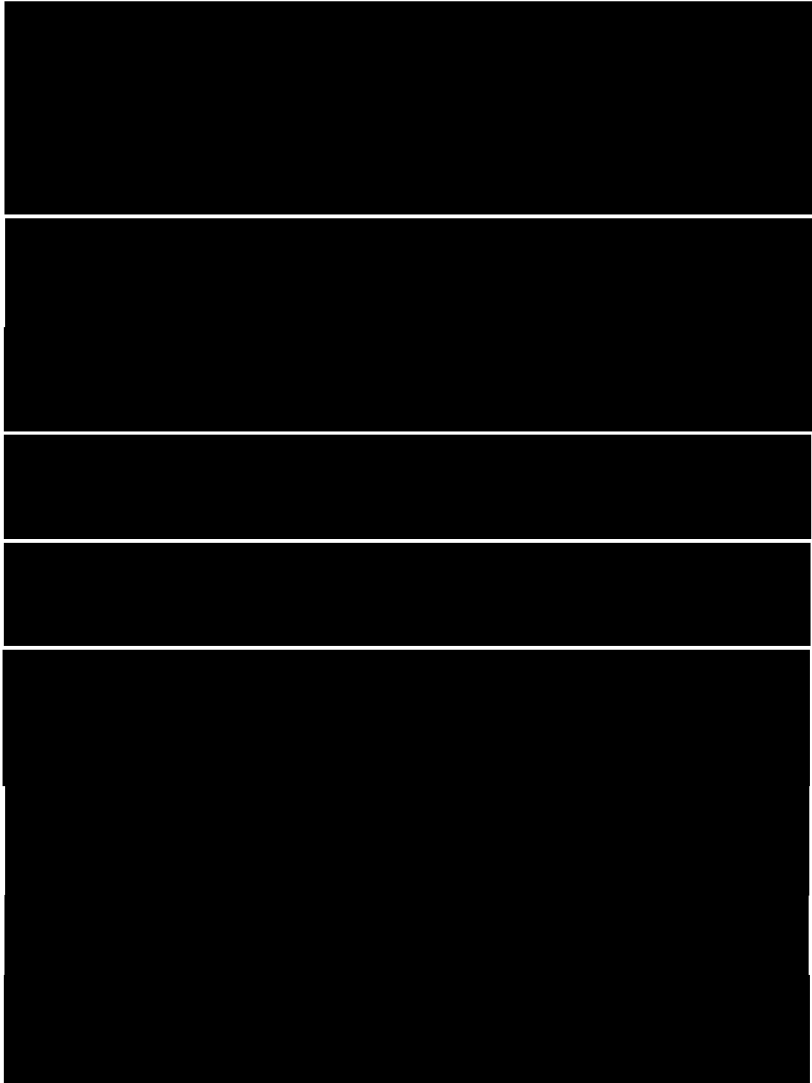


Public Utilities Commission, }  
June 2, 1953. } No. 4184.

