

Opinion of BREYER, J.

SUPREME COURT OF THE UNITED STATES

Nos. 00–511, 00–555, 00–587, 00–590, and 00–602

VERIZON COMMUNICATIONS INC., ET AL.,
PETITIONERS

00–511 *v.*
FEDERAL COMMUNICATIONS COMMISSION ET AL.

WORLD COM, INC., ET AL., PETITIONERS

00–555 *v.*
VERIZON COMMUNICATIONS INC. ET AL.

FEDERAL COMMUNICATIONS COMMISSION, ET AL.,
PETITIONERS

00–587 *v.*
IOWA UTILITIES BOARD ET AL.

AT&T CORP., PETITIONERS

00–590 *v.*
IOWA UTILITIES BOARD ET AL.

GENERAL COMMUNICATIONS, INC., PETITIONER

00–602 *v.*
IOWA UTILITIES BOARD ET AL.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF
APPEALS FOR THE EIGHTH CIRCUIT

[May 13, 2002]

JUSTICE BREYER, with whom JUSTICE SCALIA joins as to
Part VI, concurring in part and dissenting in part.

I agree with the majority that the Telecommunications
Act of 1996 (Act or Telecommunications Act), 47 U. S. C.
§251 *et seq.* (1994 ed. and Supp. V), does not require a
historical cost pricing system. I also agree that, at the

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present time, no taking of the incumbent firms' property in violation of the Fifth Amendment has occurred. I disagree, however, with the Court's conclusion that the specific pricing and unbundling rules at issue here are authorized by the Act.

I

The primary goal of the Telecommunications Act is to “promote competition and reduce regulation” in both local and long-distance telecommunications markets. Preamble, 110 Stat. 56; see also H. R. Conf. Rep. No. 104–458, p. 1 (1996). As part of that effort, the Act requires incumbent local telecommunications firms to make certain “elements” of their local systems available to new competitors seeking to enter those local markets. 47 U. S. C. §251(c)(3) (1994 ed., Supp. V). If the incumbents and competitors cannot agree on the price that an incumbent can charge a new entrant, local regulators will determine the price. §252. The regulated price will depend upon the element's “cost.” §252(d)(1)(A). In *AT&T Corp. v. Iowa Utilities Bd.*, 525 U. S. 366 (1999), this Court held that the Act authorizes the FCC to set rules for determining those prices.

These cases require the Court to review the Commission's rules. Those rules create a “start-from-scratch” version of what the Commission calls a “Total Element Long-Run Incremental Cost” system (TELRIC). See A. Kahn, T. Tardiff, & D. Weisman, *The Telecommunications Act at three years: an economic evaluation of its implementation by the Federal Communications Commission*, 11 *Info. Econ. & Policy* 319, 326 (1999) (Lodged with the Clerk of this Court) (referring to the FCC's system as “TELRIC-Blank Slate”) (hereinafter Kahn). In essence, the Commission requires local regulators to determine the cost of supplying a particular incumbent network “element” to a new entrant, not by looking at what it has cost

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that incumbent to supply the element in the past, nor by looking at what it will cost *that incumbent* to supply that element in the future. Rather, the regulator must look to what it would cost *a hypothetical perfectly efficient firm* to supply that element in the future, assuming that the hypothetical firm were to build essentially from scratch a new, perfectly efficient communications network. The only concession to the incumbent's actual network is the presumption that presently existing wire centers—which hold the switching equipment for a local area—will remain in their current locations. See *In re Implementation of the Local Competition Provision in the Telecommunications Act of 1996*, ¶685, 11 FCC Rcd. 15499 (1996) (hereinafter Order) (describing TELRIC as “based on costs that assume that wire centers will be placed at the incumbent LEC’s current wire center locations, but that the reconstructed local network will employ the most efficient technology for reasonably foreseeable capacity requirements”).

An example will help explain the system as I understand it. Imagine an incumbent local telephone company's major switching center, say, in downtown Chicago, from which cables and wires run through conduits or along poles to subsidiary switching equipment, other electronic equipment, and eventually to end-user equipment, such as telephone handsets, computer modems, or fax machines located in office buildings or private residences. A new competitor, whom the law entitles to use an “element” of the incumbent firm's system, asks for use of such an “element,” say, a single five-block portion of this system, thereby obtaining access to 20 downtown office buildings. Under the Commission's TELRIC, the incumbent's “cost” (upon which “rates” must be based) equals not the real resources that the Chicago incumbent must spend to provide the five-block “element” demanded, but the resources that a hypothetical perfectly efficient new supplier would spend were that supplier rebuilding the entire

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downtown Chicago system, other than the local wire center, from scratch. This latter figure, of course, might be very different from any incumbent's actual costs.

As a reviewing Court, we must determine, among other things, whether the Commission has “abuse[d]” its statutorily delegated “discretion” to create implementing rules. *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Automobile Ins. Co.*, 463 U. S. 29, 41 (1983) (quoting Administrative Procedure Act, 5 U. S. C. §706(2)(A)). In doing so, we must assume that Congress intended to grant the Commission broad legal leeway in respect to the substantive content of the rules, *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U. S. 402, 416 (1971); *FPC v. Hope Natural Gas Co.*, 320 U. S. 591, 602 (1944), particularly since the subject matter is a highly technical one, namely ratemaking, where the agency possesses expert knowledge. *Chevron U. S. A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U. S. 837, 843–844 (1984).

