

# SPARK

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The on-line gateway for readers of Public Utilities Fortnightly magazine.



*In this issue of Spark, a group of energy attorneys take on a big coal company merger and ask whether the judge's decision lowers the bar for future acquisitions in highly concentrated coal markets? They call the decision a "road-map" for the kind of evidence needed for a successful challenge of mergers in highly concentrated industries generally.*

*Spark continues its interest in, and probity of, electric transmission issues, as I take a look at EPRI's new smart grid proposal. Its creators call for an open architecture and industry cooperation. It is a tough topic, and creating a smart grid will require vendors and utilities to change they way they do business. But is this asking too much of them? Time will tell.*

Lori A. Burkhardt  
Editor

## TRIAL COURT GREEN LIGHTS ARCH/TRITON MERGER

# Is the Bar Lowered For Acquisitions in Highly Concentrated Markets?

BY MARY ANNE MASON, JOLA STERBENZ  
AND MARY ELLEN CALLAHAN

**O**n August 16, 2004, the district court for the District of Columbia Circuit rejected the Federal Trade Commission's (FTC) request to enjoin a proposed acquisition by Arch Coal, Inc. (Arch) of Triton Coal Company (Triton) pending an administrative hearing to determine whether the merger would substantially lessen competition in the highly concentrated Powder River Basin (PRB) in Wyoming. *FTC v. Arch Coal, Inc.*, No. 04-0534 (JDB) (D.D.C. 2004) (Memorandum Opinion). The district court's decision was upheld, following an appeal by the FTC. *FTC v. Arch Coal, Inc.*, No. 04-5291 (D.C. App. Aug. 20, 2004) (per curiam). Arch and Triton closed the transaction that same day.

The outcome was a major victory for the parties, who tried unsuccessfully for almost a year to convince the FTC to clear the merger. The trial court's ruling is also a significant blow to the FTC's merger enforcement efforts in this case. The agency recently withdrew its administrative complaint against Arch, »

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although the possibility remains that the FTC will authorize the staff to refile it.

The decision will have most immediate impact on mergers in concentrated markets where the competitive concerns center on post-merger output restrictions. The decision creates a high evidentiary bar for a merger challenge based on a "coordinated effects" theory, effectively compelling the antitrust enforcer to introduce convincing evidence either that collusion already has occurred or is likely to occur in order to block a merger. In addition, the decision raises questions about the weight that ought to be given to customer testimony against a merger. Judge Bates was unpersuaded by widespread customer opposition, and instead relied on a number of indicators to conclude that the market was, and would continue to be, vigorously competitive.

### Case Overview

In May 2003, Arch announced its intent to acquire two mines in the Southern Powder River Basin (SPRB) from Triton. The SPRB produces over one third of all coal in the United States, totaling 360 million tons in 2003. Almost all SPRB coal is used by electric power companies in their coal-fired steam generating stations. SPRB demand has been increasing annually, primarily because of the relatively low price of SPRB coal and its low sulfur content. Production in the SPRB is expected to rise to 500 million tons by 2013.

Arch and Triton were two of the five major producers of SPRB coal (the third and fifth largest, respectively), along with Peabody Holding Company (Peabody), Kennecott Energy Company (Kennecott), and RAG American.

## The decision raises questions about the weight that ought to be given to customer testimony against a merger.

Arch owns two mines, Black Thunder (a mine that produces higher quality 8800 Btu coal) and Coal Creek (also producing 8800 Btu coal). Triton owned North Rochelle (producing 8800 Btu coal) and Buckskin (producing lesser quality 8400 Btu coal) mines. As originally proposed, the transaction reduced the number of SPRB competitors from five to four. It also increased Arch's control over the higher-quality 8800 coal.

Following Arch's pre-merger filing under the Hart-Scott Rodino (HSR) Act, 15 U.S.C. § 18(a), the FTC opened a merger investigation that took nine months to complete. In an effort to try to end the investigation, Arch proposed to sell Buckskin to a non-SPRB producer, Peter Kiewit Sons, Inc. (Kiewit), arguing that the sale would resolve any competitive concerns because the number of SPRB competitors would remain at five. The FTC continued to oppose the transaction, contending that since Buckskin produced lower-quality coal

at a higher cost, the sale would not resolve the competitive concerns.

