - Fixed Tariff Rate for some customers
 - Hourly market price for other customers
- BGS provided by Utilities



Fixed Price

- Auction - week of Feb 3
- Option One: Stay with BGS Tariff Price
 - This is new "Price to Compare"
 - Needs to be calculated per account
- Option Two: Third Party Suppliers
 - They will try to beat this price
 - Current market prices offer limited opportunities for savings



Hourly Price

- Auction - to determine the capacity price.
- Option One: Stay with the EDC
 - Purchase Energy on an hourly basis
 - Great Volatility – Price Range \$.01/KWh to \$1.00/KWh
 - Great Risk - Highest in the summer
 - Different charge each month
 - Capacity prices – Higher than market
 - Pay a Retail Adder of \$5.00/MWh
 - ***2.5 Mw load @ 65% LF = Approx. \$71,000***



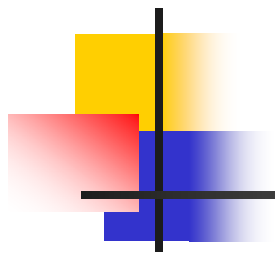
Hourly Price

- Option Two: Find a Third Party Supplier
 - Purchase Energy at a fixed price
 - Same KWh charge each month
 - Market Price for Capacity
 - No Retail Adder
 - Pay a competitive margin
 - Marketers have other products as well
 - Hybrid, block, load following



Timeframe

- August 1, 2003
 - New Market begins
- To change August 1
 - Need to decide by July 11, 2003
- HEP Customer Classes
 - PSE&G
 - HTS-HV, HTS-Sub, LPL-P
 - JCP&L
 - GP, GT
 - ACECO (Conectiv)
 - TGS, AGS



BILLING



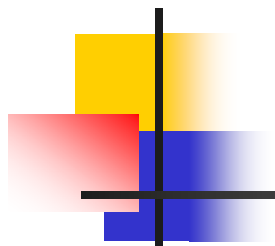
New Bill

- Regulated
 - Issued by EDC ie PSE&G, Conectiv, JCP&L
 - Also call Wires Charge
 - Customer Charge, Demand Charge, Misc
- Unregulated
 - Issued by Third Party Supplier (TPS)
 - Issued by EDC if you don't shop
 - For Generation, Energy, Transmission, Ancillary Services (PJM Charges)



Billing Options

- One Bill Option
 - Receive both the Wires Charge (regulated) and the Generation Charges (unregulated) on one bill.
- Two Bill Option
 - Receive the Wires Charge from the EDC
 - Receive the Generation Charges from the TPS



PROCESS



Information You Will Need

- Copy of EDC Invoice
 - Meter Read Date
 - Account Number
 - Rate Class
 - Service Address/Billing Address
- Interval Data
 - Usage every 60 minutes (may be 15 minutes)
 - Sample next.
 - One request every 12 mos. – free,
 - Additional data requests \$40 - \$150
 - Provide to Suppliers
 - Capacity/Transmission Obligation

**CUSTOMER USAGE INFORMATION AUTHORIZATION
(Non-Residential)**

I hereby authorize my electric utility to act in my behalf for the purpose of obtaining information about my historical energy usage and billing information and consent to the release of same so that the Company named herein may evaluate my energy usage patterns and make me an offer to supply energy. The utility considers all customer usage information to be confidential.

This authorization in no way binds me to the purchase of any service or product from the Company named herein and is to be used for the sole purpose of determining my offer price of electricity service or the provision of other energy-related services.

Supplier/Consultant Information (please print):

----- representing -----
(Individual) (Company)

Address -----

Email Address ----- Phone Number () -----

Type of Data Requested (select one):

___ Sixty (60) minute interval data (if available) provided in ASCII text file

___ Monthly billing information (will be provided if 60 minute interval data is unavailable)

NOTE: Billing information will typically cover the most recent twelve-month period.

Company Information (please print):

My Utility -----

Company Name -----

Address -----

City ----- State ----- Zip -----

Business Contact Name ----- Telephone Number () -----

Party other than customer to be Billed, if allowed by your utility: -----

Business Representative's Signature Date

20 Digit Customer Number(s) (As shown on Page 3 of Latest Bill)

PLEASE FAX THIS AUTHORIZATION

Conectiv Power Delivery 302-709-7545 FirstEnergy 330-315-8664 (attn: Supplier Services)
PSEG 908-497-1763 Rockland Electric 914-577-3602

Each utility has specific rules for releasing information, and this service may be subject to a charge by the utility.