Nonetheless, that leeway is not unlimited. It is bounded, for example, by the scope of the statute that grants authority and by the need for the agency to show a “rational connection” between the regulations and the statute’s purposes. *State Farm*, 463 U. S., at 56. We must determine whether, despite the leeway given experts on technical subject matter, agency regulations exceed these legal limits. See *id.*, at 43; *Overton Park*, *supra*, at 416; Administrative Procedure Act, 5 U. S. C. §706(2)(A) (requiring agency action to be set aside if “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law”). And, reluctantly, I have come to the conclusion that they do. After considering the incumbents’ objections and the Commission’s responses, I cannot find that “rational connection” between statutory purpose and implementing regulation that the law demands. *State Farm*, *supra*, at 56.

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II

Because the critical legal problem concerns the relation of the Commission's regulations to the statute's purpose, I must ask at the outset, what is that purpose? The relevant statutory provision says only that the agency shall set "rate[s]" (for "elements") "based on . . . cost." 47 U. S. C. §252(d)(1). At first blush the word "cost" calls to mind traditional cost-based rate-setting. See Natural Gas Act, 15 U. S. C. §717c; Natural Gas Act of 1938, §§4a, 5, 52 Stat. 824; Interstate Commerce Act, 49 U. S. C. §10701 (1994 ed., Supp. V); Federal Aviation Act of 1958, 49 U. S. C. §1302(c) (1976 ed., Supp. II) (repealed 1980); see also *ante* at 4–5 (discussing traditional rate-setting); J. Bonbright, A. Danielsen, & D. Kamerschen, *Principles of Public Utility Rates* 109–110, 388 (2d ed. 1988) (hereinafter *Bonbright*); *In re Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992: Rate Regulation*, 9 FCC Rcd. 4527, 4555, ¶55 (1994) (Commission rules referring to "[o]riginal cost" as traditional basis "for public utility valuation").

An agency engaged in traditional ratemaking will seek to protect consumers by mandating low prices as the end result. In doing so, the agency will sometimes try to mimic the prices that it believes (hypothetically) the regulated firm (often a legal monopoly) would have set had it been an unregulated firm in a competitively structured industry. See *ante* at 13–14; *Bonbright* 89 ("[M]any economists have declared that . . . the prices that would result without regulation but under pure or perfect competition would be the 'ideal' prices"); 1 A. Kahn, *The Economics of Regulation: Principles and Institutions* 63 (1988) (hereinafter *Economics of Regulation*) ("The traditional legal criteria of proper public utility rates have always borne a strong resemblance to the criteria of the competitive market in long-run equilibrium"). And the Commission's regulations are at least arguably consistent with an

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agency effort to find prices that replicate the end results of theoretically perfect competition. See Order ¶¶679, 738.

But that regulatory objective—low, competition-mimicking prices—is not the objective of the relevant statutory provision here. The Telecommunications Act is not a ratemaking statute seeking better regulation. It is a deregulatory statute seeking competition. It assumes that, given modern technology, local telecommunications markets may now prove large enough for several firms to compete in the provision of some services—but not necessarily all services—without serious economic waste. It finds the competitive process an indirect but more effective way to bring about the common objectives of competition and regulation alike, namely low prices, better products, and more efficient production methods. But it authorizes the Commission to promulgate rules that will help achieve that procedural goal—the substitution of competition for regulation in local markets—where that transformation is economically feasible. See *ante*, at 69 (accepting this rationale). The Act does not authorize the Commission to promulgate rules that would hinder the transition from a regulated to a competitive marketplace—whether or not those rules directly mandate lower “element” prices along the way.

Five considerations, taken together, convince me that the description of the statutory goal I have just given is an accurate one. First, the Act itself says that its objective is to substitute competition for regulation. Preamble, 110 Stat. 56, (stating that the goal of the Act is to “promote competition and reduce regulation” in both local and long distance telecommunications markets); see also H. R. Conf. Rep. No. 104–458, at 1; *ante* at 16, 17.

Second, the Act’s history suggests the Congress would have thought that goal a reasonable one. The 20th century’s history of telecommunications markets is primarily

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one of regulation. For decades experts justified regulation on the ground that telecommunications providers were “natural monopolists,” *i.e.*, telecommunications markets would not support more than one firm of efficient size. See *ante*, at 2–3. But beginning in the 1970s, technological developments led to a change of expert opinion by undermining the “natural monopoly” rationale. Long distance telecommunications markets seemed newly capable of supporting several competing firms without significant economic waste. See R. Vietor, *Contrived Competition: Regulation and Deregulation in America 185–190* (1994). And opinion began to change similarly in respect to local markets. In the case of local markets, however, the change was marked by hesitation and lingering uncertainty. See P. Huber, M. Kellogg, & J. Thorne, *Federal Telecommunications Law* 53, 86–87 (2d ed. 1999) (hereinafter Huber); P. Huber, M. Kellogg, & J. Thorne, *The Geodesic Network II: 1993 Report on Competition in the Telephone Industry* 2.1–2.5 (1992). That is because local telecommunications service had long demanded expensive fixed investment, for example, digging up streets to lay cables or stringing wires on overhead poles. See *ante*, at 17–18. And whether, or the extent to which, a new competitor could replicate, or avoid, that kind of investment without significantly wasting resources remained unclear. See Huber, at 34, 206. Thus, at the time Congress wrote the new Act, technological development seemed to permit nonwasteful competition in respect to some aspects of local service; but in respect to other aspects an incumbent local telecommunications provider might continue to possess “natural monopoly” advantages. *Id.*, at 206–207. And these circumstances made it reasonable for Congress to try to secure local competition insofar as that competition would prove economically feasible, *i.e.*, where competition would not prove seriously wasteful. See Order ¶1. See also 47 U. S. C. §§271(c)(1)(A), 271(c)(1)(B) (recognizing

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that some local markets will not support more than one firm).

