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importance of "neutrality" and "fairness" in their operation of the grid and wholesale markets,² and have no economic incentive to discriminate in providing transmission services.

In contrast with independent RTOs and ISOs, however, when a vertically integrated transmission provider is "net long" – . ., when it has power to sell on the open market – then it has incentives to sell such power for the highest possible price. It may be able to do this by hampering "inbound" transmission by out-of-area generators that otherwise could have competed with the integrated firm's generators. Likewise, when a vertically integrated transmission provider is "net short" – . ., when it must purchase additional power in order to serve its own demand – then it has incentives to buy such power at the lowest possible price, and it may be able to accomplish this by impeding other generators' ability to transmit their power

unbundling," which occurs when the original owners continue to hold title to the assets constituting the transmission grid, while an independent entity controls power flows over those assets. Both operational unbundling and divestiture are "structural" forms of unbundling, because they both directly eliminate (or at least reduce) the incentives of the grid operator to discriminate against independent generators.

Other forms of unbundling – such as the "functional" variety – consist of behavioral rules (such as "open access" requirements) that leave the transmission operator's incentives to discriminate in place but seek to prevent discriminatory conduct by means of regulatory prohibitions. Typically, behavioral rules are accompanied by accounting separation that can help regulators detect anticompetitive discriminatory behavior, particularly with respect to price. *S* Organisation for Economic Co-operation and Development, "Restructuring Public Utilities for Competition," OECD Observer (Feb. 2002), *a a ab a* http://www.oecd.org/dataoecd/0/0/2066164.pdf; Comment of the Bureau of Economics of the Federal Trade Commission in the Matter of Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, FERC Docket Nos. RM95-8-000 and RM94-7-001 (filed Aug. 7, 1995), *a a ab a* http://www.ftc.gov/be/v950008.shtm.

² For example, "[a]cting neutrally and independently, PJM operates the world's largest competitive wholesale electricity market and ensures the reliability of the largest centrally dispatched grid in the world." PJM Interconnection, "About PJM: Overview," *a a ab a* http://www.pjm.org/about/overview.html; *a* ISO-New England, "Overview," *a a ab a* http://www.iso-ne.com/aboutiso/co_profile/overview/index.html.

 $^{^3}$ James B. Bushnell, Erin T. Mansur, and Celeste Saravia measure the impact on power prices of integrated firms' long and short positions in "Vertical Arrangements, Market Structure, and Competition: An Analysis of Restructured US Electricity Markets," 98:1 A . E . R . 237 (Mar. 2008).

⁴ Reply Comment of the Federal Trade Commission in the Matter of Standards of Conduct for Transmission Providers, FERC Docket No RM07-1-000 (filed May 3, 2007), *a a ab a http://www.ftc.gov/be/V070009.pdf* (quoting from the Comment of the Staff of the Bureau of Economics and the Office of the General Counsel of the FTC in the Matter of

set of behavioral rules that FERC hopes will be clearer to affected parties, easier for FERC to administer at reasonable cost, and sustainable in a judicial proceeding.⁵

The FTC encourages FERC to consider an alternative perspective. After more than a decade of efforts to develop effective, workable behavioral rules against transmission discrimination, FERC may wish to weigh the possibility that accounting separation and accompanying behavioral rules (. ., functional separation) are insufficient to meet that objective – particularly in the electric power sector, where transmission arrangements can be vulnerable to subtle discrimination that is difficult to detect and document. FERC's Order No. 2000 developed the basis for the conclusion that behavioral rules are not fully effective. That order established structural unbundling of transmission under the control of RTOs and ISOs.

Structural unbundling of transmission not already under the control of RTOs and ISOs would reduce the potential for discrimination on these transmission systems. The FTC encourages FERC to undertake an evaluation of the benefits and costs of such additional structural unbundling. Even if FERC moves forward with the NOPR's new version of behavioral rules against transmission discrimination, it may wish to establish a date by which to determine whether it should take further steps to induce the structural unbundling of transmission.



 $^{^5}$ The concern about defensibility in court stems from Na $\,a$ F $\,Ga$ S $\,C$. . . FERC, 468 F.3d 831 (D.C. Cir. 2006). S $\,$ FERC, Notice of Proposed Rulemaking, S a $\,a$ C $\,$ T $\,a$ $\,$ P $\,$, 73 Fed. Reg. 16228 (Mar. 27, 2008).

⁶ The Commission of the European Communities has reached a similar conclusion regarding transmission discrimination.. *S* "Communication from the Commission, Inquiry pursuant to Article 17 of Regulation (EC) No. 1/2003 into the European gas and electricity sectors (Final Report)" (released Jan. 10, 2007), *a a b a* http://ec.europa.eu/comm/competition/antitrust/others/sector_inquiries/energy/final_report.pdf.

 $^7\,S$, . ., Deborah Platt Majoras, Chairman, Federal Trade Commission, Opening Remarks at the FTC Conference on

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grid. But such decisions also may be influenced by incentives to sell power at a higher price by discriminating against independent generators that compete with generators affiliated with the transmission operator. Some factors that go into decisions about available transmission are subtle and must be based on prior operatismissio6(a)8.6(c)8.6misie(sy)29her p byi 57 priating 0 0 6.96 1710(nzt)

operators' decisions about whether they can accommodate additional requests for transmission

without threatening system reliability may reflect unbiased judgments about conditions on the

¹⁴ In the alternative, as noted above (a, pp. 2-3), a transmission operator that is "net short" of generation will have incentives to buy the needed extra power at the lowest possible price, and may be able to achieve this objective by hampering independent generators' efforts to transmit power out of the market.

¹⁵ As a result of the physical requirement that generation instantaneously match consumption in electricity systems, negotiations between generators and wholesale or retail transmission customers are vulnerable to subtle misrepresentations about transmission conditions that delay (or add uncertainty about) finalizing transmission arrangements. Hesitancy or uncertainty on the part of the grid operator in providing information about transmission availability can disrupt bilateral transactions between an independent generator and its prospective wholesale customers, and can impel such customers to buy from the transmission operator's generation affiliates in the interest of avoiding such uncertainty. FERC is likely to find it challenging to distinguish objectively between, on the one hand, illegal discrimination and, on the other hand, the system operator's bona fide technical uncertainty about transmission availability.

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likely will be) more effective than behavioral rules in preventing anticompetitive transmission discrimination, FERC may wish to take further steps to substitute structural unbundling for behavioral rules against transmission discrimination. In the event that FERC adopts the proposed revisions in the behavioral rules against discrimination, it may wish to augment them with incentives for transmission owners to undertake efficient structural unbundling of transmission. Structural unbundling can substitute for behavioral rules (and indeed can reduce or eliminate the need to engage in continuous efforts to recalibrate such rules).

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Although FERC's focus in this proceeding appears to be to make its behavioral rules against transmission discrimination clearer and easier to administer, the FTC recommends that FERC broaden its review of remedies for transmission discrimination to give greater consideration to structural unbundling alternatives. The FTC's experience in crafting remedies to prevent anticompetitive conduct, as well as the materials supporting FERC Order No. 2000, indicate that structural unbundling can be a more attractive alternative – or at least a valuable complement – to behavioral rules.