On March 30, 2004, the FTC voted to commence court action to preliminarily enjoin the transaction, pending a subsequent administrative hearing that would fully analyze whether the transaction violated Section 7 of the Clayton Act, 15 U.S.C. § 18. A parallel suit was filed by the States of Missouri, Arkansas, Illinois, Iowa, and Texas seeking both preliminary and permanent injunctive relief.<sup>1</sup>

The FTC based its allegations on the impact of further consolidation in an already highly concentrated market.<sup>2</sup> The FTC posited that a merger in such a concentrated market would make tacit agreement among producers easier. Their theory was that SPRB producers would raise the post-merger price by arranging for production levels to lag behind demand from coal-fueled electric generating plants. The agency posited that after the merger the remaining coal producers would enjoy increased gains from such tacit coordination on output. Moreover, the FTC argued, the remaining excess capacity would be in the hands of firms whose past behavior indicated they were most likely to restrict production. Finally, the FTC contended the merger would eliminate Triton as an independent competitor that previously had acted as a competitive check on the other producers' ability to coordinate.

In support of this coordinated effects theory of competitive harm, the FTC proffered evidence of alleged output coordination among SPRB producers in 2001, a claim that was investigated by the Department of Justice with no enforcement action taken. To bolster these allegations, *(Continued on p. 5)*

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## SMART GRID

# Standardization and Open Architecture Goal of EPRI Group

BY LORI A. BURKHART

**M**id-October marked the completion of the first phase of the "Intelligrid Architecture," hailed by its creators as a great step forward in the ongoing quest to improve the reliability of the nation's electric transmission grid. Intelligrid is a communications platform being developed with the aim of transforming aged electric power lines into ones capable of functioning reliably and with more capabilities in the modern era. That goal recently has taken center stage in the regulatory and technical arenas, and may well be met by the Intelligrid. It is touted as the first comprehensive communications architecture for the power delivery system of the future.

The Intelligrid works by linking communications and electricity into a "smart grid" defined as an "integrated, self healing, and electronically controlled power system that will offer unprecedented flexibility and functionality, and improve system security." It is the creation of the Electricity Innovation Institute (E2I), an affiliate of the Electric Power Research Institute (EPRI), and E2I's Consortium for Electric Infrastructure to Support a Digital Society (CEIDS). Intelligrid is being designed as a non-proprietary open architecture that can be adopted by any user and all manufacturers. It will, backers say, promote interoperability and compatibility with future technologies. It should make it easier to expand

**If stakeholders follow a common architecture, the modernized grid will be more robust, more reliable and more secure.**

transmission capability, proponents believe, while eliminating the need for expensive transmission upgrades.

The fact remains there is a wide variation in capability and compatibility in today's power system. But it is precisely because the electric grid's integration and coordination are not performed on a wide enough scale that problems such as blackouts occur.

### Piecemeal Design

"The knowledge-based economy of the future will require a smart power delivery system that links information technology with energy delivery," said Clark Gellings, v.p. of power delivery and markets for EPRI. The concept includes automated capabilities to

recognize problems, find solutions and optimize grid performance.

But the path leading to this vision has been piecemeal, and now there exists the daunting task of overcoming wide variations in levels of capability and compatibility that make up the electric transmission system. "If all stakeholders follow a common architecture, the modernized grid will be more robust, more reliable and more secure and will move us toward DOE's roadmap vision of this critical infrastructure," argues William Parks, DOE's acting director, office of electric transmission and distribution.

"Input from hundreds of stakeholders in the public and private sectors provided the developers with a full understanding of the requirements that will be placed on the electricity system both today and in the future," noted E2I's president and CEO, T.J. Glauthier. Intelligrid development so far can be found on the Internet. "Users of the web-based system will find easy access to over 6,000 pages of models, tools, methodologies, guidelines and recommendations."

The backers of the Intelligrid say the demands of our digital society require improved reliability, more choice and a constant flow of information. For example, it is expected that the smart grid will allow utilities to manage the grid closer to real time, while allowing power users to respond more easily to changing electric prices. But they contend that without a unified vision, the net result of isolated development activities will be a power system plagued by islands of separation. Intelligrid wants to unite power systems and related transmission organizations.

### Energy Plus

The Intelligrid Architecture is intended to integrate two systems in the power industry—the power and energy delivery system with the information system (communications, networks and intelligence equipment) that controls »

it. E2I's CEIDS (*see box*) says these systems must be developed in parallel and will consist of advanced communications and networking technologies working with intelligent equipment and algorithms to execute increasingly sophisticated system functions.

