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Electric Transmission Lines and the Environment

Alan P. Buchmann*

One of the significant outgrowths of the current interest in "environmental" questions is the increasing prominence of aesthetics qua aesthetics as a subject for judicial and administrative concern. A major area of litigation, and one which has by its very nature lent itself to an analysis of the significance, and viability, of purely "aesthetic" issues, has involved high voltage transmission lines.1

In some jurisdictions the regulatory agencies have been expressly enjoined, by statute, to consider the aesthetics of such lines.2 In others, the matter is put in issue through expanded interpretation of such phrases as "public interest" or "general welfare".3 The manner in which the question is raised is extraordinarily varied: applications for certification of a project to a regulatory agency charged either expressly or implicitly with resolving the question;4 actions to enjoin construction alleged to violate local ordinances5 or, conversely, to enjoin enforcement of such ordinances;6 attempts to invoke the National Environmental Policy Act of 1969 against a Federal agency;7 or even eminent domain proceedings.8

1 For our purposes, we can understand transmission lines to be those designed to move large blocks of energy from points of generation to load centers, where the voltages are stepped down and whence, eventually, the power is distributed to the ultimate consumer. Generally speaking, they involve voltages of 138,000 volts or more, although some consider lower voltages to constitute "transmission". Obviously low voltage distribution lines may present similar problems aesthetically; the technology, however, more readily lends itself to solutions. See the discussion at note 65 infra. For a discussion of the technical problems involved in undergrounding high voltage lines see S. Miller, Electric Transmission Lines-To Bury, Not to Praise, 12 VILL. L. REV. 497 (1967). A related question, not explored here, involves the aesthetics of generating plants. This was the major issue in the Scenic Hudson litigation discussed infra beginning at note 24. See also Wilson Point Prop. Own. Ass'n v. Connecticut L. & P. Co., 145 Conn. 243, 140 A.2d 874 (1958). While it does not reach the merits of the controversy, People's Coun., Public Serv. Comm'n v. Public Service Comm'n., 259 Md. 409, 270 A.2d (1970), illustrates some of the problems presented by a statute requiring regulatory approval before construction of a generating plant.

2 See, e.g., the litigation involving the Boston Edison Company discussed beginning at note 39 infra.


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This list does not purport to be exhaustive and this paper will not attempt to analyze the procedural problems involved in these cases, the diverse constitutional and statutory questions involved in determining the relative jurisdiction of administrative agencies and local authorities in the several states, the matter of standing nor the thorny question of the constitutionality of regulations based on aesthetics alone. One or more of these questions is involved in most of the cases discussed herein and there is a substantial corpus of authority dealing with which governmental body, if any, has jurisdiction to prohibit or regulate transmission lines. These cases are primarily studies of local constitutional or statutory law and rarely, if ever, reach the merits of the aesthetic issue and frequently never mention it. What is of interest is that, one way or another, the trend is to consider aesthetic issues in transmission line cases. What is of even more interest is that, where those issues are considered on the merits, almost universally the aesthetic impact of transmission lines on the environment has been held to be minimal.

Before looking at the cases, it is important to realize that in large measure this particular problem has become acute because, just at the time that some segments of the population are apparently more interested in aesthetic questions than hitherto, a constantly increasing demand for substantial quantities of electric energy requires con-

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9 Contrast BENZINGER v. UNION LIGHT, HEAT & POWER CO., 293 KY. 747, 170 S.W.2d 38 (1943) (Public Service Act did not deprive city of authority to enact underground ordinance) with Graham FAMs, INC. v. INDIANAPOLIS POWER & LIGHT CO., 249 IND. 498, 233 N.E.2d 656 (1968). (statute authorizing local planning code not applicable to utility since it would interfere with jurisdiction of Public Service Commission and "local regulation is inimical to that larger interest"). In DETROIT EDISON CO. v. CITY OF WIXOM, 10 Mich. App. 218, 159 N.W.2d 230 (1968), rev'd, 382 Mich. 673, 172 N.W.2d 382 (1969). Both courts held that the Michigan Public Service Commission Act did not preempt the field, but the Supreme Court concluded that a local master plan which imposed height restrictions incompatible with a proposed 345 KV line, adopted after construction of the line was underway, was an unreasonable interference with vested rights. See note, Application of Local Zoning Ordinances to State-Controlled Public Utilities and Licensees: A Study in Preemption, 1965 WASH. U.L.Q. 195.

