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Negotiating A Better Deal For Your Power Supply

October 25-26, 1997

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Negotiating A Better Deal

- Fundamentals of Purchasing Power
- What Prices and Terms Can You Expect From Buying Power Competitively
- Case Study: Shifting To Another Power Supplier
- The Utility Renegotiation Option
- Setting Up The Playing Field
- Request For Proposals
- What You Need To Know
- REP?
- Evaluating responses
- Negotiation and Implementation
- Case Study: Moving To A Neighboring Utility
- Key Elements In Contract Negotiation
- Getting Regulatory Approval

Fundamentals of Purchasing Power

- A basic introduction to the power system -- Power 101
- A power system glossary
- The basic map of the deal

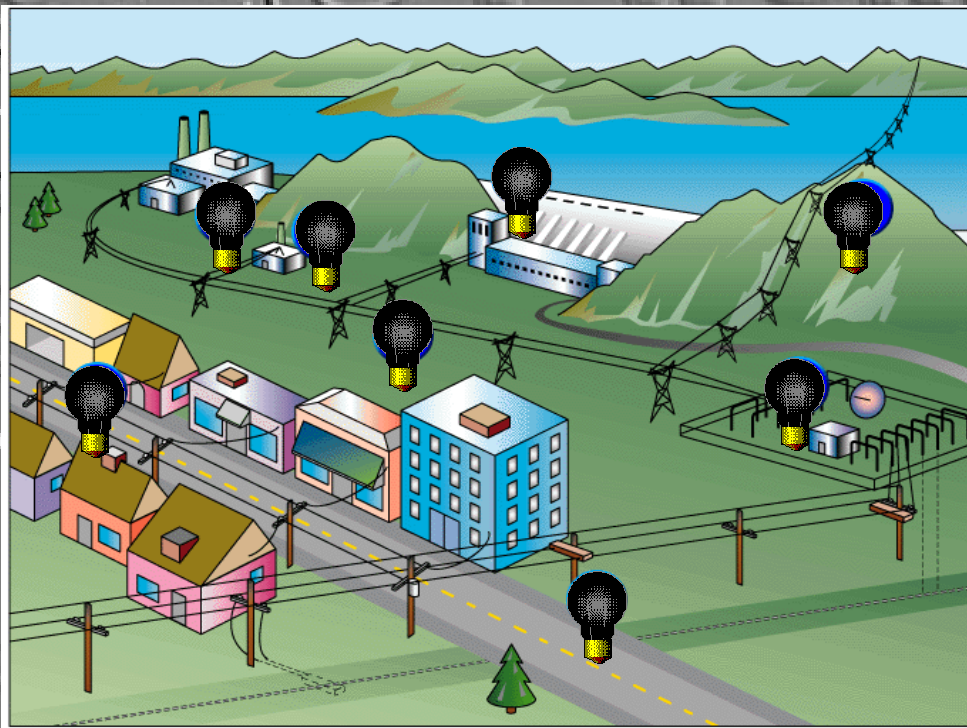
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Power Supply 101

- A brief overview of actual operations
 - Dispatching
 - Scheduling
- Power Supply Components
- An Actual Power Supply Portfolio

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The System



Thermal

- Thermal plants are the backbone of most electric systems
- Thermal efficiency is increasing dramatically
- We expect that most older plants will disappear under competition producing a marked reduction in spot energy prices
- The capital cost of thermal is usually the implied cost of capacity

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Qualified Facilities

- Qualified Facilities (QFs) are an artifact of the PURPA law
- QFs often have inefficient "must run" operations and out-of-market power contracts
- Many QFs are now being phased out or renegotiated -- a factor that will also tend to lower spot prices over time

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Hydro

- Hydro-electric facilities dominate in Western and Eastern Canada and the Pacific Northwest
- Hydro facilities usually can provide capacity for very little additional cost -- therefore capacity is inexpensive in these areas
- Hydro also produces substantial amounts of non-firm power -- power that is not dependable on a year to year basis

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Inter-Regional Transmission

- Inter-regional transmission can be constrained
- Major regions in the U.S. and Canada are connected with between 2,000 and 10,000 megawatts of transmission
- Price differentials develop (and persevere) along these boundaries

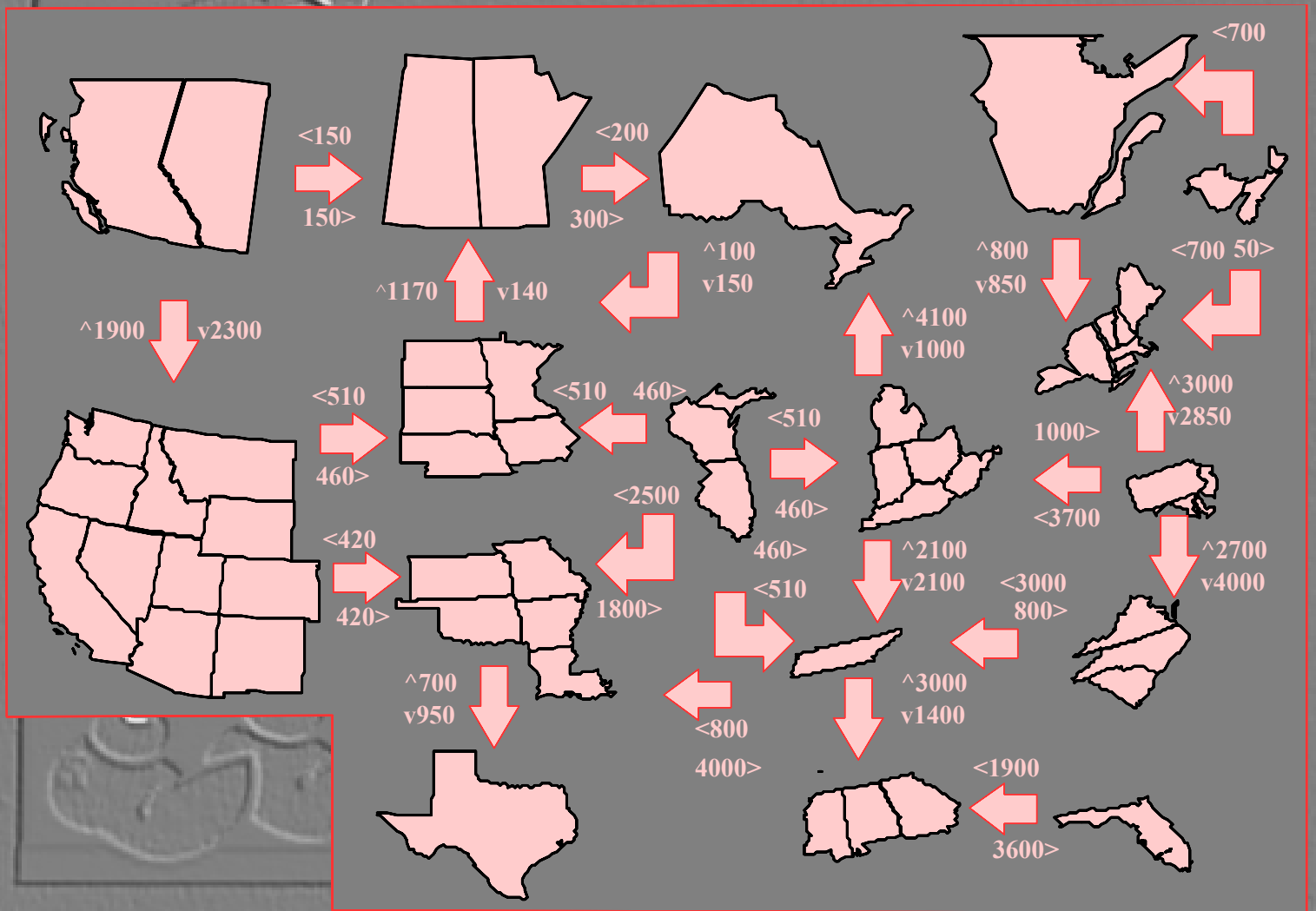
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Transmission

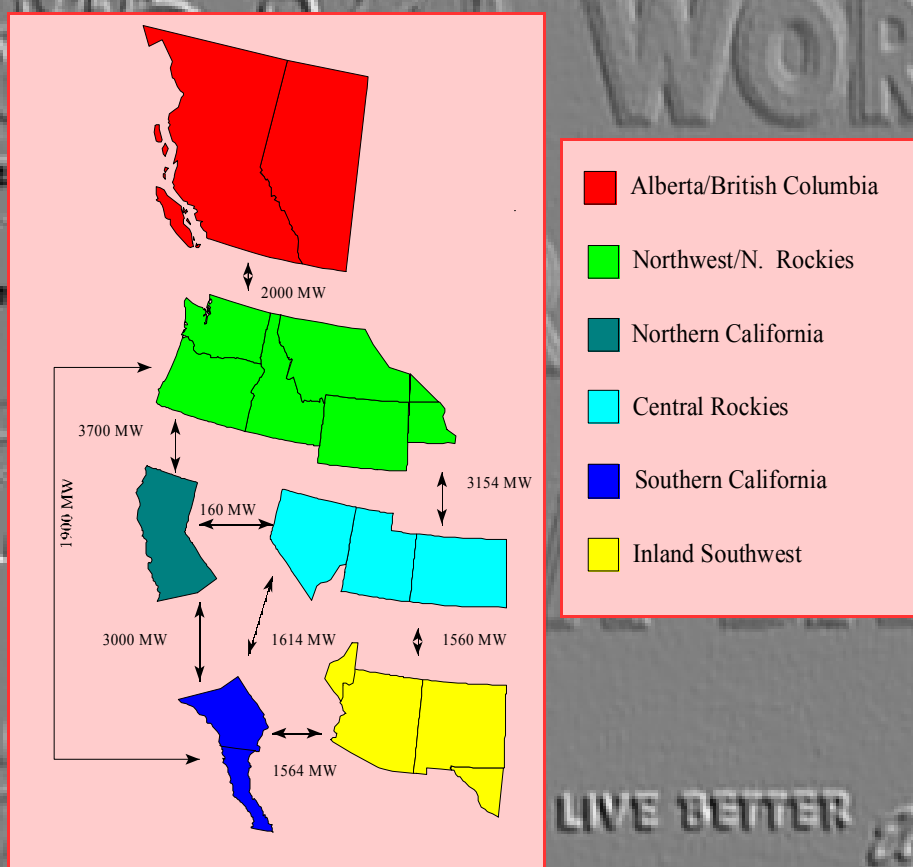
- Transmission usually contributes from three to six mills to total cost
- Transmission constraints are often described, but turn out to be unusual in everyday practice
- Under 888, all eligible (i.e. wholesale) entities have access
- Losses at transmission voltages are low 1% to 2%

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U.S. Interregional Transfer Capability



West Coast Transfer Capability



Substation

- Major points of interconnection occur at substations
- Conceptually, substations constitute the points of delivery between suppliers and customers
- Ownership of a substation is likely to be the final test for non-"sham" transactions under FERC's 888 rules

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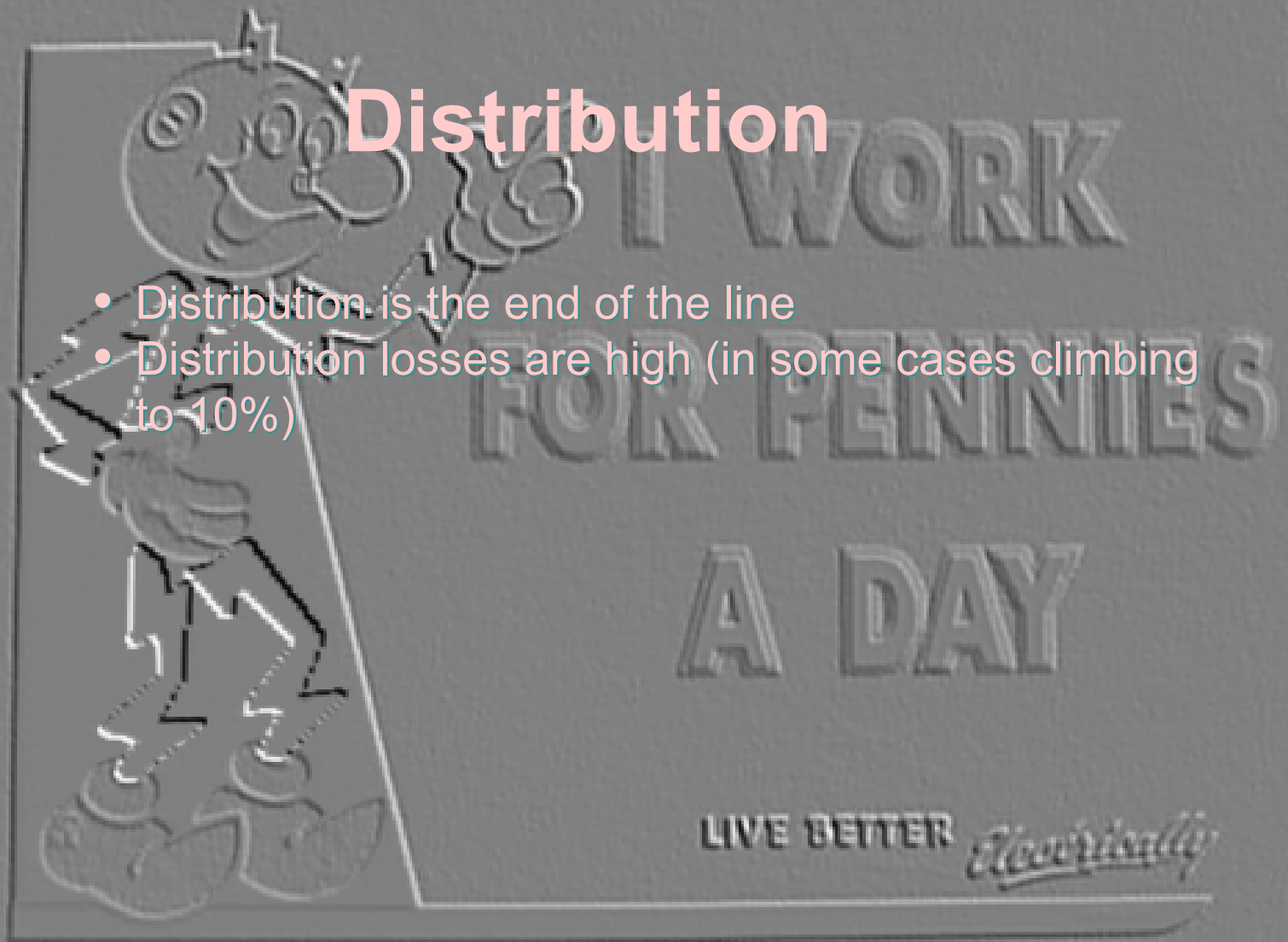
Sub-transmission

- Most endusers are served at levels below 67 kV
- This level of service is generally regarded at the sub-transmission level
- Losses increase significantly at lower voltages -- 4% and higher are not unusual

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Distribution

- Distribution is the end of the line
- Distribution losses are high (in some cases climbing to 10%)



Where Are The Moving Parts?

- In the absence of moving parts, administering an electric supply has many similarities to managing your garden -- you can give all the orders you want, but the plants tend to follow their own lead
- The only "system" functions are run by the system dispatcher and the schedulers

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What is this man doing?



Joseph Nettis

The Power Supply Dispatcher

- The dispatcher usually fulfills three functions:
 - Overview of transmission and distribution functions
 - Short term ("real time") transactions
 - Management of electric frequency by adjusting plant operations
- These three functions establish a "control area" -- an area under the control of a dispatch center
- As a general rule, these are simple operations without significant interest in our context since most power supply decisions are significantly divorced from these functions

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The Power Supply Scheduler

- Schedulers meet on a weekly basis to coordinate purchase and sales, make significant economic dispatch decisions, and to administer bulk power contracts
- Schedulers can administer our power supply without our having any contact with the dispatch center or the dispatchers
- To be exact, much of the drama of the power system is completely unrelated to the day to day economic issue concerned with the purchase and sale of electricity to meet our loads

Actual Power Purchase Mechanics

- The power supply is actually a series of contracts that provide specific solutions to operating problems
 - Base load power is rarely dispatched -- it represents blocks of "take or pay" resources
 - Peak load power operates at low load factor -- it must be dispatched to meet system peaks
 - Spinning reserve (and a variety of similar requirements under similar names) meets the reserve requirements that your load puts on the system
- Actual operational requirements are often clearly summarized under the serving utility's FERC comparability tariff

PG&E Comparability Tariff

PACIFIC GAS AND ELECTRIC COMPANY OPEN ACCESS
TRANSMISSION TARIFF

Pacific Gas and Electric Company Open Access Transmission Tariff

Original Sheet No. 1

TABLE OF CONTENTS

1. GENERAL PROVISIONS	2
2. DEFINITIONS	2
3.1 Ancillary Services	2
3.2 Access Transmission Service	2
3.3 Application	2
3.4 Business Day	2
3.5 Commission	2
3.6 Completed Application	2
3.7 Control Area	2
3.8 Curtailment	2
3.9 Delivering Party	2
3.10 Designated Agent	2
3.11 Dispatch Management Facilities	2
3.12 Eligible Outlets	2
3.13 Facilities Study	2
3.14 Firm Point-to-Point Transmission Service	2
3.15 Grid Utility Reaction	2
3.16 Interruption	2
3.17 Load Factor (LAF)	2
3.18 Load Shedding	2
3.19 Long-Term Firm Point-to-Point Transmission Service	2
3.20 Network	2
3.21 Network Customer	2
3.22 Network Interception Transmission Service	2
3.23 Network Load	2
3.24 Network Operating Agreement	2
3.25 Network Operating Committee	2
3.26 Network Resource	2
3.27 Network Upgrade	2
3.28 Non-Firm Point-to-Point Transmission Service	2
3.29 Open Access Real-Time Information System (OARIS)	2
3.30 Part I	2
3.31 Part II	2
3.32 Part III	2
3.33 Parties	2
3.34 Point(s) of Delivery	2
3.35 Point(s) of Receipt	2
3.36 Point-to-Point Transmission Service	2
3.37 Power Purchaser	2
3.38 Resolving Party	2
3.39 Regional Transmission Group (RTG)	2
3.40 Resource Quantity	2
3.41 Service Agreement	2
3.42 Service Commencement Date	2

What Information Does This Provide?

- Costs of specific network integration services
- Transmission costs
- Operating requirements
- Losses
- Operating Rules
- Interconnection Requirements

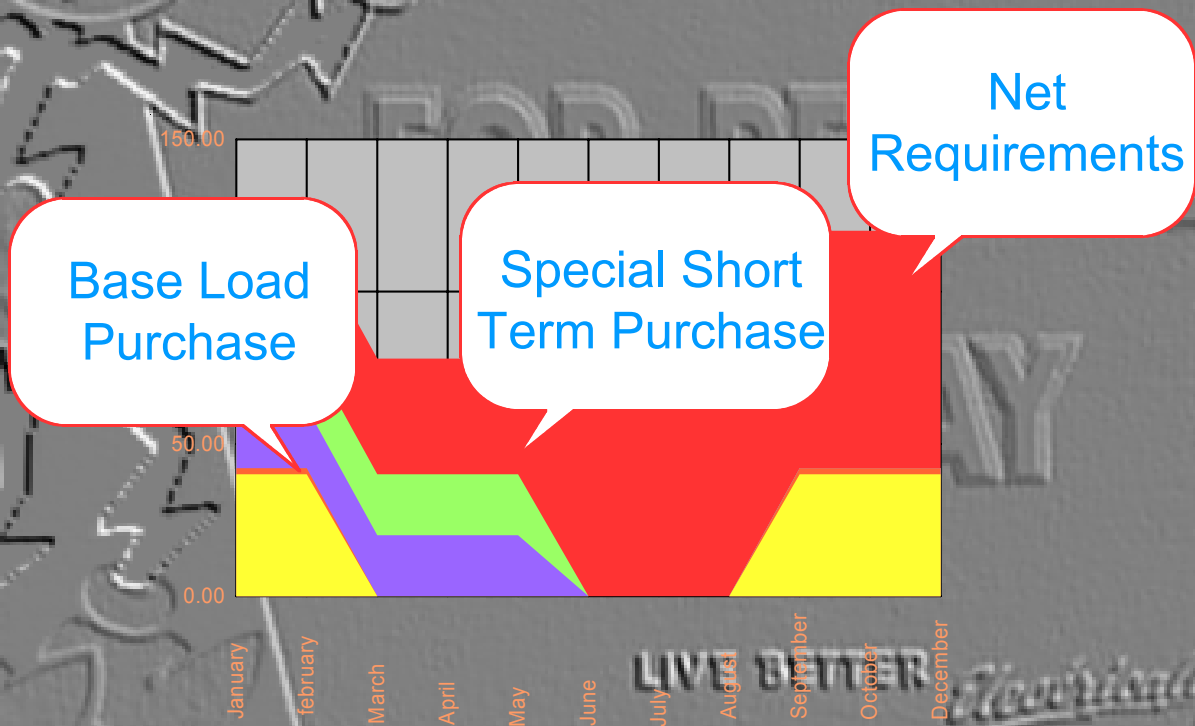
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How does this function in reality?

- A portfolio of resources must be procured to enable your system to operate under the Network Tariff
- In practice this will require a set of resources -- often procured from different suppliers
- The next page shows a yearly diagram showing power supplies for one of our clients

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An Actual Annual Supply Portfolio



Actual Example

- In this example hourly differences from the weekly and daily schedules are met by the net requirements service
- The thin bar above the base load block also provides some coverage for hourly excursions
- Special purchases are layered in above the base load block and below the net requirements

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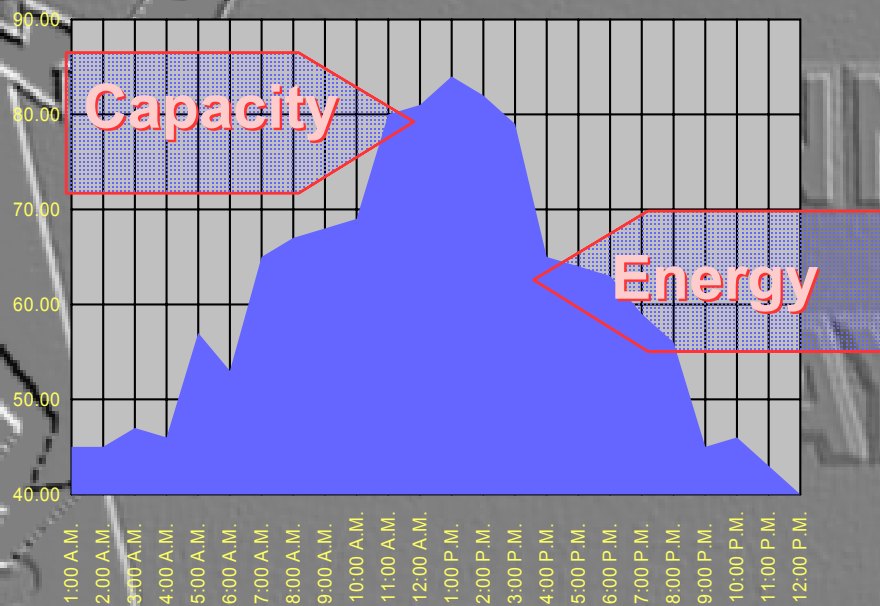
A Power System Glossary:

- Energy: Pure energy completely unscheduled -- like monthly bus pass in a slow and unreliable bus system
- Capacity: Pure capacity is the ability to schedule the bus
- Mills: One tenth of a cent
- Megawatt: Two large stores, 500 homes, one one hundredth of a steel mill
- Capacity Factor: the ratio of average energy to capacity
- Load Profile: A simple characterization of a load -- usually on a weekly or monthly basis
- On-Peak: Also known as High Load Hours (HLH) -- usually the 16 hours on Monday through Saturday
- Off-Peak: Also known as Low Load Hours -- all other hours including holidays

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Energy and Capacity



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Non-firm, Interruptible, Financial Firm, and Utility Service

Do any of these gradations actually exist?