Third, the Act's structure and language indicate a congressional effort to secure that very end. The Act dismantles artificial legal barriers to new entry in local markets, thereby *permitting* new firms to enter if they wish. 47 U. S. C. §253(a); see *ante*, at 18–19 & n. 12. But the Act recognizes that simple permission may not prove sufficient—perhaps because the incumbent will retain a “natural monopoly” form of control over certain necessary elements of service. It consequently goes on to *promote* new entry in three ways. See *ante*, at 19. First, it requires incumbents to “interconnect” with new entrants (at a price determined by the regulations before us), thereby allowing a new entrant's small set of subscribers to connect with the incumbent firm's likely larger customer base. §251(c)(2). Second, it requires incumbents to sell retail services to new entrants at wholesale rates, thereby allowing newly entering firms automatically to compete in retailing if they so desire. §251(c)(4). Third, it requires incumbents to provide new entrants “access to network elements,” say telephone lines connecting homes or offices with switching centers, “on an unbundled basis.” §251(c)(3). This third requirement permits a new entrant to compete selectively without replicating (or substituting) all of the elements the incumbent uses to offer the service in question.

Suppose, for example, the incumbent's control of certain existing cables, lines, or switching equipment would put the new entrant at an economic disadvantage because duplication of those “elements” would prove unnecessarily expensive. The new Act does not require the new entrant and incumbent to compete in respect to *those* elements, say, through wasteful duplication. Rather, the Act permits the new entrant to offer, and to compete with respect to, a related service by obtaining “access” to (and therefore

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using) *those* “elements” of the incumbent’s network, while finding on its own other elements necessary to the service. It is as if a railroad regulator, anxious to promote railroad competition between City A and City B but aware that it would prove wasteful to duplicate a certain railroad bridge across the Mississippi River, ordered the bridge’s owner to share the bridge with new competitors. The sharing would avoid wasteful duplication of the hard-to-duplicate resource—namely the bridge. But at the same time it would facilitate competition in the remaining aspects of the A-to-B railroad service. That, I assume, is why the Act says that the “elements” that must be shared are those for which access is “necessary” and in respect to which “failure to provide access” would “impair” the ability of the new entrant “to provide the services that it seeks to offer.” §251(d)(2). See *Iowa Utilities*, 525 U. S., at 392 (Commission must give “substance to the ‘necessary’ and ‘impair’ requirements”); cf. *id.*, at 416–417 (BREYER, J., concurring in part and dissenting in part) (stating that the “necessary” and “impair” provision’s object is to require access to, and thereby force sharing of, those elements of an incumbent’s system that would prove, to a significant degree, economically wasteful to duplicate).

To put the matter more concretely, imagine that a communications firm—a potential new entrant—wishes to sell voice, data, text, pictures, entertainment, or other communications services, perhaps in competition with the incumbent. That firm must decide how its service will reach a customer inside a house or office. Should the firm 1) run its own new cable into the house? 2) run wires through an already-existing electricity conduit? 3) communicate without wires, say by wireless or one-way or two-way satellite? 4) or use the incumbent’s pair of twisted copper telephone service wires already in place? If the potential new entrant claims that all but the last of these possibilities are impractical or far too expensive—that

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using existing telephone wires is far cheaper (in terms of real resources expended) than the alternatives—then the new entrant is claiming that the incumbent’s wires are a kind of “bridge” to which it must have access. And it may ask the regulator to make its new entry feasible by requiring the incumbent to permit it to use that “element” at a reasonable price.

Fourth, the Commission has described the Act’s goals as including promotion of nonwasteful competition. The preamble to the Commission’s price regulations describes their statutorily based aim as “giv[ing] appropriate signals to producers and consumers and ensur[ing] *efficient* entry and utilization of the telecommunications infrastructure.” Order ¶630 (emphasis added). The Commission also says that “the prices that potential entrants pay for these elements should reflect forward-looking economic costs in order to encourage *efficient* levels of investment and entry.” *Id.*, ¶672 (emphasis added). And it adds that “Congress specifically determined that input prices should be based on costs because this would foster competition in the retail market.” *Id.*, ¶710; see also *id.*, ¶1.

Fifth, the Solicitor General confirmed this view at oral argument when he said that the rates in question should be set in order to “encourage new entrants to come into the market,” Tr. of Oral Arg. 60, to “allow them to enter the market at competitive rates,” *ibid.*, and to “encourage them to develop new technologies.” *Id.*, at 61.

The statute, then, seeks new local market competition insofar as local markets can support that competition without serious waste. And we must read the relevant rate setting provision—including the critical word “cost”—with that goal in mind.

