

**INSTRUCTIONS FOR SCHEDULE B**  
**(ANNUAL OPERATING EXPENSES ASSOCIATED WITH MAINTENANCE AND**  
**INSTALLATION OF CABLE EQUIPMENT, EXCLUDING DEPRECIATION)**

Schedule B includes all annual operating expenses, excluding depreciation, for service installation and maintenance of equipment for the 12 months ending as of the date you last closed your books. This schedule requires you to list your operating expenses, including salary and benefits, supplies, utilities, other taxes and any other applicable expenses. Other expenses included must be identified. The total is the sum of all operating expenses and should be entered in Box 2.

**INSTRUCTIONS FOR SCHEDULE C**  
**(CAPITAL COSTS OF CUSTOMER EQUIPMENT)**

1. Schedule C includes the purchase cost of leased customer equipment, including acquisition price and incidental costs such as sales tax, financing and storage up to the time it is provided to the subscriber.
2. In Column A list all customer equipment for which there is a separate charge, including different models of remote control units, different types of converter boxes, and other equipment. List separately each type of other equipment for which you plan to develop a separate charge.
3. In Column B give the gross book value of the listed equipment. The gross book value includes the cost of spare customer equipment that the operator keeps on hand for new customers or as replacement for broken equipment.
4. List the accumulated depreciation in Column C for each equipment category in Column A.
5. Column D requires you to give the deferred tax balance associated with the plant categories listed in Column A (Generally, such amounts result from the use of faster depreciation write-offs for tax purposes than for financial reporting purposes).
6. Column E requires you to give the net book values for each category in Column A (Column B minus the sum of Columns C plus D).
7. Column F multiplies a reasonable rate of return by the investment listed in Column E. The Report and Order states that the Commission will consider up to 11.25% as a not unreasonable rate of return. If you choose a rate of return that is higher than 11.25%, you must attach a justification for your choice.
8. Column G requires you to list the federal and state income taxes you would be required to pay for each category of return in Column F. (Apply your federal and state tax rate to the return on investment in Column F).
9. Column H requires you to list the annual depreciation expense for each category of equipment in Column A.

10. Column I requires you to give the total number of units in service for leased remotes and converter boxes. For other leased equipment, list the total number of units in service or the total number of subscribers using this equipment, whichever is appropriate.
11. Column J requires you to add Columns F, G, and H.
12. Add the totals in Column J and enter in Box 3.

#### **INSTRUCTIONS FOR SCHEDULE D**

Schedule D is used only if you choose to charge averaged rates for service installation. If choosing this option, you must calculate an averaged rate for several types of installations.

Schedule D calculates four separate averages charges that the Commission requires for an operator choosing this option. These average charges are for: (a) installations of unwired homes; (b) installations of already wired homes; (c) installations of additional connections at the time of initial installation; and (d) installations of additional connections after initial service installation. An operator may calculate, using the same methodology, average charges for other specific types of installations such as those requiring extra long drops to the home. Add additional lines as needed.

To calculate an average installation charge, multiply the Hourly Service Charge (HSC) by the average number of hours it takes for that type of installation. Attach an explanation or study for how you arrived at the average time for that type of installation.

**APPENDIX E -- SURVEY RESULTS: TECHNICAL ISSUES**

## APPENDIX E

### Survey Results: Technical Issues

1. On December 10, 1992, the Commission adopted an Order, in MM Docket No. 92-266, 8 FCC Rcd 226, which required certain selected cable system operators to provide subscriber rates and other information for their cable community units and the cable systems to which they belong.

#### Data Collection

2. Survey Methodology. The Commission mailed 748 survey forms to a range of cable community units.<sup>1</sup> The components of the survey were: 1) a 1-percent random sample of cable community units ("random sample");<sup>2</sup> 2) cable community units where there appeared to be competition from at least one other multichannel video service provider ("overbuild sample");<sup>3</sup> 3) community units in low

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<sup>1</sup> A cable community unit is a cable television system, or portion of a cable television system, that operates within a separate community or municipal entity. See 47 CFR §76.5(dd). A cable television system is defined in 47 CFR §76.5(a).

<sup>2</sup> A 1 percent random sample of 300 cable community units was drawn from the universe of active cable community units (29,963) in the Commission's data base as of December 14, 1992. The procedure used is as follows: 1) in order to initialize the random number generator described below, forty seed numbers were randomly selected by Commission staff; 2) a list of random numbers between 1 and 29,963 was created by a computerized random number generator based on the encryption standard of the National Institute of Standards and Technology (NIST); 3) at the same time, a list of the 29,963 community units was created from the Commission's data base, alphabetized by state, and within each state, ordered in seriatim, by the community unit identification numbers (CUIDs); and 4) Commission staff matched the first 300 randomly selected numbers to 300 community units from the list described in (3) above.