10 See, e.g., Gimbel v. Loughlin, 28 Conn. Sup. 72, 250 A.2d 329 (1968).

11 See CENTRAL MAINE POWER CO. v. WATEVILLE URBAN RENEWAL AUTHORITY, 281 A.2d 233 (ME. 1971), holding that the fact that the authority considered aesthetics in ordering the replacement of overhead downtown distribution lines by underground did not invalidate its action where other factors, such as safety and reliability, were also involved. See also Opinion of the Justices, 103 N.H. 268, 159, A.2d 762 (1951) (excluding to decide whether a billboard prohibition act could be justified by aesthetics alone, but saying they could be taken into account). The position that aesthetics alone will not justify exercise of the police power is typified by WONDRAK v. KELLY, 129 Ohio St. 268, 195 N.E.65 (1935). For a transmission line case in which the same view is expressed in a concurring opinion, see DETROIT EDISON CO. v. CITY OF WIXOM, 382 Mich. 673, 172 N.W.2d 382 (1969). Compare COMMONWEALTH TELEPHONE CO. v. CITY OF HAYWOOD, 7 P.U.R. n.s. 156 (Wisc. P.S.C. 1934) (resolution to remove poles and wires solely "to improve the appearance of the community" void). Cf. N. Hooley, Compulsory Underground Wiring—A Battle Rejoined in Public Utility Law, 5 VILL. L. REV. 80 (1960).

struction of more and more transmission lines. As the chairman of one of the most affected electric companies has put it: "There is no known way to produce, transmit, and distribute electric energy without some effect on the natural environment." The result is a "conflict between these needs of a highly technological society and the increased awareness of environmental considerations."  

The electric utility industry faces an environmentally aroused general public. The questions being raised are difficult to answer to the satisfaction of this public and often times adverse reactions cause delays that may create critical shortages. The industry must acknowledge by policy and deed the public's right to insist on environmental protection. However, no less important is the general public's duty to acknowledge that the principal function of this industry is to supply energy at a reasonable cost where and when it is required. What remains to be defined then is the balance between those two significant concerns. Energy must be supplied and the environment will be protected.  

The underlying consideration, of course, is that even if one method of construction (as, for example, the undergrounding of transmission lines) is generally assumed to be more "aesthetic," will or should the public pay for that result and how much? The decisions to date, almost uniformly, evidence a marked judicial and administrative reluctance to compel significantly higher capital investment solely for aesthetic reasons. And it is apparent that the courts are strongly influenced by the lack of substantial evidence to show that the increase in cost is really warranted by aesthetic considerations. In short, it remains to be shown that in fact there is much, if any, "aesthetic" harm.

Partly because of this failure of proof and partly because of the constitutional or statutory problems inherent in dealing with the bare questions of taste, transmission line cases frequently involve, or purport to involve, factors other than aesthetics, such as safety. State, ex rel. Cleveland Electric Illuminating Company v. City of Euclid  

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16 In some cases, of course, the alternative urged on aesthetic grounds may be intrinsically unreliable or technologically impossible. See Re Public Serv. Elec. and Gas Co., 69 P.U.R. 3d 1 (N.J. Bd. of P.U. Comm'rs, 1967), aff'd 100 N.J. Supr. 1, 241 A.2d 15 (1968), which contains an extensive review of the technological problems involved in putting a 500 KV line underground.
17 169 Ohio St. 476, 159 N.E.2d 756 (1959), adhered to on reconsideration, 170 Ohio St. 45, 162 N.E.2d 904 (1959), appeal dismissed, 362 U.S. 457 (1960). The court was able to reach result only through this "judicial notice" technique. The trial court (through a special master whose findings are discussed at length in the dissenting opinion, 169 Ohio St. 476 at 483 (1959) found on the facts that the proposed con-
well illustrates the point. Holding reasonable a municipal ordinance requiring underground construction of lines carrying more than 33 kv, the Ohio Supreme Court said:

Judicial notice may be taken that high-voltage electricity by its nature is a very dangerous commodity, and that high-voltage electric wires stretched across public streets constitute a danger to the travelling public.18

On the facts, however, the safety argument has also run into a failure of proof19 and the City of Euclid case, as far as that issue is concerned, has been effectively overruled by the Ohio General Assembly.20 Of considerable interest, however, is the Ohio Supreme Court’s recognition of the difficulty it might have in a purely aesthetic case.

Relator contends that its lines will go through an industrial district, and that, therefore, there is no reason to require underground installation. If our problem was purely a question of aesthetics, relator’s arguments would be valid. However, we are not concerned primarily with the aesthetic but must direct our attention to the question of public safety.21

While some have felt that subsequent developments in the law have placed “beauty and other intangible interests in a far less disadvantageous position”22 or hailed judicial abandonment of “the banal terms of cost-accounting,”23 a careful examination of the cases reveals that, in the present technological situation, cost and reliability considerations outweigh, and should outweigh, questions of taste. Both the procedural complexities and the final results on the merits

(Continued from preceding page)


are best seen through a review of specific transmission line projects and the litigation they have engendered. The basic result, however, is the conclusion stated by the Federal Power Commission during the extensive Scenic Hudson litigation:

It is thus apparent that only for the most cogent reasons, as where no feasible alternative is possible or where the aesthetic detriment is so violent as to preclude any consideration of overhead transmission facilities, that undergrounding should be required.24

Although Scenic Hudson involved much more than the transmission line issue, that aspect of the case loomed large in the legal skirmishing. Consolidated Edison of New York proposed to build some twenty-five miles of high voltage lines, strung on towers 100 to 150 feet high on a 125 foot right-of-way, from a proposed pumped-storage reservoir on the Hudson River to New York City.