NEW ENGLAND TELEPHONE & TELEGRAPH COMPANY

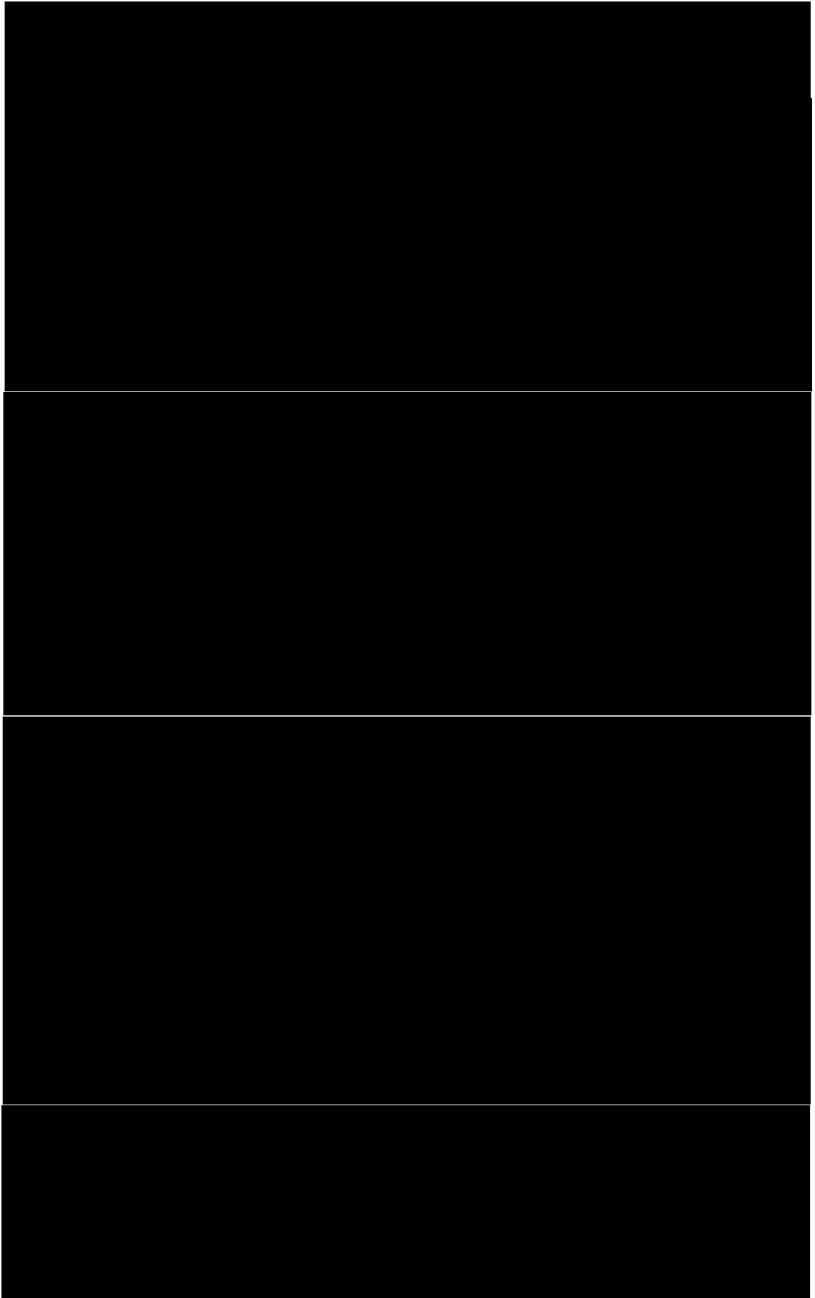
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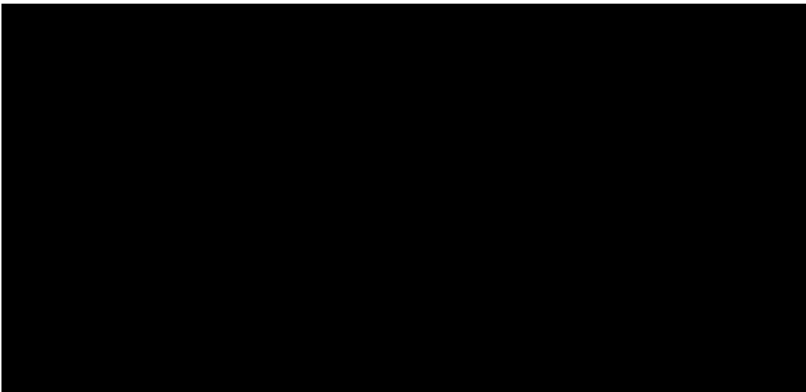
STATE.