III

The Commission’s critics—Verizon, other incumbents, and experts whose published articles Verizon has lodged

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with the Court—concede that the statute grants the Commission broad authority to define “cost[s].” They also concede that every rate-setting system has flaws. Cf. *e.g.*, *Missouri ex rel. Southwestern Bell Telephone Co. v. Public Serv. Comm’n of Mo.*, 262 U. S. 276, 311–312 (1923) (Brandeis, J., joined by Holmes, J., dissenting) (criticizing “reproduction cost” systems because of the administrative difficulty of determining costs); Economics of Regulation 109–111 (criticizing “historical cost” systems because of their failure to provide proper incentives).

Nonetheless, the critics argue, the Commission cannot lawfully choose a system that thwarts a basic statutory purpose without offering any significant compensating advantage. They take the relevant purpose as furthering local competition where feasible. See Part II, *supra*. They add that rates will further that purpose (1) if they discourage new firms from using the incumbent’s facilities or “elements” when it is significantly less expensive, economically speaking, for the entrant to build or to buy elsewhere, and (2) if they encourage new firms to use the incumbent’s facilities when it is significantly less expensive, economically speaking, for the entrant to do so. They point out that prices that approximately reflect an *actual* incumbent’s *actual* additional costs of supplying the services (or “element”) demanded will come close to doing both these things. See Kahn 330 (prices set at “incremental cost,” the cost of supplying an added “increment,” will give challengers the “proper target at which to shoot” only if that cost reflects “the cost that society will *actually* incur if they purchase more” or the resources that it would save if they purchase less); G. Knieps, *Interconnection and Network Access*, 23 *Fordham Int’l L. J.* 90 (2000); see also J. Sidak & D. Spulber, *Deregulatory Takings and the Regulatory Contract* (1998) (arguing that a market-determined efficient component pricing rule (M-ECPR) satisfies these objectives and that the FCC has misunder-

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stood the M-ECPR system). But prices like the Commission's, based on the costs that a *hypothetical* "most efficient" firm would incur if *hypothetically* building largely from scratch, Order ¶685, would do neither. Indeed, they would do exactly the opposite, creating incentives that hinder rather than further the statute's basic objective.

First, the critics ask, why, given such a system, would a new entrant ever build or buy a new element? After all, the Commission's rate-setting system sets the incumbent's compulsory leasing rate at a level that would rarely exceed the price of building or buying elsewhere. That is because the Commission's rate-setting system chooses as its basis the hypothetical cost of the most efficient method of providing the relevant service—*i.e.*, the cost of entering a house through the use of electrical conduits or of using wireless (if cheaper in general) and it then applies those costs (based on, say, hypothetical wireless) *as if* they were the cost of the system in place (the twisted pair of wires). Why then would the new entrant use an electrical conduit, or a wireless system, to enter a house when, by definition, the Commission will require the incumbent to lease its pair of twisted wires at an equivalent price or lower—whether or not the incumbent will have to spend more, in fact, to provide the twisted wires? The rules further discourage independent building or buying by assessing a special penalty upon the new entrant that does so, for that entrant will have to worry that soon another newer new entrant will insist upon sharing the incumbent's equivalent of that very element at a still lower regulation-determined price based on subsequent technological developments.

The Commission's system will tend to create instances in which (1) the incumbent's *actual* future cost of maintaining an element (say, a set of wires), will exceed (2) the new entrant's cost of building or buying elsewhere (say,

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through wireless or wires in electrical conduits) which, in turn, will equal, (or even exceed), (3) the *hypothetical* future “best practice” cost (namely, what the experts decide will, in general, be cheapest). In such a case (or in related cases, where technological improvements, actual or predicted, tend to offset various cost differences), the new entrant will uneconomically share the incumbent’s facilities by leasing rather than building or buying elsewhere. And that result, in the assumed circumstances, is wasteful. It undermines the efficiency goal that the majority itself claims the Act seeks to achieve. Compare *ante*, at 38, 69.

Nor is the “sharing” of facilities (*e.g.*, the wire pairs) that this result embodies consistent with the competition that the Act was written to promote. That is because firms that share existing facilities do not compete in respect to the facilities that they share, any more than several grain producers who auction their grain at a single jointly owned market compete in respect to *auction services*. Cf. *Iowa Utilities, supra*, at 429 (BREYER, J., concurring in part and dissenting in part) (“It is in the *unshared*, not in the *shared*, portions of the enterprise that meaningful competition would likely emerge”). Yet rules that combine a strong monetary incentive to share with a broad definition of “network element,” see 47 C.F. R. §§51.319(f)–(g); Order ¶413, will tend to produce widespread sharing of entire incumbent systems under regulatory supervision—a result very different from the competitive market that the statute seeks to create. See *Iowa Utilities, supra*, at 386–387 (affirming the Commission’s broad definition of “network element”). At the least, those rules are inconsistent with the Commission’s own view that they will sometimes “serve as a transitional arrangement until fledgling competitors could develop a customer base and complete the construction of their own networks.” *In re Implementation of the Local Competition Provisions of the Telecom-*

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munications Act of 1996, ¶6, 15 FCC Rcd. 3696 (1999) (Third Report & Order). Why, given the pricing rules, would those “fledgling competitors” ever try to fly on their own?