They further argue the present information infrastructure of the energy system is plagued with legacy systems, proprietary protocols, stranded applications and *ad hoc* interfaces, which impedes expansion and upgrading of computer systems and software. The following benefits are expected from Intelligrid:

- Advanced applications requiring ubiquitous infrastructure;
- Capital savings from standardized components;
- Life-cycle savings from lower maintenance costs;
- Reduction in stranded assets from integrated systems;
- Ability to incrementally build upon first steps and scale-up massively;
- Reduced development costs by building on components of Intelligrid systems engineering;
- Robustness from structured approaches to system management; and
- A secure architecture.

CEIDS says the Intelligrid Architecture is both a plan for integrated information infrastructure and a study of the requirements and principles required to make particular automation projects work. They call it a "set of high-level concepts" used to design a technology independent architecture, as well as identify and recommend standard technologies and best practices.

Those concepts include use of modeling to give standardized names to data, development of security policies, use of network and system management, implementation of data management technologies and use of technology independent components to manage the diverse legacy systems and

## INTELLIGRID'S BACKERS

Intelligrid Architecture development was sponsored by E2I's Consortium for Electric Infrastructure to Support a Digital Society (CEIDS), a partnership among industry, utilities and government to create the smart grid to support future industries and business. CEIDS partners include Alliant Energy, California Energy Commission, Bonneville Power Administration, ConEdison, Electricite de France, Long Island Power Authority, New York Power Authority, Polish Power Grid, Public Service Electric and Gas, Salt River Project, TXU Energy, U.S. Department of Energy, United Technologies and We Energies.

To develop the Intelligrid Architecture, a diverse team of industry experts led by GE Global Research brought utility industry and standards making experience to the task of defining requirements and the technical approach for the project. The report is available on the Internet and includes a catalog of functions of the electricity system, a set of design tools and recommendations for standards and technologies. (<http://www.e2i.org>)

migration to standardized interfaces.

When developing the first phase of the Intelligrid, over 400 power system functions were identified, and some of them were selected as "key" functions requiring detailed descriptions. They were considered significant, or key, in that they had unique or complex information requirements. It became clear to the Intelligrid team that one set of recommendations would not fit all situations. The 400 power systems functions then were analyzed for similarities, and 20 that were found to have similar information requirements were labeled "Intelligent Architecture Environments." That is defined as where the information exchanges of power system functions have essentially similar architectural requirements, including configuration requirements, quality of service requirements, security requirements and data management requirements.

The Intelligrid team also listed six domain areas of power system operations: (1) market operations; (2) transmission operations; (3) distributed operations; (4) high-voltage generation; (5) distributed energy resources; and (6) customer service. In each category, certain system functions were exam-

ined in more detail than others were.

For example, included under the domain area of market operations are further delineations on long-term planning (system maintenance), medium- and short-term planning (load forecasting, outage scheduling), day-ahead markets (FTRs, ancillary services), real-time operations (calculations, schedules), and post-dispatch considerations (metering, financial settlements).

### What Next?

The results of the Intelligrid Architecture project are contained in a series of printable documents, computer models and web-browser navigable hypertext pages. Key aspects were incorporated into a modeling tool, along with links to the standardized technologies.

The Intelligrid backers offer simple advice: "adopt Intelligrid". They ask industry executives to formally adopt the Intelligrid Architecture as the strategic vision for each company's information infrastructure. They want companies to develop plans to implement the system using recommended standard technologies, based on specific business needs, and to develop a plan for migrating legacy systems »

and interfaces to the Intelligrid Architecture recommended technologies. Finally, they ask for feedback so the Intelligrid can evolve to meet future needs and create better standards.

That is necessary because so far, the Intelligrid Architecture is not an endorsement of specific methods, tools or products. Instead, the team selected tools and methods as the best available approach for defining and evaluating large, complex distributed computing systems. It expects the Intelligrid concept to mature and anticipates further refinements and improvements.

The study's authors point to the free market having developed base technologies, such as computers, field devices and communications as stand-alone products, but note that the free market is not as successful in develop-

ing infrastructure because the principle goal of vendors is differentiation, not uniformity. They argue that without substantial demand from the user community, there is little incentive for vendors to facilitate interoperability with another vendor.

CEIDS looks forward to testing the principles touted by it in utility pilot projects. It then wants to implement and validate the design in real-world, large-scale systems. Finally it will feed back the lessons learned into another iteration of the process. It says the design is just the start, now the Intelligrid must be built, proven and continuously improved on. ■

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considering the impact of the proposed sale of the Buckskin mine, while Arch did. If control over Buckskin were to be attributed to Arch, its market share would increase. If not, Arch's post-merger market share would decrease.