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*Sulloway, Jones, Hollis & Godfrey, and T. Baxter Milne and John M. Gepson (both of Massachusetts). (Mr. Hollis and Mr. Godfrey orally), for the company.*

*John N. Nassikas, Deputy Attorney General, for the State.*

LAMPRON, J. The issue dealing with separations arises because subscribers use most of the plant of the company in New Hampshire in common for local or exchange calls, intrastate toll calls and interstate toll calls. The company's books of accounts, however, have to be kept according to a "Uniform System of Accounts" prescribed by the Federal Communications Commission which does not provide for the showing of intrastate and interstate results separately. The commission having jurisdiction over intrastate operations only, the company's investment, expenses and revenues have to be apportioned between intrastate and interstate.

The company contends that under applicable legal principles this separation must be made on the basis of the actual relative use of the facilities in the two services. The State maintains that these principles do not demand an apportionment on that basis, but require no more than an apportionment by a practical and reasonable method by which the different uses of the property may be recognized as an element of arriving at an intrastate valuation, provided that such recognition will result in just and reasonable rates.

For a considerable period of years, representatives of the Federal and State regulatory bodies and of telephone companies have cooperatively considered methods and procedures of effectuating this

separation. Two plans in particular have evolved. One is the Separations Manual of 1947: "The fundamental basis on which separations among exchange, state toll and interstate services are made, is the use of telephone plant in each of these services . . . . Separations are made on the 'actual use' basis, which gives consideration to relative occupancy and relative time measurements." The other is a revision of the above made in 1951 and is generally referred to as the Charleston Plan: "The exchange plant has become increasingly complex in nature in recent years . . . . This complexity has correspondingly increased the work involved in the preparation of the separation studies. It, therefore, would be desirable to incorporate as great a degree of simplification as can be employed consistent with reasonable separations procedure . . . . While it has been concluded that sound separations procedures should be based on the 'use' principle, it has been recognized that there are different methods by which these measurements may be employed to allocate the plant."

The commission found "long standing dissatisfaction with the Separations Manual and its results, when applied to New Hampshire." It also found that "the Charleston Plan . . . increases the amount of plant and associated expenses assigned to interstate toll service, thus partially relieving [subsidization of the toll plant] . . . but . . . it still fails to properly evaluate the true state of conditions here in New Hampshire." It further found that the State introduced "a plan of separations which more equitably meets the actual situation . . . .

"The New Hampshire Plan [so called] . . . is based on local conditions of use, with the principles of the 1947 Manual being used fully in grouping the various items of plant, and local factors used to arrive at an allocation." It "modifies the 1947 Manual only in dividing the local exchange minutes of use by three, and using the same categories of plant and factors as contained in that Manual. The allocation is made, however, at the time of maximum use [July-August] in contrast to the average annual usage as determined by the Company."

The company argues that by so doing the commission adopted a method of separations which departed not only from the standard methods but from the basic principle of actual relative use; that its apportionment was inherently arbitrary, without substantial support in the evidence, and constituted error as a matter of law.

The separation on which the parties disagree affects about 65% of

the company's total plant in New Hampshire, commonly referred to as the "subscribers' line plant." It consists of the telephone instruments and associated equipment on the premises of the subscribers, the lines from those telephones to the central office, including supporting structures, and much of the local central office equipment. The company contends that by adopting the New Hampshire Plan, the commission excluded for the year 1952 over \$1,450,000 of property and \$250,000 of expense from intrastate operations. The State maintains the difference in investment is \$1,194,618 and \$135,000 in expenses.

We shall first consider the division of the exchange use by three. The Separations Manual provides that the subscribers' line plant be apportioned as follows: multiply the number of intrastate toll calls, interstate toll calls and exchange calls, respectively, by the average time each type of call uses this plant thus obtaining the total minutes of use. Calculate the relationship of the minutes of interstate use to the total minutes of use. The percentage thus obtained is called the subscriber line use factor commonly abbreviated to "SLU factor." This percentage is applied to the cost of the subscribers' line plant and to the associated expenses to arrive at the amount in dollars which should be apportioned to interstate, the balance being intrastate.