<sup>3</sup> To identify cable systems competing with other systems, a list of cable overbuilds was taken from the Cable TV Overbuild Census in Paul Kagan Associates, Inc., "Cable TV Franchising," April 30, 1992. In addition, a list of overbuild systems as of October 3, 1992, from Nielsen Media Research, was provided by NCTA. Systems that appeared on either list were included in this sample. To identify cable systems facing competition from wireless cable systems, a list of wireless cable systems in operation or under construction in 1992 was obtained from the Wireless Cable Association. A list of multichannel wireless cable systems as of December 31, 1990 was also obtained from Paul Kagan Associates data. On the assumption that a wireless cable system that began operation after 1990 was unlikely to have penetration greater than 15 percent in September 1992, wireless cable systems were

penetration franchise areas (those expected to have less than 30 percent cable penetration) ("small sample")<sup>4</sup>; and 4) cable community units in the 100 largest cable systems ("top-100 sample").<sup>5</sup> A small number of surveyed community units fell into two categories.

3. Information solicited in the survey. The survey sought information about (i) the community unit selected, (ii) the cable system to which the community unit belongs, and (iii) one other community unit in the same cable system.<sup>6</sup>

4. Information requested concerning the cable system included identification and location data; a list of all franchise areas served by the system, their zip codes, FCC community unit identification (CUID) numbers, and franchise authorities; a range of descriptive data for the system including, among other things, households passed by the cable system, subscribers, line miles of distribution plant, and whether it was part of an MSO; system annual revenue for the latest complete fiscal year including separate information for the basic tier, other tiers, pay, pay-

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considered only if they appeared on both lists. Cable systems in the same markets as these wireless systems were identified from the Cable TV Factbook. These cable systems were included in the survey if their ownership was different from that of the wireless cable system in the market. These lists of systems were compared with the FCC's list of cable system community units to determine the CUID code and the mailing address of the appropriate community unit. Where the systems could not be identified in the FCC's list, and addresses were not provided in the original list, addresses were found in the Cable TV Factbook.

<sup>4</sup> To identify cable systems with less than 30 percent penetration as of October 3, 1992, a list from Nielsen Media Research was provided by NCTA. Where these systems could not be identified in the FCC's list, and addresses were not provided in the original list, addresses were found in the Cable TV Factbook.

<sup>5</sup> The list of 100 largest systems was taken from the Cable TV Factbook list of "Top 100 Systems." The community unit for each system was selected by choosing the community unit -- as recorded in the Commission's data base -- located in the same city as the cable system's mailing address; where no such community unit was found, a nearby community unit was selected.

<sup>6</sup> We asked respondents to choose as the second community unit the community unit, other than the one to which the survey was addressed, that had the most subscribers and faced competition; if no community unit faced competition, the second community unit was to be the one with the most subscribers (and different prices and channel lineups, if possible).

per-view, and advertising, and information on the extent of competition in each of the franchise areas served by the system.

5. Additional descriptive data sought by the survey about one community unit within the cable system included: households in the franchise area, subscribers, and line miles of distribution plant; franchise fees; average charges for a range of equipment and supplementary charges and the annual sales or rental volumes of these items as of both September 30, 1992 and November 30, 1986; subscribers, number of channels by origin of programming (local broadcast, satellite-delivered, etc.), and monthly charges for the basic tier and other tiers as of both September 30, 1992 and November 30, 1986; and whether the system provided programming services and was rate regulated in November 1986.

6. The survey also asked respondents whether all franchise areas served by the system had the same rates and channels. Where the system did have a second community unit with different rates and channels, the survey asked respondents to provide the information for both community units. A copy of the survey form is attached to the survey Order, and is available in the docket of this proceeding.

7. Survey responses. We received 708 responses from all the samples combined, a 94.6 percent response rate (by February 17, 1993). Of these, 21 were not included in the database because they were either duplicates or had insufficient information for processing, for instance because some systems were not operational. The six hundred eighty-seven valid responses, a response rate of 91.8 percent, were entered into a computer database to permit staff analysis. (An additional 12 responses were received too late to be entered into the database.) We received 293 valid responses from the 300 cable community units in the random sample (a 97.7 percent response rate), and 97 valid responses from the top 100 systems (a 97 percent response rate).

8. Four hundred twenty of the 687 responses include information about a unique second community unit within the same cable system. There are therefore 1107 usable different community unit responses. Many responses have some information missing. In particular, many responses do not have information relating to 1986 rates, channels, and subscribers, or only have part of this information. However, almost all responses have substantially complete information relating to 1992 rates, channels, and subscribers, as well as information describing the system and the community unit(s).

#### **Data Editing**

9. All 687 responses were checked by Commission staff before the data were entered into the computer database. These editors checked the clarity and consistency of the responses.

Where there was doubt about the validity of responses to questions, a follow-up telephone call was made to check the response. Approximately one-quarter to one-third of all survey respondents were called in order to check particular responses. The data were not cross-checked against either published data or the Commission database; not all items of information were checked, and a limited number of logical checks of one data field against another data field were made.