Second, what incentive would the Commission’s rules leave the incumbents either to innovate or to invest in a new “element?” The rules seem to say that the incumbent will share with competitors the cost-reducing benefits of a successful innovation, while leaving the incumbent to bear the costs of most unsuccessful investments on its own. But see *infra*, at 14–15. Why would investment not then stagnate? See, e.g., T. Jorde, G. Sidak, & D. Teece, Innovation, Investment, and Unbundling, 17 Yale J. Reg. 1, 8 (2000) (“It makes no economic sense for the [incumbent] to invest in technologies that lower its own marginal costs, so long as competitors can achieve the identical cost savings by regulatory fiat”); J. Sidak & D. Spulber, Deregulation and Managed Competition in Network Industries, 15 Yale J. Reg. 117, 124–125 (1998) (“If deprived of a return to capital facilities after capital has been sunk in irreversible investments, or if faced with reduced returns to investments already made, any economically rational company will eliminate or reduce similar capital investments in the future”); Armstrong, AT&T Scoffs at Possible Common Carrier Status, Telecommunications Reports, Nov. 9, 1998 (Chief Executive Officer of AT&T, which here supports the Commission’s regulations), cited in Huber 206, n. 611 (“No company will invest billions of dollars . . . if competitors who have not invested a penny of capital, nor taken an ounce of risk, can come along and get a free ride on the investments and risks of others”).

I recognize that no regulator is likely to enforce the Commission’s rules so strictly that investment literally slows to a trickle. Indeed, the majority cites figures showing that in the past several years new firms have invested \$30 to \$60 billion in local communications mar-

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kets. See *ante*, at 46. We do not know how much of this investment represents facilities, say broadband, for which an incumbent's historical network offers no substitute. Nor do we know whether this number is small or large compared with what might have been. Compare Federal Communications Commission, Statistics of Common Carriers, 2000/2001 Edition, Table 2.7; Federal Communications Commission, Statistics of Common Carriers, 1999 Edition, Table 2.7; Federal Communications Commission, Statistics of Common Carriers, 1998 Edition, Table 2.7; Federal Communications Commission, Statistics of Common Carriers, 1997 Edition, Table 2.7 (incumbents' similar investment over the same period amounts to over \$100 billion); compare Federal Communications Commission, Statistics of Common Carriers, 2000/2001 Edition, Table 2.9 (total depreciated investment plus working capital equals \$220 billion); *ante*, at 45, 50 (new entrants' market share provided by entrants' own facilities alone is 3%). Regardless, given the incentives, this independent investment would seem to have been made despite the "start from scratch" rules, not because of them. At best, such statistics do no more than show that at least some of the coincidences I describe below have, happily for the Commission and the public alike, come to pass. See *infra*, at 17, 19, 24.

The critics mention several other problems as well. They say, for example, that the Commission's regulations will exacerbate the problem of "stranded costs"—*i.e.*, the need for a once-regulated incumbent to recover its reasonable, but now technologically outdated, historical investment. See *supra*, at III–C. They add that the regulations will make nearly redundant the statute's provisions for "element" rates set through negotiation. See 47 U. S. C. §252(a)(1). After all, given the Commission's regulations, how much is there to negotiate about? The regulations entitle the new entrant to a price equal to, or lower than,

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the price to which any rational incumbent could agree. See Brief for United States in *Mathias v. Worldcom Technologies, Inc.* No. 00–878, O.T. 2001, p. 18, n. 5 (“[A]s a practical matter” carriers have little incentive to negotiate).

Nor, in the critics’ view, do the regulations possess any offsetting advantages. They lack that ease of administration that led Justices Holmes and Brandeis to favor use (for ratesetting purposes) of an incumbent’s historic costs despite their economic inaccuracy. See *Southwestern Bell Telephone Co.*, 262 U.S., at 292–296 (dissenting opinion); see also *ante*, at 9–11. The hypothetical nature of the Commission’s system means that experts must estimate how imaginary firms would rebuild their systems from scratch—whether, for example, they (hypothetically) would receive permission to dig up streets, to maintain unsightly telephone poles, or to share their pole costs with other users, say, cable operators—and they must then estimate what would turn out to be most “efficient” in such (hypothetical) future circumstances. The speculative nature of this enterprise, the critics say, will lead to a battle of experts, each asking a commission to favor what can amount to little more than a guess. See Kahn 333, 334, n. 36, 335 (describing three models introduced in regulatory proceedings, one of which reduced all actual expenses by 27% because railroad regulation had brought similar efficiency gains, another of which assumed that all utilities, including electricity producers, would rebuild entire systems from scratch at the same time, and the third of which assumed New Hampshire’s telecommunications system was administratively most efficient but then reduced its actual administrative expenses by 25%). These administrative difficulties seem far greater than any difficulty likely involved in an effort to determine an actual incumbent’s actual (past or likely future) costs. See Affidavit of W. Baumol, J. Ordovery, & R. Willig, Com-

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ments of AT&T Corp., CC Docket 96–98: In the Matter of Implementation of Local Competition Provisions in the Telecommunications Act of 1996, ¶25, (May 16, 1996), App. 67 (TELRIC’s estimates “do not simply accept the architecture, sizing, technology, or operating decisions” of the incumbents “as bases for calculating” costs). Assumptions are inevitable. And the resulting uncertainties mean a somewhat random sort of rate that can either exacerbate the incentive problems previously mentioned or alleviate those problems by a kind of regulatory coincidence. See *ante*, at 51 (describing how state commissioners “customarily assign rates based on some predictions from one model and others from its counterpart”).