- Non-firm power may simply not exist
- Interruptible power is seldom defined operationally
- Financial firm may be the only grade of power we have ever purchased
- Utility grade service would seem to be an aftereffect of regulatory incentives for overbuilding rather than a fundamental commitment to serve

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Commonly Used Pseudonyms

- Moe, Curly, Shep: Large California Investor Owned Utilities
- Ernie and Bert: McCullough Research clients
- Cookie Monster: Bypass clients
- Laurel and Hardy: Power marketers
- Nero: AB-1890 Regulator

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Mapping The Deal:

Supplier

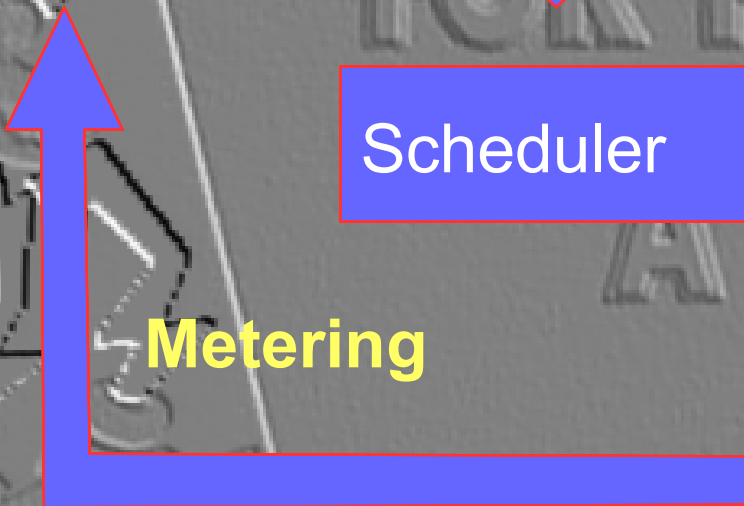
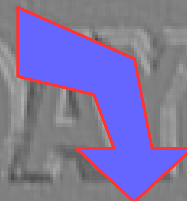
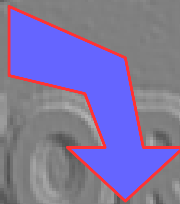
Transmission

Scheduler

ISO

Metering

Customer





What Prices and Terms Can You Expect From Buying Power Competitively?

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Prices and Terms

- Overall Prices
- Delivery Points
- Firmness
- Duration
- Commitment Duration
- Supplier Flight

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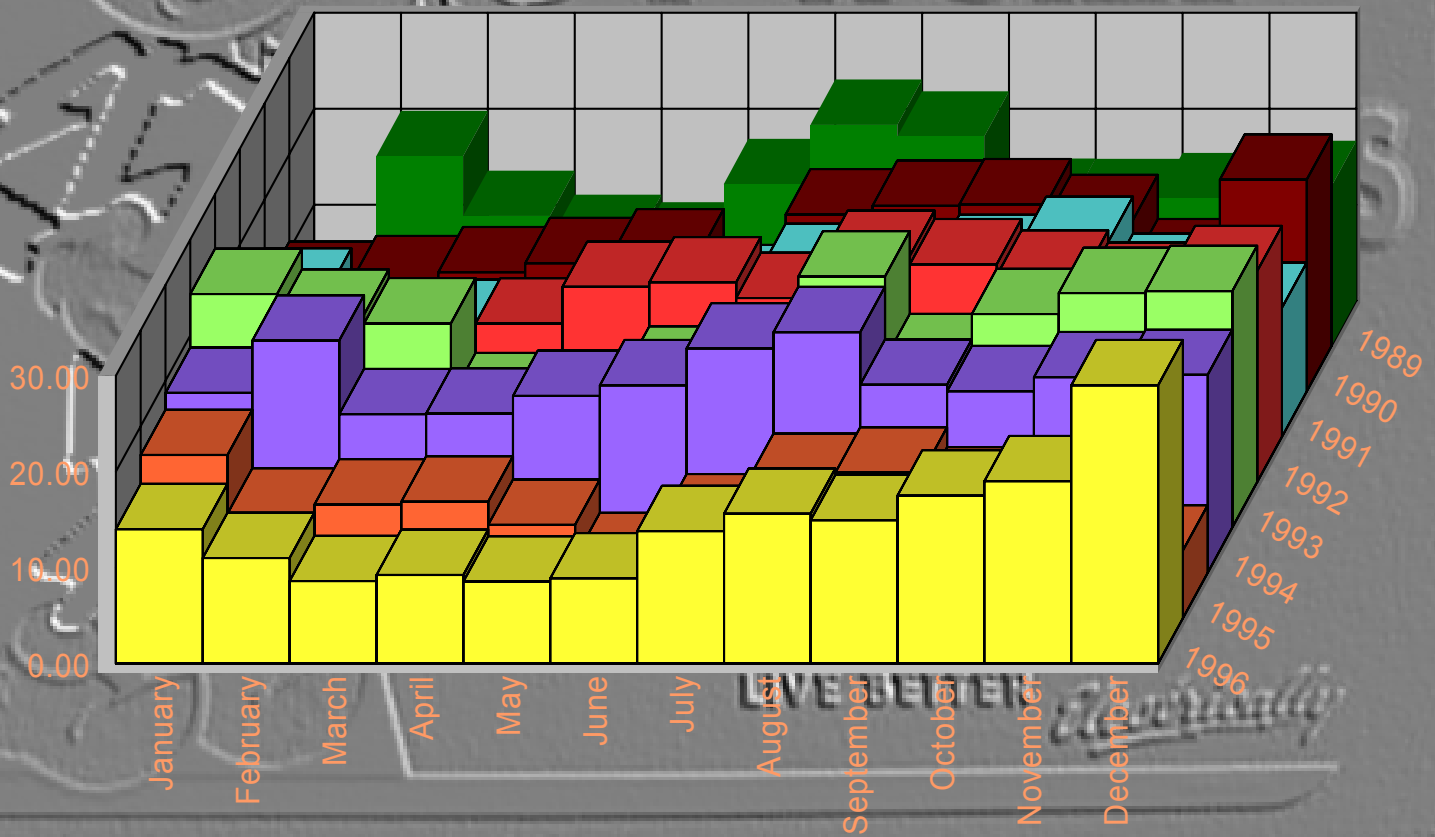
Overall Prices

- For the past two year long term flat prices have stayed in the sixteen mill range
- Capacity prices are very low -- \$1.00 to \$2.00 per kilowatt month

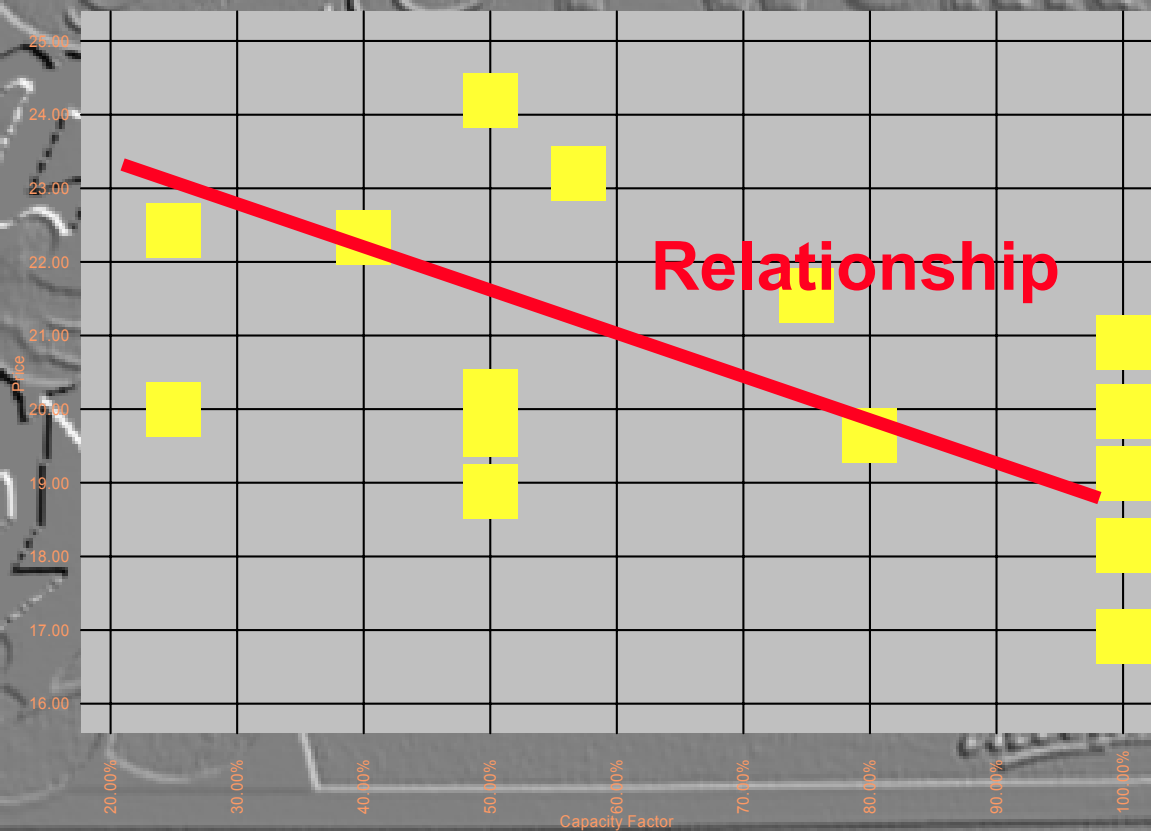
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Mid-Columbia Spot Prices By Month



Current Bay Area Bids



Recent Northwest Tariffs

Type	Tariff	Price	
Spot Index	Puget Schedule 48	32.32	/kwh
	Puget Special Tariffs	24.77	/kwh
	PGE Schedule 67	30.94	/kwh
	PP&L Low	17.70	/kwh
	PP&L High Pricing	24.70	/kwh
	BPA Special Tariff	17.00	/kwh
	Seattle City Light	32.72	/kwh
Market	Tacoma Utilities	21.00	/kwh
Access	WWP Schedule 26	33.58	/kwh
Fixed	PP&L Special	27.00	/kwh
	BPA DSI Contract	22.60	/kwh

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Delivery Points

- Almost every discussion we have had for California customers has specified delivery points at Palo Verde or COB
- The delivery points minimize financial risk since numerous suppliers are present and NYMEX contracts provide hedging options

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Firmness

- With the exception of Pacific Northwest utilities, full utility commitments are unusual
- Most commitments are financially firm -- simply a guarantee to provide supply by purchase
- Clearly, financially firm commitments are sufficient for the immediate future

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Duration

- The magic "five years" has characterized the market for several years
- Few of the suppliers -- even Laurel and Hardy -- know how to bridge the load/resource date
- Some of our clients are considering building Frame 7Fs to bridge this date for industrial development

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Commitment Duration

- Most suppliers are unable to commit (or provide, even after they commit) to bids for more than a few months
- Some of this is due to inexperience -- Laurel once assured us that the rapid evolution of the market made commitment impossible -- even though Laurel's bids really haven't changed over the past few years
- Given the increasing evolution of the business towards gas standards over electric -- contractual guarantees may be required for bid commitments

Supplier Flight

- The increasing complexity caused by the AB-1890 implementation is creating a new energy consumer problem -- "supplier flight"
- For the first time in our experience -- going back almost twenty years -- suppliers have been attempting to leave the bidding process
- Over the past six months we have seen five major suppliers -- including Laurel and Hardy -- abandon bids

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Gaining Access To The Transmission/Distribution System



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**The 1992 Energy Policy Act and
FERC Order 888**

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Words of Restructuring

- CTC
- WEPEX
- ISO
- “Must-run”
- “Must-take”
- Real Time Pricing

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ORDER 888:

- Which sections actually changed the world?
 - 1. Anti-competitive effects of existing transmission system
 - Brown v. Board of Education
 - Miranda
 - 2. Open access to wholesale transmission
 - 3. Apparent award of transition damages (“stranded costs”).

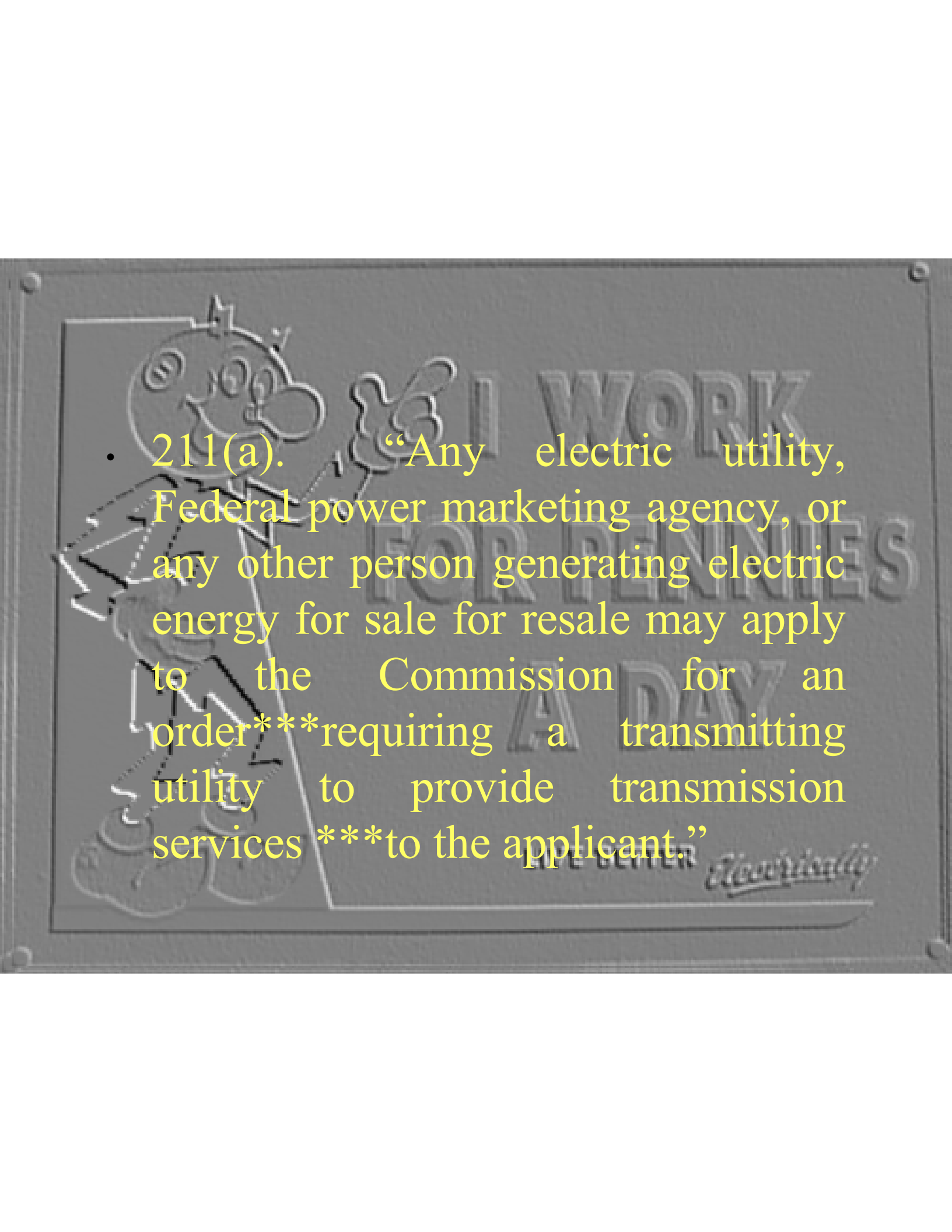
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Wholesale Transmission Access

- Under 888
 - By pro forma, mandatory tariff.
 - “We will not allow transmission providers to define terms or specify transmission uses to erect barriers to fair and equal competition in power markets or to engage in undue discrimination.”
- Under Energy Policy Act of 1992
 - 211/212

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- 
- 211(a). “Any electric utility, Federal power marketing agency, or any other person generating electric energy for sale for resale may apply to the Commission for an order***requiring a transmitting utility to provide transmission services ***to the applicant.”

- 212(h). “No order***shall ***require transmission*** (2) to***an entity if such ***energy would be sold to an ultimate consumer, unless:*** (B) such entity***would utilize transmission or distribution facilities that it owns or controls to deliver all such ***energy to such***consumer.”

- Palm Springs

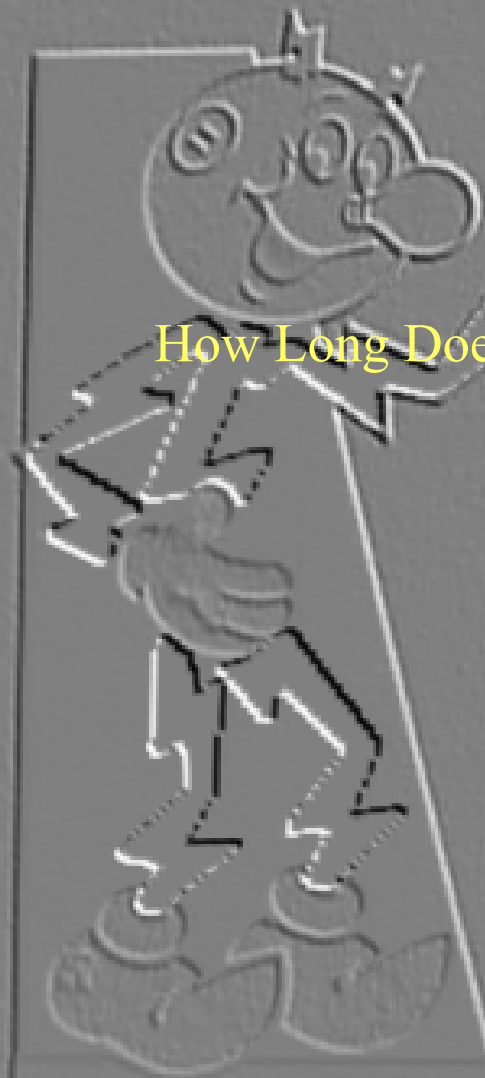
- Cleveland Public Power

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The 212 Process

How Long Does It Take?



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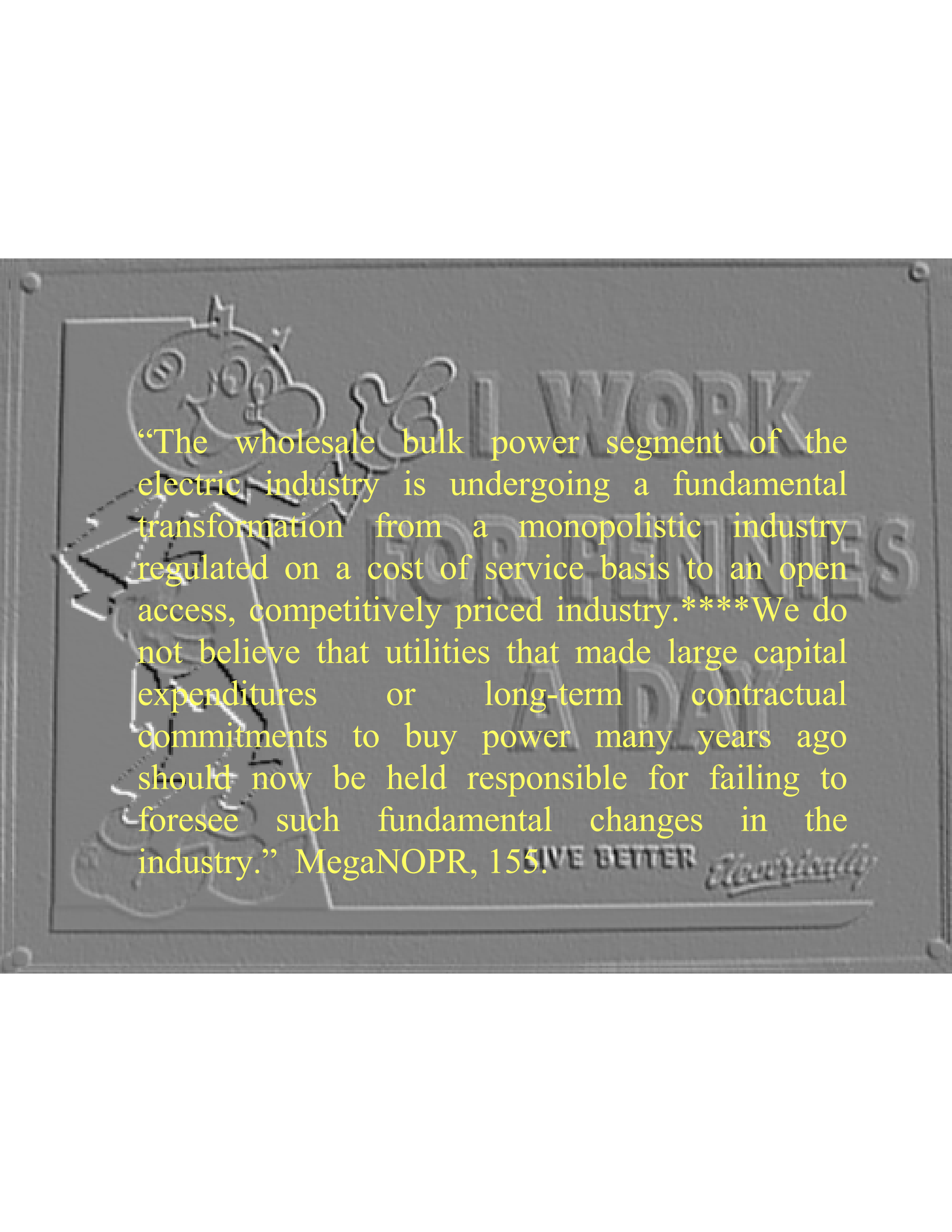
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Stranded Costs

Why?