The court adopted Arch's proposed approach, ruling that coal reserves (committed and uncommitted) provide the most accurate way of measuring market concentration. The court reasoned that reserves are a better predictor of a producers' future ability to expand output. This approach resulted in an HHI of 2,054, with a post-merger increase of 49. The court concluded that, although high, these concentration levels were "less than compelling." Judge Bates also noted that the number of competitors would remain the same given that Buckskin would be sold to Kiewit, a new entrant.<sup>3</sup> Therefore, the proposed transaction "just barely" raised significant competitive concerns.<sup>4</sup>

The court next discounted the FTC's assertion that the merger would increase the possibility of tacit coordination on output among the SPRB producers. The FTC case assumed that coordination would take the form of an "output restriction in which major coal producers in the SPRB would constrain their production so that increases in supply would lag behind increases in demand, thereby increasing upward pressure on price." The court labeled this theory "novel," observing that allegations of output coordination are normally "grounded on price coordination." This view appears to reject the generally-accepted principle that output and price restrictions are essentially the same thing since they have the same adverse economic effect. In the court's view, the novel nature of the FTC's claim increased the FTC's burden of establishing the anticompetitive effects of the transaction. Ultimately, the court found that the FTC failed to meet this burden.

The court dismissed as unpersua- ➤

## ARCH/TRITON Merger

*(Continued from p. 2)*

the FTC relied in part on internal company documents apparently indicating the producers' willingness to coordinate their output decisions. Among other things, the FTC claimed that, during a single month in 2001, SPRB producers had publicly signaled to one another their plans for output restrictions. This signaling came in the form of a series of public pronouncements by senior executives of Peabody, Kennecott and Arch expressing their belief that too much coal was being produced. According to the FTC, this signaling resulted in mine closings and output reductions, which, in turn, led to a steep hike in SPRB spot coal prices. The agency also relied on strong opposition to the merger from coal-burning utilities and independent power producers; representatives of several major customers testified in support of the agency's case.

A two-week trial on the FTC's motion for a preliminary injunction took place in late June and early July

2004 in front of Judge John Bates. The parties filed over 700 pages of findings to support their version of the facts in this case. On August 16, 2004, Judge Bates issued a lengthy decision finding that the FTC had not met its burden to prove the likelihood of anticompetitive harm as a result of the proposed merger.

Among other things, the court found that market-share statistics alone were insufficient to predict anticompetitive harm from the merger. Although the parties and the court all acknowledged that the SPRB market was already concentrated, they differed on the proper measure of market share. The FTC argued that existing market shares and related post-merger increases should be measured by looking at production and mine loadout capacity. Arch favored market-share statistics measuring coal reserves, which would yield lower post-merger concentration levels. In addition, the FTC analyzed market shares without

sive the evidence of the 2001 price spike and the allegedly related output reductions. The court concluded that the price spike was a short-term phenomenon explained by reduced utility stockpiles, severe weather conditions, and higher prices for natural gas and other alternative fuels. Judge Bates noted that similar spot price increases were experienced in other regions around the same time. He also concluded that the SPRB mine closings and output reductions had legitimate business rationales, and did not result from any express or tacit coordination by SPRB producers.

Dismissing the testimony of several customer witnesses to the contrary, Judge Bates determined that the current SPRB market is competitive. In this regard, the decision highlighted the fact that customers in the SPRB acknowledged having received bids from all five major producers, often including a "surprise" low bid. He also faulted the FTC for not submitting expert analysis to demonstrate whether the market was competitive, and thus failing to rebut expert testimony from the merging parties on that point.

The court went on to determine that the merger was unlikely to facilitate future output coordination, although conceding that such coordination was feasible. In order for producers to coordinate production, the court reasoned, the producers would need reliable information as to the effect of a lag in production. Since the evidence established that supply and demand estimates in the SPRB have been historically inaccurate and uncertain, effective coordination was deemed unlikely. Judge Bates noted that the FTC had not presented any economic analysis of how coordination might take place, and instead relied on the evidence of the 2001 price spike and internal company documents. He also criticized the agency's heavy reliance on customer testimony, ruling that customers have no way

of knowing what will happen after the merger.

### What Does It Mean For Future Transactions?

The decision offers a road-map for the kind of evidence that would be needed for a successful challenge of mergers in highly concentrated industries. In this case the court was willing to accept high post-merger increases in concentration levels because it concluded that the market was competitive even though it was, and would remain, dominated by a few firms. In future transactions, the government would need to produce expert economic evidence to demonstrate that the merger would reduce competition.