The State agrees that the separation of that plant should be made on the basis of the relative use of its facilities for intrastate and interstate services. But it argues that this comparison must be made between comparable use units. Witness Gerrish, called by the State as an expert, testified in substance that unlimited exchange calls for which the subscriber pays a flat monthly charge are not comparable to toll calls. The latter are a timed message conversation. A price consideration is attached to each call. Unlike an exchange call, an additional charge is assessed for each extra minute of use over the initial rate. The use is constricted both in the inception and duration by the price tag on each call. On the contrary the subscriber may make exchange calls at will unrestrained by any price consideration for the initiation or the duration of the call except for limited or metered service.

Gerrish further testified that it was his opinion, corroborated by the company's own experience with extended area service, that where short haul toll charges are removed between certain exchanges, calls not only triple in number but their duration also increases. Hence the determinants of the SLU factor, viz; number of calls and time

each type of call uses the plant, are thereby affected. To the same effect a company engineer assumed a 35% constriction or curtailment of service would result if coin box charges were to be increased in this state from 5 cents to 10 cents for local messages. In support of the same principle witness Burroughs testified that when the company desires to stimulate the toll calling rate in order to maintain maximum use from the toll plant, it reduces its toll rates for evenings, Sundays and holidays.

Because of these factors, it was Gerrish's opinion that to make exchange and toll calls comparable units from which to determine the relative use of the subscribers' line plant, the free and unlimited exchange use must be equated to measured or toll use. This is to be accomplished by dividing the exchange use by three (or multiplying the toll use by three) because the company's experience demonstrates that their respective use would be affected at least in that proportion if their differentiating charge factors were removed. The evidence supports the commission's finding that as a comparable measure of relative use actual exchange use is more nearly equivalent to actual toll use if the former is divided by three.

The company has criticized, as based upon a distortion or misunderstanding, the State's claim that the Charleston Plan departs from the basis of actual use because it involves dividing or equating exchange minutes of use by two. However, the State logically argues that on an exchange call of five minutes duration the actual use of each subscriber's station (instrument) and loop is five minutes, and this constitutes a total of ten minutes of actual use of the two stations and loop involved. It further argues that under the Charleston Plan of measurement which considers it as being five message minutes of use or total call minutes (T. C. M.) that in fact constitutes a division of the exchange use by two and results in toll minutes of use being weighted two to one for exchange minutes of use. It could be found that this plan would not be as practical and equitable a method of recognizing the relative uses of the company property as the New Hampshire Plan which involves a division of the exchange use by three.

We direct our attention next to the apportionment of the company's plant and expenses on the basis of July-August calls or on a peak-load theory, so-called. The company asserts that this accounts for a difference in net plant allocation of \$640,400 and in operating expenses (excluding Federal income tax) of \$114,000.

As we have seen, the interstate SLU factor is, in broad terms, the

percentage that interstate subscriber line usage represents of total subscriber line usage for all types of calls. The two fundamental components of the SLU factor are therefore (1) number of messages and (2) the holding time. The number of calls can be readily determined with almost mathematical accuracy. This is not so however as regards to holding time. To determine the composite holding times component the company took a total sample of 900,000 observations of call use in the state out of a total annual call use of 210,000,000. This measurement is influenced also by the period of time when the study is made, the selection of sample offices and the application of the results so obtained to non-study offices.

Gerrish testified that the telephone plant is planned to provide a satisfactory service at all times. Since, however, it cannot be installed and removed from hour to hour and day to day, it must be designed to provide for the maximum use, and is always so built by the company. The volume of toll traffic during the months of July and August is far above the average for the year. To make a cost allocation of the plant installed to take care of this high usage on the basis of average annual use is unsound and unreasonable. Only if the relative use between one type of service and another were constant could reasonable results be obtained in this manner. Since the toll usage is the portion that markedly increases in the summer, especially the long line and interstate toll, and the plant as constructed is installed to provide sufficient equipment to handle this particular load, then the allocation at this time reflects the true cost and also the relative costs to be assigned each type of service. This substantial seasonal influence which aggravates the peak load to a greater degree than in other states served by the company is in his opinion unique to New Hampshire and Maine.

