EVALUATING MARKET POWER IN PUBLIC UTILITY INDUSTRIES:
NEW DIMENSIONS OF MARKET FAILURE AND AN
ASSESSMENT OF PROPOSALS FOR REFORM

I. Early Enthusiasm for Deregulation and Privatization Followed by Growing Disenchantment.


1. By close of 1999, 21 state legislatures had enacted electricity deregulation legislation, and three state PUCs had issued orders facilitating deregulation and competition.

2. Abandonment of RB/ROR regulation in telecommunications at Federal and state levels. Promotion of open access at ILEC level.


C. Growing dissatisfaction with results.

1. Market dominance remains at ILEC level (97%).


3. Fly-up in market price of natural gas.

4. Montana Power sells generation, now wants to divest all energy operations to focus on telecommunications. Industrial buyers in Montana shutting down, unemployment goes up because of high power rates.
5. Growing plight of residential/small business electricity customers. Enron withdraws from residential market in CA, RI, MA (1998). Last independent seller withdraws from residential market in RI. Default customers pay high default rates in RI and MA.

6. Special power problems in California.

   a) Sempra Power rates are unfrozen as stranded cost recovery is completed. San Diego residents first in nation to be exposed to market prices without a safety net. They have seen power bills double in summer of 2000. (June heat wave.) Rates for PG&E and Edison International remain frozen. California ISO cut price cap to $500 MWH from $750 MWH (75¢ Kwh).


   a) Real time prices for Boston Edison/Commonwealth Edison (MA) reach $6,000/MWH ($6.00 Kwh) on May 8, 2000, for four hours.

   b) New York ISO request ceiling prices on power sales (NYISO wanted $1,300 MWH). On July 26, 2000, FERC imposes ceiling price of $1,000 MWH on both the NYISO and the New England ISO. FERC directs staff to investigate nationwide bulk power market and report by Nov. 1, 2000.

8. Debate over the benefits of electricity deregulation.


   b) Stone & Webster study of Colorado (1999) found higher power prices while DOE study found lower prices. Tellus Institute evaluated both studies and found DOE forecasting “seriously flawed” and S&W results “far more credible.”

9. Growing concern over market power in electricity.

   a) US DOE, *Horizontal Market Power in Restructured Electricity Markets*, March 2000. This study examined deregulation in California, middle Atlantic states, UK, and Colorado. Concluded threat of new entry and antitrust “... does not appear adequate to alleviate concerns surrounding the potential exercise of market power ...” (p. 16)
b) US FTC, *Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform*, July 21, 2000: "...the benefits of deregulating the electric power industry may be deferred -- or may not materialize at all -- if existing monopoly utilities are left unchecked to exercise market power in a deregulated marketplace."


11. Debate over stranded cost recovery. See Appendix A.

12. Unclear prospects for open access in telecommunications.

   a) AT&T’s six-month pilot program with affiliate Excite at Home to provide ISP open access on upgraded cable. Pilot program will begin Nov. 2000 in Boulder, CO, with 500 people. But pilot will not address:

      1) How much control over customers AT&T will be willing to give rival ISPs.

      2) How much AT&T will charge rivals for access or charge to lease capacity.

      3) Excite at Home is AT&T’s exclusive provider of high-speed Internet until mid 2002, at which time AT&T will supposedly open up high-speed cable to rival ISPs.

      4) AOL and other ISPs invited to participate in this pilot. (WSJ 6/8/00, B-10).

   b) AOL-Time Warner promise to open up Time Warner’s cable-TV system to all ISP comers once merger is finalized. Will this happen in practice?

13. NZ to launch an investigation in high telecom prices charged by incumbent NZ Telecom. Topics to be covered include high prices, number portability, interconnection rates, Internet access, the Kiwi share, and possible changes in NZ’s regulatory arrangements. Results of inquiry due on Sept. 29, 2000. Previously, deregulation did not lead to interconnection between NZ Telecom and Clear Communications. The former retained market dominance.