At an early stage the company agreed to an underwater crossing of the Hudson River,25 extending underground 1.6 miles from the east shore of the river beyond the crest of the first ridge, adding $12,500,000 to the projected cost of the project. These changes were prompted by the objections of persons opposing transmission facilities within view of the river and were designed to preserve scenic values along the shoreline. The Federal Power Commission concluded that the result was the elimination of any adverse impact on those values, at least in the area of the river, since they would not be visible at all. It was still contended that the lines (when they again became overhead ones) would impair the cross-river view from West Point, but the evidence showed that anyone there would have to use binoculars to find them.26 To place the balance of the line underground would have required $85,000,000 more. One political subdivision proposed to reduce this excess cost by just having the line put underground through it. The Federal Power Commission, quite properly gave this particular proposal short shrift, pointing out that there would be no justice in having the line placed underground through one community and overhead through others.27

The Commission's conclusion on the transmission line issue, after reviewing the significant additional costs attributable to various alternatives calling for various degrees of undergrounding, well states the parameters of the problem:

It must be recognized that overhead high voltage transmission lines are a fact of life in today's world in which the demands for electric power are constantly growing. Consideration of air pollution as well as economy dictate that in the

25 An underground river crossing, which it sounds nice, may well involve more scenic disruption than an overhead one. See Re Hartford Elec. Light Co. note 52 infra.
27 Consolidated Edison Co. of N.Y., Inc., 57 P.U.R.3d 279 at299 (1965). ("Indeed, such a conclusion, in the absence of some clear and compelling reason therefor, would be patently discriminatory").
future even more than in the past electric generating sources must be built at a distance from metropolitan centers, necessitating transmission hauls to markets. We do not mean to minimize the problems associated with overhead transmission lines traversing populous areas or cutting a swath through areas of natural beauty. There is a great public interest in the additional research which is badly needed to accelerate the rate of progress in developing economical underground transmission lines. At present, however, the cost of underground transmission lines at high voltages (and extra high voltages) is still enormous, and the differential as compared with overhead construction is prohibitive except for short distances. The Commission is convinced that to require underground transmission for this entire project would dissipate its economic benefits for power consumers with little commensurate public gain. In this age of electricity, overhead high voltage transmission lines, particularly in rural areas, will continue to be a necessary part of the American scene for many years to come. We do not believe that there is any real dispute on this point and that our task on this aspect of the case is to minimize the adverse impact on the affected communities without destroying the economy of the project.

In summary we find that on the present record no satisfactory and sufficient reason has been shown why Con Edison and, in the final analysis, its consumers, should be required to absorb the extravagant additional costs entailed for more underground cable installation in view of the limited impact which the lines will have upon the area involved.28

The Commission left open the selection of the route for further consideration. It rejected, however, an application for further reopening on the undergrounding issue, saying that its conclusion that the transmission lines, whatever their final location, were to be overhead and not underground was based on the evidence establishing that the costs involved simply could not be justified in the public interest.29

Eventually the Commission certified what it believed to be the best route and in so doing pointed out the effort made by the company to minimize scenic impairment, including running the lines at the base of hills. In addition, it required that the towers be treated to blend “insofar as practical” into the landscape and that the right-of-way be replanted after construction at road crossings and “other points of major public view.”30

On appeal, the Second Circuit reversed, in part on the somewhat surprising ground that it found “no indication” that the Commission had “seriously weighed” the aesthetic advantages of underground

28 Id.
29 Consolidated Edison Co. of N.Y., 57 P.U.R.3d 279 (1965).
transmission lines against the economic disadvantages.$^{31}$ On remand, the Commission reviewed the subject again and concluded that undergrounding would result in unreliability in the delivery of power and would be too costly. Considering construction and maintenance, undergrounding would be sixteen times more expensive. Outages on underground lines, although less frequent, would be more disruptive (due to difficulties in locating the problem and repairing it). Against these cost and reliability factors the aesthetic complaints had to be balanced, but the Commission made it clear that a balancing was required, not simply a determination that there would be some aesthetic impairment.$^{32}$

It may well be that an underground transmission line is aesthetically preferable, but merely because it is aesthetically preferable is a far cry from a conclusion that failure to underground will create such serious damage as to warrant the increased charges to consumers. . . . We would not countenance the destruction or serious damage to any of [the beauty of the area.] Nor do we believe it is in the public interest to burden consumers with the cost of undergrounding unless it were necessary to prevent such destruction or serious damage.$^{33}$

The fact of the matter, the Commission concluded, was that there just was no evidence that there would be "serious damage".

The record testimony reveals that except in infrequent instances no measurable price differentials were found among otherwise comparable properties that could be associated with power line proximity. . . .