Conectiv

- Hourly Priced Rate Classes
 - GST - Gen Service Trans
 - AGS-TOU - Ann Gen Serv - Time of Use
 - Transmission and Sub-Transmission
- Sign up **July 1 - July 11** for Aug 1 start
- Meter Read on August 1, 2003
- Meter Read date will stay at first of the month



JCP&L

- Hourly Priced Rate Classes
 - GP - General Service Primary
 - GT - General Service Transmission
- Meter Read on August 1, 2003
- Sign up **July 1 - July 10** for Aug 1 start
- After August 1, meter read will revert to old meter read schedule
- FP customers switch on meter read date
 - Need 20 days notice



JCP&L

- After August 1, 2003
 - Can shop anytime, 20 days notice
- Data: Customer Interaction Center (CIC)
 - 1-800-543-4655
 - Need 20 digit customer number



PSE&G

- Hourly Priced Rate Classes
 - HTS - High Tension Service
 - LPL-P - Large Power and Light Primary
- Sign up **July 1 - July 11** for Aug 1 start
- After August 1, meter read will revert to old meter read schedule
- FP customers rates will change on August 1
 - After Aug 1, Need 20 days notice



PSE&G

- After August 1, 2003
 - Can shop anytime, 20 days notice



Request for Proposal

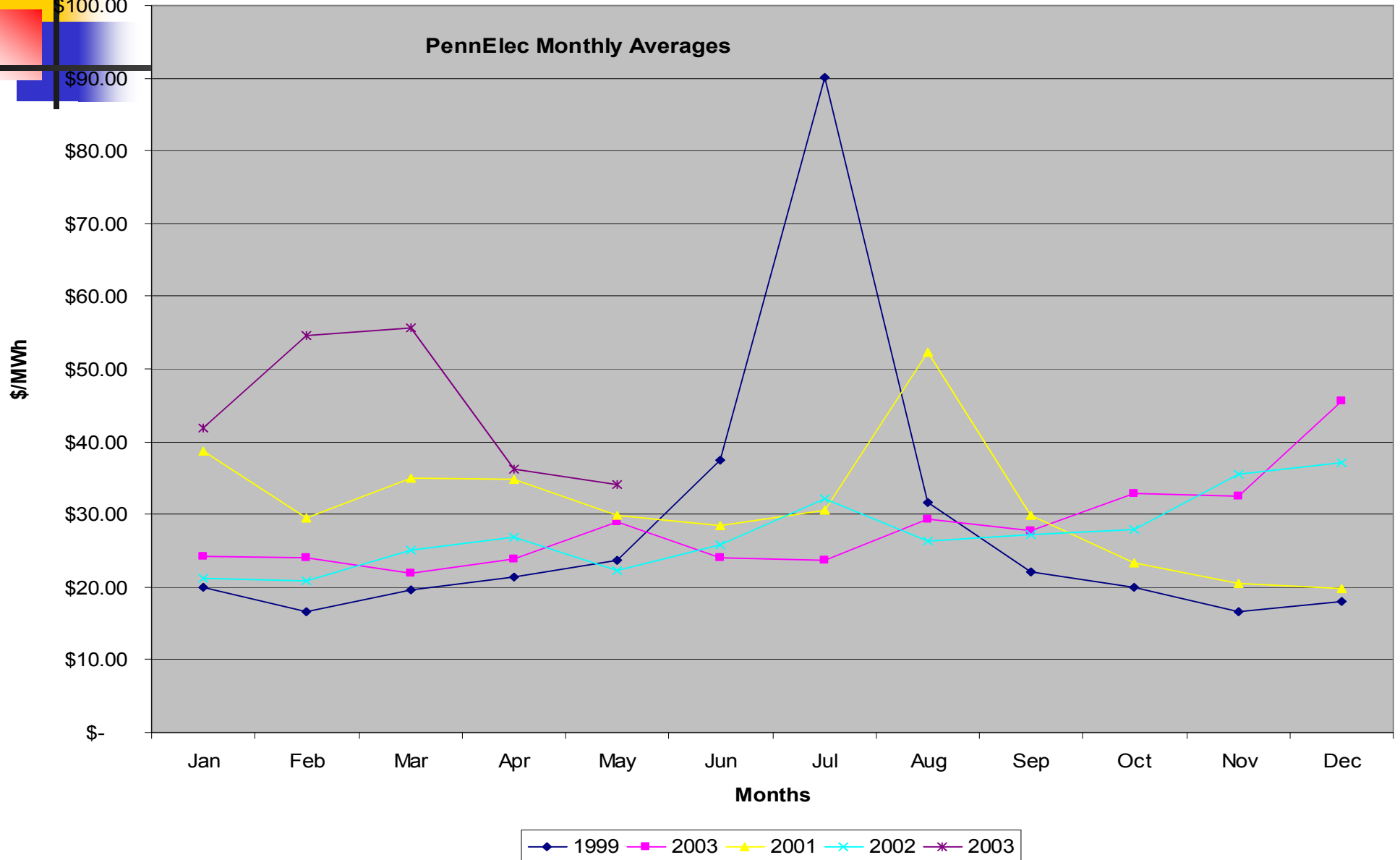
- Can be fancy or simple
- All supplier needs is:
 - Rate Class/Meter Read Date
 - Interval Data
 - Capacity/Transmission Obligation
 - Term of Contract
- Will check credit