II. Examining Real and Potential Market Failure in Network Industries.

A. To be effective markets must satisfy the following conditions:
1. Every relevant market must be vulnerable to rapid/free entry by competitors.
   a) No public or private barriers to entry can exist.
   b) No niche markets with captive customers can exist.
   c) With unrestricted entry, market concentration will be rapidly eroded. Market power and price discrimination will be short lived.
   d) There will be no corporate dominance (defined as one firm with 40% or more of the market).
   e) There will be no tight oligopoly (4 leading firms, combined, have 60-100% of the market).

2. Effective competition requires at least 5-6 firms of approximately equal size. These firms will act as "price takers" — accepting market-determined prices. Demand conditions confronting each firm will be highly elastic. The firm will have no long-run ability to manipulate price to discriminate or foreclose entry.

3. Information and transaction costs must be minimal. Furthermore, information must be symmetrically distributed between all players.

4. Market prices must reflect both private and societal costs. If social costs are introduced it must be through market-oriented solutions (e.g., auctioning pollution rights).

5. Access to the network must negate management’s incentives to foreclose part of the network.

B. Excluding the problems of social costs and social values, public utilities are characterized by three factors that impede free market performance. These are:

1. Inherent propensity toward concentration.
2. Behavioral strategies associated with high concentration.
3. Fallibility of primary and secondary markets.

C. Inherent propensity toward concentration.

1. Major determinants include network economies, coordination economies, convergence, and buyer preferences.
   a) Network economies
1) As size of network increases, economies of joint production and pooled reserves increase. Therefore, the incremental cost of adding new services to a network falls as network size increases.

2) Networks enjoy increased functionality as size increases.

3) Networks can reduce reserve margins, raise reliability, and realize falling unit costs as usage increases.

4) Networks permit users to enhance productivity by expanding the scope of their markets.

5) Network economies require a minimum efficient size.

b) Coordination economies

1) Economies from balancing usage and fully utilizing a large common-cost plant.

2) These economies are reflected in the load factor, diversity factor, and capacity factor. Also, circuit fill.

3) Coordination economies require a minimum market share to match diverse usage patterns and a capital intensive supply network.

c) Closely aligned with these economies are:

1) Existence of monopoly focal points. These may change with new technology but some form of bottleneck typically persists.

2) Existence of a network plant that services a broad range of customers. This may permit differentiation and impede arbitrage. At the same time, the existence of common and joint costs pose a cost-traceability problem, especially when incremental costs decline.

d) Convergence

1) This is a more questionable feature. It assumes joint production economies, scope economies, and improved use of common plant. Examples include joint provision of electricity and gas, joint provision of energy and telecommunications, and telecommunications and content.

2) Convergence is allegedly reinforced by buyer preferences for one-stop shopping and bundled service. It is difficult to determine whether this is an authentic preference or the product of bilateral oligopoly.
D. Behavioral strategies of major players in concentrated industries.

1. Control of the network is critical to the capture or retention of market share. Market share is a major determinant of long-run profits.

2. Schematic illustration:

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<td>Control of Network</td>
<td>➔ Capture network and coordination economies</td>
<td>➔ Assures a major position</td>
<td>➔ Creates an oligopolistic industry</td>
<td>➔ Introduces oligopolistic behavior by firms</td>
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<td>➔ Control of convergence</td>
<td>➔ Facilitates entry into new markets</td>
<td>➔ Facilitates M&amp;A programs as least-cost methods of expansion</td>
<td>➔ Forecloses or circumvents competition</td>
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3. The objective of control can be achieved through pricing and market structure strategies.

a) Pricing can be employed to achieve four goals:

1) Foreclose entry and retain existing customers. Examples: Standard offer, special contracts, price increases for transmission and ancillary services.

2) Selected targeting to promote customer migration and recovery of stranded or transition costs.