In essence given a preference, a property owner or purchaser would tend to prefer not to have a transmission right-of-way in his vicinity, but the impact is not substantial and tends to diminish with the passage of time.$^{34}$

The Commission pointed out the obvious, and extremely significant fact that the benefits, such as they might be, of undergrounding would redound to a few, but the costs would be charged to all users. Finding that there would not be any destruction of or serious damage to scenic beauty, it held that the public interest in a reliable supply of bulk power under the Federal Power Act overrode

$^{31}$ Scenic Hudson Preservation Conf. v. Federal Power Comm'n., 354 F.2d 608, 623 (2nd Cir. 1965) (emphasis supplied), cert. denied, 384 U.S. 941 (1966). Somewhat the same result was reached in Hamilton v. Dept. of Public Utilities, 346 Mass. 130, 190 N.E.2d 545 (1963). The Second Circuit's decision is of peculiar importance for its indication that the Commission has an affirmative duty to examine these issues, even if not otherwise raised. On this point, see also Town of Framingham v. Dept. of Public Utilities, 355 Mass. 138, 244 N.E.2d 281 (1969); Hyde Park v. Collette, 70 P.U.R.3d 110 (Vt. Pub. Serv. Bd. 1967) (Board, in a condemnation proceeding, requested evidence on the effect of a 34.5 KV line on scenic preservation even though the parties had stipulated that there would be no interference).


$^{33}$ Id. at 192.

$^{34}$ Id. at 192. The lack of such evidence has been conspicuous in many other cases. See Re Baltimore Gas and Elec. Co., 64 P.U.R.3d 473, 479 (Md. P.S.C. 1966) and cases cited note 54 infra.
the inconsequential environmental effect of the project.\textsuperscript{35} This time the Second Circuit, in what is essentially an opinion directed to proper standards of judicial review of administrative decisions, affirmed.\textsuperscript{35a} As far as the transmission line issue is concerned, it is obvious that it did so reluctantly,\textsuperscript{35b} although there is good reason to believe that this issue was little more than a device seized upon by the court in the first appeal as an excuse for reversal.\textsuperscript{35c}

In any event, the Federal Power Commission's position is in substantial accord with most of the others which have dealt with the problem. For example, the Connecticut Public Utilities Commission has said:

Progress made necessary by public demand must not be impeded for a few people who are apprehensive of the possibility of later discontent, so long as the public convenience and necessity of the greater number is served thereby.\textsuperscript{36}

In short, the additional costs involved in the \textit{Scenic Hudson} case were simply not justified. Approached another way, despite vigorous assertions to the contrary, the overhead lines in question just did not have any significant aesthetic impact on the environment.

... the area will remain what it is now—scenic and pleasant, with open farmland and orchards and partly wooded with some brooks. To say that this will be seriously damaged or destroyed by an overhead transmission line is not consistent with reality. (Emphasis supplied.)\textsuperscript{37}

The practical effect of the \textit{Scenic Hudson} case, therefore, was little more than to delay construction of a power source and its attendant transmission lines, to the marked detriment of consumers in New York City.\textsuperscript{38} Consolidated Edison, however, has certainly not been

\textsuperscript{35} Consolidated Edison of N.Y., Inc., 58 P.U.R.3d 129 at 193 (1965). At this point the Commission is dealing with Philipstown's reiterated argument that the lines should be underground through Philipstown.

\textsuperscript{35a} \textit{Scenic Hudson Preservation Conf. v. Federal Power Comm'n}., 354 F.2d 608 (2nd Cir. 1965)

\textsuperscript{35b} "Since the Commission's conclusions on this issue are based upon consideration of all relevant factors and are supported by substantial evidence, \textit{they cannot be rejected}" \textit{Id. at} (emphasis supplied). The court noted that the routes had been changed somewhat, but this was hardly the basis of the Commission's decision.

\textsuperscript{35c} The dissenting judge, in discussing what he believed to be the Commission's error in not considering alternate sites more than one hundred miles from New York City, said, "In this day of high voltage transmission, what is so magic about one hundred miles?" a somewhat cavalier approach to the problem after so much time and effort had been devoted to a much shorter line. It is interesting that the "case study" of \textit{Scenic Hudson} in a recent Sierra Club "Battlebook" makes no mention of the transmission line issue. J. HODKIN and P. HERRERA, \textit{Energy} 180 et seq., (1971).


\textsuperscript{37} \textit{Scenic Hudson Preservation Conf. v. Federal Power Comm'n}., 354 F.2d 608 (2nd Cir. 1965).

\textsuperscript{38} Reflecting "the best known problem of administrative procedure: the endless time involved." C. Reich, \textit{The Law of the Planned Society}, 75 \textit{Yale L. J.} 1227, 1242. The Second Circuit felt it necessary to expressly state that it did not consider that the five years of additional investigation which followed our remand were spent in vain,\textsuperscript{8} \textit{Scenic Hudson Preservation Conf. v. Federal Power Comm'n}., 354 F.2d 608 (2nd Cir. 1965), but with no comment at that point on the power supply situation in New York City.
the only utility, nor the Federal Power Commission the only regulatory agency, to confront this kind of litigation. Indeed, a glance at some of the recent cases involving the Boston Edison Company reveals a statutory maze far more intricate than even the obscurities of the "public interest" standard of the Federal Power Act.