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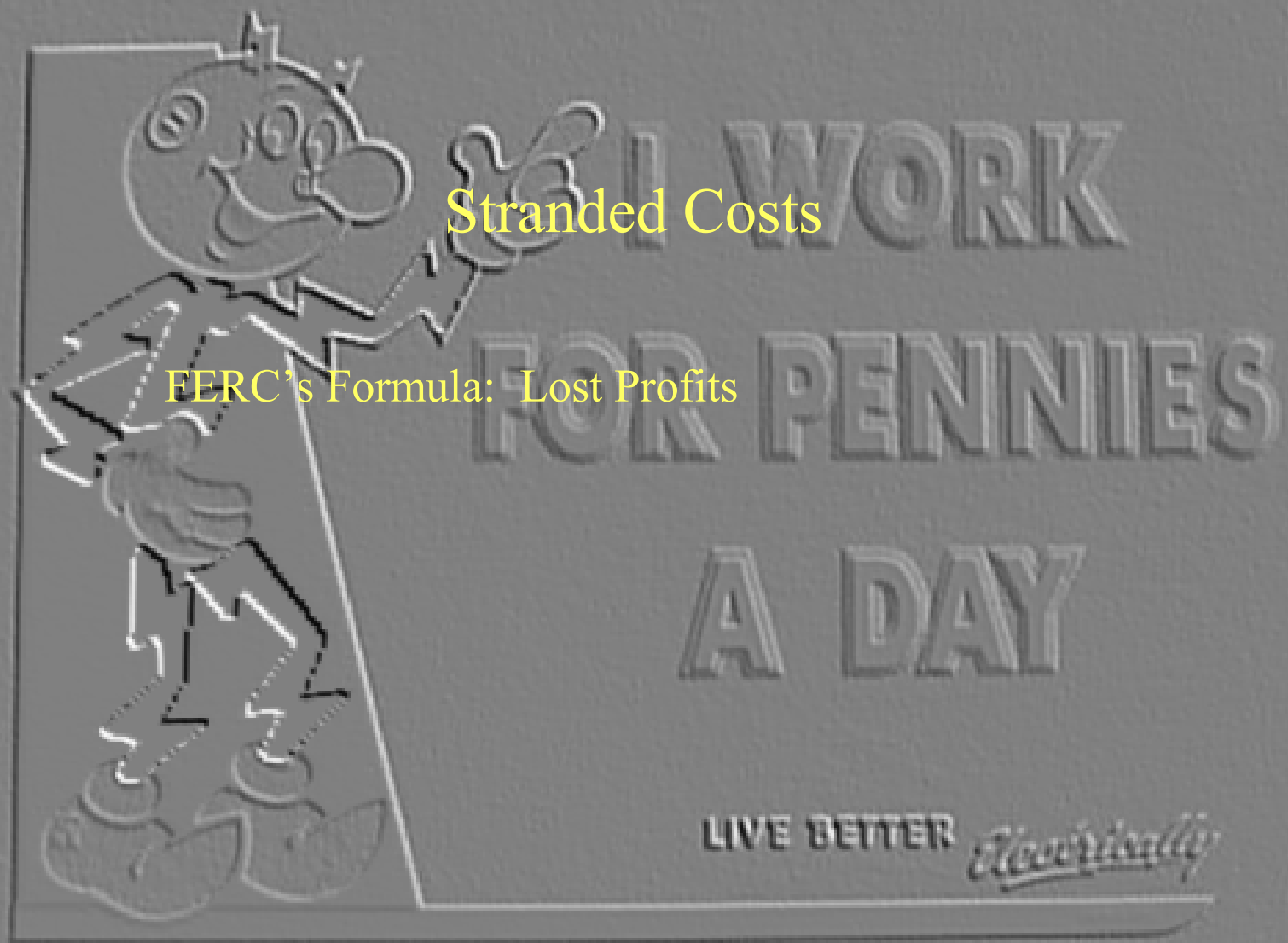
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“The wholesale bulk power segment of the electric industry is undergoing a fundamental transformation from a monopolistic industry regulated on a cost of service basis to an open access, competitively priced industry.****We do not believe that utilities that made large capital expenditures or long-term contractual commitments to buy power many years ago should now be held responsible for failing to foresee such fundamental changes in the industry.” MegaNOPR, 155.

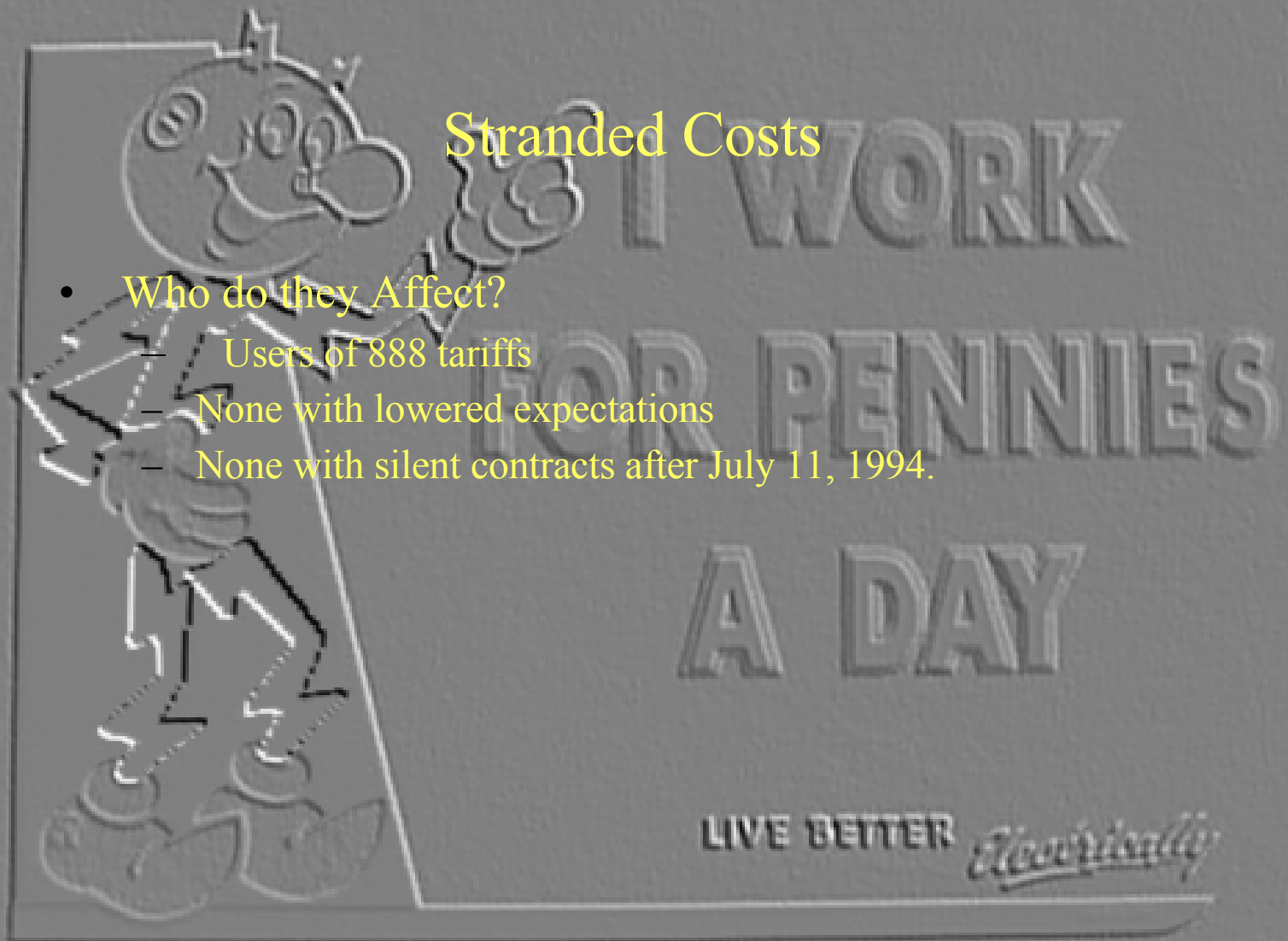
Stranded Costs

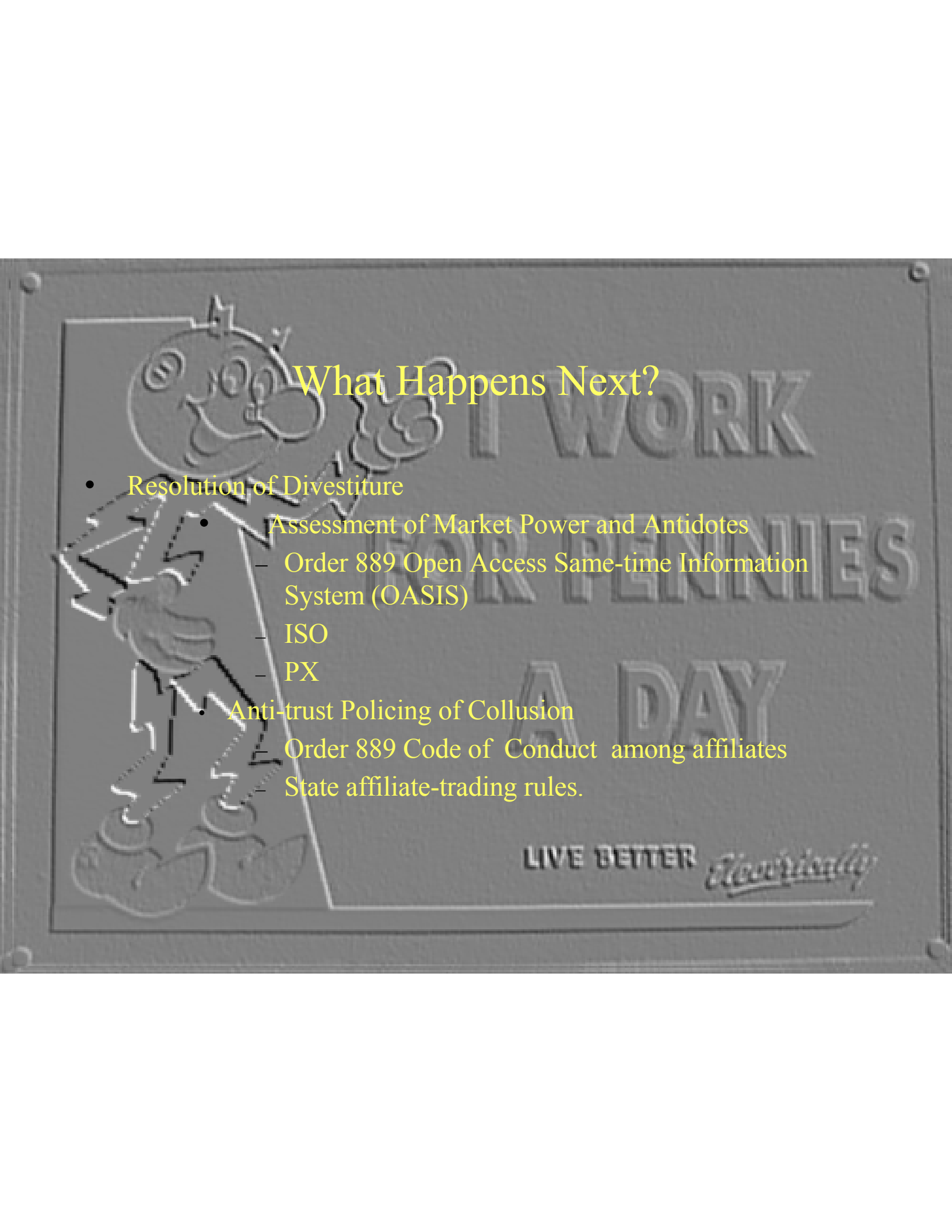
FERC's Formula: Lost Profits



Stranded Costs

- Who do they Affect?
 - Users of 888 tariffs
 - None with lowered expectations
 - None with silent contracts after July 11, 1994.





What Happens Next?

- Resolution of Divestiture
 - Assessment of Market Power and Antidotes
 - Order 889 Open Access Same-time Information System (OASIS)
 - ISO
 - PX
 - Anti-trust Policing of Collusion
 - Order 889 Code of Conduct among affiliates
 - State affiliate-trading rules.

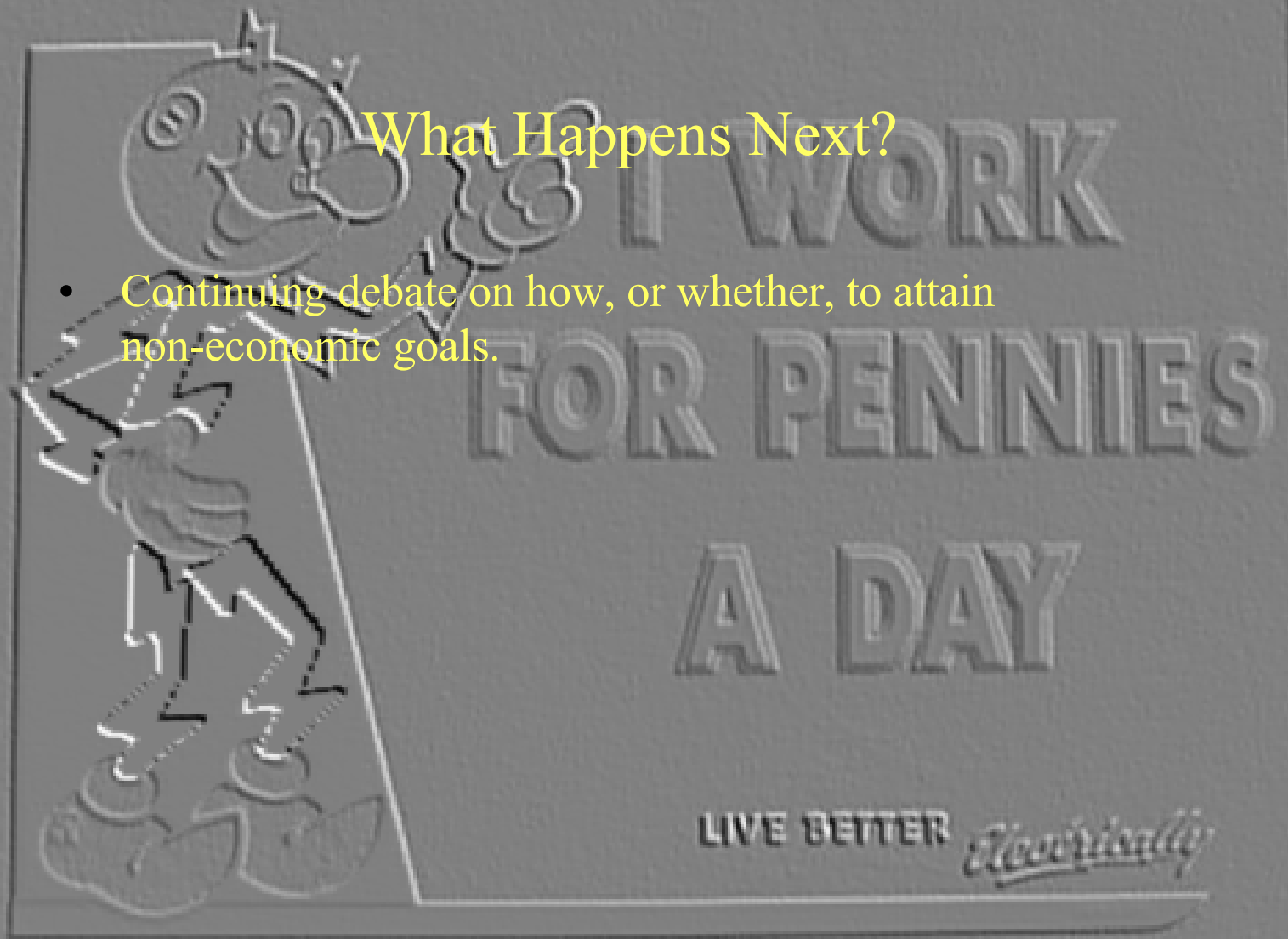
What Happens Next?

- Resolution of Physical By-pass
 - What if municipal bypass is prohibited.
 - California restructuring legislation (Dec. 20, 1995)
 - What if self-generation is taxed?
 - MIT, 74 FERC ¶ 61,221
 - Can Regulators Force Customers to Pay Up? Stranded Costs v. Competition Transition Charge (CTC).

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What Happens Next?

- Continuing debate on how, or whether, to attain non-economic goals.