   (a) Goal of customer migration is to shift customers to a bundled package of services.

   (b) Bundled packages facilitate one-stop shopping, but they make price comparisons difficult, facilitate cross subsidization, and restrict consumer choice.

   (c) On the other hand, bundling is consistent with oligopsony bargaining and concessions.

3) Facilitate entry into new markets and new technology. Reduce cost and risk of new markets and new technology by shifting them to basic service markets. (Reliance on ceiling prices and price floors is
ineffectual in controlling these strategies, given infirmities in the stand-
alone cost concept and the variability of incremental cost estimates for
new service.)

4) Minimize price volatility and control price wars among rivals. This is re-
inforced by the need to maintain overall levels of profitability in the face of
mergers and acquisitions. This results in price leadership and conscious
parallelism. (Between 1991-1997, AT&T, MCI, and Sprint raised long
distance prices in lock step while access charges declined substantially. 1997
is last year for which data were collected.) (See Appendix B)

b) Market structure strategies are designed to participate in new technology, enter
new markets, and tighten control of existing markets.

1) Acquisitions to reach new markets. Examples: AT&T buys Teleport and TCI,
plans to acquire Media One, all to reach end users with a bundled service.
This acquisition also facilitates establishing a position in a new technology
(IP). PG&E's U.S. Gen buys 18 plants from NEES. Nat'l Grid proposes to
buy NEES. Scottish Power proposes to buy Pacific Corp.

2) Acquisitions to reach privatized markets. Examples: U.S. electrics, gas, telcos
move into developing nations. Also, into Australia and NZ. U.S. electric
utilities acquire 9 out of 12 UK regional distribution systems.

3) Acquisitions to integrate vertically and broaden coverage. Examples: CMS
Energy--Panhandle; Dominion Resources-Consolidated Natural Gas; Sempra-
KN; Cal Energy-Mid America; WorldCom's acquisition of Wiltel, MFS,
Brooks Fiber, and MCI.

4) Horizontal mergers

(a) LEC mergers. 7 RBHCs become 4.
(b) AEP+CSW, Commonwealth Edison + Phila. Electric, Con Edison +
Northeast Utilities. (See Appendix C)
(c) Vodafone-AirTouch (creating world's largest cellular carrier)

5) Collaborative alliances

(a) Strong alliances: FT-DT’s Atlas

(b) Weak alliances: AT&T’s World Partners

(c) Joint ventures: AT&T-BT to invest $11 billion in global broadband
network that is IP compatible. AT&T-Time Warner to invest $5 billion in
cable plant upgrades. Consortium to construct transpacific cable.
Alliances and joint ventures can contain provisions that prohibit competition in home markets by partners.

6) Threshold investment to establish a community of interests. Not equivalent to full vertical integration or full horizontal integration.

   (a) Ameritech acquires 20% of BCE.
   (b) Bell South acquires 10% of Qwest.
   (c) SBC acquires 10% of Williams.
   (d) Microsoft acquires 30% of C&W's cable TV unit.
   (e) AT&T/BT invest $1 billion for 30% of Japan Telecom (not NTT).

c) Rationale for aggressive market structure strategies

1) Sempra (SDG&E + SoCal Gas + KN): (1) Establish a large geographic footprint. (2) Create a stable of related energy products and services. (3) Obtain wholesale trading expertise. (4) Establish strong asset base.

2) AEP: (1) Establish a major position in growing consumer businesses. (2) Create a global portfolio. (3) Become a top level trader on a national basis. (4) Acquire wires and generation to support trading and marketing. (5) Expand product offerings to include gas, communications, and wireless.

3) MCI/WorldCom/Sprint: (1) Correct a deficiency in wireless capability. (2) Integrate a full range of offerings to market bundled services (bundled billings -- not integration of multiple services on a single network). (3) Implement one-stop shopping. Sprint acquisition abandoned. Now MCI/WorldCom says it may be up for acquisition. DT to acquire VoiceStream Wireless Corp for $45.5 billion.

d) New synergism arguments underlying market structure strategies in energy.