The commission in accordance with this testimony modified the SLU factor in this manner. It applied the company's average annual holding times to the number of calls made during July and August instead of to the average annual number of calls. The State maintains that by so doing the commission did not ignore the actual use of the plant for the other ten months because it applied the company's holding time averages which are based on annual use to the number of calls during the peak use to properly reflect the unique situation which prevails in New Hampshire and thereby effect an equitable allocation as between the two classes of services. This is evident it maintains when we consider that telephone facilities are provided for combined peak load requirements of exchange, intra-

state toll and interstate toll users. The demand measured by minutes of use of both interstate and intrastate toll users reaches its peak in July and August. The demand measured by minutes of use of exchange users reaches its peak in August, and July-August average exchange demand is almost coincident with annual average demand for exchange service.

The company argues that because the property and expenses of the company are jointly used and incurred in rendering both interstate and intrastate service and because regulatory jurisdiction is divided between State and Federal authority the need for a firm and definite standard to delineate the respective fields of authority is apparent. Under long established legal principles this standard is the relative use actually made of the facilities by each service. *The Minnesota Rate Cases*, 230 U. S. 352; *Smith v. Illinois Bell Tel. Co.*, 282 U. S. 133; *Norfolk v. Chesapeake &c. Tel. Co.*, 192 Va. 292. Accordingly, the standard methods of separations which have been adopted by the Federal Communications Commission and the National Association of Railroad and Utilities Commissioners and used by the company in this case are based on actual relative use. It also claims that by departing radically from these methods and this basis the commission excluded from intrastate substantial amounts of the company's investment and expenses which are not recognized as interstate under the standard separation methods, with the result that the company is compelled to devote this property and these expenses to the public service without compensation. This action it maintains is contrary to law.

It is true that as much uniformity as possible is desirable in the method of separation to be used by Federal and State authorities. However if the argument of uniformity that the State of New Hampshire must necessarily use the same methods of separation as those used by the Federal Communications Commission is carried to its ultimate conclusion then it runs afoul of the fundamental legal meaning of the term "appropriate recognition of the competent governmental authority in each field of regulation." *Lindheimer v. Illinois Tel. Co.*, 292 U. S. 151, 155.

The commission is not bound by law to the service of any single formula or a combination of formulas in determining a proper rate base. *New England Tel. & Tel. Co. v. State*, 95 N. H. 353, 357; *Chicopee Mfg. Co. v. Company*, 98 N. H. 5, 10; *Federal Power Commission v. Pipeline Co.*, 315 U. S. 575. It is clear that the dominant standard of our statutes is that rates shall be just and reasonable.

*New England Tel. & Tel. Co. v. State, supra; Chicopee Mfg. Co. v. Company, supra*, 9. Since our statutes do not provide a formula for the commission to follow we are not warranted in rejecting the one employed by it unless it plainly contravenes the statutory scheme of regulation or violates our law in some other respect. *Colorado Interstate Gas Co. v. Federal Power Comm'n*, 324 U. S. 581, 587.

We do not believe that the only legally acceptable method of separation is one based on actual relative use as interpreted by the company. Agencies to whom this legislative power of rate-making has been delegated are free, within the ambit of their statutory authority, to make pragmatic adjustments which may be called for by particular circumstances. *Federal Power Com. v. Pipeline Co., supra*, 587. "The variables due to local conditions are numerous; and experience teaches us that it is much easier to reject formulas presented as being misleading than to find one apparently adequate." *Groesbeck v. Duluth, S. S. & A. R. Co.*, 250 U. S. 607, 614. The determination of the extent of the use, in either intrastate or interstate operation, of property used in common for both, and the ascertainment of comparable use-units which will afford a basis for a reasonable division of property and expenses between such uses (*Minnesota Rate Cases, supra*, 461) is not a process which can be held correct or incorrect to a mathematical certainty. Too many variables or judgment factors are involved to permit "extreme nicety" which is not required. *Smith v. Illinois Bell Tel. Co., supra*, 150. A practical method which recognizes the different uses and reflects in a reasonable way their relative proportion is not to be condemned because it differs from other methods in use.