10. Telephone checks were also made to most respondents who indicated that a competitor offered similar services to at least 50 percent of the households in the same franchise area. Calls were also made, in many of these cases, to the relevant franchise authorities and competitors. The purpose of these calls was to gauge the extent of competition and whether the particular community unit was likely to meet one of the legislative definitions of effective competition. Staff also matched responses where different cable operators provided service in the same franchise area.

11. All the community units in the responses were classified according to the extent and type of competition on the basis of the answers to the survey questions, as well as on the basis of telephone calls and other checks. Of the 1107 community units recorded, there are 79 community units facing apparent competition under the statute's first classification (franchise areas with less than 30 percent penetration).<sup>7</sup> There are 46 community units facing apparent competition under the statute's second classification (at least 50 percent of households passed by both competitors and more than 15 percent of households subscribe to the smaller competitor).<sup>8</sup> Finally, there are 16 community units facing apparent competition under the statute's third classification (service provided by either a franchise authority owned cable system or a privately owned cable system competing with

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<sup>7</sup> Of the 79 community units from the first statutory classification, 51 came from the one of the targeted samples (40 from the small, 3 from the overbuild, 7 from the random, and 1 from the top-100). Twenty-eight came from the "second" community unit information (13 from the small, 1 from the overbuild, 9 from the random, 5 from the top-100). The community units were coded in this category according to their responses to the survey.

<sup>8</sup> Of the 46 community units meeting the statute's 50 percent reach/15 percent penetration competition test, 30 came from the targeted samples (21 from overbuild, 4 from random, 4 from small, and 1 from top-100). Sixteen came from the "second" community unit (11 from overbuild, 4 from random, 1 from top-100).

a franchise authority owned cable system passing at least 50 percent of the households).<sup>9</sup>

12. There are also 104 community units where some degree of competition was indicated in the responses but where further checks suggested that the extent of competition did not meet any of the legislative definitions of "effective competition". These community units were not included in the competitive sample, and were classified as "NB."

13. The completed responses were then sent to an outside contractor for entry into a computer database. The computer database was spot checked for accuracy of the data entry. Entries for variables such as subscriber rates, the number of subscribers, and the number of channels that were exceptionally high or low were also checked for accuracy. After the appropriate changes were made, this database was released to the public electronically, both on-line and on computer diskettes and an opportunity for public comment on the data was provided.<sup>10</sup>

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<sup>9</sup> Of the 16 meeting the statute's third classification, 15 came from the targeted samples (13 from overbuild, 2 from random). One came from the "second" community unit in the random sample. A community unit was coded in this category based upon the response to the survey.

<sup>10</sup> Public Notice No. 31934, released February 24, 1993.

**Adjustments made to the data, after release to the public, prior to staff analysis<sup>11</sup>**

14. Adjustment to subscriber rates to take out effect of franchise fees. Of the 1107 responses, 904 indicated that they paid franchise fees. Of these, 401 indicated that franchise fees appeared as a separate line item on their subscribers' monthly bills, (i.e., the subscriber rates for the basic and cable programming tier(s) do not include a franchise fee component). The subscriber rates for the basic and cable programming tier(s) of the other 503 responses which paid franchise fees were assumed to include a component to recover franchise fees. Prior to analyzing the data, all rates which apparently included a franchise fee component were adjusted downward so that all subscriber rates are net of franchise fees.

15. The adjustment procedure for the rates in these 503 responses was as follows. For the responses which indicated that franchise fees were incurred as a percentage of basic subscriber revenue, the monthly subscription charge for the basic tier was reduced by the percentage indicated by the respondent. For the responses which indicated that franchise fees were incurred as a percentage of total subscriber revenue, the monthly subscription charge for all tiers was reduced by the percentage indicated by the respondent. For the responses which indicated that franchise fees were incurred as a fixed amount per subscriber, the monthly subscription charge for all tiers was reduced by the same percentage of franchise fees to subscription revenue. For the responses which did not indicate how franchise fees were incurred, the monthly subscription charge for the basic tier was reduced by the percentage of franchise fees to basic subscription revenue.

16. Although these adjustments are not precisely correct in every case, the imprecision is not likely to introduce a significant amount of error, and on a per-channel basis is outweighed by rounding errors. For all tiered services, the unweighted average monthly charge net of franchise fees differs by only \$0.30 from the monthly charge including franchise fees. On

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<sup>11</sup> NCTA submitted to the Commission a computer diskette that contained a copy of the released database with several entries changed to correct errors. (Diskette submitted on March 8, 1993.) Since there was not sufficient time to independently verify the correctness of the changes made by NCTA, and we did not think it was appropriate to accept NCTA's changes absent such verification, we did not use NCTA's "corrected" data base in any of our analyses. In addition, we do not have any reason to believe that the use of NCTA's diskette would have substantially changed our overall results. The staff also identified a small number of other errors, which were not corrected, subsequent to the creation of the database.

a per-channel basis the difference is only \$0.01. On average, franchise fees are not a very significant component of rates in the data set and the adjustment process described above appears to make sufficient allowance for it.