1) Integrate network and coordination economies with a strong asset base including deregulated generation and marketing.

2) Eventual convergence of electricity, gas, other services into one stop shopping.

3) Use overseas investment to raise ROE.

4) Employ growing size to negotiate exclusive alliances with LDCs it does not already own. Create new joint ventures.

5) Employ the size advantage to capture:
(a) Firm Transmission Rights (FTR). FTR will eventually be auctioned. FTR creates certainty. Firm power dominates sales (93-98% of total).

(b) Establish a major position in the bidding and trading of ancillary services (primarily spinning and non-spinning reserve, replacement reserves, load following).

(c) Size will position the firm to grow through diversification as some activities decline while others grow. Firm will have a foot in T&D (as a wires co.), marketing, merchant generation, overseas investment, conglomerate diversification.

6) Emergence of new giant natural gas marketers covering multiple production areas, controlling capacity on a number of diverse independent pipelines, holding gas on spot and futures markets, negotiating bilateral contracts with buyers for firm and short term sales, and controlling LDC capacity. These new marketers represent an excellent example of the capturing of coordination economies. Small independent marketers (e.g., Hadson) cannot survive.

E. Offsetting factors.

1. Rapidly changing demand weakens the position of the existing network.
   
a) New demand for new services requires retrofitting or upgrading of the network. Examples: (1) Internet services produce new network requirements. (2) Market trading of electricity and gas places new pressures on the existing grid and pipeline system.
   
b) New upgrades diminish network economies vis-a-vis new construction.
   
c) Is distributed generation an authentic substitute or merely a complement?

2. Stand-alone networks possess new advantages.
   
a) Greater autonomy of action. Better able to implement new corporate strategies.
   
b) Rivals (owning network) can no longer prescribe a portion of the new entrant’s costs through access fees.
   
c) Rapid market growth will absorb excess capacity.
   
d) As costs of upgrading old network increase and network economies diminish, benefits of new construction increase.

   e) Barriers to a new stand-alone system.
1) Right-of-way problems.
2) Achieving coordination economies.
3) Financing may not be a problem.

III. What are the Effects of Growing Concentration?

A. A potentially good effect of tight oligopoly: a dynamism that did not exist under regulated monopoly.

B. Bad effects:

1. Prices do not track costs. (Rather, they reflect strategies and bargaining power of players.)

2. Profit levels are higher than under competition or optimal regulation.

3. Network design driven by large users (ELCON et al). Not infrastructure requirements of all classes of users.

4. Distribution of benefits of technology tracks strategic decisions of major players -- not the contribution of each customer class.

5. Asymmetric deregulation creates an incentive to fragment the network by transferring assets to nonregulated entities.

6. Incentive to disinvest.

7. Rigid prices for residential and small business customers. This yields a redistribution of income and a transfer of benefits of technology away from this class of customer.

8. Social goals not necessarily consistent with those of oligopoly firms.

9. No incentive to constrain the shifting of costs to third parties through free insurance to preferred customers, cherry picking ancillary services, or failure to track inadvertent energy flows.

10. Political activity grows in importance for the firm.

a) Enron in India.
c) Southern Co. in Chile and Argentina.
d) AT&T and Nebraska Legislature (1998)
e) California utilities and Proposition 9.
C. Cumulative impact of tight oligopoly will be to distort income distribution by promoting cross subsidization between classes of customers. It will also distort the development of infrastructure as a platform for productivity growth and real wage growth. Finally, it will contribute to allocative and operational inefficiencies associated with growing concentration and market power. The problem is that these adverse effects are far more subtle than simple examples of extortionist pricing.