The company proposed to construct about seven and a half miles of a 115 kv line on H-frame structures through three towns. It was, first, obligated to seek a determination from the Massachusetts Department of Public Utilities that the project was necessary to serve the convenience of the public and consistent with the public interest. The Department so found, over the objection that the unsightliness of the line would adversely affect property values, and it was affirmed in the "First Sudbury" case. 39

Boston Edison was then required to obtain the Department's authorization for the exercise of eminent domain powers to obtain right-of-way and the same issues were raised. Pointing out that the undergrounding of the line conferred no benefit on the ultimate user and brought no additional revenue to the utility, the Department granted the requested authority. Again it was affirmed. 40

The company still had to seek street crossing permits from the three municipalities. These were, of course, refused and this time the towns were upheld. 41 To do so the court had to hold that the boards of selectmen acting under a statute requiring them to determine whether the line would "incommode the public use of public ways" had jurisdiction to consider aesthetic questions. Keeping in tune with the times, it found that "incommode" could be stretched this far.

The presence of power lines across a public way can, in our view, disturb natural beauty sufficiently to create real annoyance to the public users of the way, particularly in a day when such beauty seems to be a rapidly diminishing public asset. 42

The conclusion that evidence showing that some people felt "a high level of annoyance" is sufficient to support a finding that "public use of public ways" would be "incommoded" is a rather venturesome judicial excursion into statutory interpretation. 43 This is not

42 Id. at 876. Although some "safety" arguments were made, it is obvious that the court did not rely upon them (in contrast to state ex rel. Cleveland Elec. Illum. Co. v. City of Euclid, 169 Ohio St. 476, 159 N.E.2d 756 (1959).
43 The court did make one noteworthy remark which goes further than virtually any other case when, in examining the factors considered by the selectmen, it said: "Furthermore, we cannot say that aesthetic factors are not determinative in the light of the statutory history and our case law." Boston Edison Co. v. Board of Selectmen

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the place, however, to look too closely into the Massachusetts statutes involved, which are exhaustively examined in these cases.

As might be expected, however, this did not end the Boston Edison story. The company also had a 230kv tower line underway which encountered similar opposition. In Town of Framingham v. Department of Public Utilities, a Department order granting an exemption from local zoning restrictions was upheld and in “Third Sudbury” it was held that the local building code was inapplicable. These cases, however, are of interest principally as an illustration of the jurisdictional struggle between the regulatory agencies and local governments ending, in the case last cited, with a heavy suggestion by the court that statutory changes would be needed if local authorities continued to put local considerations ahead of state-wide concerns.

The result in each of these Massachusetts cases, however, except Third Sudbury which directed the company to seek relief from the regulatory agency, really turned on the court’s finding that there was evidence to sustain the conclusion reached by whatever agency had initial jurisdiction. Although in Concord the local authorities declined to issue street-crossing permits, it is plain that the state-wide regulatory agency felt that aesthetic questions had to be balanced against the “cold hard facts of economics” and that, even if construction of the lines would result in a devaluation of property values (which it doubted), it would not be substantial in relation to the public benefit of the project. This is an excellent illustration of the difference in attitude between those bodies which have rate-making responsibility and those which do not. The former are, as the cases amply demonstrate, intimately concerned with the question of excess costs for apparently little, or only locally valuable, results.

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of Concord, 355 Mass. 79, 242 N.E.2d at 877 (emphasis supplied). In White Mountain Power Co. v. Whitaker, 106 N.H. 436, 213 A.2d 800 (1965), an appeal by a landowner from a Public Utility Commission order granting a petition for authority to condemn right of way for a 33 KV line, the court said that damage to scenic beauty, while not determinative, could be considered. It held that there would be less damage in the route proposed by the company than the alternate urged by the landowner (to get it off his property).


45 Boston Edison Co. v. Town of Sudbury, 356 Mass. 406, 253 N.E.2d 850 (1969). The result of all this, we are advised, is that the 115 KV lines are being built underground; the 230 KV, overhead.

46 Town of Sudbury v. Dep’t. of Public Utilities, 351 Mass. 214, 218 N.E.2d 415, 425 (1966). The line would be visible from only 50 out of 2054 residences in the town. The cost of undergrounding was more than three times that of the proposed overhead construction.

The latter either do not appreciate the problem or, being answerable only to local interests, feel free to ignore it.47a

A third complicated piece of litigation, which we need not examine in detail, illustrates both the ingenuity of litigants and the insubstantiality of aesthetic "proofs" where they finally get to them. It involved a proposal by Pacific Gas and Electric Company to build two 220kv lines to an Atomic Energy Commission project in California. Thirty property owners sought to enjoin construction on aesthetic grounds presenting, as the California Public Utilities Commission said, "a clash between that which is aesthetic and that which is practical."48 The Commission's opinion clearly reflects its reluctance to interfere where only a question of taste is presented.

While jurisdiction to give due weight to the question of aesthetics has been conceded in this case, the courts have been reluctant to allow aesthetic values alone to control the regulation of the use of property.