IV

The criticisms described in Part III are serious, potentially severing any rational relation between the Commission’s regulations and the statutory provision’s basic purposes. *State Farm*, 463 U. S., at 56. Hence, the Commission’s responses are important. Do those responses reduce the force of the criticisms, blunt their edges, or suggest offsetting virtues? I have found six major responses. But none of them is convincing.

First, the FCC points out that rates will include not only a charge reflecting hypothetical “most-efficient-firm” costs but also a depreciation charge—a charge that can reconcile a firm’s initial historic investment, say, in equipment, and the equipment’s current value, which diminishes over time. See Order ¶686 (“[P]roperly designed depreciation schedules should account for expected declines in the value of capital goods”). If, for example, an incumbent’s reasonable investment, measured actually and historically, came to \$50 million, but FCC experts predict a “most-efficient-firm-building-from-scratch” future replication cost of \$30 million, a depreciation charge could permit the incumbent to recoup the otherwise missing \$20 mil-

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lion. And, in theory, a state commission might structure a potentially complex depreciation charge so as both to permit recovery of historic investment and also to offset many of the improper investment incentives described in Part II, *supra*.

This response, however, does not reflect what the Commission's regulations actually say. Those regulations say nothing about permitting recovery of reasonable historic investment nor about varying the charge to offset perverse investment incentives. Rather, they strongly indicate the opposite. They clearly require state commissions to use *current* depreciation rates right alongside the Commission's new and different "most-efficient-firm-building-from-scratch" charges. See Order ¶702. They do create an exception from "current" rates. But to take advantage of that exception "incumbent LECs" have to bear the "burden of demonstrating with specificity that the *business risks* that they face in providing unbundled network elements and interconnection services would justify a different . . . depreciation rate." *Ibid*. Unless the exception is to swallow the rule, the term "business risks" must refer to some special situation—not to the ordinary circumstance in which a new entrant simply asks to share an "element" at rates determined under Commission "most-efficient-firm" rules. In any event, that is how 24 state commissions have read the language. See *1998 Biennial Regulatory Review—Review of Depreciation Requirements for Incumbent Local Exchange Carriers*, 15 FCC Rcd. 242, ¶69 (1999). And the FCC nowhere explicitly says to the contrary. Hence the FCC depreciation rules as written do not respond to the critics' claims in the ordinary case, nor do they otherwise transform its "most-efficient-firm-building-from-scratch" system into a system that reflects historic costs.

Second, the FCC points out that a state commission can adjust permissible profit rates. In theory, such an ad-

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justment could offset many of the improper investment incentives described in Part II, *supra*. But, like the depreciation regulations, the profit regulations say nothing about the matter. Indeed, like the depreciation regulations, they suggest the opposite. The relevant FCC regulations say that “the *currently authorized rate of return at the federal or state level is a reasonable starting point.*” Order ¶702 (emphasis added). They, too, add an exception, available to “incumbent LEC’s” that successfully “bear the burden of demonstrating with specificity that the *business risks* that they face in providing unbundled network elements and interconnection services would justify a different risk-adjusted cost of capital.” *Ibid.* But this exception, like the depreciation exception, cannot respond to the critics’ claims in the ordinary case for similar reasons.

The FCC adds that it did not have “time” to offer more than “tentative guidance,” Reply Brief for Federal Parties 11–12, that profits now may be too high, Order ¶702, and that the incumbents may find other ways to lower their capital costs, *id.*, ¶687. These additions, however, concede the critics’ basic point—that the “profit” rules as written do not provide an answer to Part III’s claims. Rather, *considered as a response to those claims*, they must rest upon no more than hope for a regulatory coincidence. Most significantly, they hope that current market conditions mean that current profit rates somehow magically offset the adverse effects of the Commission’s other regulations, see Part III, *supra*. See Reply Affidavit of J. Hausman ¶ 9, n. 8, submitted with Reply Comments of the United States Telecom Association, CC Docket No. 96–98 (FCC filed May 30, 1996), App. 197 (testifying for critics that profit rates would have to double or triple to secure investment). Compare G. Hubbard & W. Lehr, *Capital Recovery Issues in TSLRIC Pricing: Response to Professor Jerry A. Hausman*, (July 18, 1996), App. 216, 221 (arguing

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for FCC defenders that Hausman overstates the need for change, but stating that “[I]f any adjustments . . . are required . . . such adjustments would be modest”). And the majority relies on its belief that that hope has been realized. *Ante*, at 50 (stating that in light of the fact that “competition in fact has been slow to materialize,” “it seems fair to say” that the current rate is a “reasonable starting point”). Of course, one must sympathize with the FCC’s time problem. But the statute did not require the FCC so quickly to create so complex a system. Rather, the statute seems to foresee rates set, not by FCC regulations primarily or in detail, but by negotiations among the parties, 47 U. S. C. ¶252(a)(1), if not by state commissions. See *Iowa Utilities*, 525 U. S., at 412–420 (BREYER, J., concurring in part and dissenting in part).