IV. Consequences of Market Trading

A. Shift to retail competition in RI, CA, MA, and PA, and wholesale trading generally, has raised the following questions:

1. Who will serve the small residential customer? If large, outside marketers withdraw (e.g., Enron, Southern Co.), the only option will be default service or a deregulated marketing affiliate of the incumbent utility. This would not constitute effective competition, nor would it offer reasonable options for consumer choice.

2. Market trading can lead to disaggregation of load with potentially high supply costs for customers left behind by suppliers who are seeking customers with an optimum load/profit profile.

   a) This would translate into cherry picking preferred customers.

3. Cherry picking could also apply to ancillary services. Only two ancillary services could not be provided by competitive bidding. These are system control (scheduling generation and transmission) and voltage control (maintaining voltage). There will be pressure to offer other ancillary services through competitive bids -- especially spinning reserves, operating reserves, back up supply, and real power loss replacement. The result could be an increase in costs for residual customers.

4. Trading leads to greater price volatility and increased risk premiums.

   a) Power marketers are playing an increasing role. A growing percentage of power marketer sales are to other power marketers, as opposed to end users. Approximately 75% of all power marketer sales in 1997 were to other power marketers.

   b) Eventually, trades that are cashed out. Paper trades will set the market price for physical trades.

   c) Risk management refers to the buying and selling of power. This involves a use of spot markets, futures markets, and long-term contracts. It can be done by utilities, deregulated marketers, or outsourced by a utility to an independent marketer.
d) Locking in total power supply at a long-term fixed price can make utility or marketer vulnerable and less competitive. However, a spot market is very volatile.

e) Annual stock market volatility is 15%. Oil price volatility is 20-30%. Gas price volatility is 50%. Electricity exceeds gas.

f) Variations in weather, outages, and transmission constraints make electricity forecasts difficult and historical trends less meaningful.

g) Will secondary markets create a risk premium because of volatility?

5. Spot prices skyrocket during periods of short supply.

a) Utilities caught short will cut off interruptible customers. In June 1998, both utilities and large users went to spot markets, and as a result spot prices increased from $30/megawatt hour to $7500/MWH.

b) Reserve replacement power (next day delivery) went from $10/MWH to $5000/MWH to $9999/MWH, according to California ISO (WSJ July 13, 1998).

c) Leaps in Midwest and East came from temperature rises, power plant outages, and mistakes by commodity traders. In California it rose because FERC said California ISO must accept a market-based rate (instead of a cost-based rate) for power sales by purchasers of divested PG&E and Edison powerplants (Duke, AES, Houston Industries, Dynenergy). California ISO asks for price cap.

d) In July 1999, *Megawatt Daily* reported NY rose to $120-140 MWH, and PJM rose to $850-924 MWH. (*Megawatt Daily*, 7/7/99)

e) On Aug 6, 1999, Cinergy defaulted on contracts to deliver power to traders. It issued *force majeure* letters. WSJ concluded the wholesale market remains “a perilous place.”

f) Major players remain: Enron, Southern Co., Utilicorp, and Entergy. But Pacific Corp and LG&E dropped out of trading due to losses.

6. As a result of price volatility, merchant generators want a premium for contract sales. This is because of: (1) the fear of paying an excessive charge for replacement power if a unit fails at the peak, and (2) profits foregone in a crisis. As an offset, it is possible that an increase in merchant generation might constrain price fly-ups and lead to greater stability. But this requires much greater network coverage.
a) Some observers of retail competition in New England believe that after PX auctions all prices increased 30% on an hourly basis -- both peak and off peak.

b) This risk premium provides an incentive to hold power off the market for sale at a higher price, and an incentive to negotiate bilateral contracts. Others estimate that the experience with all ISO/PX arrangements has been to increase prices about 30% higher than prices that would have prevailed under economic dispatch.