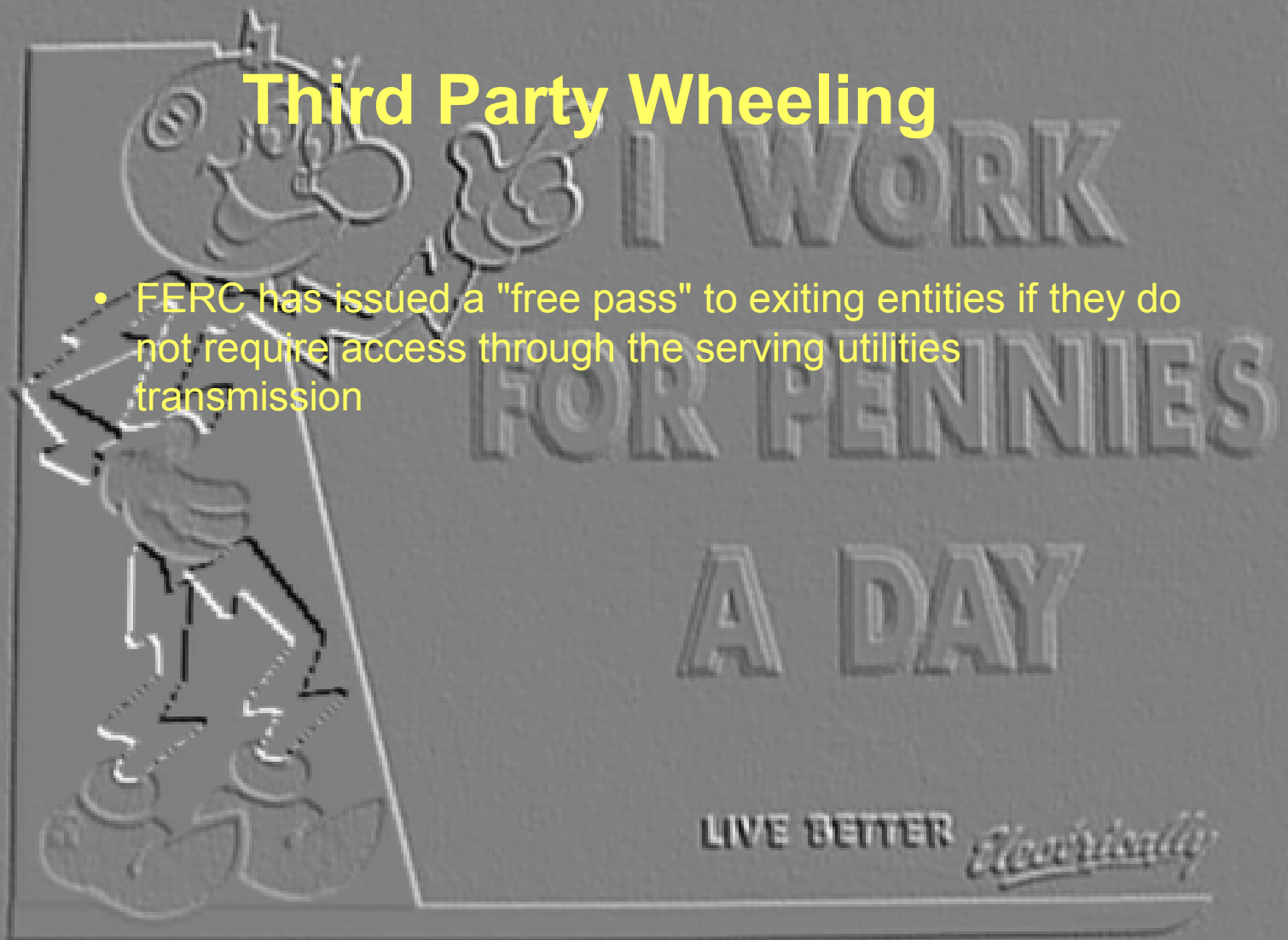
Summary

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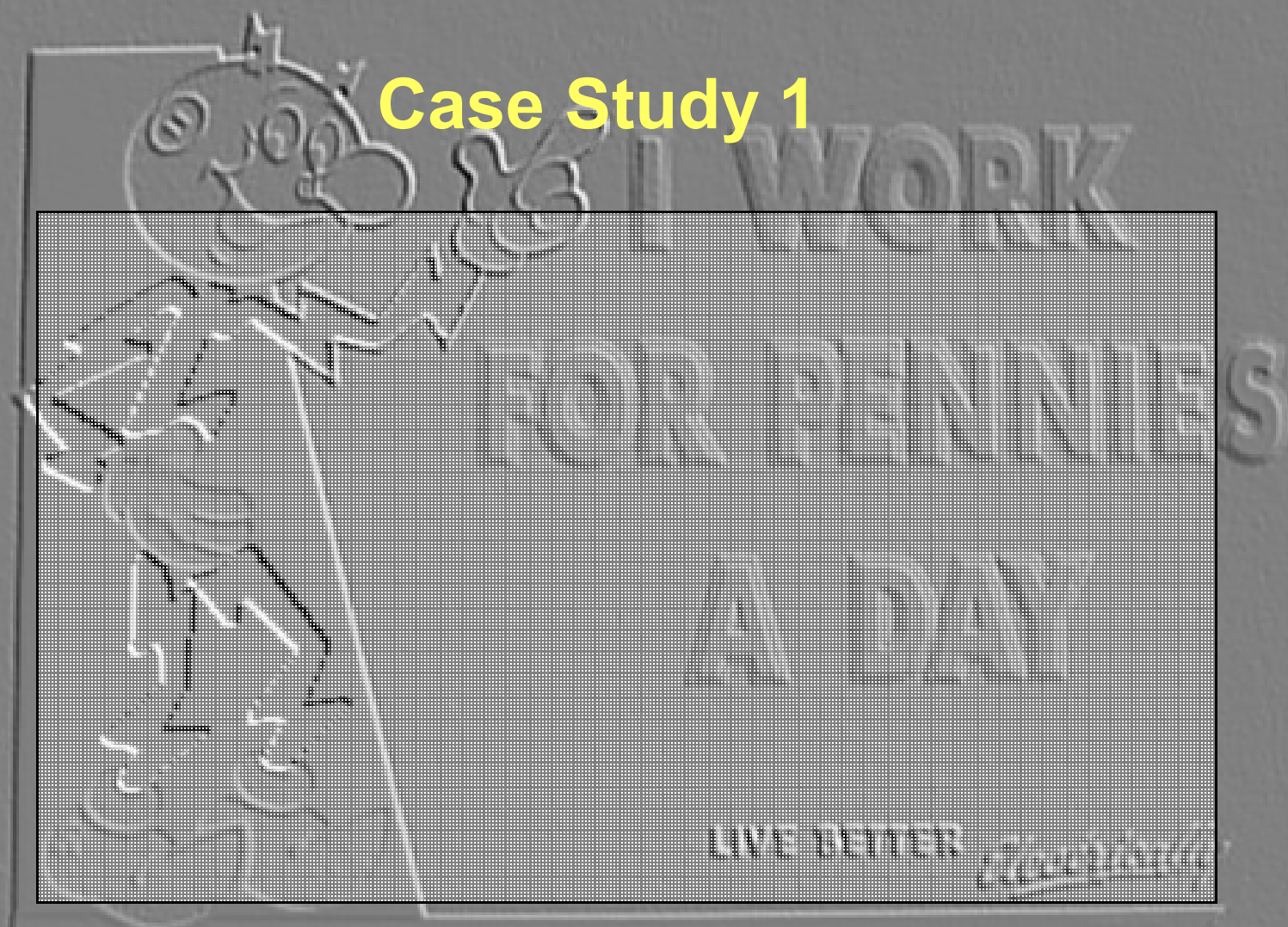
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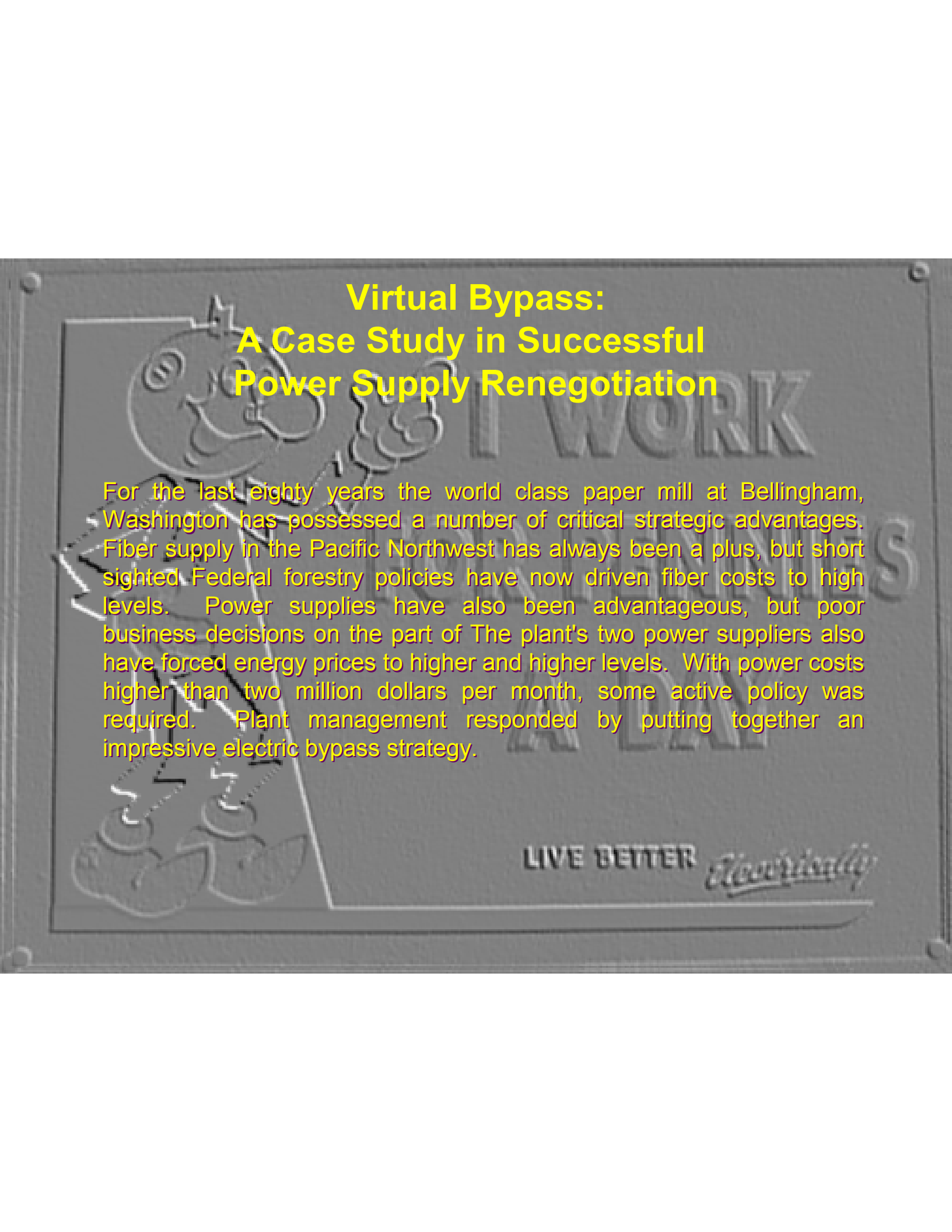
Third Party Wheeling

- FERC has issued a "free pass" to exiting entities if they do not require access through the serving utilities transmission



Case Study 1





Virtual Bypass: A Case Study in Successful Power Supply Renegotiation

For the last eighty years the world class paper mill at Bellingham, Washington has possessed a number of critical strategic advantages. Fiber supply in the Pacific Northwest has always been a plus, but short sighted Federal forestry policies have now driven fiber costs to high levels. Power supplies have also been advantageous, but poor business decisions on the part of The plant's two power suppliers also have forced energy prices to higher and higher levels. With power costs higher than two million dollars per month, some active policy was required. Plant management responded by putting together an impressive electric bypass strategy.

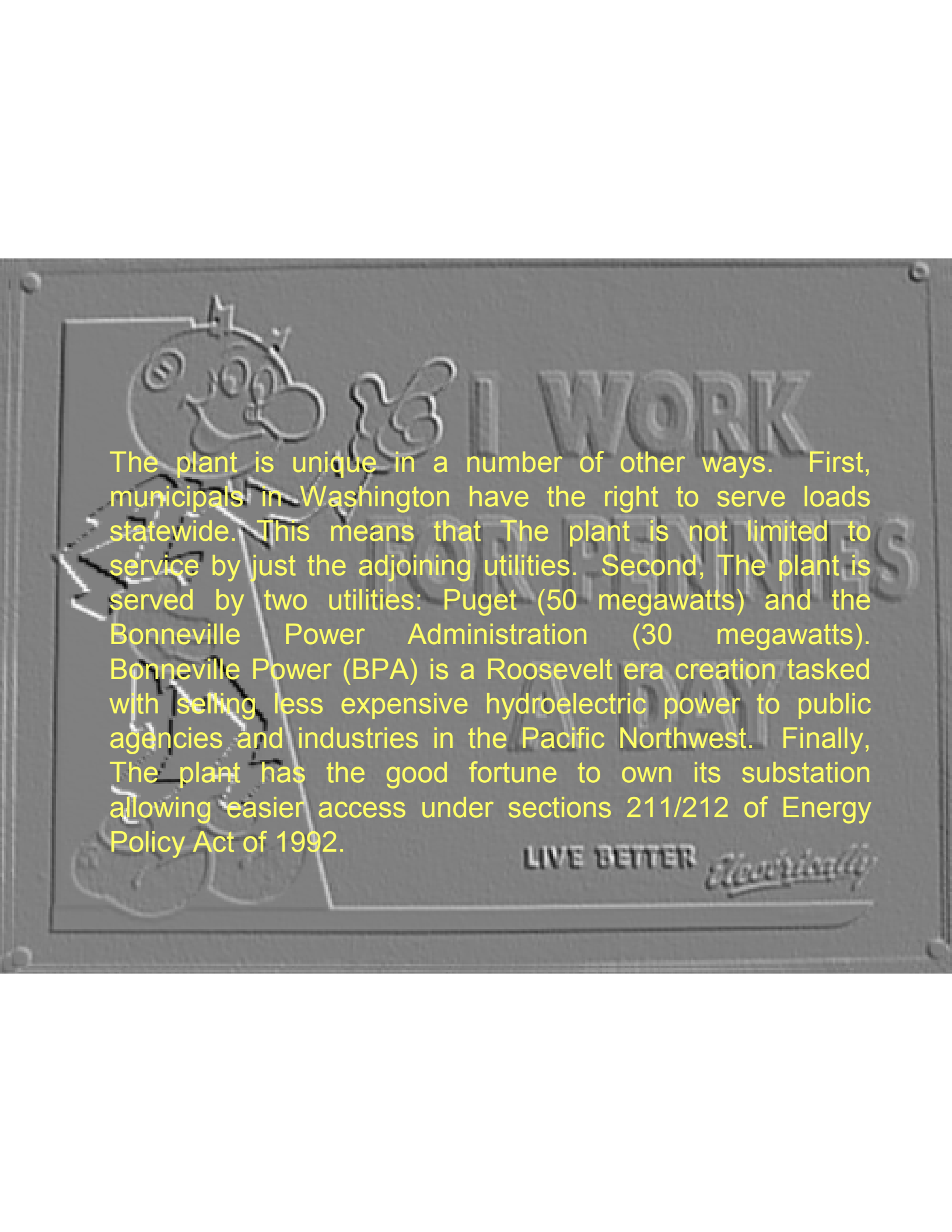
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Unique Circumstances

The Bellingham mill has a number of unique advantages that can be marshaled to its advantage. First, the mill was in a state without strong service territories. Washington state has overlapping service territories in many places. In the case of Bellingham, a city close to the Canadian border, two different utilities have rights to serve. Puget Sound Power and Light is a traditional investor owned utility with average rates of approximately five cents per kilowatthour. The second utility is the Whatcom Public Utilities District. Whatcom was formed more than 40 years ago to serve Bellingham and its environs. It has served industrial customers, but has not chosen to expand its operations against its least cost effective competitor. Whatcom's overall rates are less than three cents per kilowatthour.

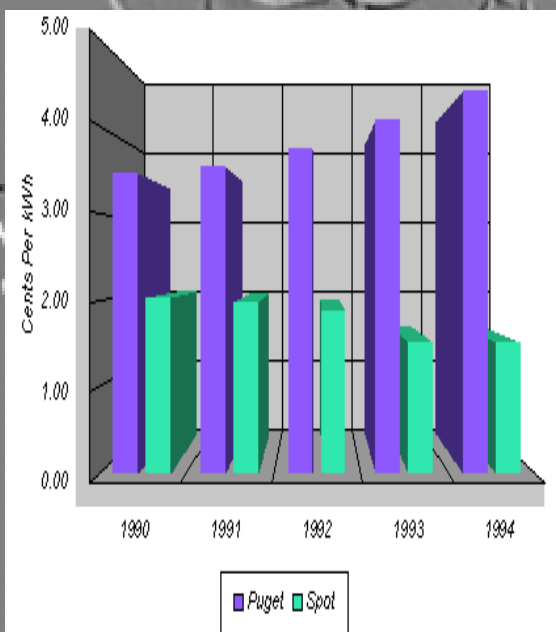
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The plant is unique in a number of other ways. First, municipals in Washington have the right to serve loads statewide. This means that The plant is not limited to service by just the adjoining utilities. Second, The plant is served by two utilities: Puget (50 megawatts) and the Bonneville Power Administration (30 megawatts). Bonneville Power (BPA) is a Roosevelt era creation tasked with selling less expensive hydroelectric power to public agencies and industries in the Pacific Northwest. Finally, The plant has the good fortune to own its substation allowing easier access under sections 211/212 of Energy Policy Act of 1992.

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Rising Electric Costs

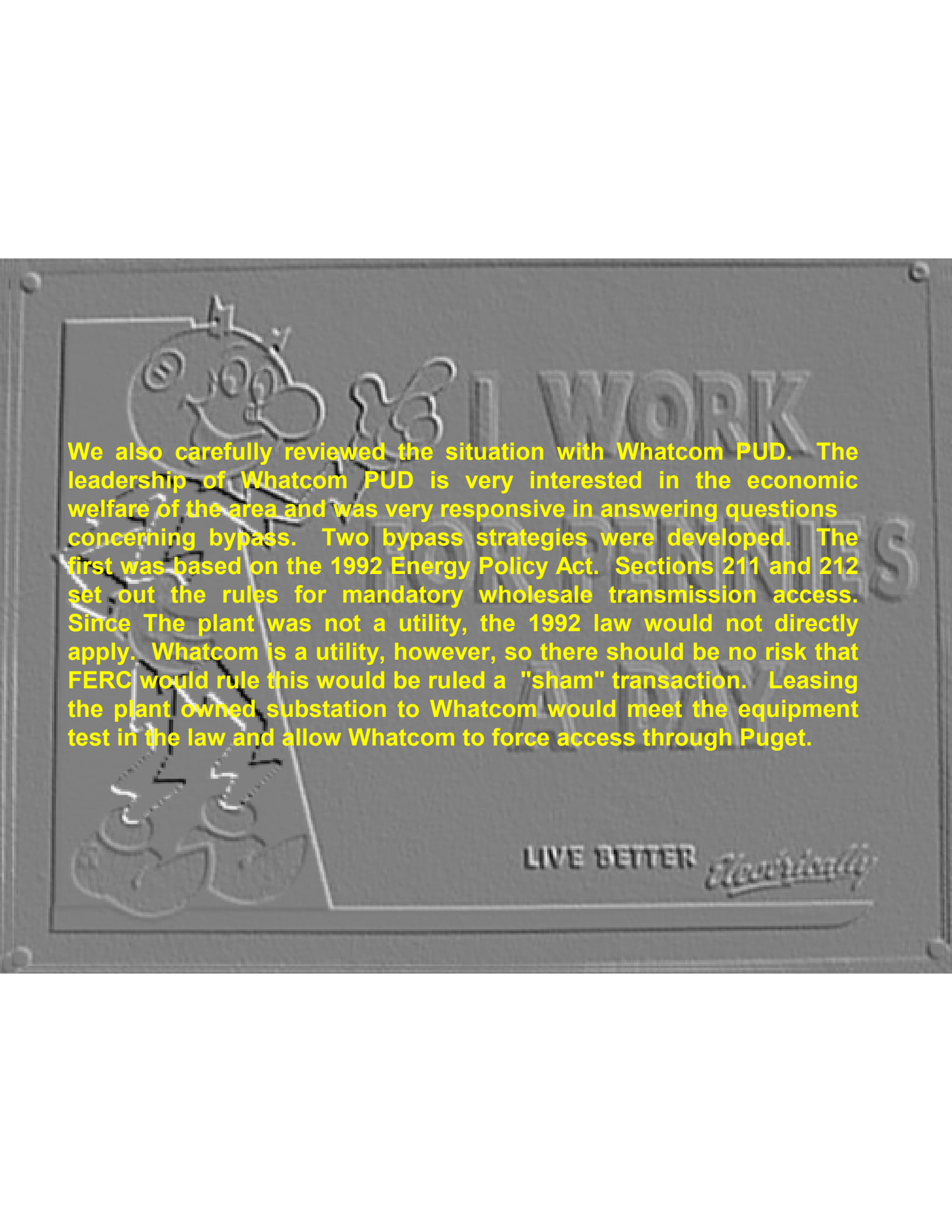


Both Puget and BPA have passed increasing costs onto their ratepayers in recent years. In BPA's case, ill-judged investments in the largest nuclear project in history (WPPSS 1 through 5) increased rates by twentyfold over the 1980s. BPA also was harnessed to a strong political agenda that even today expends massive dollar amounts in conservation, environmental measures, and renewable acquisition. Puget's problems were simpler. In the late 80s and early 90s, Puget purchased a number of PURPA projects in the five cents per kilowatt-hour range. Although Both Puget and BPA have announced rate freezes and reduction in response to current market pressures, neither utility really planned to address the size of the problem the Bellingham mill was facing.

Initial Steps

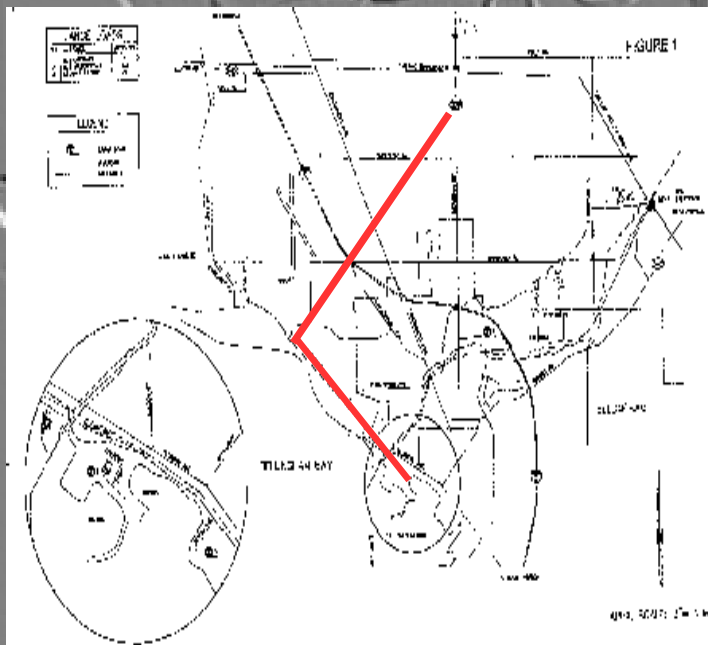
The first step was to get a very good idea of the possibilities. Approximately a year ago, McCullough Research issued a Request For Proposals (RFP) for an unspecified customer in northern Washington. The RFP received more than fifty enquiries and eventually resulted in 13 serious proposals. A simple review of the major customers in the northern Washington area would have identified the Bellingham mill immediately. We were surprised by some of the respondents. For example, Puget's bulk marketing partner, Dreyfus, was one of the marketers to respond.

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We also carefully reviewed the situation with Whatcom PUD. The leadership of Whatcom PUD is very interested in the economic welfare of the area and was very responsive in answering questions concerning bypass. Two bypass strategies were developed. The first was based on the 1992 Energy Policy Act. Sections 211 and 212 set out the rules for mandatory wholesale transmission access. Since The plant was not a utility, the 1992 law would not directly apply. Whatcom is a utility, however, so there should be no risk that FERC would rule this would be ruled a "sham" transaction. Leasing the plant owned substation to Whatcom would meet the equipment test in the law and allow Whatcom to force access through Puget.

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A second option was to consider physical bypass. The geographic situation was very positive. The distance from the plant to a substation where service from Whatcom was available was less than five miles. Right of way was available at a nominal cost. Meetings with local officials indicated that construction of the line would not pose a major obstacle.

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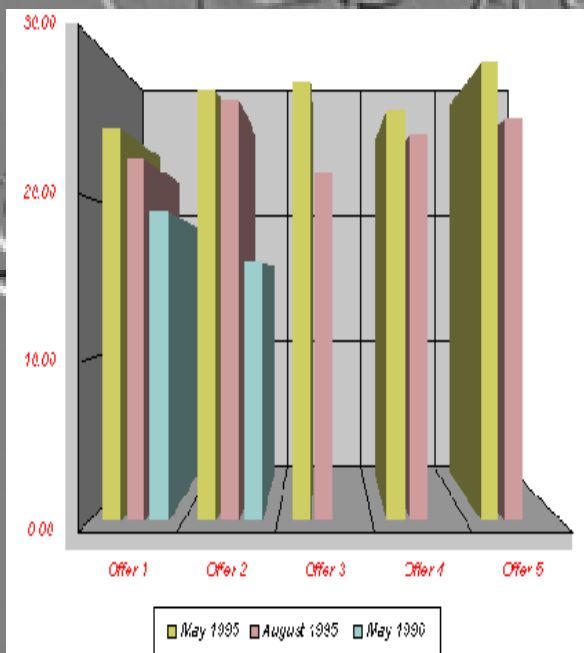
1992 EPAct 211/212 Access

In spite of the clear advantages of a 211/212 strategy, the decision was made to pursue both alternatives. The primary reason was a concern over the timeliness of FERC's response to the 211/212 request. Under the 1992 law, Whatcom would first make a request to Puget. After Puget had rejected (or more likely, ignored) the request, Whatcom could approach FERC to force access. With the Mega-NOPR still under consideration at FERC, Whatcom and The plant were concerned that Puget would be able to cause substantial delays. Physical bypass was simpler. The time line for physical bypass was predictable and did not expose the parties to extended litigation. Another concern was the issue of exit fees. Puget asked for exit fees in the decision of one of its wholesale customers seeking alternative supplies. Puget's proposed exit fees appeared artificial and inconsistent with simultaneous filings in other arenas, but debating such issues in front of FERC could easily push the effective bypass date past the physical completion of a transmission line.

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Power Supply Options



Response to the initial RFP was very gratifying. With the general decline in bulk power prices over the past year, many participants elected to "sweeten" their bids. The original responses were less than two and one half cents per kilowatthour. Final fixed price options were as low as one and one half cents per kilowatthour.

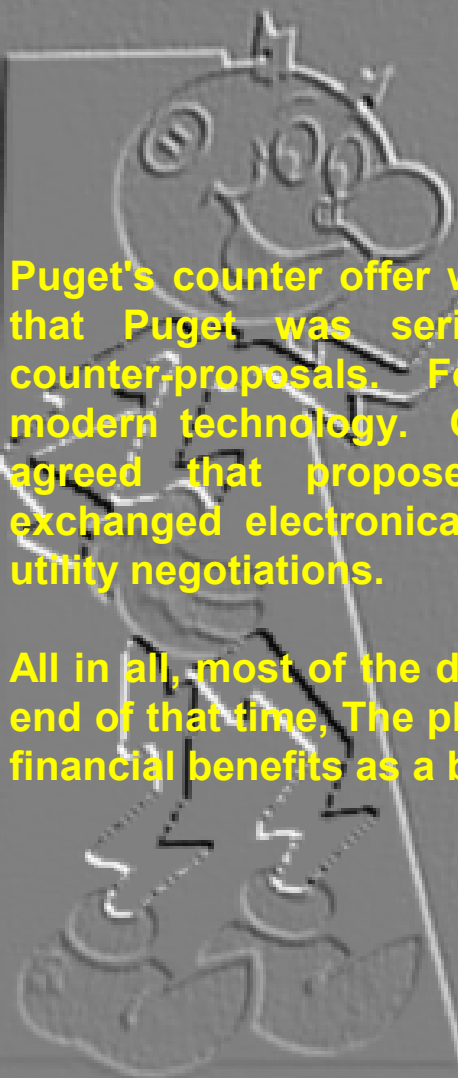
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The Grizzly Wakes Up

Puget's response to our preparations had been very quiet. Puget representatives sat through several presentations to local officials and the Whatcom PUD board. Meetings between the plant and Puget staff tended to be passive and procedural. It was expected that Puget would respond violently to the 211/212 request, but, with that exception, we had begun to believe that Puget was so enmeshed in its merger preparations that the exit of their second largest customer might take place without their notice. On the week when the approval of the power supplier was placed on the Whatcom board agenda, Puget finally began to realize that the bypass was a serious possibility. On Monday of that week the Puget negotiating team was replaced. For the first time, an officer was included in Puget's negotiating team with the power to actually make decisions.