**17. Adjustment to subscriber rates to include the total cost of equipment and supplementary charges.** Cable operators differ in how they recover the cost of equipment and supplementary equipment-related services ("equipment") from subscribers. Some cable operators include the total cost in the basic monthly charge (*i.e.*, the charge is bundled), while other operators charge separately for the entire cost or a portion thereof. We asked cable operators to report any separate charges for equipment for the community unit (Schedule 7, lines 1 through 16). We specifically asked for the average charge and quantity data for: installation fee, disconnect fee, reconnect fee, monthly converter box rental, monthly remote control rental, monthly additional outlet fee, and tier changing fee. In order to make the subscriber monthly charges consistent across all cable community units, we added these separate equipment charges to the basic tier subscription rate, so that all basic tier rates would include the total cost of equipment. (In the absence of detailed cost data, it was not possible to subtract the equipment costs that were already bundled into the subscriber monthly charge.)<sup>12</sup>

**18.** The specific method used to include all equipment revenues in the subscriber monthly charge is as follows. The average charges for installation fee, disconnect fee, reconnect fee and tier changing fee are multiplied by the number of units of each service, respectively, for the last completed fiscal year. These revenue figures are then divided by 12 to get an average monthly revenue figure. The monthly converter box rental, monthly remote control rental and monthly additional outlet fee are also multiplied by their respective average quantities for the last fiscal year to get an average monthly revenue figure. The monthly revenue figures for each of these seven separate charges are summed<sup>13</sup> and then divided by the number of subscribers to the first

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<sup>12</sup> We also asked respondents to list any other equipment and supplementary charges and average volumes, but did not add these revenues to the monthly charge.

<sup>13</sup> In equation form, the revenues from equipment and services were determined as follows (where "S7" refers to Schedule 7 of the survey questionnaire and the variable names are those used in the documentation of the database): equipment and services charge revenues = (S7\_IFEE X S7\_NIP/12) + (S7\_DFEE X S7\_FYNDI/12) + (S7\_RFEE X S7\_FYNRE/12) + (S7\_TCFEE X S7\_FYATC/12) + S7\_CRENT X S7\_FYACB) + (S7\_RRENT X S7\_FYARC) + (S7\_AOFEE X S7\_FYAAO), where IFEE = installation fee and NIP = the number of installations provided; DFEE = disconnect fee and FYNDI = the number of

tier to get a total equipment charge per month per subscriber. This value was then added to the monthly subscription charge for the basic tier (adjusted for franchise fees) to get the monthly charge which includes the total cost of equipment.

19. There were 64 out of the 1107 records where some information was missing or no information was provided in Schedule 7 of the survey form for equipment and supplementary charges. We concluded that if the cable system to which the community unit belongs earned revenues from equipment charges, then the cable operator probably also charged for equipment at the community unit level, even if some or all the information was missing from Schedule 7. To include no equipment charges for these community units would bias the rate per channel downward. Therefore, for those units we estimated equipment revenue from the system information for these community units and added this estimate to the monthly charge for the basic tier (adjusted for franchise fees) to get a monthly charge which includes an estimate of the total cost of equipment. Using this approach we were able to add equipment charges for 50 of the 64 records that had incomplete information.

20. The specific method used is as follows. The equipment revenues for installation, equipment rental and additional outlets from Schedule 3 for the entire cable system were added together. This number was divided by the sum of basic subscriber revenue plus other tier subscriber revenues for the cable system as a whole, also from Schedule 3 of the survey form, to create a ratio of equipment revenue to the total subscriber revenue for the system.<sup>14</sup> The monthly charge for the individual community unit (adjusted for franchise fees) was then multiplied by 1 plus this equipment ratio to get the monthly charge including equipment revenues.<sup>15</sup>

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disconnections; RFEE = reconnect fee and FYNRE = the number of reconnections; TCFEE = tier changing fee and FYATC = number of tier changes charged for; CRENT = monthly converter box rental and FYACB = average number of converter boxes rented; RRENT = monthly remote control rental and FYARC = average number of remote control units rented; and AOFEE = monthly additional outlet fee and FYARC = average number of additional outlets charged for.

<sup>14</sup> The equipment ratio equals  $(S3\_INSCH + S3\_ERENT + S3\_AOCHR) / (S3\_BASSU + S3\_OTHSU)$ , where S3 = Schedule 3; INSCH = installation charges; ERENT = equipment rental; AOCHR = additional outlet charges; BASSU = subscription revenue to basic tier; and OTHSU = other tier subscription revenue.

<sup>15</sup> This estimating process relies on the assumption that the ratio for equipment revenue to total subscriber revenue for the system as a whole is identical to this ratio for the individual

21. We determined this to be a reasonable approach to estimating the revenues from equipment charges. For example, most of the values for a cable community unit's unweighted rate per channel including equipment revenues derived from Schedule 7 are within 10 percent of the value for the unweighted rate per channel including equipment revenues estimated from Schedule 3.