7. If the objective of retail and wholesale competition is to break up the inherent monopoly power of the utilities, this effort has failed because of the mergers that have taken place. At best there has been an increase in merchant generators and de-regulated marketers. However, the high Tobin “Q” ratio paid for generation by outsiders suggests a potential for high profits and restricted competition. (Appendix C)

8. The standard offer dilemma remains. To protect consumers with a low standard offer destroys the incentive to enter. Apparently, significant price increases are the penalty for securing competitive trading.

V. Weak and Uncertain Constraints on Market Power

A. Weak constraints

1. Price cap regulation (ceiling prices frozen or indexed).
   a) Only an interim step.
   b) Ignores oligopolistic pricing strategies (especially price leadership and limit entry pricing).
   c) PCR sever tie to profits.
   d) Indexed prices > actual cost increases will support new strategies (cross subsidies, M&A, predation).

2. Performance based regulation (PBR).
   a) Revenue sharing mechanism is weak.
   b) Cannot accurately trace source of gains.
   c) Estimate of base rate is arbitrary.
   d) Reluctance to impose penalties.
   e) Best applied to targeted services.
3. Public control of mergers, acquisitions, and alliances requires public policy makers to come to grips with problems of market dominance and anticompetitive behavior.

   a) Four approaches appear to be emerging in US, UK, and European Union.

      1) Mandatory divestiture of selected assets on the grounds that post-merger firm will have too much power. An example involved forcing MCI to sell both its Internet assets and Internet accounts to Cable & Wireless to keep MCI WorldCom from achieving dominance in provision of ISP backbone capacity. MCI WorldCom could reenter after 18 months.

      2) Imposing open access as a condition for merger/alliance approval. Example: EU Commission imposed open access on FT and DT to provide Atlas.

      3) Prohibition of vertical integration. Example: In UK, a power generator is prohibited from acquiring a retail distribution system.


      5) On balance, the merger guidelines are lax and permissive. None of them ask the basic questions: What are the net efficiency gains? Could they be achieved without merger? How are gains distributed?

      6) Special role of SEC under the PUHCA. EPAct of 1992 amended PUHCA to permit holding company investments in EWGs and FUCOs if these investments have no substantial adverse effect on the HC's financial integrity or on consumers. SEC's Rule 53 says the HC can invest up to 50% of its consolidated retained earnings on EWGs or FUCOs because there is little risk in this magnitude. Amounts greater than 50% will have a preemptive impact and will be examined on a case-by-case basis.

4. Establishing open access and interconnection.

   a) FCC's first order on access charges was issued in 1996, yet there are few tangible results. Delays are not simply due to appeals to courts, but to more fundamental factors. This is the inability of major players to establish a joint profit maximizing solution. Each player will endeavor to circumvent the other.
1) Access agreements can arise when both parties are under pressure. In NY (1999), AT&T's TCI has no facilities for upgrading to reach final customers. Also, its joint venture with Time Warner has not been concluded. At the same time, Bell Atlantic needs open access to secure entry into the NY long distance market.

2) Gaming access

(a) RBHCs and GTE argue that new ADSL investment is exempt from the Telecom Act of 1996. Open access applies only to old LEC plant. "Interstate Special Access."

(b) AT&T will endeavor to constrain open access to its cable TV upgrades (despite Florida and Oregon decisions).

(c) Impasse: Is an entry barrier and attendant monopoly threat the price to be paid for innovation and modernization?

b) Access pricing in electricity remains to be resolved. Transmission congestion issues remain a problem. This is worsened when affiliate abuses arise (e.g., complaint filed by Aquila against Niagara Mohawk Power, April 1999.)

c) Gaming available transmission capacity.


a) Serve primarily to penalize poor performance and raise the cost of capital where risk has increased (e.g., fall in price of AT&T stock on basis of added risk associated with cable TV acquisitions).

b) Financial markets actually reward oligopolistic behavior rather than penalize it.