It is our opinion that the formula applied by the commission in this case, The New Hampshire Plan, so-called, was warranted by the evidence. We are of the further opinion that certain of its departures from methods of apportionment now in use elsewhere are justified by variables due to local conditions. In other respects there is no such departure from the legally acceptable principles of separation based on the different uses made of the company's property as to be in violation of them. We are not satisfied that a rate base fixed thereby is unjust or unreasonable.

The commission found that a rate of return of 5.75% was reasonable and that "under the present conditions, and for the purposes of this case, we find that a range of 45% to 50% debt ratio is proper for this company. It is our opinion that this range of debt ratio

will allow the company to attract new capital in the foreseeable future.”

The company contends that such a rate of return is not only unreasonably low but it is also confiscatory. It claims that the commission's rate of return finding was based upon two fundamental errors. First, the commission disregarded the actual capital structure of the company and substituted a hypothetical structure without warrant in the evidence. Second, the commission failed to find a cost of equity money to the company and completely ignored the evidence presented by it on that question.

We held in *New England Tel. & Tel. Co. v. State*, 95 N. H. 353, 361, that “the proper rate of return is a matter for the judgment of the commission, based upon the evidence before it. In fixing the rate the cost of capital may not be ignored, but what that cost may be is also a matter for determination by the commission upon the evidence.”

When the case was tried the capital structure of the company was equity capital 61.9%, long term debt 32.7% and short term debt 5.4%. Its debt ratio has fluctuated between a low of 36.2% in 1945 to a high of 58.5% in 1949 with a seven year average of 47.5%.

Although the determination of whether bonds or stocks should be issued is for management, the matter of debt ratio is not exclusively within its province. Debt ratio substantially affects the manner and cost of obtaining new capital. It is therefore an important factor in the rate of return and must necessarily be considered by and come within the authority of the body charged by law with the duty of fixing a just and reasonable rate of return. *New England Tel. & Tel. Co. v. Department of Pub. Util.*, (Mass.) 97 N. E. (2d) 509, 514; *Petitions of New England Tel. & Tel. Co.*, 116 Vt. 480. The commission could therefore legally determine a just and reasonable rate of return upon a capital structure different from the actual structure of the company at the time the case was adjudicated. *Chesapeake & Potomac Tel. Co. v. Public Service Comm'n*, (Md.) 93 A. (2d) 249, 257.

The commission virtually adopted the recommendations of witness Kosh, an expert called by the State, in its determination of a reasonable capital structure. He testified that there are two measures of capital structure; viz; (1) debt ratio which reflects the balance sheet and indicates what proportion of total capital is in the form of debt; (2) absorption ratio which reflects the income account and is the percent of gross income available for return

absorbed by interest charges. The latter being, in his opinion, the soundest approach to determine a safe and economical capital structure, he developed the "Absorption Ratio Factor" which measures the relative ability of different companies to carry fixed charges during periods of differing economic conditions. He then proceeded to analyze the financial history of the Bell System and of the company and found that the latter could have a 14% higher absorption ratio than the former. He also compared the absorption ratios of five other telephone companies and those of a group of electric companies including the Public Service Company of New Hampshire. He concluded that an absorption ratio of 30% would be conservative for the company.

It was agreed that the present cost of debt capital is 3.56%. Kosh testified that in his opinion the cost of hiring new debt would be 3.15—3.25%. He further testified that the cost of debt is virtually unaffected by variations in capital structures.