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Puget's counter offer was complex and ill-defined at first. We knew that Puget was serious when it actually began to react to counter-proposals. For some reason, many utilities are fearful of modern technology. One important moment occurred when it was agreed that proposed language and spreadsheets could be exchanged electronically, instead of the slow minuet of traditional utility negotiations.

All in all, most of the discussions took place within one week. At the end of that time, The plant had a rate proposal that provided the same financial benefits as a bypass, but without the risk.

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Virtual Bypass

The final agreement provided for a spot indexed price. Puget had argued for indexing at the California Oregon (COB) border. With a basis difference between COB and the Pacific Northwest network (erroneously called "Mid-Columbia" by many) at a mill, this difference was a major pricing issue. It was finally agreed to adjust the indexing location back to an appropriate location.

Both parties agreed on a five-year duration. With bulk power prices falling precipitously and new gas fired technology promising lower marginal costs in the future, a twenty-year contract simply is not appropriate for most industry. Although utility planners are usually focused on twenty years, the average industrial facility in the United States is only 17 years old. Given Bellingham's age, a short horizon seemed appropriate.

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The Last Act

Puget carried the new contract through regulatory approval by June 7 -- a record for most regulatory approvals. One key to acceptance was our detailed preparation of the bypass alternative. The plant helped gain approval by continuing our preparation for bypass throughout the regulatory process. If the Washington Utilities and Transportation Commission had blocked the settlement, The plant and Whatcom were prepared to continue with bypass without the loss of a single day. Puget has subsequently offered the same model (although at a substantially higher rate) to the rest of its major industrial customers as part of settlement of their merger intervention.

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Experience with other Markets

- Experience with other "poolco" style administered markets is that they are volatile and often unfair
- The problem isn't with the theoreticians who set them up -- it is with the real people who have to operate against them
- As currently constituted, California's poolco should devolve into a classic oligopsony model -- three sellers and many buyers
- traditional economic theory indicates that the sellers should win -- at the cost of uncertainty if they do not collude

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Administered Markets:

Why are they so
volatile?

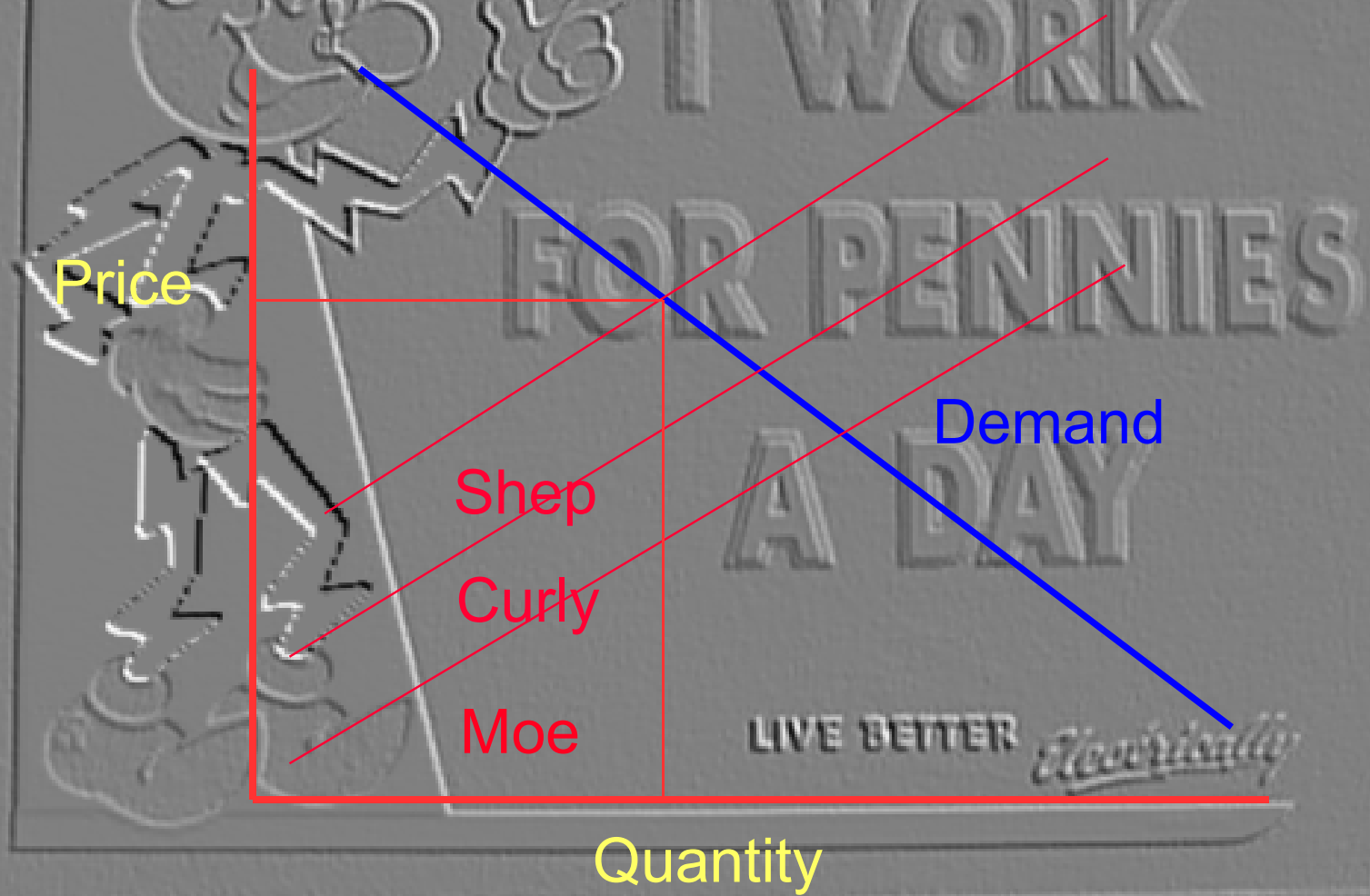
PoolCo Oligopsony

1

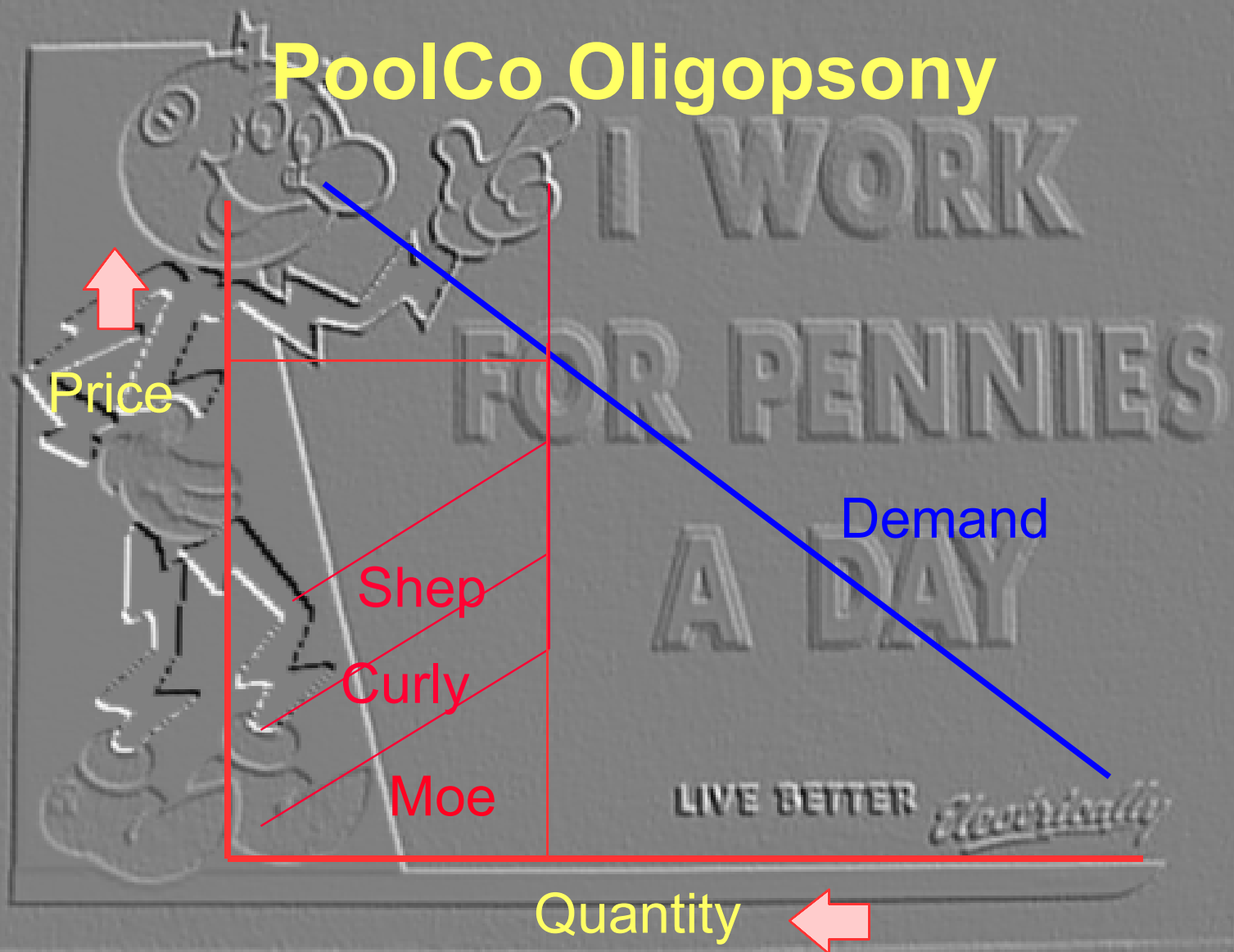
- In traditional economic theory an oligopsony selling to a competitive market will be sorely tempted to pursue production reductions
- Assuming that the three do not violate Federal antitrust law (who can imagine utility executives in jail?), the most efficient approach is a market enforcement mechanism based on the "tit for tat" theory

1 Many buyers, few sellers

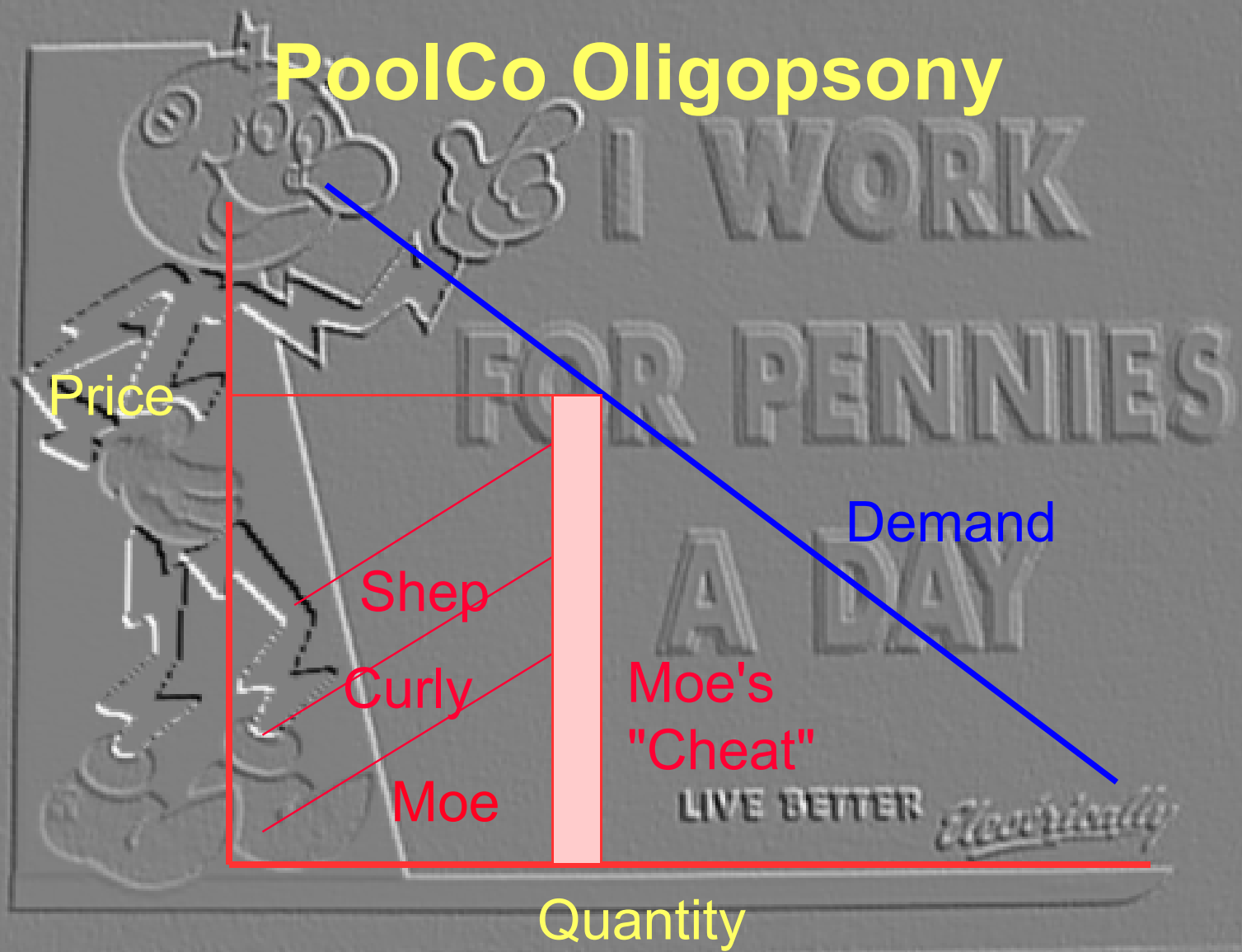
PoolCo Oligopsony



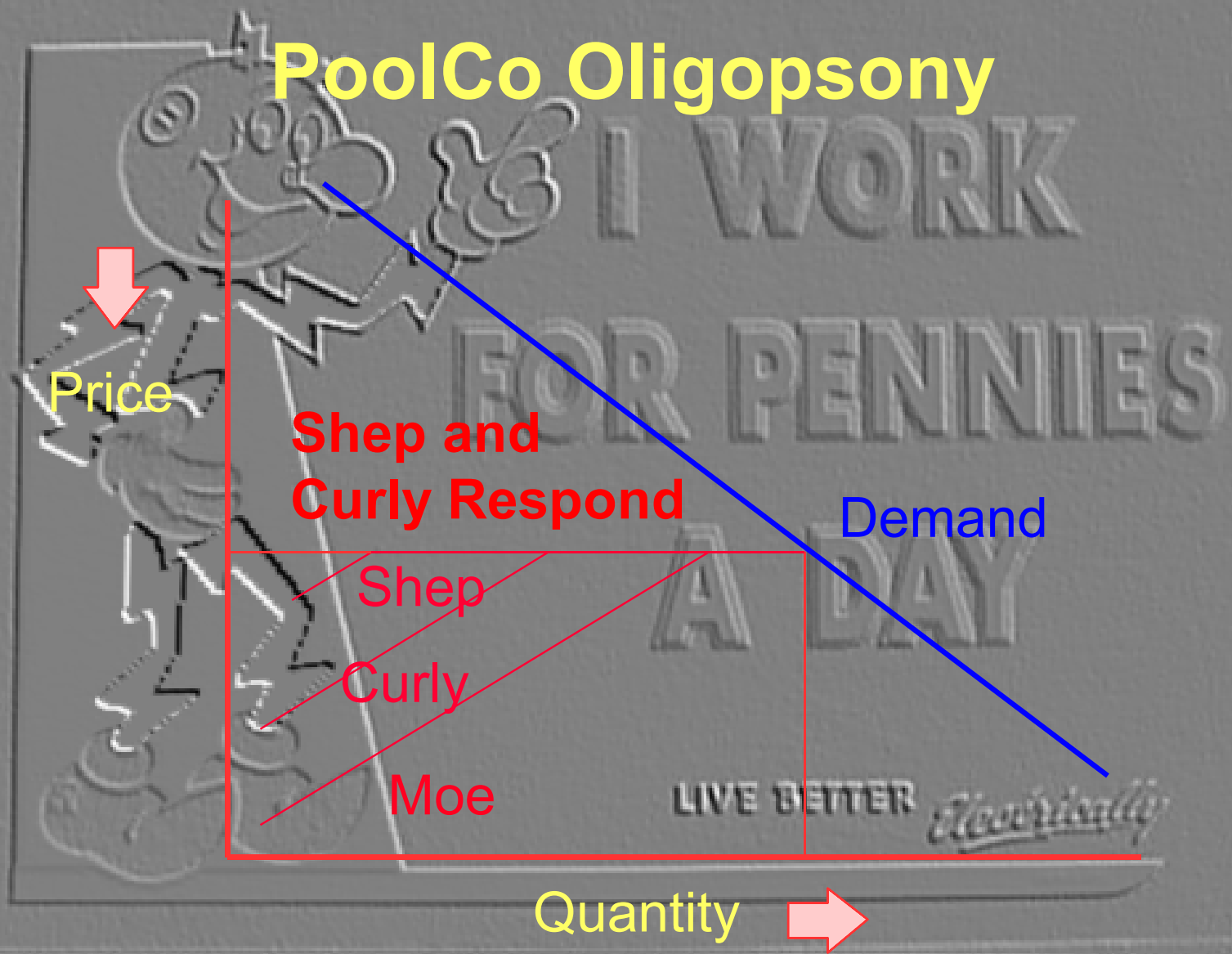
PoolCo Oligopsony



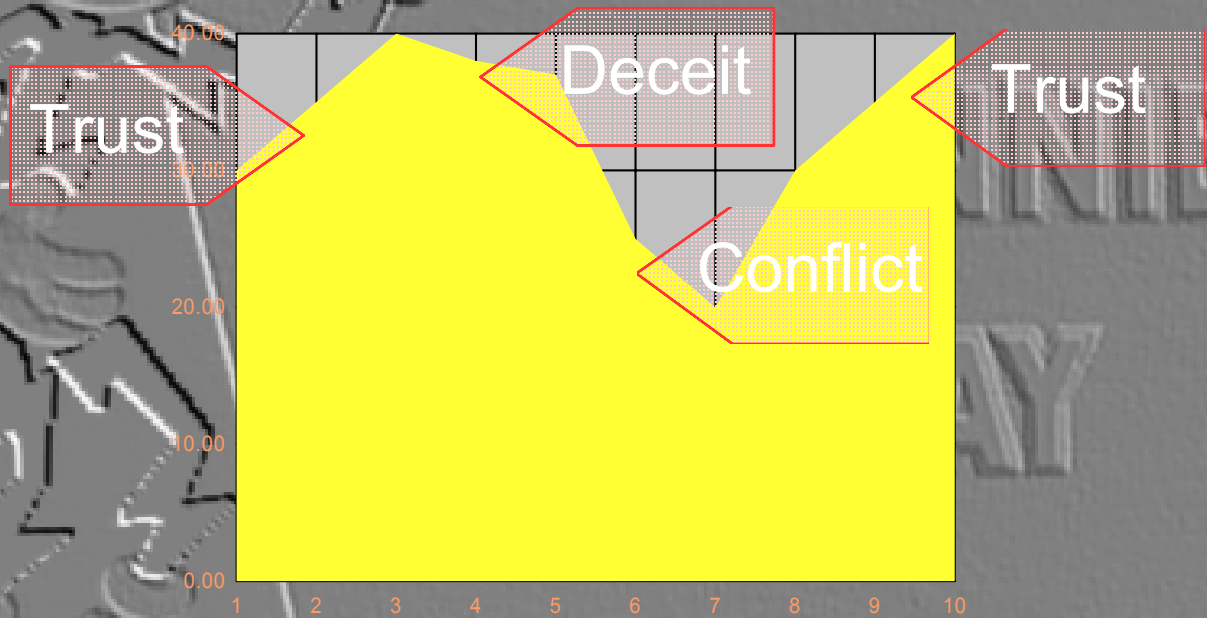
PoolCo Oligopsony



PoolCo Oligopsony



Oligopsony Dynamics

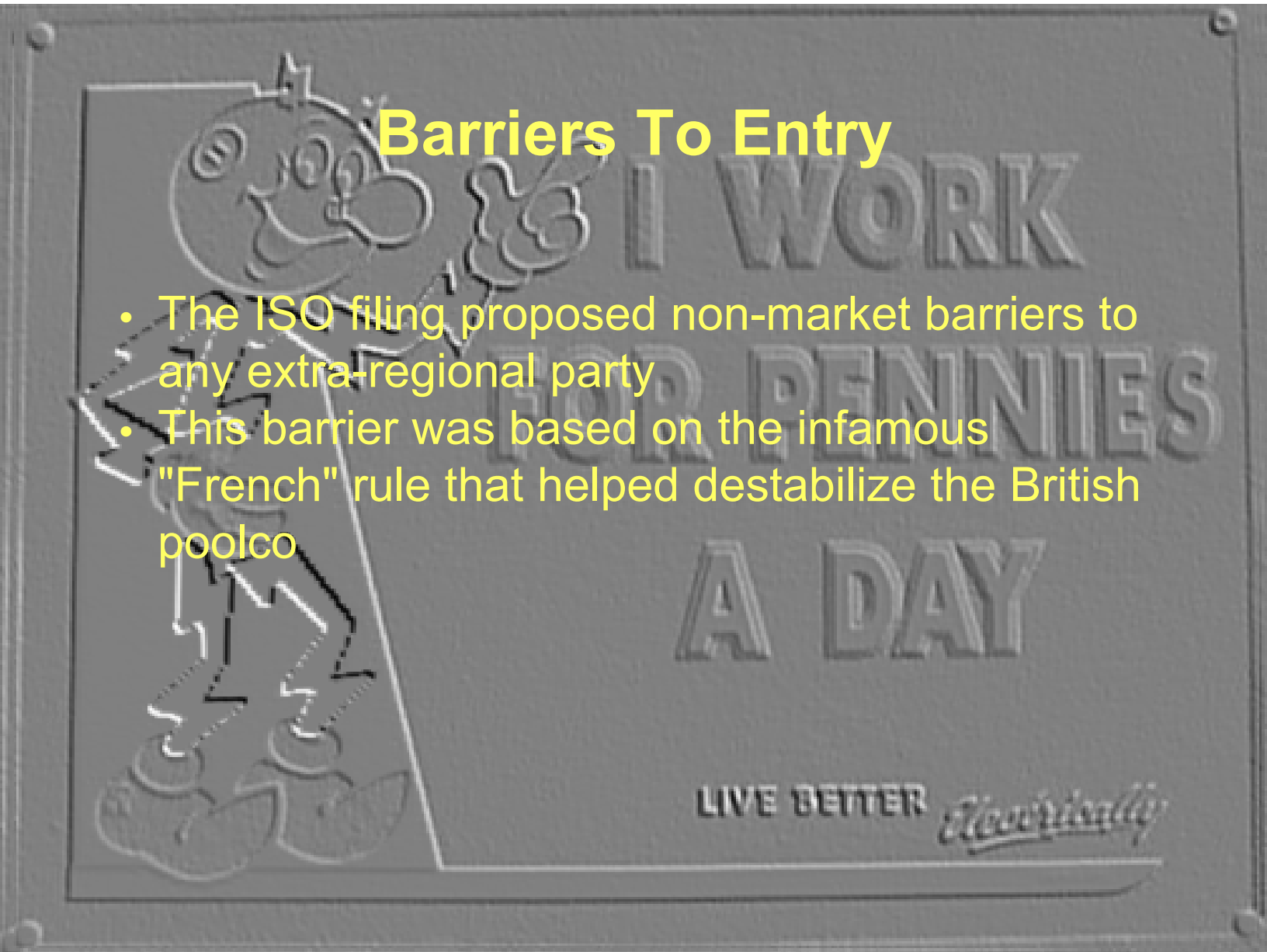


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Barriers To Entry

- The ISO filing proposed non-market barriers to any extra-regional party
- This barrier was based on the infamous "French" rule that helped destabilize the British poolco





Setting Up The Playing Field

Setting Up The Playing Field

- Marriage, casual dating, or serious competitive promiscuity
 - Maintaining an active portfolio
 - How multiple suppliers reduce your risk
- Recruiting advisors
- What do you need to know first
- RFP Components

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Marriage, casual dating, or serious competitive promiscuity

- Marriage
 - Easily administered
 - Cost effective
 - Requires high confidence in the marriage partner
- Casual Dating
 - Short term commitments create competition but lack security
 - California's complex implementation may not provide sufficient incentive to stay the course
- Serious promiscuity
 - Pools allow internal competition
 - Multiple suppliers police each other

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Recruiting advisors

- Knowledge of power markets is useful
- Knowledge of power contracts is necessary
- Bid evaluation and negotiation are by far the major personnel commitments

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What do you need to know first?