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There are few areas in California where the establishment of transmission lines and other utility facilities does not invoke the displeasure of some persons. If the utility's choice of route or location for its facilities is reasonable—in terms of aesthetics—the commission will not substitute its judgment on aesthetics for that of the utility, even though there are other reasonable choices. The Commission should only interpose its jurisdiction in adjudging public convenience and necessity in matters relating solely to aesthetics where the proposed action of a utility is of the type which would shock the conscience of the community as a whole.49

This apparently means it is not enough for the neighbors to just show that they are displeased. The Commission went on to make it clear that even the displeasure of the community might not be controlling.

It is not here meant to suggest that in a given case where aesthetics is not the sole factor present, the balancing of factors may not be resolved in favor of other factors even though the result is aesthetically displeasing to the community. E.g., (1) the erection of a transmission line required for national defense. (2) The erection of a transmission line through one objecting community for the benefit of many other communities or the state as a whole.50

47a Cases cited note 27, 46 supra note 83 infra.
50 Ligda v. Pacific Gas & Elec. 48 PUR3d 209 at 213 (Calif. P.U.C. 1963). The municipality then adopted an underground ordinance and the A.E.C. undertook construction itself. In Woodside v. Pacific Gas & Elec. Co., 57 P.U.R.3d 209 (Calif. P.U.C. 1965), the commission held it had no jurisdiction to regulate construction by a non-utility. The Ninth Circuit, however, then held that, by virtue of the terms of the Atomic Energy Act, the A.E.C. itself was subject to the local ordinance. Maun v. United States, 60 P.U.R.3d 129 (9th Cir. 1965). Congress then amended the Act and the lines were constructed, overhead. The litigation is discussed and the California Commission criticized by J. Kouba, Regulating Electric Transmission Lines in California—Insulation from Aesthetic Shock?, 22 HASTINGS L. J. 587, 592 (1971).
Two related points—excess costs and the failure to show significant aesthetic detriment, much less such detriment as would justify the excess costs—appear again and again in the cases. In *Re United Illuminating Company* the Connecticut Public Utilities Commission approved construction of a transmission line through the town of Woodbridge. The local opposition made the familiar claims that the installation would seriously interfere with television reception, reduce property values, endanger children in the neighborhood of the towers, and destroy the present natural beauty. The Commission, after a hearing on the merits, concluded that no credible evidence had been adduced to support any of these contentions.

The same Commission reached in *Re Hartford Electric Light Company* involving a river crossing.

Our investigation has resulted in the conclusion that the placement of the proposed transmission lines will mar, to a certain extent, the natural beauty of this river. However, the offense to the eye will be relatively minor. It is thus incumbent upon the commission to weigh this admitted blemish with the cost necessarily entailed in adopting the alternative of underground construction.

The comparative costs of overhead and underground construction is at a mimimum about $382,000 as against approximately $5 million. In our opinion, the relatively minor interference with natural beauty does not justify the placing of such a burden on users of electrical service.

This question of proof is worth examining. Despite the frequent, if not universal, assertion that construction of a transmission line will significantly reduce property values, it is apparent that, like the Connecticut Public Utilities Commission, most courts and regulatory agencies have not been convinced by the evidence presented on the point. On the contrary, while there may be a great deal of opinion on the question, the evidence appears to confute it. It seems safe to conclude, therefore, that, where a case is decided on the merits, compulsory undergrounding of high voltage transmission lines for aesthetic reasons alone will not, and should not, receive significant

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52 64 P.U.R.3d 394, 404 (Conn. P.U.C. 1966) (emphasis supplied).


54 The courts repeatedly say so. See e.g., cases cited notes 40, 48, 53 supra. The argument is not new. For a careful discussion see Property owners & Residents of Westchester County v. Westchester Lighting Co., *P.U.R. 1952C 503, 512 (N.Y. P.S.C. 1952) ("It is probable that every transmission line has some effect upon the valuation of adjacent property, but the estimates given by the witnesses for the complainants are grotesque"). See W. Kinnard, Jr., *Transmission Line Rights of Way and Residential Values*, Connecticut Urban Research Reports No. 7, Aug. 1965.
judicial approval in the foreseeable future, at least as long as cost differentials continue to be significant.\(^5\)

The aesthetics issue has, however, on occasion arisen in another and more diffuse form when it is contended, not that the transmission lines should be placed underground, but that they should be supported by some type of structure different from that proposed, allegedly more aesthetic.\(^5\) Generally speaking, here the cost problem becomes less acute and we are confronted with a simple comparison of the attractiveness of one type of structure as opposed to another.\(^5\) This is an issue with which the judicial system is reluctant to grapple, principally because the question is so pervasively subjective. Even in overhead versus underground cases the decision maker may be confronted with poetic flights about the beauties of industrial construction. In \textit{Re Vermont Electric Power Co.}\(^5\) witnesses testified that the towers of the transmission line would have "a positive effect on scenic values" and the regulatory agency's witness testified that "some people would call them beautiful." As the New Hampshire Public Utilities Commission said in dealing with a low-voltage line over lake water to an island:

\begin{quote}
Who is to say that such a wire crossing is an eyesore. It may be to those on the mainland, and yet, to the owner on the island seeking central station service, this wire span bringing him many comforts may be a thing of beauty.\(^5\)
\end{quote}