Adjustment to the rate per channel (excluding franchising fees and including equipment) for the regulated tiers for each cable community unit to give more weight to the tiers with a greater number of subscribers.

22. Subscriber rates per channel can be analyzed in a number of ways. For example, subscriber rates for the basic, or first, tier can be examined separately from subscriber rates for the cable programming services (tier 2 and tier 3, if they exist). The analysis described below, however, combined the basic tier and cable programming tier(s). The rate per channel for basic and cable programming services can be combined (aggregated) to create a "composite" rate per channel on an unweighted basis. The unweighted composite rate per channel is the sum of the subscriber monthly charges for the basic tier (excluding franchise fees, including the equipment revenues) and the monthly charges for the cable programming tier(s) divided by the total number of channels on those tiers.<sup>16</sup> This composite represents an average rate, or revenue, per channel if a subscriber purchased all these services.

23. Not all subscribers who purchase the basic tier also purchase the cable programming tier(s). We concluded, therefore, that in creating the composite variable, the rate per channel for each tier should be weighted by the number of subscribers in that tier. In this way, the tiers that have more subscribers count more than the tiers that have fewer subscribers. Obviously, therefore, a tier with very few subscribers counts less than a tier with many subscribers.

24. The specific method used is as follows: equipment revenue per month per subscriber is added to the tier 1 subscriber monthly charge (adjusted for franchise fees). This sum is multiplied by the number of subscribers to tier 1 (subscriber data

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community unit.

<sup>16</sup> The unweighted rate per channel = ((Equipment per month per subscriber + S7\_1MC) + S7\_2MC + S7\_3MC) / (S7\_1TS + S7\_2TS + S7\_3TS). Where S7 = Schedule 7; 1MC = monthly subscription charge for basic tier (after adjustment for franchise fees); 2MC = monthly subscription charge for second tier; 3MC = monthly subscription charge for third tier; 1TS = subscribers to basic tier; 2TS = subscribers to second tier; and 3TS = subscribers to third tier.

were adjusted based on the assumption that all subscribers to the community unit take tier 1). This value is added to the tier 2 monthly charge multiplied by tier 2 subscribers plus the tier 3 monthly charge multiplied by tier 3 subscribers (if these tiers exist). This sum is divided by the sum of the number of channels on each tier multiplied by the number of subscribers to that tier. The resulting number is a subscriber weighted rate per channel, excluding franchise fees and including equipment revenues.<sup>17</sup>

### **Econometric Estimation**

25. Multiple regression analysis was applied to the survey data to determine the effects of competition on the rates charged by cable community units and to isolate characteristics of cable community units that are associated with higher or lower rates. Because costs differ widely across cable community units, it was believed that a single benchmark rate per channel for all community units would be inefficient and unreasonable, allowing high profits for community units with low costs and possibly imposing losses on high-cost community units. In order to take account, at least roughly, of differences in conditions under which cable community units operate, a statistical analysis of community unit and system characteristics associated with higher or lower prices was performed. The results of this analysis were used to calculate a benchmark rate formula that adjusts allowable rates for important community unit and system characteristics.

26. In this analysis, a stepwise regression procedure was first performed to determine what characteristics of cable community units explain the prices charged per channel. This procedure was not an attempt to model demand or supply, but rather an empirical exercise to determine the relationship between prices and various other characteristics of cable community units. The random sample of cable community units was used for this analysis. The dependent variable was the price per channel for all tiers of nonpremium cable service for which data were collected, weighted by tier subscribership and adjusted for franchise fees and equipment and other charges as described above. Although various formulations of the model were tested, ultimately the natural logarithm of price per channel was used.

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<sup>17</sup> In equation form, the subscriber weighted rate per channel excluding franchise fees and including equipment revenues =  $((EQ/MO/SUB + S7\_1MC) \times S7\_1TS) + (S7\_2MC \times S7\_2TS) + (S7\_3MC \times S7\_3TS) / ((S7\_1TTOT \times S7\_1TS) + (S7\_2TTOT \times S7\_2TS) + (S7\_3TTOT \times S7\_3TS))$ , where  $S7$ ,  $1MC$ ,  $1TS$ ,  $2MC$ ,  $2TS$ ,  $3MC$ , and  $3TS$  are as defined supra, and  $1TTOT$  = total number of channels in basic tier;  $2TTOT$  = total number of channels in second tier; and  $3TTOT$  = total number of channels in third tier.

27. The characteristics of cable community units found to have a consistent statistically significant relationship with this price variable were the reciprocal of the number of subscribers to the cable system, the natural logarithm of the number of channels on all the nonpremium tiers offered by the community unit, and the natural logarithm of the number of satellite-delivered channels on all the nonpremium tiers offered by the community unit.<sup>18</sup> Prices per channel decline as the number of channels increases and as the number of subscribers increases. These results are consistent with cable systems having substantial capital costs and overhead expenses that can be spread over more subscribers and over more channels as cable systems expand.<sup>19</sup> Prices per channel increase as the number of satellite channels increases, which is consistent with both program costs for obtaining most satellite channels and with the relatively high value of those services to subscribers. Other characteristics expected to be related to prices, such as density (subscribers per mile) and percentage of plant underground, either were not statistically significant or were not consistently so.