Third, the Commission supports the reasonableness and practicality of its system with the claim that “a number of states” have used it successfully, as have several European nations. Order ¶681. As to domestic experience, I can find no evidence that, prior to the promulgation of the rules at issue here, any State had successfully implemented the FCC’s version of TELRIC. It is hardly surprising that since then several States have tried to apply it. Nor is it surprising that their implementation has produced criticisms similar to those made here. See, e.g., *MCI Telecommunications Corp. v. GTE Northwest, Inc.*, 41 F. Supp. 2d 1157, 1168–1169, and n. 7 (DC Ore. 1999) (discussing problems with the FCC’s TELRIC).

And the “foreign nation” part of the Commission’s claim rests only upon a 1997 European Community paper referring to a “best current practice” approach as a future goal. See Commission of the European Communities, Recommendation on Interconnection in a liberalised telecommunications market, C(97) 3148, §§3.3, 3.5 (Oct. 15, 1997), <http://europa.eu.int / ISPO / infosoc / telecompolicy / en / r3148-en.htm> (Feb. 25, 2002). Indeed, Britain’s FCC

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counterpart has said that, in the absence of a showing of inefficiency, the incumbent's *actual* current expenditures on capacity additions should be used "as the starting point." See Office of Telecommunications (OfTel), Access to Bandwidth: Indicative prices and pricing principles ¶9 (May 2000), <http://www.oftel.gov.uk/publications/broadband/llu/llu0500.htm> (Feb. 25, 2002).

In fact, as I understand the European system, it may turn out in practice to work roughly as follows: The relevant European regulatory agency, seeking competition, encourages new firms to enter local markets in order to provide new voice, data, text, picture, entertainment, or other communications service. Like the Commission, the agency normally has the authority to insist that an incumbent firm "unbundle," *e.g.*, that it permit a new entrant to use its pair of twisted wires running from switching center to the inside of a house. It also has the authority to set prices. But in exercising that authority, it has neither required, nor is it likely to rely upon, any one rate-setting method. Rather, it may encourage negotiation among the parties in order to reach agreed-upon prices low enough to prevent the incumbent from blocking entry but high enough to encourage the new firm to consider other entry methods, such as use of electricity conduits, or new cables, where economically feasible. If no agreement can be reached, the regulator, in determining the price, can use formulas, modified to take proper account of depreciation and historical cost, or it can look to prices set in other European nations as a yardstick to help produce competition.

This less formal kind of "play it by ear" system, in my view, is what the statute before us intended. The Act provides for price negotiation among the parties, it brings in State regulators where necessary to break deadlocks, and it permits the States to use a variety of different rate-setting approaches, looking to experience in other States

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as appropriate, in order to determine proper prices. The mysterious statutory parenthetical phrase “(determined without reference to a rate-of-return or other rate-based proceeding)”, §252(d)(1), makes sense from this point of view. It reflects Congress’s desire to obtain, not perfect prices but speedy results. It specifies that States need not use formal methods, relying instead upon bargaining and yardstick competition. See *Iowa Utilities, supra*, at 424–425 (BREYER, J., concurring in part and dissenting in part); cf. Order ¶631 (describing how the New York Commission “se[t] prices on a case-by-case basis”). I recognize, however, that the FCC has rejected this approach in favor of extraordinarily complex national rate-setting standards, which we review only to determine whether they will further, or serve as obstacles to the competitive marketplace that the statute seeks.

Fourth, the FCC adds that its system seeks to base rates on the costs a hypothetical “most efficient firm” hypothetically would incur were it “building from scratch.” And such a system, in its view, will “simulate” or “best replicat[e], to the extent possible, the conditions of a competitive market.” Order ¶679; see also *id.*, ¶738. This response, however, does not do more than describe that very feature of the system upon which the critics focus their attack.

As I have previously said, *supra*, at 5–6, such an objective is perhaps consistent with an ordinary ratesetting statute that seeks only low prices. But the problem before us—that of a lack of “rational connection” between the regulations and the statute—grows out of the fact that the 1996 Act is not a typical regulatory statute asking regulators simply to seek low prices, perhaps by trying to replicate those of a hypothetical competitive market. Rather, this statute is a deregulatory statute, and it asks regulators to create prices that will induce appropriate new entry. See Part II, *supra*. That being so, we may assume,

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purely for argument's sake, that the FCC rules could successfully “replicate” the prices toward which perfectly efficient, perfectly competitive markets would tend. But see Kahn 326–327 (stating that such prices are never achieved in any actual market); A. Kahn, *Whom the Gods Would Destroy, or How Not to Deregulate* 4 (2001) (Lodged with the Clerk of this Court) (stating that a firm in an actual market would determine efficient investment in light of its actual system, not a hypothetical system built from scratch). Still, those rules, if successful, would produce the strong incentives to demand sharing, and the strong disincentives to build independently, that Part II describes—for they would create a “sharing” or “interconnection” price equal to or lower than any price associated with the creation of independent facilities. They would thereby tend towards a system in which regulatory price setting would *supplant*, not *promote*, competition. And however congenial institutional regulators might find such a system, it differs dramatically from the system that the statute seeks to bring about. See Part II, *supra*. Cf. *Iowa Utilities, supra*, at 387–392 (setting aside Commission rules granting new entrants power to obtain access to virtually any existing element). At least that is the claim that underlies much of the criticism set forth in Part III, *supra*. And the Commission's response that its system simulates the conditions of a competitive market does not respond to that basic criticism.