The question becomes infinitely more difficult when the parties agree to overhead construction, but argue that one kind or shape or color of tower or pole is prettier than another. Such differences in taste cannot be judicially resolved except in the most extraordinary cases. The very variety of suggested pole and tower designs of itself indicates that there can be no universal agreement on questions of this sort.\(^6\)

Thus the problem, as the case-law now stands, does not readily lend itself to a reconciliation of the need for power and the expressed desire to have it transported as invisibly as possible. Where the question is whether one structure is significantly more beautiful (or less ugly) than another, the administrative agencies and courts are

\(^{55}\) An interesting question, beyond the scope of this article, is whether a utility which voluntarily spends a significantly larger amount to underground transmission lines solely for aesthetic purposes may include that full amount in its rate base for rate-making purposes. The problem, of course, arises from the requirement that the investment be "prudent" or that the property be used and useful for utility service.


\(^{57}\) A question of reliability may also be presented since the "aesthetic" structures, almost by definition, will be relatively untried. \textit{Se Id. Accord, Re Hartford Elec. Light Co., 64 P.U.R.3d 394 (Conn. P.U.C. 1966).}


\(^{60}\) \textit{See Electric Transmission Structures: A Design Research Program, Edison Electric Institute Publication No. 67-61.}
hard put to resolve it and proof of a different effect on property values or other local interests will be hard to come by. On the other hand undergrounding, which at least seems to pose an easier aesthetic issue, is not worth the costs and the courts will continue to decline to impose them on the utility's ratepayers. After all it must be remembered, and the courts do remember, that in the usual case the cost is borne by all the utility's ratepayers, not just those within sight of the proposed transmission line. It is, however, the persons in sight of the line who get the benefit.

In practically all transmission line cases, beauty is the only justification for expenditure of these millions and millions of extra dollars, since the excess expenditure contributes no additional quality or safety to the public service. The sole benefit is aesthetic and accrues primarily to persons living in sight of the line. ... The very focus on this issue, however, affords a key to some aspects of the problem. Perhaps we can put the costs elsewhere. The New Hampshire Commission once put the issue squarely to objecting landowners:

Yet there is a remedy for their objection. The company is willing to place a submarine cable crossing at this location, providing the cost in excess of an overhead crossing is not an assessment against all customers, but a charge against those concerned in the immediate area.

This approach has been followed by a number of regulatory agencies in determining responsibility for the additional cost of undergrounding distribution lines in new residential subdivisions. The issue was carefully considered by the Nevada Public Service Commission, which pointed out that while the conflict on the surface appeared to be between utilities and subdivision builders, the real discrimination was that which might arise against all of the utility's

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64 It has been estimated that conversion to underground of existing distribution would cost $150 billion dollars. A. Aymond, Electric Energy and The Environment, 85 PUB. UTIL. FORTNIGHTLY, 39 (June 4, 1970). See E. Miller, Jr., Public Utilities Underground, 1 CALIF. WEST. L. REV. 97 (1965).
overhead ratepayers and in favor of just those residing in underground tracts. If the utility, faced with having to assume all the additional cost of underground installations, sought and obtained a general rate increase, all of its ratepayers would be saddled with the burden of paying that additional cost, but only those living in underground subdivisions would benefit. The Michigan Commission has taken the same position.

... the burial of electric facilities increases the utility's rate base and its cost of rendering service to its customers.

... Overhead electric construction is the standard method of serving electric customers at the present time and it would not be reasonable to charge higher rates to the vast majority of customers served from overhead systems in order to provide underground electric facilities for the relatively few customers to be served through underground facilities in the immediate future.

This, of course, is an underlying consideration in the high voltage cases, the principal difference being that the cost differential is significantly greater. The Connecticut Commission (with many others) has emphasized that the cost of underground high voltage installations is in multiples of the cost of overhead and would have a marked unfavorable impact on the rates charged consumers. As a result of this concern for cost responsibility, while the regulatory agencies have allowed or ordered undergrounding in the residential distribution cases, they have generally imposed all or some of the additional costs on the persons primarily benefited.

It is in this direction that a solution to the controversy over high voltage transmission lines may be found. Assuming that questions of reliability and safety can be eliminated or minimized, so that cost versus presumed aesthetics is the sole issue, it may be desirable for the utilities to offer those concerned, at least where they act through a municipal or similarly geographically-defined agency, a choice at their cost. This option should eliminate any burden on other parties benefited and the method of its calculation receives widely varying treatment, but this does not affect the principle. See Re Rules for the Undergrounding of Elec. and Communications Facilities, 78 P.U.R.3d 189 (Ark. P.S.C. 1969) (statewide uniform rule impracticable); Re Portland Gen. Elec. Co., 67 P.U.R.3d 417 (Ore. P.U. Comm'r, 1967); Virginia State Corp. Comm'n v. Appalachian Power Co., 65 P.U.R.3d 283 (Va. St. C. C. 1966). Underground distribution proceedings abound; these notes do not purport to be exhaustive.

This may be a large assumption, but the cases suggest the possibility, at least for voltages under 345 KV.
ratepayers and, at the same time, rather conclusively test the true depth of environmental concern.