28. To determine the effects of competition on community unit prices, the sample of community units facing "effective competition," by the statutory definition, was added to the random sample. Regression analysis was again performed, using the variables identified above and a dummy variable representing membership in the competitive sample. The equation estimated was the following:

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<sup>18</sup> Taken together, these three variables account for more than 60 percent of the variance in per-channel rates.

<sup>19</sup> As can be seen from tables in Attachment A to Form 393, however, the decline in prices as the number of subscribers increases appears to cease at very low numbers of subscribers.

$$\begin{aligned} \text{LNP} = & 2.4448 - 0.0939^2(\text{ABC}) + 7.3452^2(\text{RECIPSUB}) \\ & (3.17) \qquad\qquad\qquad (2.81) \\ & - 0.8878^2(\text{LNCHAN}) + 0.1006^3(\text{LNSAT}) \\ & (13.75) \qquad\qquad\qquad (2.19) \end{aligned}$$

where

LNP = natural logarithm of the composite price per channel for up to three tiers of service, weighted and adjusted to exclude franchise fees and include equipment and other subscriber charges as described above;

ABC = 1 if the community unit belongs to one of the categories comprising the statutory definition of "effective competition," as described above, and  
= 0 otherwise;

RECIPSUB = 1/number of households subscribing to the cable system;

LNCHAN = natural logarithm of the number of channels in use in the tiers of service examined; and

LNSAT = natural logarithm of the number of satellite-delivered channels in the tiers of service examined.

The adjusted R<sup>2</sup> is 0.63. N = 377. Numbers in parentheses are t-statistics.

<sup>2</sup> The coefficient is significantly different from zero at the 0.01 level.

<sup>3</sup> The coefficient is significantly different from zero at the 0.05 level.

**29.** As can be seen from the coefficient of the dummy variable for the competitive sample, the composite price per channel was 9.4 percent lower for the competitive sample than for the random sample, controlling for the effects of number of subscribers, number of channels, and number of satellite-delivered channels. The coefficient was significantly different from zero at the 0.01 level.

**30.** When a similar regression was run with one dummy variable for the sample with less than 30 percent penetration and a separate dummy variable for the other two components of the "effectively competitive" sample combined, the coefficient of the first variable was positive but not significantly different from zero, while the coefficient of the other variable was -.279 and highly significant. Thus, the prices per channel of the less than 30 percent sample are not significantly different from those of the

random sample, while the prices per channel of the second and third sample combined are approximately 28 percent lower than those of the random sample, controlling for the effects of the other three variables. Community units with less than 30 percent penetration clearly behave very differently from the community units that face competition from other multichannel providers.

31. As noted above, the data set does contain errors, and information on variables likely to affect prices, such as local price levels for goods and services and geographic conditions, was unavailable. As a consequence, the standard errors of the estimates are relatively large. For instance, while the best estimate of the difference in price per channel between the "effectively competitive" sample and the random sample is a negative 9.4 percent, the 95 percent confidence interval for that estimate ranges between -3.6 percent and -15.2 percent. Thus it is quite reasonable to assume that the differential between community units facing effective competition and the random sample of community units not facing effective competition is a 10 percent difference in the price per channel.

32. Several assumptions underlie these estimates. First, the procedure used assumes that the determinants of prices per channel are the same, and have the same association with prices, for competitive and non-competitive community units. It may be, for instance, that community units facing competition are forced to price closer to cost than those with no competition, so that variables reflecting cost are more closely associated with prices than appears to be the case in the random sample. Also, the procedure assumes that prices are in equilibrium. If, for instance, some community units in competitive markets are facing price wars, their prices may be below cost and may not be sustainable in the long run.

33. The benchmark rates per channel were calculated from the regression equation presented above for various numbers of subscribers, channels, and satellite-delivered channels. These rates are shown in the tables contained in attachment A. These rates represent the average price per channel for nonpremium service, appropriately weighted and adjusted, of community units in franchise areas that are "effectively competitive" and that have the given numbers of subscribers, channels, and satellite-delivered channels.

34. Attachment A contains the tables that were generated from the estimating regression equation described above. The tables present benchmark rates per channel for systems with 50, 100, 250, 500, 750, 1000, 1500 and 10,000 subscribers. The tables show the benchmark rates for all combinations of 5-24 channels and 0-24 satellite channels. For systems with 25-100 channels, the tables present the benchmark rates in 5 channel increments, i.e. for 25, 30, 35 channels, etc. For benchmark rate per channel

values in between those increments, cable system owners may either use the interpolation techniques described with the tables or they may choose the closest number of channels and satellite channels that would yield a slightly lower benchmark rate per channel or they may use the regression equation described above to calculate the exact benchmark number to three decimal places.