B. Uncertain constraints.

1. Aggregator procurement.

a) Uncertain whether an aggregator can effectively represent residential/small business customers alone.

b) Problems of implementation: (1) Dealing in spot and futures markets? (2) What oversight is needed? (3) Can customers opt out?

c) Should aggregation be done by a municipal authority?
2. Auctioning

a) Can be used to allocate spectrum (e.g., European wireless auctions are highly lucrative).

b) Can be used to allocate transmission and pollution rights.

c) If auctioning is to represent retail customers, a designated winner (lowest bid) would become the distributor for customers in a region. The winner should have an obligation to serve, be subject to review, and its franchise should be vulnerable to recapture.

3. Schumpetarian dynamics

a) Requires forces that will continue to promote D/S dynamics (turbulence). In contrast, control of the network and control of the market seeks to establish stability and long-run profitability. Which force will ultimately triumph?

b) What is needed to sustain D/S dynamics?

4. Functional separation of the network from those using the network.

a) Network can be isolated through separate subsidiaries. Network would still have a tie to the parent holding company.

b) Rochester Telephone Plan (Jan. 1995) embodies functional separation in local telecommunications. (See Appendix E)

c) Will Bell of Pennsylvania eventually be forced to engage in functional separation?

d) FERC Order 888 requires functional unbundling of wholesale generation and transmission. FERC does not mandate divestiture in the creation of RTOs.


C. Positive constraints

1. Full separation

a) Independent management
b) Independent financing
c) Lower cost of capital
d) Freedom to expand size of network without having to expand HC control.
e) Best mix of network and coordination economies
f) Ability to monitor potential gaming of generation
g) Externality benefits. As network size increases, volatility of price should go
down.
h) Would have little incentive to restrict capacity at the peak. A reliability-
competition tradeoff could be negated.
i) Should enhance the effectiveness of auctioning and aggregation.

2. Full separation embodied in “Commodities Clause” in Hepburn Act (1906). Applied
to Reading Railroad coal properties.

3. Full separation is possible for ILECs but political resistance from RBHCs will be
intense. Diseconomies of network deintegration will be stressed. Should full
separation be applied to global communications, wireless services, ISPs, cable TV?
Separate tracking stock is not sufficient.

4. Best applied to RTOs. RTO would be fully divested and given common carrier status.

5. Structural separation needs to be carefully planned. Key should be what functions can
be most efficiently performed by the network (e.g., ancillary services).

a) Poor definition of the network and its responsibilities can negate any gains from
full separation. See problems with Railtrack in UK.

b) Emergence of mega marketers in natural gas can still exploit coordination
 economies and achieve dominance without owning an individual network. It can
establish a transnetwork position of power -- and extract rebates.

VI. Will a Two-Track Approach Ultimately Emerge?

A. If deregulated markets do not protect residential/small business customers, there will be
strong pressure to restore traditional RB/ROR regulation to this class of customer. There
will then be two tracks.

1. A deregulated track where large buyers negotiate with large sellers (primarily
deregulated mega marketers). These dealings will be characterized by bilateral
oligopoly (a few large sellers dealing with a few large buyers).

2. A regulated track where large aggregate sales are made to a large number of small
buyers. These sales would be regulated and final distribution made through the
carrier, a local utility, or a designated aggregator.

B. A two-track system will be difficult to administer at both the wholesale and retail levels.

1. Cost of service problems will be difficult for the regulated track.
a) Both tracks will be served from a common plant. This will require an allocation and an imputed rate of return for the regulated sector. Recourse to a stand-alone estimate for the regulated sector will foreclose joint production and scope economies.

b) Both tracks will share common support services provided either separately or by the network. Large buyers and mega marketers will cherry pick.

c) Both tracks will be subject to curtailment and varying reliability requirements.

d) Both tracks will benefit from innovations and modernization. These gains will be difficult to assign.

e) Making these assignments will require information on the entire operation. This will undoubtedly be regarded as proprietary by the utility or the parent holding company.