To determine the cost of equity capital to the company Kosh made an analysis of American Telephone and Telegraph Company dividend yields and found the cost of capital and fair rate of return to the Bell System as a whole. To determine the extent of the applicability of his cost of capital and rate of return, he compared the financial and operating characteristics of the Bell System as a whole with those of the company including the economic characteristics of the markets they serve. He concluded that the company was a substantially similar investment opportunity to the Bell System. Having so found he next determined the cost of equity capital to the Bell System by using the dividend yield as his basic measure. Proceeding under the theory that the best measure of the cost of equity capital to the company is to determine the cost of equity capital of telephone utilities which are equivalent and comparable investment opportunities carrying corresponding risks he found the cost to be between 7.41% and 7.84% on a dividend yield of 6%, pressure of 10% and dividend payouts of 90% and 85% respectively.

The company's witnesses, considering the capital structure of the company as it actually existed, testified that the current cost of equity capital was approximately 10%. Some of their conclusions were derived from a study of the debt structure of Class I railways and "the most soundly financed companies in the electric industry."

Whether the commission should rely upon the expert testimony presented by the State in preference to that offered by the company

or vice versa cannot be decided as a matter of law. It is a matter for its judgment based upon the evidence presented. *New England Tel. & Tel. Co. v. State*, 95 N. H. 353, 361. It could properly find from the evidence that the cost of money to the company is 5.59—5.76%. This is based on a cost of debt of 3.56% and a cost of equity of 7.41—7.84%. It could also properly find from the evidence that the cost of debt and the cost of equity used above are higher than the bare cost of capital. While the rate of return allowed in this case was not the only sustainable rate that could be allowed it was not confiscatory and we cannot say that it was unreasonable or unjust. *Chicopee Mfg. Co. v. Company*, 98 N. H. 5, 12.

The commission established \$144,093 as an adequate working capital allowance to add to the "test year" 1951 rate base, and \$241,575 for 1952. A working capital allowance has for its purpose and should be sufficient to provide for (1) the necessary amount of operating materials and supplies, (2) the maintenance of required minimum cash balances, (3) the payments for operating expenses made before reimbursement therefor from revenues. Because of the lag between receipt by the company and payment by it of certain cash received mostly from taxes collected by it, the company has the use of this cash to meet certain of the above obligations. Whether and to what extent such funds should be deducted from the cash working capital required is essentially a question of fact within the province of the commission to decide under the circumstances of the case before it. We see no error in the method adopted or the results reached by the commission in this case. *Chicopee Mfg. Co. v. Company*, 98 N. H. 5, 14; *Chesapeake & Potomac Tel. Co. v. Public Service Comm'n*, *supra*, 256.

*Appeal dismissed.*

BLANDIN, J., dissented in part: the others concurred.

BLANDIN, J., *dissenting in part*: To determine the relative amount of plant and associated expenses which should be apportioned to intrastate and interstate operations respectively, the majority report of our commission divided the minutes of exchange use by three. It thereby credited to exchange use only a fraction of the minutes so used and thus departed from all previous separations formulae here or elsewhere which are based on actual use. The report itself concedes that this drastic procedure goes beyond that adopted in

any other jurisdiction. However, justification is sought by claiming that this division by three is only an extension of the so-called Charleston separations formula which makes a similar division by two. This formula was unanimously adopted by the Federal Communications Commission after exhaustive study less than a year before our commission's report. At the meeting at which this plan was adopted two of our Commissioners were present and supported the plan. The reason for the division by two in the Charleston Plan is that in exchange calls, under the company's recording system, the time used by the person making the call is added to the practically identical time consumed by the one receiving it. Thus if Jones in Lebanon calls Brown in Lebanon and they talk for five minutes, the result would be a credit of ten minutes to this exchange call. It may be argued with some logic that this results in a disproportionate amount of cost being credited to the exchange operations, so the ten minutes is divided by two. However, if Jones in Lebanon calls Brown in Boston and they talk for five minutes this all should be and is credited to interstate service. This obvious explanation has been recognized in other jurisdictions and we know of none where the reason for the division is otherwise interpreted. It seems therefore clear that the Charleston Plan does not depart from the actual use principle in its separations procedure. Furthermore, the plan itself states unequivocally that "sound separations procedures should be based on the 'use' principle" (*company's exhibit 32a p. 1*), and this plan is so based. Nowhere in the Charleston Plan is there mention or suggestion of "equating" toll and exchange use or of dividing or multiplying to equate such use by the introduction of any element of value of service. It seems to me that any surmise that this plan embodies anything of this sort is without foundation in fact.