- Load information
 - Historical tariff information
 - Hourly data
- Location
 - Transmission
- Metering
- Dispatchability

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Load information

Historical tariff information

- Rate schedules
- Is this load contractual?

Hourly data

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Location

Transmission
Distribution

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Metering

AB-1890 requirements

Resource provider communications

Where is a competent metering solution?

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Dispatchability

Type of process

Fuel choice

On-peak/Off-peak Scheduling

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RFP Components

- Qualifications
 - Experience
 - Financial
- Delivery
 - Point of delivery
 - Transmission access
- Firmness
 - WSCC definition
 - Financial guarantees
- Prices
 - Energy
 - Capacity
- Ancillary services

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Qualifications

- Experience
 - Actual transactions
 - details
 - FERC filings
- Financial
 - Letter of credit
 - Parental guarantees

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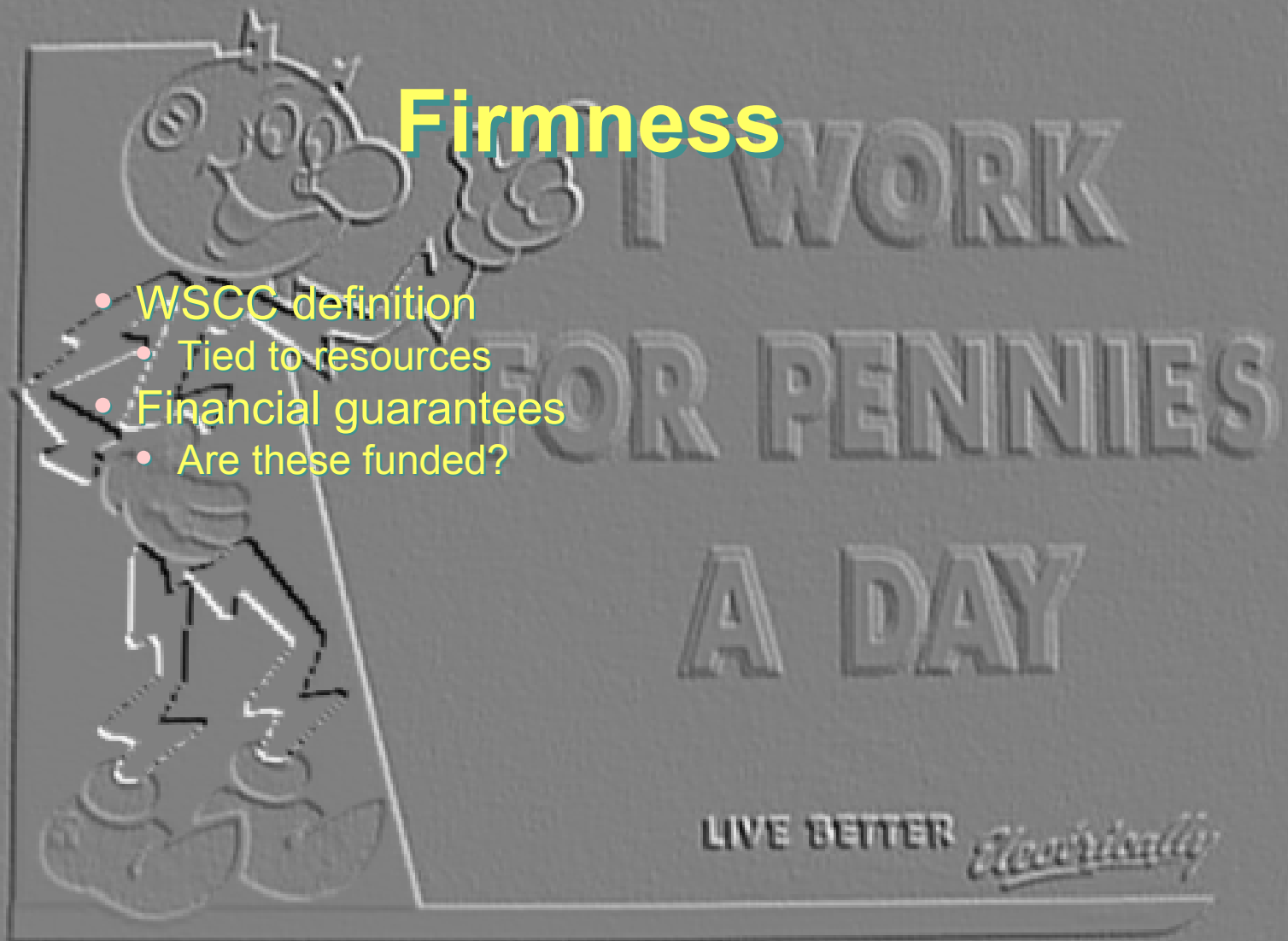
Delivery

- Point of delivery
- History
- Transmission rights
- Transmission access
- Curtailment history
- Firm contractual path?

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Firmness

- WSCC definition
- Tied to resources
- Financial guarantees
- Are these funded?



Prices

- Energy
 - By month
 - By year
 - By hour
- Capacity
 - By month?
- Indexation
 - Where?
 - Can reasonable men disagree?
 - Is the index "dual sourced"
 - Are there alternatives?

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Ancillary services

Balancing account

Dispatch

Scheduling

Spinning reserves

Frequency support (steel)

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Should you have more than one round?

- One round -- motivates bidders to do their best
- Two rounds -- allows "negotiating room" to be worked out of the prices

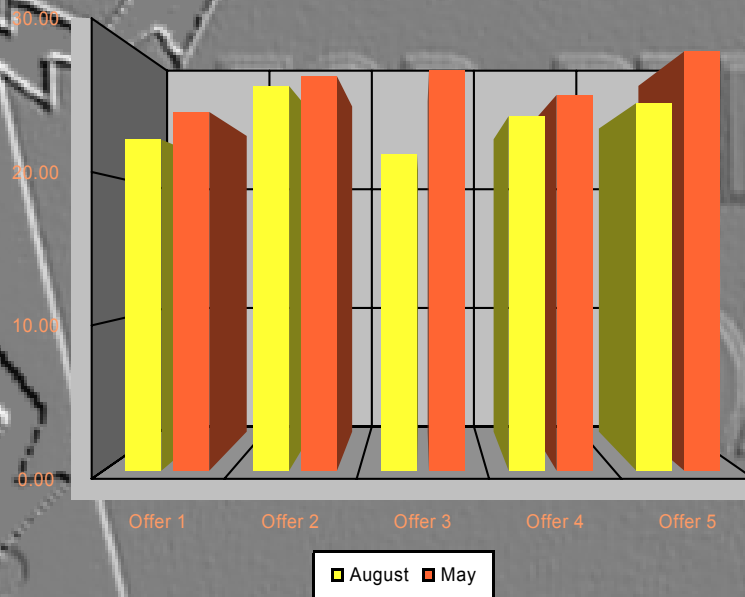
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Negotiating Room

- Our experience has been that a second round will reduce prices by 10%
- Our interpretation is that most bidders do not believe in single rounds -- they reserve negotiating room regardless of the announced RFP structure

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Second round price reductions



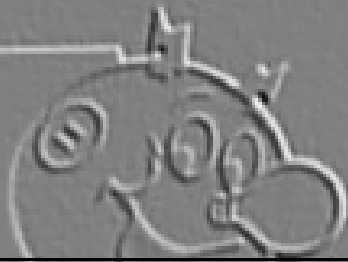
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The MOU Stage

- Setting out terms and conditions in the contract process can be lengthy and costly
- Establishing a formal MOU process can allow definition of these issues early in the process

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RFP?



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Purchasing Power By RFP

- Why Hold A Horse Race?
- Who should be invited?
- What structure should be imposed?
- Should we charge a fee for entry?

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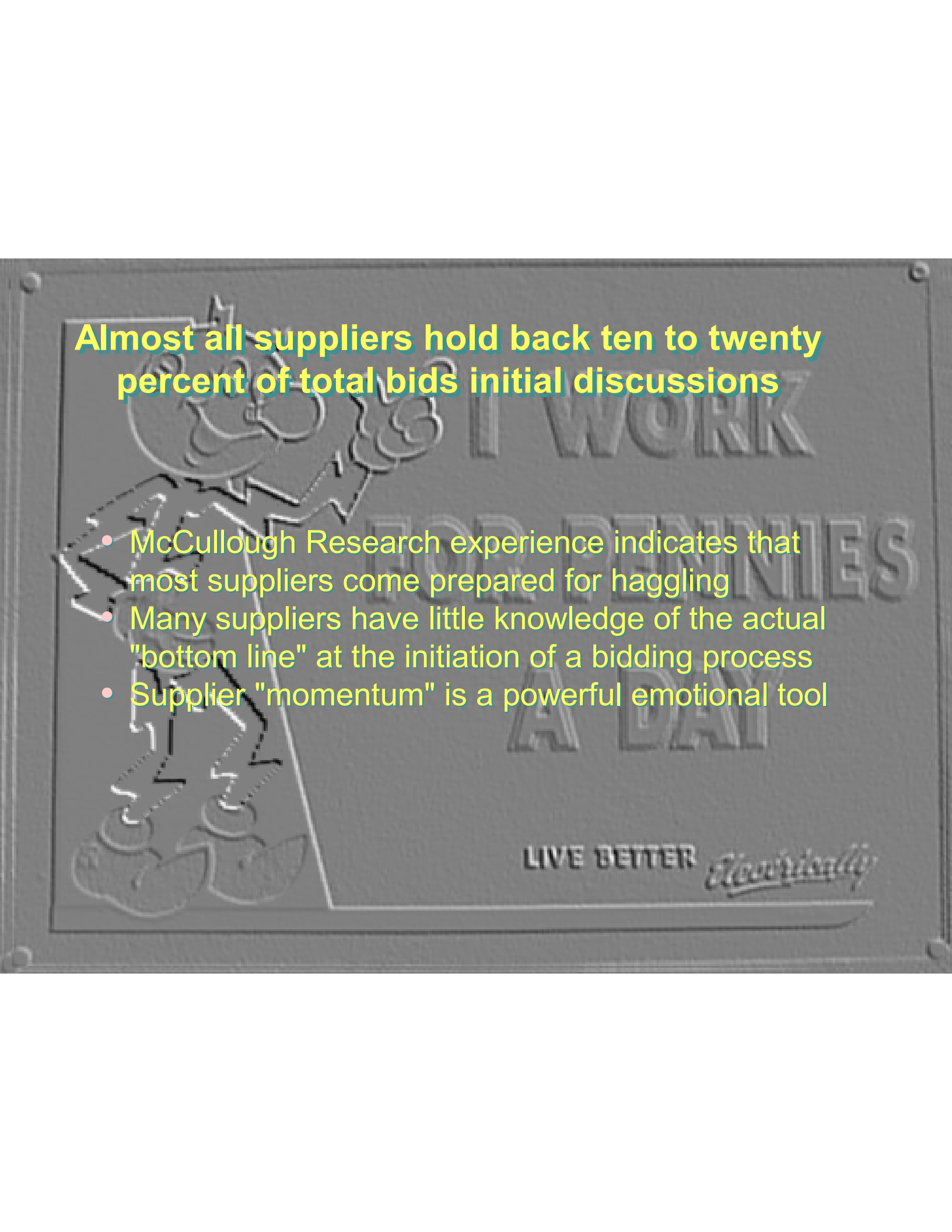
Why Hold A Horse Race?

- Almost all suppliers hold back ten to twenty percent of total bids initial discussions
- Supplier learning curves are *Very* steep
- Additional market information often educates buyers as well

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Industry "A" Bid Experience





Almost all suppliers hold back ten to twenty percent of total bids initial discussions

- McCullough Research experience indicates that most suppliers come prepared for haggling
- Many suppliers have little knowledge of the actual "bottom line" at the initiation of a bidding process
- Supplier "momentum" is a powerful emotional tool

Supplier leaning curves are **Very steep**

- Our experience is that suppliers have a lot to learn
- Transmission arrangements are a common source of learning curve "value"
- For example, many existing utilities have power contracts that already involve transmission in the opposite direction of the proposed transaction
- This is called "counter-scheduling" in real world operations

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Additional market information often educates buyers as well

- Many buyers structure their bid around a limited set of resources
- The bid process often firms up the possible inter-relationships between bidders
- A common example is timing:
 - Bidder A has resources for one to five years
 - Bidder B has resources for six to twenty years

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What RFP Structure Should Be Imposed?

- Using our resources efficiently
- Reducing bidder "creativity"
- Required information

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Using Our Resources Efficiently

- A large number of bids require that the bids be comparable
- It is best if the bidders provide similar formats -- usually in a spreadsheet format
- Amorphous bids should be eliminated
- Invitations to negotiate should be eliminated
 - Many bidders in the current changing environment attempt to avoid commitment
 - Early bid termination dates usually mark unrealistic proposals

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Reducing Bidder "Creativity"

- McCullough Research has gone to a "quantum" approach
- Bidders are invited to provide 10 megawatt blocks with a minimum capacity factor
 - This allows easy comparison between competing bidders
 - The minimum capacity factor allows easy classification of peak and baseload resource
- The "quantum" approach also reduces the need to provide bidders with detailed load information

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Ancillary Services

- Most real transactions have reduced ancillary services to one mill or less of the total bill
- Most ancillary services are services -- a small component in the total package
- Definitions MUST be taken from external sources
 - Some bidders can create as many as 67 ancillary services (BPA)
 - Other bidders offer such services but have little or no understanding on how to provide them
 - Enron once offered load following services across phase shifters

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Information For Bidders

- Bidders tend to request more information than they actually use
- Most pricing is currently based on supplies rather than specific demand characteristics
- Overall loads -- on a monthly or daily basis -- are useful, but not required
- More important information is location, transmission arrangements, and operating requirements

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Who Should Be Invited?

- Recently the building management association of San Francisco proposed eliminating brokers from participation because they "lacked experience"
- In reality, the brokers and the utilities are often difficult to distinguish
 - Enron, LG&E, Illinova and others are closely tied to large retail utilities
 - New entrants often are staffed with skilled personnel and bring new solutions to old problems
 - More is often better

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Should We Charge A Bidding Fee?

- Bidding fees have ebbed and flowed
- Sacramento Municipal Utility District required a \$50,000 deposit in their Rancho Seco solicitation
- ABAG recently chose to charge a \$1,000 fee for their RFP
- Most industrial RFPs do not require a payment
- Overall, fees may complicate the process with little benefit

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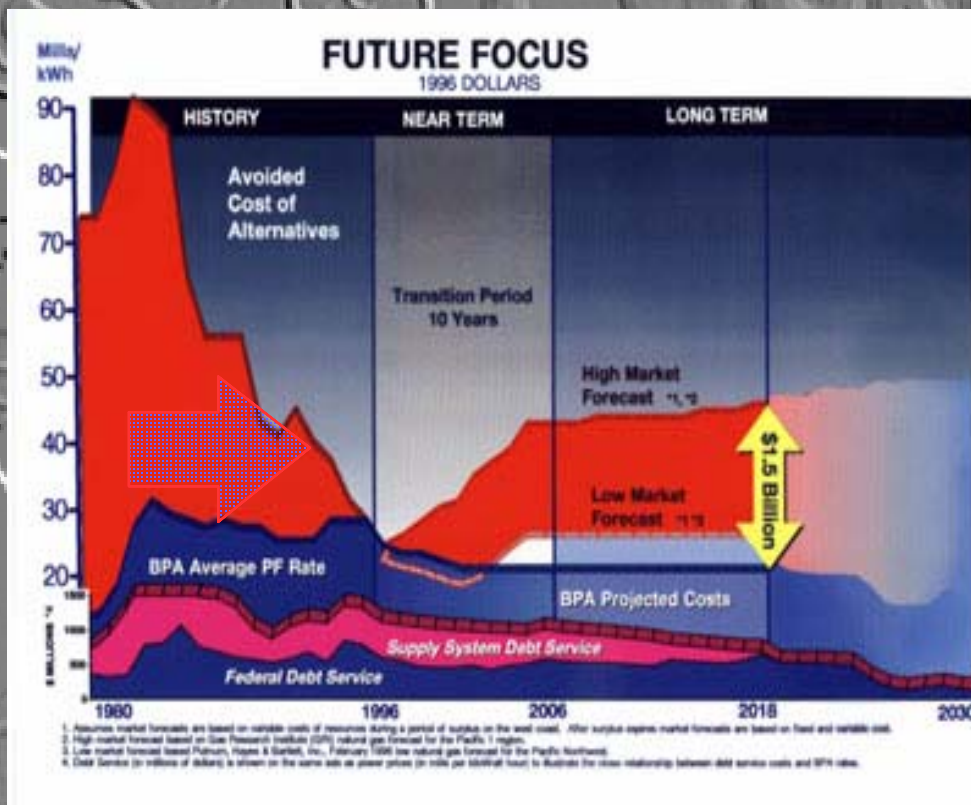
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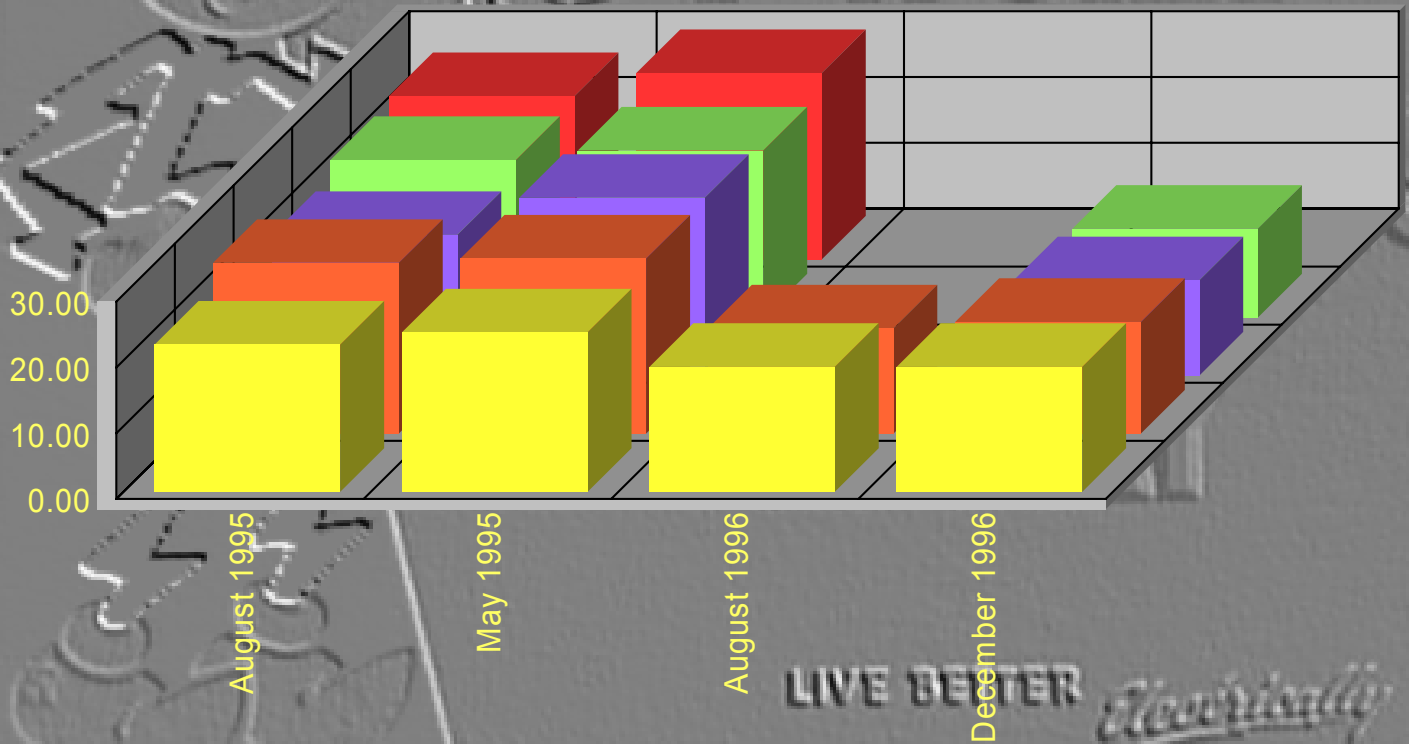
Identifying A Good Price In Competitive Markets