Fifth, the Commission says that its regulations are simply suggestive, leaving States free to depart. Reply Brief for Federal Parties 11–12. The short but conclusive answer to this response is that the Commission considered a “suggestive” approach and rejected it. See Order ¶166 (refusing to characterize rules as setting forth, not “requirements,” but “preferred outcomes,” because the latter approach “would fail to establish explicit national standards for arbitration, and would fail to provide sufficient

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guidance to the parties' options in negotiations").

Sixth, the majority (but not the Commission) points out that local commissions are likely to leave any given set of rates in effect for some period of time. And this "regulatory lag" will solve the problem. See *ante*, at 33–34. I do not understand how it could solve the main problem—that of leading new entrants to lease a more costly incumbent "element" where building or buying independently could prove less costly. See *supra*, at 11–13. Nor, given any new entrant's legal right to obtain a regulator's decision, am I certain that lags will prove significant. But, in any event, lags will differ, depending upon regulator, time, and circumstance, thereby introducing a near random element that might, or might not, ameliorate the system's otherwise adverse effects.

In sum, neither the Commission's nor the majority's responses are convincing.

V

Judges have long recognized the difficulty of reviewing the substance of highly technical agency decision making. Compare *Ethyl Corp. v. EPA*, 541 F. 2d 1, 66 (CA DC 1976) (en banc) (Bazelon, C. J., concurring) ("[T]he best way for courts to guard against unreasonable . . . administrative decisions is not . . . themselves to scrutinize the technical merits . . . [but to] establish a decision-making process that assures a reasoned decision") (internal quotation marks omitted), with *id.*, at 69 (Leventhal, J., concurring) (stating that judges must assure, on substantive review, "conformance to statutory standards and requirements of rationality," acquiring "whatever technical background is necessary"). This Court has emphasized the limitations the law imposes upon judges' authority to insist upon special agency procedures. *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*,

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435 U. S. 519, 543–548 (1978). But it has also made clear that judges nonetheless must review for rationality the substance of agency decisions, including technical decisions. *State Farm*, 463 U. S., at 56. That review requires agencies to undertake the difficult task of translating technical matters into language that judges can understand and preparing technical responses to challenges of the sort found here. But, despite the difficulty, review by generalist judges is important, both because technical agency decisions are often of great importance to the general public and because the law forbids agencies, in the name of technical expertise, to wrest themselves free of public control.

Agencies are, of course, expert in technical areas. That is why Judge Leventhal wrote that “the judges,” when reviewing the rationality of substantive decisions, “must act with restraint.” *Ethyl Corp.*, 541 F. 2d, at 69. And I agree. But, he added, judges may not “abstain from any substantive review.” *Id.*, at 68. And again I agree. In this case, the critics’ claims are strong. They suggest that the FCC’s pricing rule, together with its original “forced leasing” twin, see *Iowa Utilities*, *supra* at 388–392 (finding original leasing rule unlawful), would bring about, not the competitive marketplace that the statute demands, but a highly regulated marketplace characterized by widespread sharing of facilities with innovation and technological change reflecting mandarin decision-making through regulation rather than decentralized decision-making based on the interaction of freely competitive market forces. And the Commission’s replies are unsatisfactory. The majority nonetheless finds the Commission’s pricing rules reasonable. As a regulatory theory, that conclusion might be supportable. But under this *deregulatory* statute, it is not. Under these circumstances, it would amount to abstention from, indeed abdication of, “rational basis” review, were I to agree that the record here demonstrates

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the “rational connection” between regulations and statutory purpose upon which the law insists. *State Farm, supra*, at 56; Administrative Procedure Act, 5 U. S. C. §706(2)(A); see also *State Farm, supra*, at 43 (“[W]e may not supply a reasoned basis for the agency’s action that the agency itself has not given”). As Judge Leventhal properly put it, “Restraint, yes, abdication, no.” *Ethyl Corp., supra*, at 69. The Court, of course, with 69 pages of careful analysis, does not abdicate its reviewing responsibility; but for the reasons stated here I cannot agree with its substantive conclusion. Consequently, I would affirm the Eighth Circuit’s determination that the regulations are unlawful.

VI

I disagree with the majority about one further legal issue. The statute imposes upon an incumbent the

“duty to provide . . . for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis . . . in a manner that allows *requesting carriers to combine* such elements in order to provide such telecommunications service.” 47 U. S. C. §251(c)(3) (emphasis added).

The FCC, pointing to this provision, has said that (upon request) incumbents must themselves combine, among other things, elements that are ordinarily not combined. Rules 315(c)–(f), 47 CFR §§51.315(c)–(f) (2000). How, the incumbents ask, can a statute that speaks of the *requesting carriers* combining elements, grant the FCC authority to insist that *they*, the incumbents, combine the elements?

In *Iowa Utilities, supra*, the Court found authority for a somewhat similar rule—a rule that forbids incumbents to *uncombine* elements ordinarily found in combination. But, as the majority recognizes, *ante*, at 64, that different rule rests upon a rationale absent here. If an incumbent

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takes apart elements that it ordinarily keeps together, it is normally discriminating against the requesting carriers. And the statutory provision forbids discrimination. But here the incumbent simply keeps apart elements that it ordinarily keeps apart in the absence of a new entrant's demand. How does that discriminate? And if it does not discriminate, where does this statutory provision give the FCC authority to forbid it?

I cannot find the statutory authority. And I consequently would affirm the lower court on the point.

For these reasons, I dissent.