SEPARATE STATEMENT

OF

COMMISSIONER ANDREW C. BARRETT

**RE: Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992 (Cable Rate Regulation)**

In 1990 I voted for a Report to Congress which recommended competition as a solution to the public's concerns with cable rates.<sup>1</sup> While I still believe that competition is a better solution than regulation of the cable industry, Congress has spoken. It determined through the Cable Television Consumer Protection and Competition Act of 1992<sup>2</sup> that regulation should substitute for competition until effective competition exists in markets. I will not attempt to challenge their conclusions. I believe it is my duty to faithfully apply the statute and to carry out Congressional intent. I write separately to make clear goals throughout this proceeding and to make clear my intent to implement in a manner consistent with the goals of the legislation.

During this proceeding, I have had concerns whether the Federal Communications Commission would implement the provisions on rate regulation in a manner that fully accomplishes Congressional intent. My reading of the statute and the legislative history suggested that Congress intended that the Commission adopt rate standards that closely paralleled the rates consumers would pay for the basic tier of service in a competitive marketplace.<sup>3</sup> For the cable programming tier, Congress mandated that we examine the reasonableness of the

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<sup>1</sup> Report in Docket 89-600 ("6 Year Cable Report"), 5 FCC Rcd 4962 (1990).

<sup>2</sup> Cable Television Consumer Protection and Competition Act, Pub. L. No. 102-385, 106 Stat. 1460 (1992).

<sup>3</sup> Pursuant to the statute the Commission is to "ensure that the rates for the basic service tier are reasonable. Such regulations shall be designed to achieve the goal of protecting subscribers of any cable system that is not subject to effective competition from rates for the basic service tier that exceed the rates that would be charged for the basic service tier if such cable system were subject to effective competition." Section 623(b)(1).

rates.<sup>4</sup> Ideally, the Commission could examine cost data and determine based on this data and an examination of competitive systems what the correct rates should be for cable systems. The time frame provided for within the statute, the lack of Commission resources and the lack of data make this scheme unworkable.<sup>5</sup>

The Commission ultimately determined that it should rely upon current rate data to ascertain the appropriate rate levels for cable systems. This calculation is imperfect for numerous reasons. I am confident that parties on each side of this issue will dispute our analysis. Numerous commenting parties and our own staff of economists and other professionals have differed over the correct numbers and the methodology to utilize in comparing competitive systems and non-competitive systems. The difference between these numbers has ranged from around 10% to around 30%. One reason for this difference has been use of different criteria to define competitive rates. While Congress provided seven factors that the Commission is required to take into account under the statute, it did not remove the discretion of the Commission as to how best to utilize each factor in defining competitive rates.<sup>6</sup> Some commenting parties have analyzed the data by removing statistics from one or more of the tests. An examination of the Commission's data reveals that the below 30% penetration factor may not be a reliable indicator of competitive rates.<sup>7</sup> Clearly when adopting the effective

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<sup>4</sup> Although I understand the intent of the unitary approach of regulating the basic and cable programming tier pursuant to the same benchmark formula, I am not as confident as my colleagues that Congress did not, by adopting different standards in the Act intend, for different regulatory structures.

<sup>5</sup> My experience at the Illinois Commerce Commission in handling rate cases convinces me that this is not a task the Commission is prepared to take on today.

<sup>6</sup> Congress left to the Commission the obligation to best effectuate Congressional intent. It did not specify the mechanism nor do I believe that it provided a definitive test for competitive rates. The effective competition standard merely establishes the cable systems that are excused from having local franchise authorities and this Commission rate regulate their activities.

<sup>7</sup> As I understand, the data indicate that removal of this factor creates a 27% difference in competitive and non-competitive cable systems. This difference may be explained by the characteristics of these systems or the marketplace realities of using this criteria. The below 30% penetration system may have a low rate of penetration based on excessively high rates,

competition standard, Congress did not have the data we have gathered on this matter.

I examined the record in this proceeding and concluded that if we must err, the statute would encourage us to err on the side of the cable subscriber. However, I also recognized the disparate impact a wrong decision could have on cable companies and their ability to continue to offer the high level of quality programming services. Congress did not intend an unjustified rollback or rates to levels below competitive rates. While I believe that accomplishing Congressional intent requires a rate reduction greater than ten percent, I cannot be certain that this is justified under the statute.<sup>8</sup>

Today, we take a "cautious" approach by adopting the lower percentage difference between competitive and non-competitive systems. We take this first step at accomplishing Congressional intent. It should have some immediate benefits for cable subscribers as rates should be lowered somewhat. I will not attempt to hazard a guess at the total benefit to the public or the benefit to individual subscribers. Whether the ten percent decrease for systems above the benchmark adequately accomplishes our mandate under the statute and Congressional intent is debatable. The adoption of a Further Notice has provided me with a small level of comfort that in fact we may be able to actually determine a more accurate measure of the competitive rates for cable service by this fall. We may find that the ten percent is the correct amount. I have no problems with maintaining this percentage decrease if the data and our studies demonstrate this to be true. The Further Notice will provide us an opportunity to ascertain whether we have the legal authority to consider removing the below 30% percent penetration data and whether, based on this and our examination of the cost data we will gather, the rates should be lowered more than ten percent. I support this scenario with the understanding that we will expeditiously resolve these issues and may require further rate reductions by cable systems before the end of this year.