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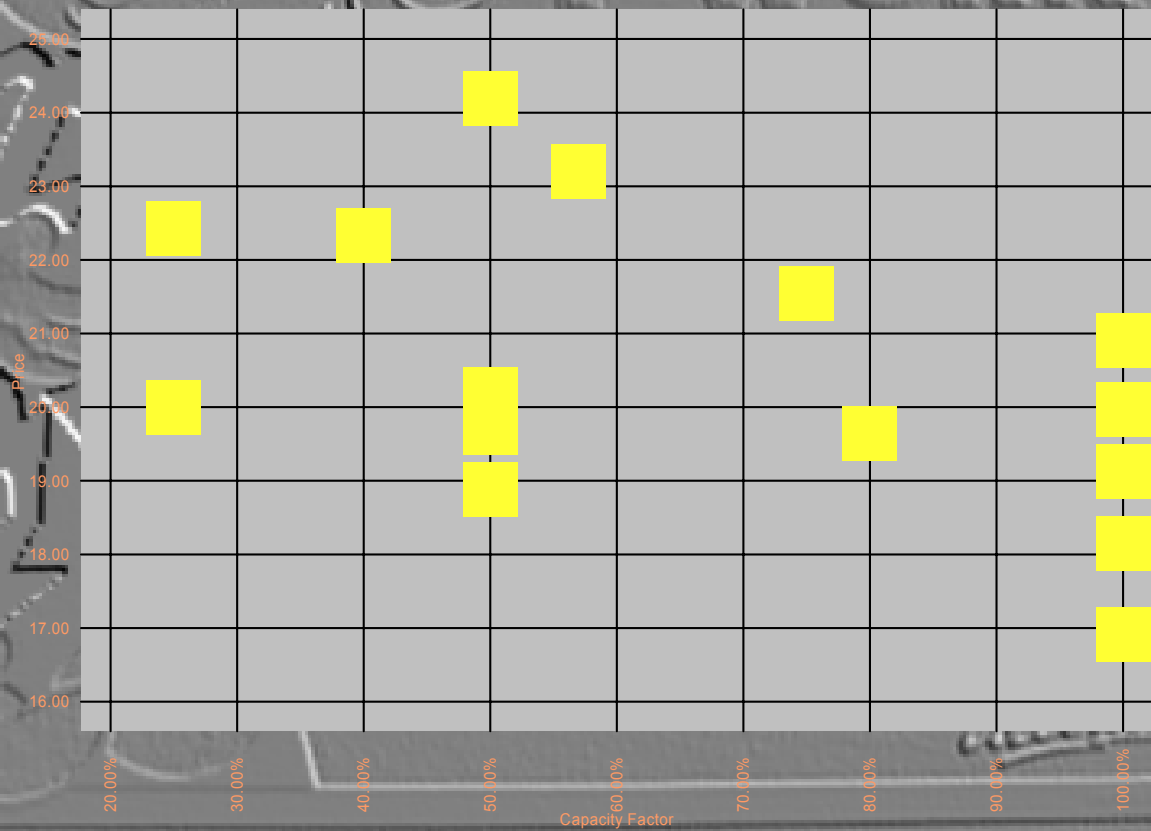
Prices Fall Again



Recent West Coast Prices



Current Bay Area Bids

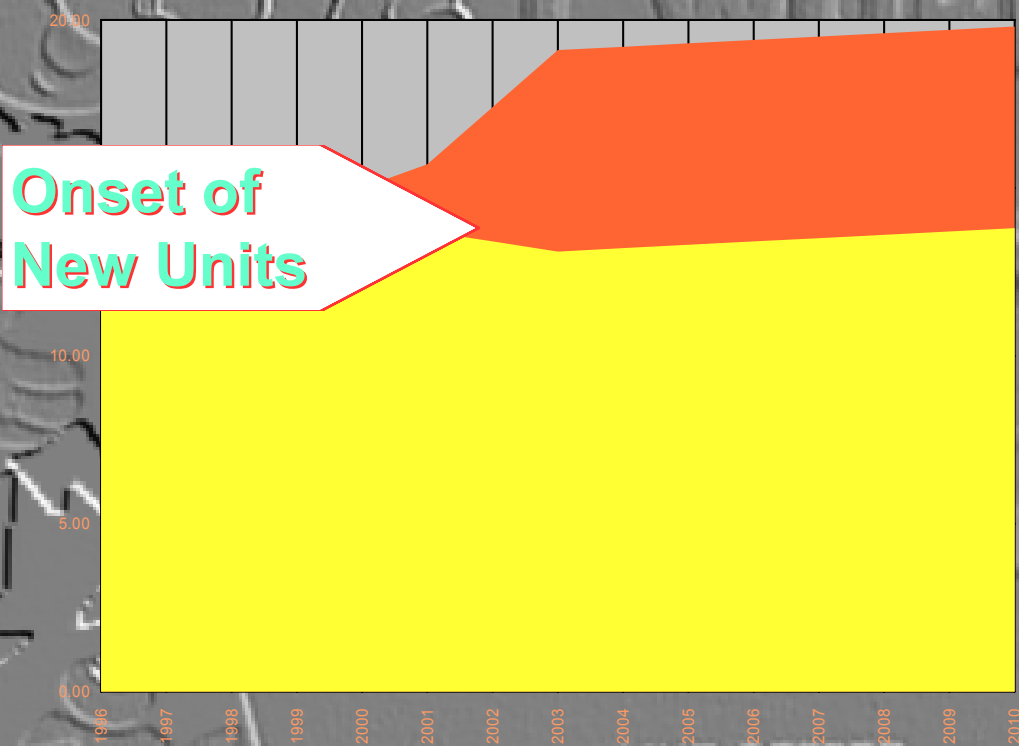


Market Truths

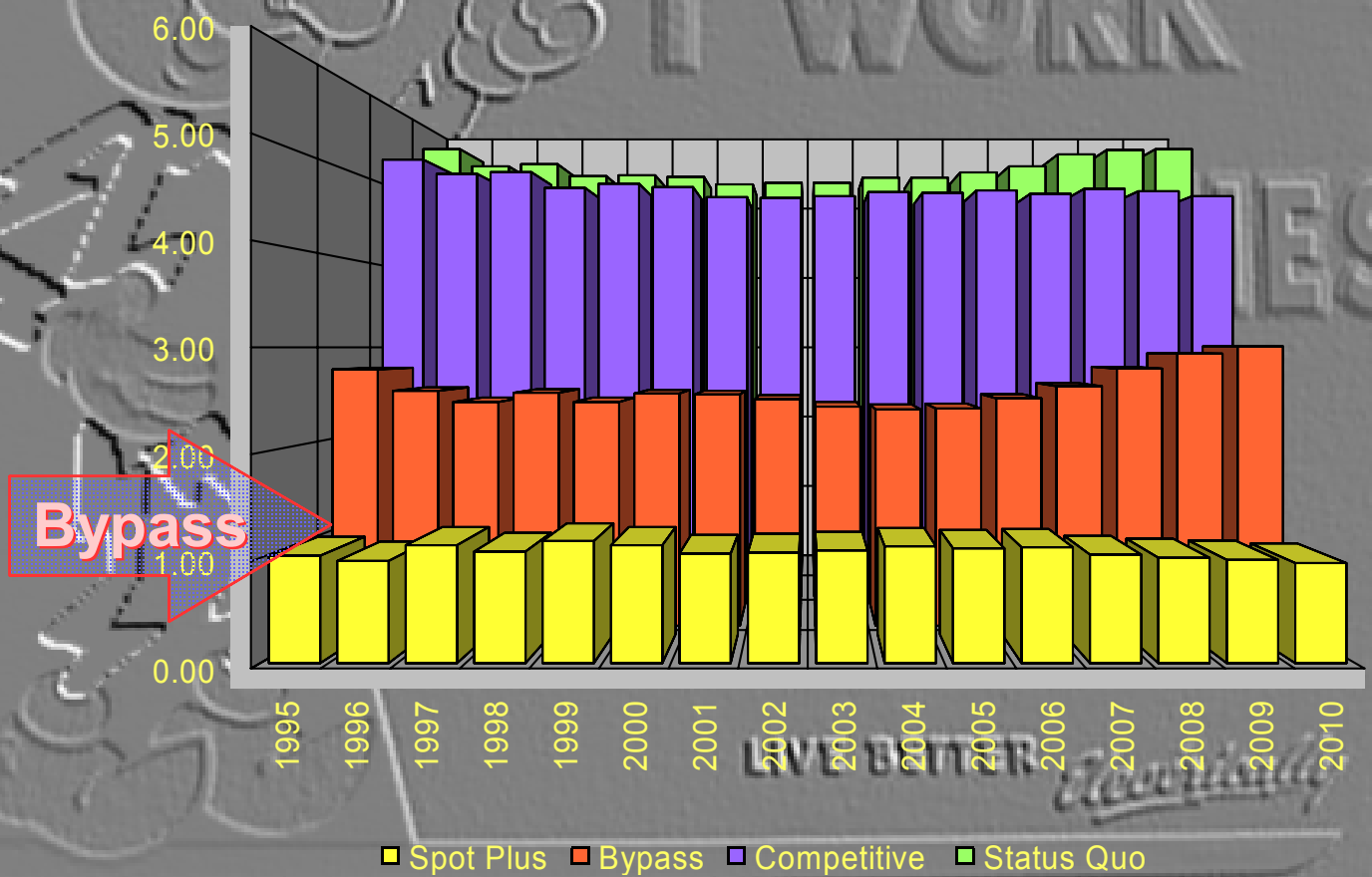
- Capacity has become very, very cheap
- Energy indices are simple
- If they aren't simple, they aren't useful
- Industrial and bulk power markets have converged
- Prices are low and going lower

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WSCC Bulk Power Prices

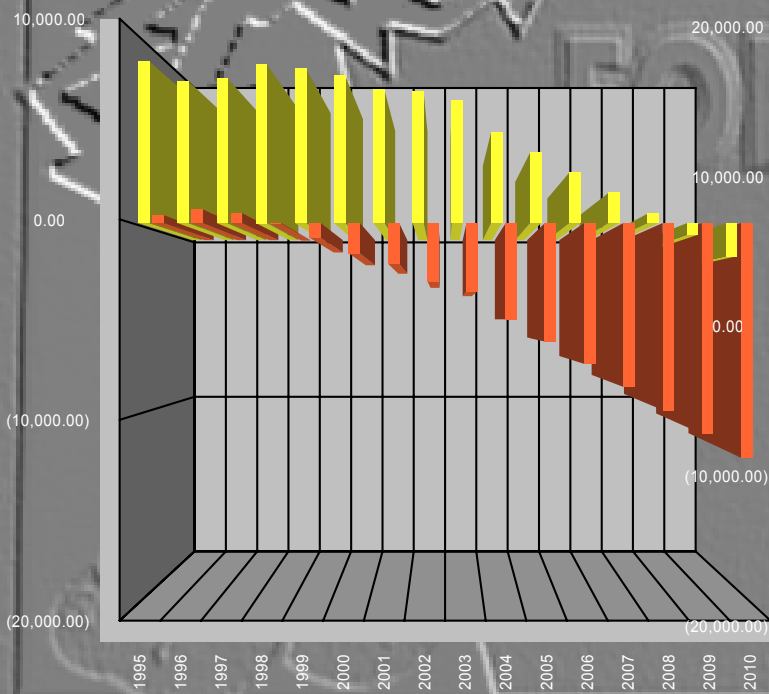


WSCC Industrial Rates

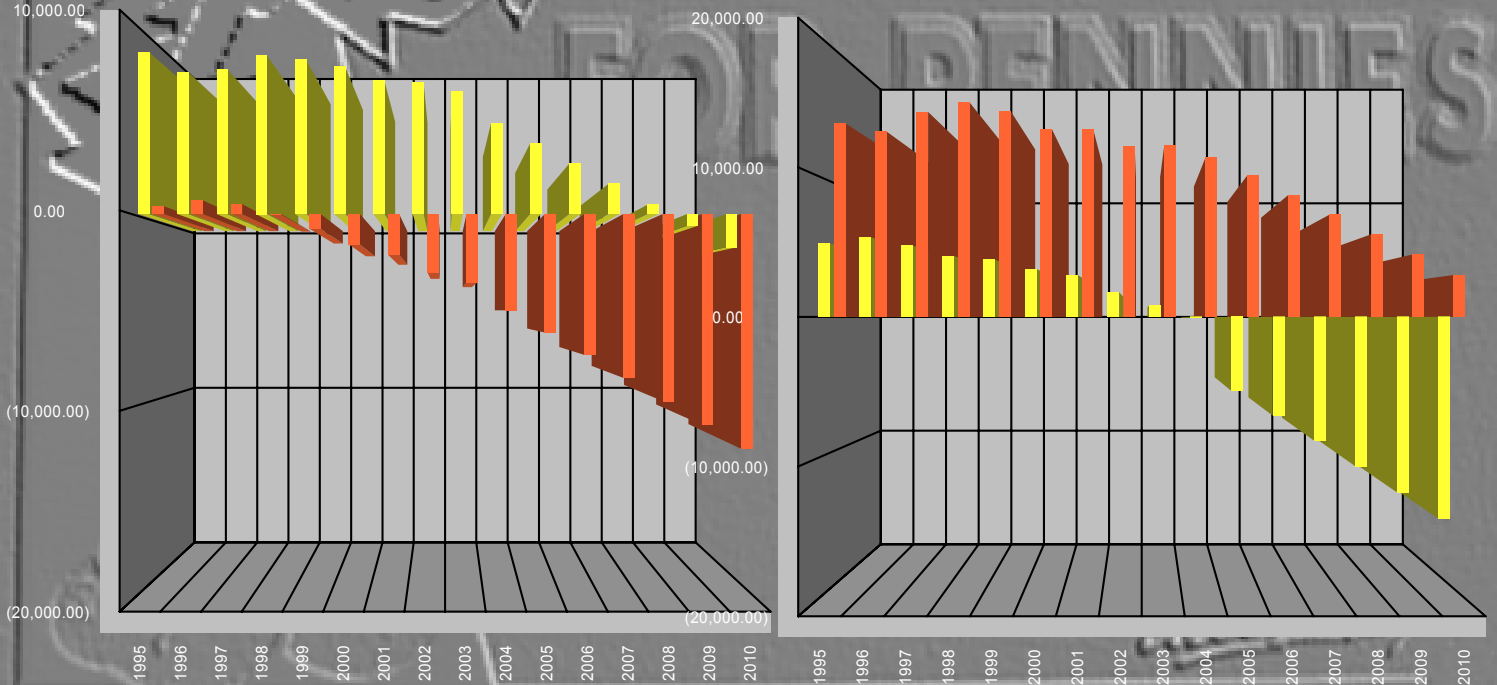


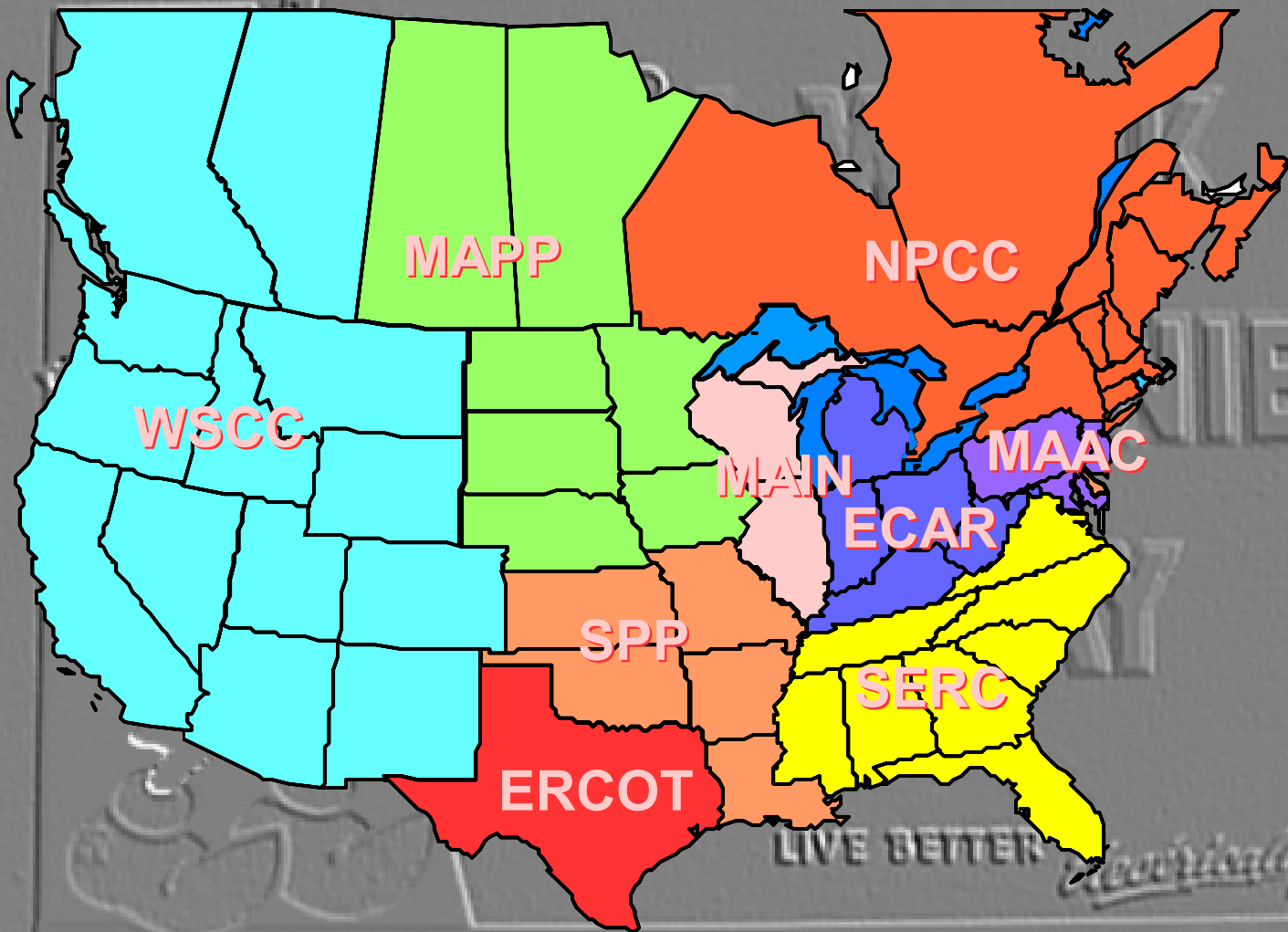
WSCC Seasonal Diversity

Northwest



Southwest





Response Evaluation

- Breaking the whole into parts
- Ancillary Services
 - Defined ancillary services should be taken from the FERC comparability tariff
- Energy
- Capacity
- Bids that cannot be reduced to numbers are likely to be unhelpful
- Dealing with deadlines
- Dealing with "welshers"
- Indexed bids

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Dealing With Bid Deadlines

- Many bidders now provide a final date for their bid
- Little evolving information actually occurs in the market so this is an artifact rather than real business information
- McCullough Research experience is that bid deadlines are seldom realistic or relevant

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Dealing with "Welschers"

- Current practice is for a few bidders to rewrite their bids on the pretext of errors
- We have found that this practice causes more problems than it is worth
 - Other bidders are placed at a disadvantage
 - Bidders with "errors" can repeat the performance later
- McCullough Research recommends a "put up or shut up" rule

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Indexed Bids

- While fixed price bids are still in the majority, an increasing share of the market is at indexed prices
- Most sellers are very unsophisticated when it comes to indexing
- Many sellers will index to an inappropriate location (NYMEX COB) regardless of where the real power transaction is taking place

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Caveat Emptor

- A number of utilities have recently started to use indexes as hidden surcharges
- Pacific, for example, proposes indexing to NYMEX COB futures even though NYMEX contracts are for peak energy only
- Pacific's scheme contains a 2.8 mill hidden surcharge

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Negotiation and Implementation



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How Can Vendors Help With Implementation?

- The Energy Manager Model
- Timing Municipal Services
- Payment For Success
- Load Research and Equipment Requirements

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The Energy Manager Model

- Using Existing Supplier Expertise
- Timing Services
- Payment For Success
- What is success?

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Using Existing Supplier Expertise

- Most suppliers currently are affiliated with an existing utility system
- These suppliers have a successful history of billing, distribution, credit, and management issues
- Suppliers also are able to draft personnel to meet needs
- Suppliers are able to measure, estimate, and cost expansion and replacement options

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Timing Services

- Many potential customers would like to see full services on the first day but fear the implementation process
- Some new customers fear to "lock in" a relationship with a new supplier
- Suppliers can agree to supply low margin services – billing and distribution on a temporary basis

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Payment For Success

- Since most successful bypass undertakings currently result in rate reductions and continued service by the existing supplier, the Energy Manager model smoothly operates in the compromise outcome
- The Energy Manager can be reimbursed on a success fee basis

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What Is Success?