There has been comparatively little case law in this area, but what there is points the way to this result. As already shown, the agencies and courts have frequently referred to the discriminatory effect of imposing excess costs on all ratepayers for the benefit of the few. They have rarely had to determine whether this is undue discrimination in the sense of most public service acts, because generally they have declined to require the excess expenditure in the first place. Aside from the underground distribution cases, however, there is some authority indicating that excess costs imposed by local enactments must be recovered through a local surcharge and certainly there is no authority, or reason, which would support the proposition that they may not be. The best illustration, however, is Re Baltimore Gas and Electric Company. The utility had been required to employ what was considered to be more aesthetic construction for a 115kv line in the City of Baltimore, adding somewhat more than a half million dollars to the cost of the project. It thereupon petitioned the Maryland Commission for authority to impose a surcharge on residential customers residing within one quarter mile of the line. Although the Commission denied the application, it clearly approved the underlying concept. First, it established that the only question was one of aesthetics.

The commission finds as a fact that there is no evidence to indicate any substantial difference in the safety of underground transmission as compared to overhead transmission.

There was no evidence before the commission that property values are adversely affected by overhead transmission as opposed to underground.

It would appear the only justification for the requirement of underground construction is on the basis of beauty.

It should be noted that the Maryland Commission did not find that underground construction was in fact “aesthetically more attractive,” but conceded it “for the purposes of this opinion.” This left it with two issues. The first was whether “the improvement in the beauty of surroundings” justified the requirement that a public utility expend five times or more its normal cost to install trans-

70 See beginning at note 64 supra.
71 Ogden City v. Pub. Serv. Comm’n., 123 Utah 443, 260 P.2d 754 (1953) (requiring an electric company to recover local taxes through a local surcharge).
75 Amounting to $5.22 per month per affected customer.
mission facilities underground rather than above. This, of course, is the question which has been, almost universally, answered in the negative in other jurisdictions. The Maryland Commission, however, concluded that in the absence of a uniform state policy on overhead and underground construction established by the legislature, it was not for it to make that particular determination. This, of course, left this policy decision in local hands.

The Maryland Commission was, however, prepared to decide what it posed as the second issue—whether, if the expenditure of such excess sums was required, all the utility's customers should bear the resulting increased burden or whether it should be imposed on those who benefited from the requirement. Its answer is the only reasonable one.

The commission rules that whenever electric utilities in the state are required by local zoning, ordinance, or by exercise of the police power of a local subdivision to construct an electric line underground at a cost substantially higher than the cost to construct the same line overhead using acceptable standards of utility line construction, then in the absence of the proof of unusual circumstances, the annual fixed charges needed to support the excess investment shall be imposed on all of the utility's customers receiving service in the geographic area and/or the local subdivision to which the regulation or ordinance is applicable as a whole. In other words, if the county or incorporated community requires the underground installation then the utility's customers in the county or incorporated community must bear the excess cost and the commission will approve a surcharge in such instances to apply to these customers only.

While the Commission did not authorize imposition of a surcharge in the case before it, on the ground that it was one of first impression, it made plain that its new policy should be considered by local governmental agencies in deciding to require underground construction:

It is our belief that the important result of this decision is that it will alert and inform all the local subdivisions as to our policy where there is a local requirement of future underground installation.

This seems to pose the issue rather squarely. The cases have, unquestionably, moved toward consideration of aesthetic issues and, albeit reluctantly, of objections based on aesthetics alone. While there

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77 Id.
78 For a time only, however, since Maryland thereupon adopted a policy, see Md. Ann. Code Art. 78 § 54a (1959) 2. Obviously such a statute as Ohio Revised Code 4905.65 does establish a "uniform state policy" opposed to the expenditure of substantial excess sums for undergrounding. That should not, however, inhibit application of the Maryland Commission's ultimate conclusion in appropriate circumstances.
80 Id.
may yet be many battles to be fought in particular jurisdictions on standing and preemption and such like issues, sooner or later the aesthetic questions will be examined on their merits in one fashion or another. The hard fact, however, is that when aesthetics are examined on the merits in transmission line cases they prove not to be worth the candle. And this is not just by way of “cost-accounting”. The cases show that, on the evidence, not only are aesthetic costs high, but the aesthetic effect bought with them is minimal.

It follows that, if there are those who feel that transmission lines significantly affect the environment (and there undoubtedly are), but cannot prove it, they must find some other way to obtain their desires. The obvious way, and the only satisfactory way in view of the case-law, is for them to bear the excess costs which they seek to impose. This will inevitably lead to rate-making and perhaps other problems, but that is surely preferable to a continuation of the unproductive delays attendant upon most of this kind of litigation to date.

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81 As one commentator on the Maryland decision put it: “Whatever cooling effect this may have upon the ardor of those who have hitherto been able to advocate underground lines without being embarrassed by the crass subject of money to be paid by their audiences remains to be seen.” Miller, supra note 1 at 505. See Re Portland Gen. Elec. Co., 67 P.U.R.3d 417, 422 (Ore. P. U. Comm'r 1967).