Request for Proposal

- Market is very volatile
- Ask suppliers to submit price at a specific date and time
- Price is only good for 24 hours
 - Or until 4PM that day
- Suggest reviewing contract prior to pricing

Average Monthly Prices





Suppliers

- To Find a Supplier
 - Go to BPU web page
<http://www.bpu.state.nj.us/home/home.shtml>
 - Click on Energy, then Electric Suppliers
 - List of Licensed Suppliers in NJ
 - Can request copy of license
 - Can also request FERC license



How to Pick a Supplier

- Price - important, know how to compare
 - Are taxes included?
- Contract
 - Tolerances
 - Unusual Requests
 - Capacity Charges
 - Guaranteed Savings Offer
 - Term



Supplier

- Relationship
 - Interested in your business
 - Do the deal and move on
 - Know the market
 - Can they answer your questions
 - Help you understand
 - This is a complicated and changing business
 - Responsive
 - Watch the Prices



Different Prices/Different Suppliers

- Pricing Model
- Risk
- Congestion
- Profit/margin

- Most suppliers hedge their deals.
 - Yours should!



Consultant

- Advantages
 - Licensed - Independent
 - Knows the market
 - Always involved, developed expertise
 - Aware of the opportunities and pitfalls
 - Educate
- Disadvantages
 - Pay another fee.
 - Usually make up for it.



Aggregation

- Should I Aggregate
 - Go together with others to get a better price
- Two Types
 - Committed to group, shopped as one load
 - Everybody gets the same price
 - Not committed, shopped individually
 - Presents larger load



Aggregation

- High Load Factor price advantage is reduced by adding in low load factor.
- Margins are tight.
- Usually can do better or as well on your own.
- Advantages
 - Small load (less than 1MW),
 - Load is not experienced
 - Group gets more attention
 - Hire somebody to do the work
 - “We’re part of the group, they’re doing it for us.”



Metering

- Products are available for people to measure their own load.
- Inexpensive - \$100/month
 - Hourly load
 - PJM Pricing
 - Load Management
 - Analysis



QUESTIONS

New

Energy

Concepts

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What should we do now?

- Look at your bill and determine the rate class.
- If it is not one of the identified Hourly Priced rate classes, you will be on the Fixed Price rate and that is currently competitive.
 - It will not be necessary for you to do something immediately.
 - You should, however, start to learn more about the market and the opportunities.
 - At some point the market will come down and you will be able to save money for your organization.



What should we do now?

- If it is an Hourly Price rate, you have three options:
 - Hire a consultant to help you with the process. A consultant will usually save you enough to justify the cost of hiring one.
 - Do it yourself, get the data, put out a proposal, get some bids and choose a supplier. If you get stuck, call me and I will be happy to provide some suggestions to keep you moving forward.
 - Do nothing. On August 1, you will be priced at an hourly rate. If it is a hot August, you will pay a lot, if it is cool it may not be too bad although still a higher rate than you are used to paying. Last summer, three of the five hottest days were in August.