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they may be newer systems that have higher costs, or they may not be able to spread costs over subscribers as well as larger systems. The data reveals that on average these systems have much higher rates than systems with head-to-head competition.

<sup>8</sup> I remain concerned that our Report and Order may permit some systems which have rates substantially higher than ten percent will only be required to reduce rates ten percent rather than reduce rates fully to the competitive level. These outliers may reap the largest windfall from our actions. I am pleased that we might investigate these operators and order further rate reductions where the system's rates are not justified by their costs plus a reasonable profit.

Finally, I am concerned that our actions do not have an adverse impact on the small cable operators that may be operating at margins that will not permit these rate reductions and who cannot afford to make cost of service showings. This Report and Order relieves them of some administrative burdens, but I would have preferred to ensure that our regulatory net did not curtail their ability to grow and serve their communities.

**SEPARATE STATEMENT  
OF  
COMMISSIONER ERVIN S. DUGGAN**

In the Matter of Implementation of the Cable Television Consumer Protection and Competition Act of 1992 -- Rate Regulation  
(MM Docket No. 92-266)

Today the Commission, in response to an Act of Congress, takes a significant step to press down the rates that consumers pay for cable television service. No one should doubt how seriously the Commission takes this task, nor how diligently it will continue to pursue the rate-setting effort. We will ensure that the will of Congress is carried out.

Our action is a substantial first step. It represents a diligent effort, under the twin limitations of time and data, to drive cable rates close to the level that consumers would pay if cable television systems faced actual competition.

Our rules make it possible for regulators and the Commission to take four separate, concrete steps:

First, the Commission rolls back current rates to the levels of September 30, 1992. This rollback wipes out rate increases imposed on consumers after the rate-regulation provisions of the Cable Act were passed by the Congress last October. This rollback would apply to all systems with rates above competitive levels.

Second, the Commission sets forth competitive "benchmarks" that could reduce rates an average of another 10 percent. According to economists and statisticians within the Commission, cable systems which do not face competition charge an average of 10 percent more than cable systems subject to "effective competition," as defined by the Congress. The ten percent reduction to a benchmark competitive price tracks that finding. We are also launching a second proceeding today to determine whether, if the "effective competition" definition of the Congress were changed in some way, this competitive differential could be higher, and rate reductions deeper.

Third, the Commission sets in motion a process for dealing with "outliers"--- cable systems whose rates, after the first two cuts, remain substantially above our competitive benchmarks. Those systems will be subject to searching investigation. The FCC will seek to determine whether those operators are charging higher rates because of higher costs or whether the real explanation is abuse of market power. Systems found to be abusing their power in the marketplace will be subject to further rollbacks. I expressly advocated this stricter scrutiny of outlier systems, although I will insist on full due process for all who face this scrutiny.

Fourth, the Commission imposes caps on future rate increases. Rate hikes in the future will be limited to the general inflation index and to limited increases in specifically defined costs.

Despite these clear prospects for rate rollbacks substantially exceeding 10 percent, and despite this Commission's clear determination to pursue the rate-setting process faithfully, some will claim that the FCC has not gone far enough to lower cable rates. They may argue, perhaps, that we should have yanked every system down to the benchmarks, or that we should have required much larger across-the-board rollbacks. Those arguments unfortunately collide with the facts, and ignore five months of effort by dedicated public servants here. Those experts have made a plain reading of the statute; and they have recommended a significant first phase of rate regulation based on data that consistently reflected a 10 percent competitive differential between competitive and non-competitive rates. To require deeper, blanket rollbacks for every system at the outset could force prices for some systems below cost and, in any event, would fall disproportionately hard on the country's smallest cable systems. The best minds here were reluctant--- justifiably reluctant, I believe--- to be so radical.

Those who ask, "Why not more?" will be furiously opposed, on the other side, by those who ask, "Why so much?" To that second group I say that this Commission's experts have made careful estimates of a proper rate-setting approach. Operators who feel that the treatment accorded them is unfair or unwarranted by the facts will have ample opportunity to appeal.

Government regulation is, of necessity, a blunt instrument. Congress in its wisdom has provided a relief valve, however: It has provided that rate regulation will end when true competition in the video marketplace begins. In a world in which Direct Broadcast Satellites (DBS), video dialtone, and various forms of wireless cable are now emerging, perhaps we can consider this step a transitional step--- toward real competition, which will achieve the goals of fair rates and good service that all of us seek.

Make no mistake, however: This Commission will not shirk its regulatory responsibilities while waiting for that day. We will continue to refine our approach to rate regulation, with local franchising authorities as full partners in that effort. Today's action is the beginning, not the end, of the process.

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