The decision also appears to be a setback for government cases based on tacit coordination. At a minimum, it has heightened the evidentiary burden on the government to demonstrate that a proposed transaction increases the likelihood of tacit coordination among competitors. For example, the court apparently would have required that the FTC produce an economic analysis of how the alleged coordination would work, including how the producers would be able to detect and punish deviation from any such scheme. Even persuasive documentary evidence of the willingness to collude would not be enough to show the likelihood of coordination. Here, the court viewed the documentary evidence presented by the FTC as merely indicative of the producers' willingness to coordinate production levels.

The decision also raises some question as to the viability of the type of coordinated effects theory advocated by the FTC, namely output coordination without any evidence of coordination on prices. The court faulted the FTC's case for not presenting evidence showing that SPRB producers actually could tacitly agree on prices. The logic of the decision also suggests that a theory of output restriction based on »

## Next Month's FORTNIGHTLY

In December, *Fortnightly* wraps up the year with a look at the future of generation, as Michael Burr talks with experts on what the industry faces in the coming year.

In *Commission Watch*, *Fortnightly* Publisher Bruce Radford follows up on his October *Spark* article, further exploring profit taking from the electric transmission grid. Here is some of what you will find:

### ► Roundtable:

#### The Future of Generation

A group of executives and analysts tell *Fortnightly* that the outlook for generation is positive, because it has to be. But making generation work well—affordably, cleanly, and reliably—won't be easy.

### ► An Expensive Experiment? RTO Dollars and Sense

Restructuring the energy industry was more costly and more risky than anticipated, and reasonable estimates of RTO costs outweigh nearly all of the benefits anticipated.

### ► A Green Light on Subsidies

Utilities were founded to create cross-subsidies, but regulators should address lingering uncertainties about such subsidies in a coherent, constructive way. The authors offer five recommendations.

### ► Model Risk Management: How to Avoid an Earnings Surprise

Domestic and international groups have pushed the industry toward mark-to-market accounting, creating significant opportunities for earnings swings and distortions and making good model risk management more essential now than ever before.

### PLUS: A Better Measure of Profitability: The Top 5 U.S. Generating Units

“lagging” production, as opposed to straightforward output reduction, may not be enough to show output coordination.

The decision presents new challenges for federal antitrust enforcers who have tended to put significant weight on customer complaints, at least during a merger investigation. Customer support or opposition has long been an important tool to gauge whether a transaction poses competitive concerns. The assumption has been that if the transaction is procompetitive, customers would support it. Conversely, an anticompetitive merger would lead to customer opposition. Judge Bates’ skepticism about customers’ knowledge of the market suggests a need for the government to rethink the role of customer testimony in future merger cases, at least to the extent that customer concerns are not backed up by expert analysis of the transaction’s likely competitive effects.

Finally, for natural resources industries such as coal and petroleum, the decision provides a precedent in

favor of the use of reserve figures to calculate market shares rather than other, more restrictive indicators such as loadout or productive capacity.

It is unclear whether the decision will have enduring influence on future merger cases given the inherently difficult nature of a tacit coordination case. Judge Bates did not hold that a theory of tacit coordination is not viable. Rather, he concluded, for purposes of granting a preliminary injunction, that the government did not offer adequate proof that coordination actually had, or likely would, occur. Since the FTC primarily relied on historical evidence of “signaling” behavior, and did not offer an economic analysis of the susceptibility of the post-merger market to coordination, a different outcome might obtain if such evidence were presented. ■

### Endnotes

1. The actions were consolidated before Judge Bates on April 21, 2004.
2. Market concentration is a function of the number of firms in a market and

their respective market shares. Market concentration is measured by the Herfindahl-Hirshman Index (HHI).

3. The court assumed that Buckskin would be owned by Kiewit, although it never expressly required the divestiture.
4. By comparison, a market with an HHI above 1800 is normally viewed as highly concentrated. An increase in HHI of greater than 50 points in such a market may raise significant competitive concerns. An increase of over 100 points typically indicates that the merger will be anticompetitive.

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## Public Utilities Fortnightly Discusses Gas Issues at Con Edison Gas Expo

**O**n Nov. 9, 2004, Con Edison held its first ever Options and Opportunities: Con Edison’s PowerYourWay Expo, in which Public Utilities Fortnightly Executive Editor Richard Stavros participated in panels and presentations with representatives from the the New York Public Service Commission and Con Edison. The Expo was designed to help gas retail customers make informed choices about energy in a competitive market and to introduce them to the type of options that energy service companies can offer. Stavros discusses some of the top gas supply and risk management issues facing gas retail customers today, as well as responds to questions on volatility in gas prices.

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