Supply (cost of service) and demand (value of service) are separate and independent factors in the determination of utility rates. The object of separating joint plant and apportioning it among local exchange, intrastate toll and interstate toll uses is to ascertain the costs applicable to each kind of service. The measure of the cost of such service under existing rate structures must be the actual use of the plant in rendering each kind of service. To introduce, as would our commission, the demand or *value* of the service in reckoning this cost is to give weight to an extraneous and unrelated factor. The aggregate value of each service to consumers may be measured by the total revenue derived therefrom. But to

separate the cost of property on this basis is clearly improper for it entails circuitry of reasoning. If the property were so separated, then the relative total revenues would be used to determine a rate base for each kind of service and this rate base in turn would be used to determine the rates necessary to produce the revenue required to cover operating expenses and an adequate return on investment. Yet in dividing by three the actual minutes that the plant was used for local exchange cost in the reckoning of relative use, the commission was introducing the element of value based on the rates consumers are willing to pay for the services. Such a procedure incorporates indirectly a factor which so far as we know no jurisdiction has permitted to be brought in directly.

Our commission concededly without precedent or experience upon which to base such action makes a radical departure from the use principle by dividing the actual minutes of exchange use by three. In so doing it violates the long established principle that the separation must be based on actual use. *Smith v. Illinois Bell Tel. Co.*, 282 U. S. 133, 150, 151; *Norfolk v. Chesapeake &c. Tel. Co.*, 192 Va. 292. As the commission admits "the full effects of the Charleston plan are not yet fully known, or realized." In other words, this plan while possessing a findably logical basis has not yet completely proved itself and is to an extent an unknown. Upon this unknown the majority opinion of our Court would permit the commission to superimpose another unknown factor in the hope of obtaining a fair result. I am unable to find an adequate justification in law or logic for such a procedure. Unquestionably the matter of separations is one of great difficulty and reasonable latitude must be granted the commission in the performance of its task. *New England Tel. & Tel. Co. v. State*, 95 N. H. 353, 357. *Federal Power Commission v. Pipeline Co.*, 315 U. S. 575. But its conclusions must be based on "facts and reason." *New England Tel. & Tel. Co. v. State*, *supra*, 359. Here it is not a fact that dividing the minutes of actual use on exchange calls by three can by any rational processes lead to a fair separation based on actual use as the law requires. *Smith v. Illinois Bell Tel. Co.*, *supra*, 150, 151. Nor does it seem the hope that somehow this figure three arbitrarily chosen will produce a just result is a sufficient reason to permit its use. To say, as does in effect the majority opinion of our court, that the method of arriving at the result is immaterial so long as a fair result is reached seems to me to beg the question. It is impossible to tell in this case whether a fair result has been

obtained since it rests upon errors of law and fact. Assuredly, it is the duty of our court to supervise the methods employed by the commission to the extent that such methods shall not be arbitrary but shall be based on reason. *Cf. Wisutskie v. Malouin*, 88 N. H. 242, 245. For us to do otherwise would be to destroy eventually the integrity and effectiveness of the whole regulatory process. "The public, as well as the parties, is entitled to a finding of the public good on a hearing without error of law." *Parker-Young Co. v. State*, 83 N. H. 551, 560; *Boston & Maine R. R. v. State*, 97 N. H. 380, 384. It seems to me the commission has erred as a matter of law in its apportionment of property and expenses between intrastate and interstate services and that as a result of this error the petitioner's constitutional rights are violated. Therefore, I would remand the case for a redetermination of this issue and for such revision of the order as may result therefrom.

Hillsborough, }  
 May 27, 1953. } No. 4186.

MERCHANTS NATIONAL BANK *v.* DELANA B. CURTIS & *a.*