- Measuring rate benefits may well be tricky
- Recent entrants into the California market have very dubious "benchmarks"
- A careful due diligence may well save significant litigation costs down the line

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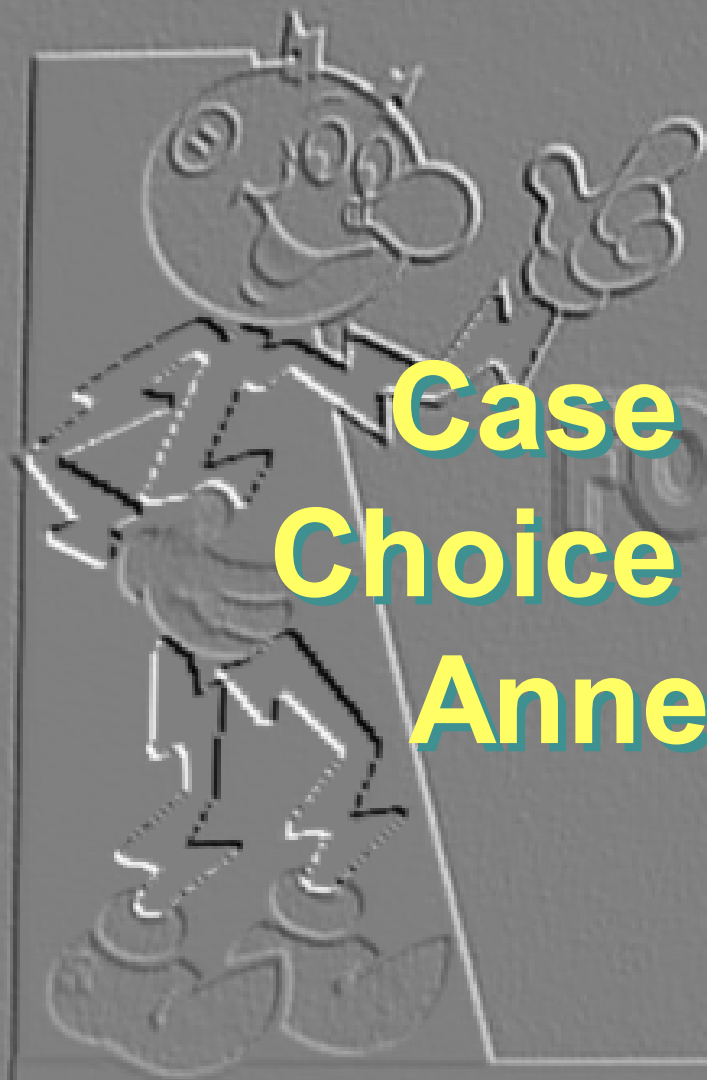
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Load Research and Equipment Requirements

- Traditionally, end-user service has required an enormous effort to establish the equipment base and the load research to be served
- Suppliers already have the expertise to evaluate the loads and equipment requirements

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Case Study: Choice Through Annexation



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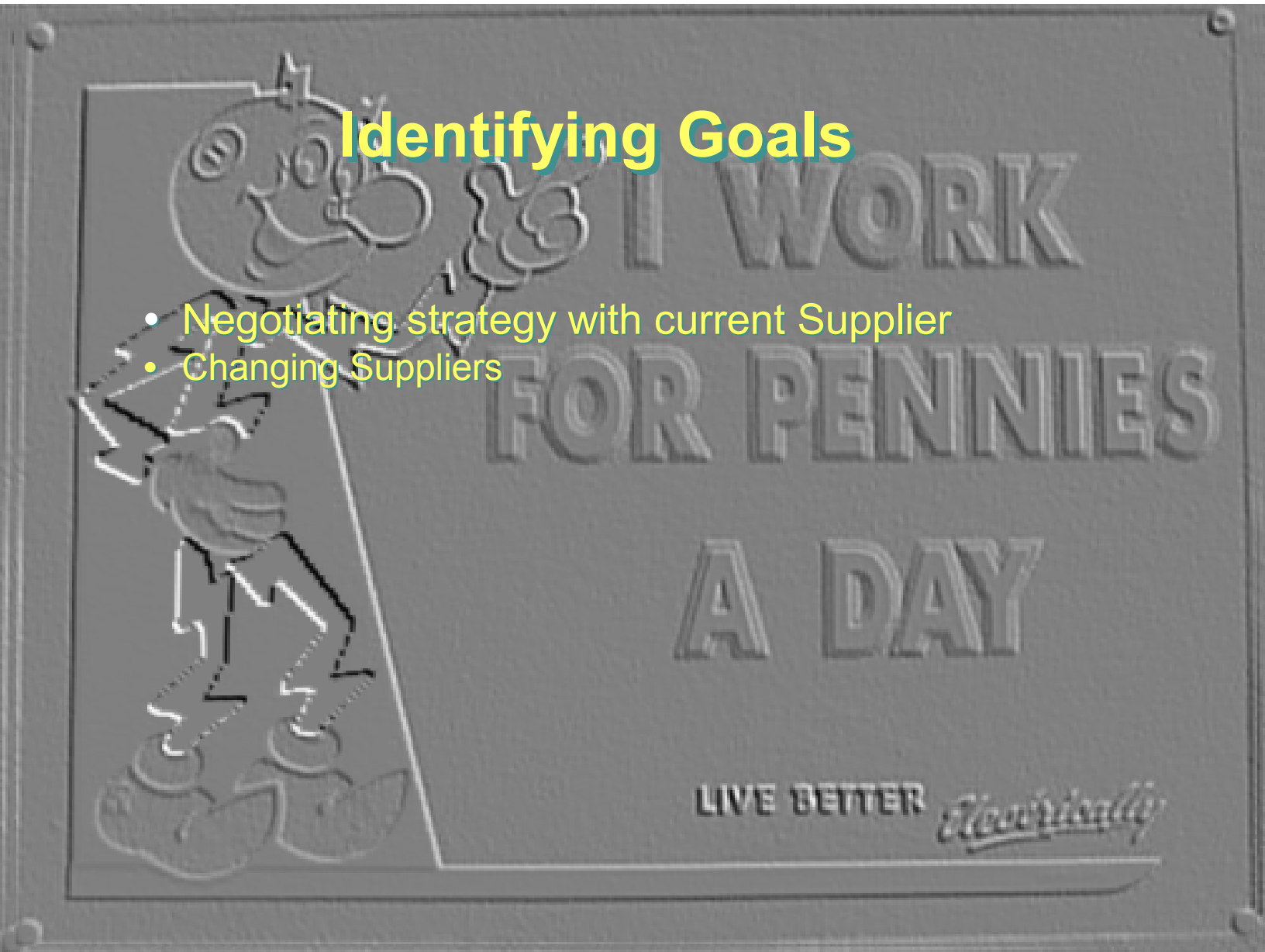
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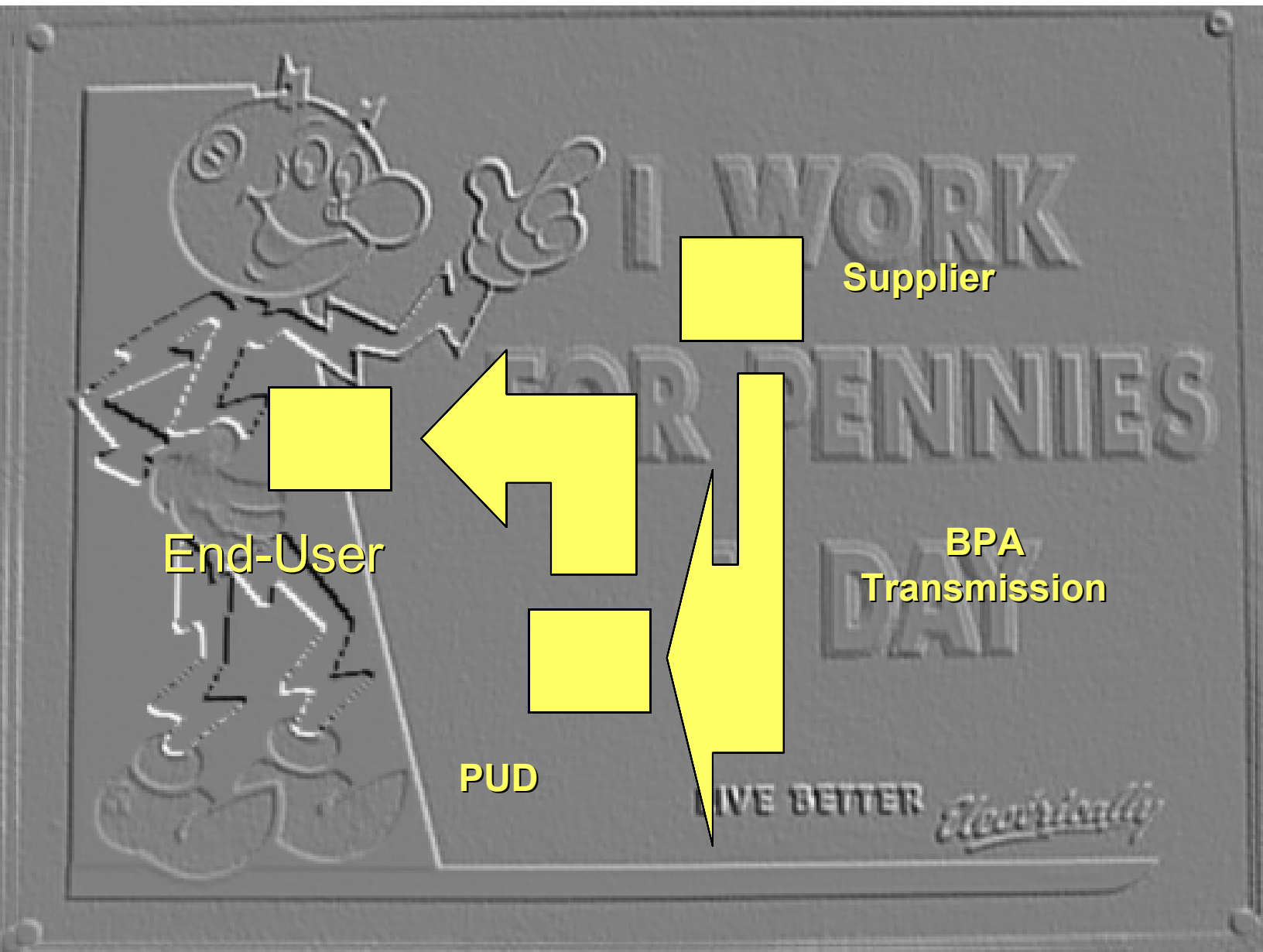
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Identifying Goals

- Negotiating strategy with current Supplier
- Changing Suppliers





Who Can Annex?

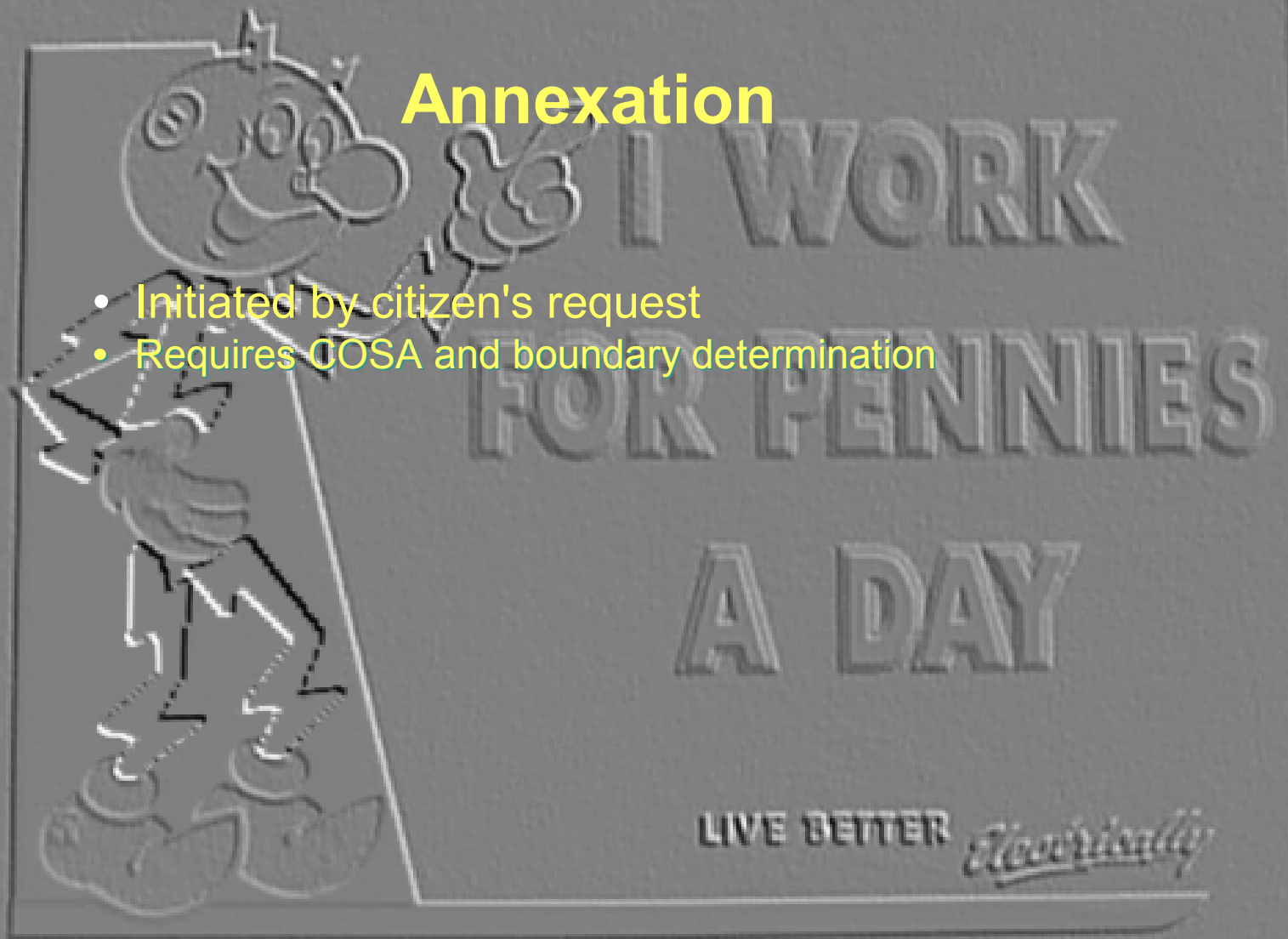
- Public Utility Districts
- Municipalities
- Not investor-owned or electric co-ops

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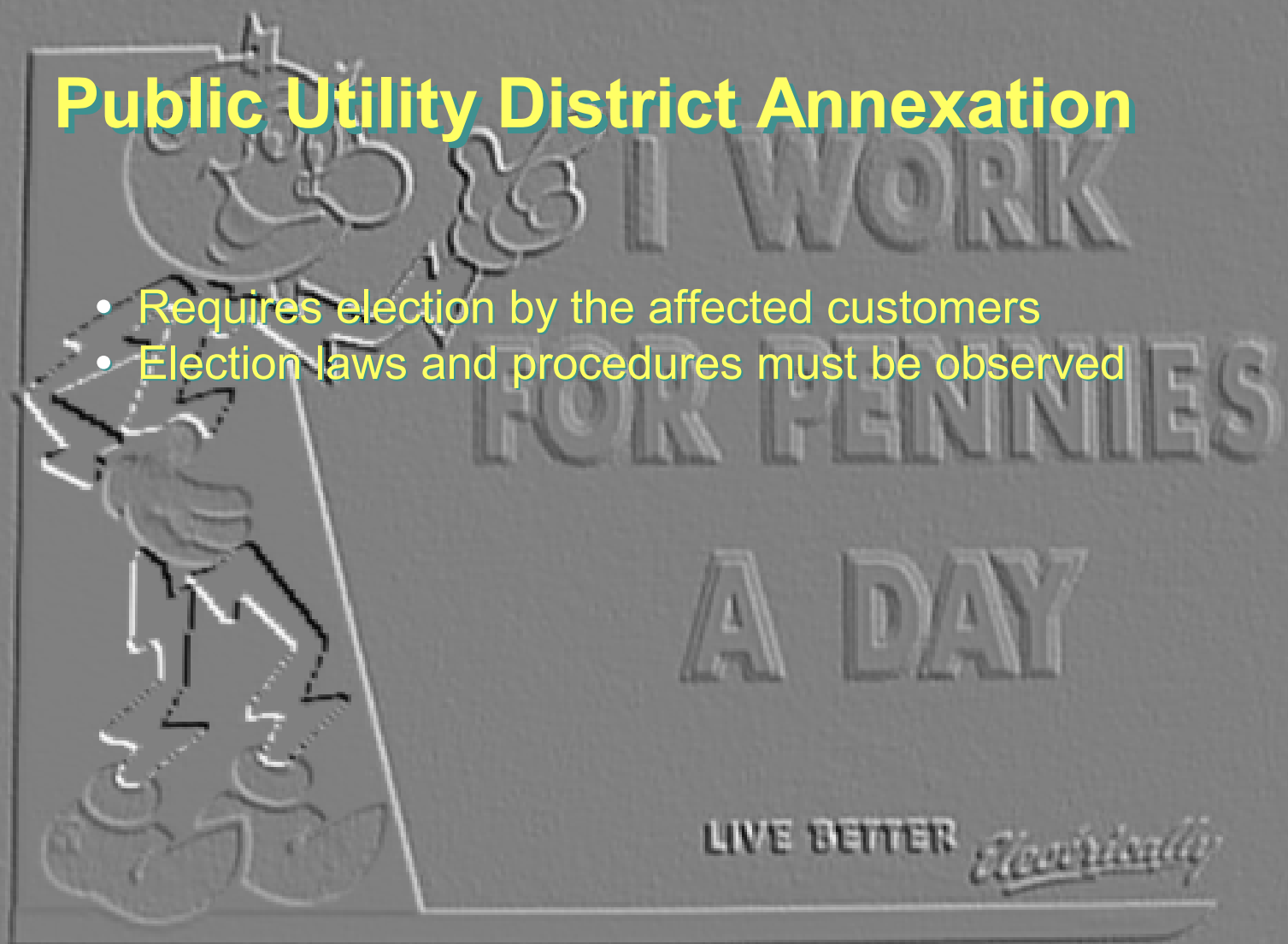
Annexation

- Initiated by citizen's request
- Requires COSA and boundary determination



Public Utility District Annexation

- Requires election by the affected customers
- Election laws and procedures must be observed



Municipalities

- Initially must be approved by City Council or similar body
- In most areas, must be approved by voters.



The people voted, now what?

- Certifying "new" territory
- Acquiring facilities

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Condemnation

- Valuation of Facilities
- Court action to set price if no agreement



Large Customer Issues

- Can be lengthy process
- Dependent upon local support
- Media coverage may turn into smear campaign
- Arrangements with annexing Utility critical
- Economic Benefits are Significant

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Utility Contract

Distribution Charges

Facilities

Stranded Costs

Services Provided

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Questions?



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**Key Elements In Contract
Negotiation**

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Key Elements

- Fixed and variable pricing
- Exit Ramps
- Multiple Commodities
- New Products
- Reviewing the "Perfect Contract"

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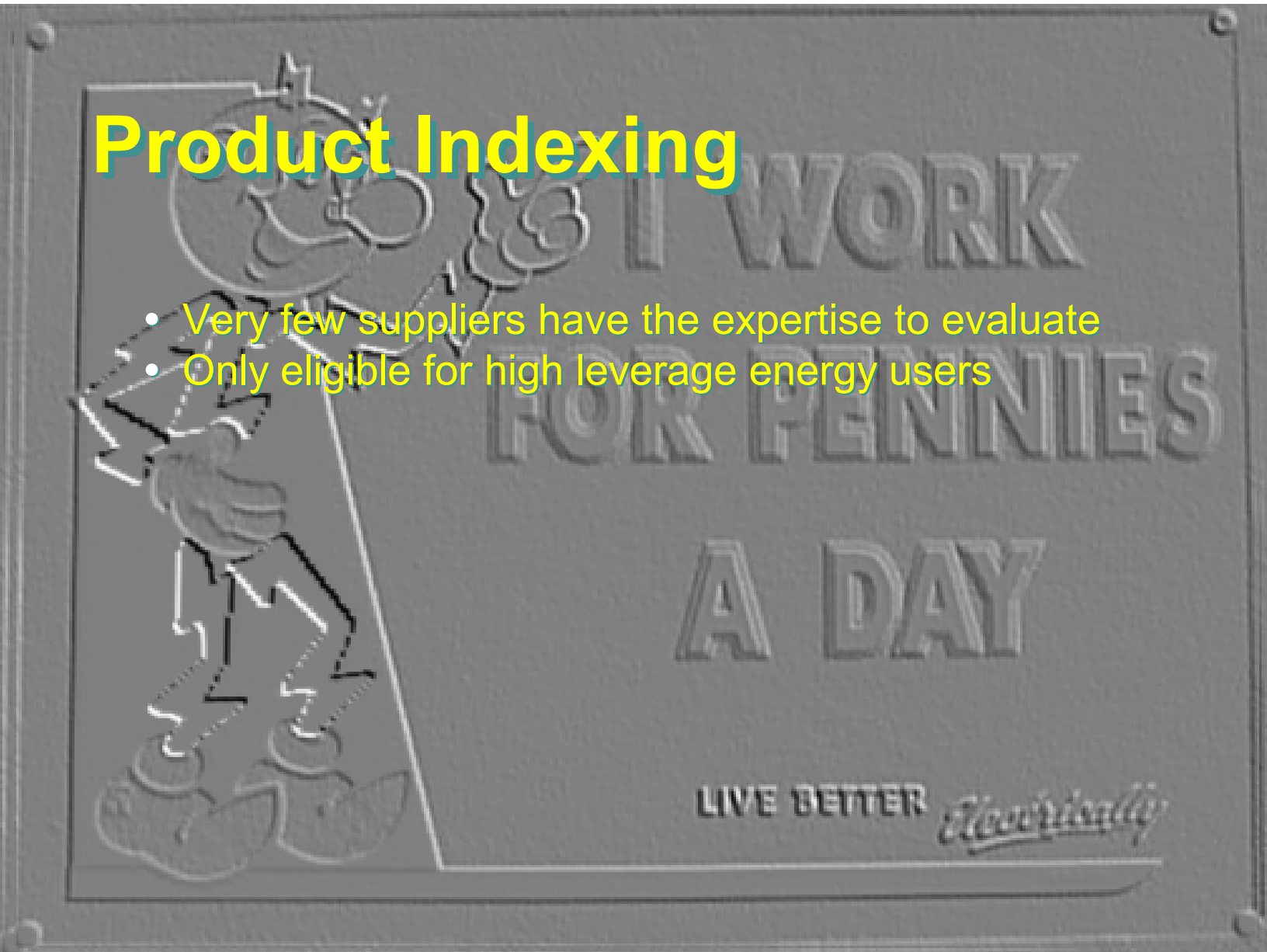
Fixed and variable pricing

- Escalation
 - Current inflationary circumstances have been known to change
 - Old solutions are good solutions
- Fixed charges
- Variable solutions
 - Product indexing
 - Market Indexing

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Product Indexing

- Very few suppliers have the expertise to evaluate
- Only eligible for high leverage energy users



Market Indexing

- Always carefully evaluate the index
- Seek an "second source"
- Include an explicit computational example

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Exit Ramps

- Acts of God
- Regulatory Change
- Contract transfer
- Specific issues
 - Plant closure
 - Environmental regulation

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Multiple Commodities

- Apples and Oranges make bad contracts
- Separate contracts for separate commodities?

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New Products

- Always ask for a model
- Always include a computational example

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Reviewing the "Perfect

- John Gould's Model Contract
- An actual example: BPA's frightening end-user contract

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John Gould's Model Contract

- Commodity
- Point of Delivery
- Term
- Scheduling
- Price
- UFT
- Boiler Plate

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An actual example: BPA's frightening end-user contract

- Regulatory Approvals -- FERC -- Section 3
 - Contingency if disallowed -- Page 8
- Scheduling Power Deliveries -- Section 9
- Monthly, Weekly, and Daily -- Section 10
- Rate Test -- Page 11
- Operating Interruptions -- Section 17
- Relief From Take or Pay -- Section 18
- Force Majeure -- Section 23

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Regulatory Approval

Regulatory Approval

- Don't Rely On Your Utility Supplier
- Explaining the deal to the Commissioners
- Explaining the deal to the regulatory staff



Don't Rely On Your Utility Supplier

- Utilities have been known to be wily
- Don't forget who was on the other side of the table in the negotiations
- The state PUC is the ultimate "sales manager"
- Direct testimony has much more impact than "regulatory experience"
- Remember, victory at the negotiation table buys very little at the state capitol

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Explaining the deal to the Commissioners

-
- Start with the governor's energy advisor
- Commissioners often seek simple solutions to complex problems
- Fairness is an issue
- Explaining the special circumstances
- Focus on the commissioner's problems -- do not waste your influence on other issues
 - Commissioners are in charge of money -- they don't care about smoke, injury records, or the Little League

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Explaining the deal to the regulatory staff

- Wheels within wheels
- Answering the questions
- Encyclopedias work too -- brief the staff very, very well
- Avoid litigious lawyers -- your own junk yard dog may be a burden you cannot afford

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Attend The Hearing

- In one recent regulatory approval -- Boise Cascade's reduction of rates from 38 mills to 25 mills -- staff opposition was only announced the day of the hearing
- Utility involvement had been weak -- the utility was clearly unprepared to prevail in a floor debate in front of the Commissioners
- The company attorney was prepared and managed to win against the motion to remand the tariff back to the staff for more study

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Talking To The Press

- Industry press is very important
- Commissioners read the newspaper in the state capitol -- but they really read industry press
 - Commissioners often are more interested in consistency with industry practice than right or wrong
 - Perceptions are reality in a regulatory hearing
- Befriend the press early -- last minute briefings can be tricky
- Give the press everything on background

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