# BRITE $\mathcal{E}$ HOPKINS, PLLC ATTORNEYS AT LAW <br> 83 BALLPARK ROAD, P.O. BOX 309 <br> HARDINSBURG, KENTUCKY 40143-0309 <br> PHONE (270) 756-2184, FAX (270) 756-1214 

September 24, 2010

Jeff Derouen, Executive Director
Kentucky Public Service Commission

## RECEMED

211 Sower Boulevard

## SEP 272010

P.O. Box 615

Frankfort, Kentucky 40602
Re: Application of Meade County Rural Electric for an Adjustment of Rates
Case No. 2010-00222
Dear Mr. Derouen:
Please find enclosed the original and ten (10) copies of the responses to the Commission's Order "Second Information Request of the Commission Staff to Meade County Rural Electric Cooperative Corporation." dated September 10, 2010.

Please contact me at (270) 756-2184 or Burns E. Mercer at (270) 422-2162 with any questions regarding this filing.

Respectfully submitted,
Thimuite

Thomas C. Brite
Attorney for Meade County Rural Electric
Cooperative Corporation

Enclosure

## COMMONWEALTH OF KENTUCKY

## BEFORE THE PUBLIC SERVICE COMMISSION

## In the Matter of adjustment of

Rates of Meade County Rural Electric
Cooperative Corporation
Case No. 2010-00222

## APPLICANTS RESPONSES TO

SECOND INFORMATION REQUEST OF COMMISSION STAFF

The applicant, Meade County Rural Electric Cooperative Corporation, makes the following responses to the "Second Information Request of Commission Staff", as follows:

1. The witnesses who are prepared to answer questions concerning each request are Burns E. Mercer, Karen Brown, and Jim Adkins.
2. Burns E. Mercer, President and CEO of Meade County Rural Electric Cooperative Corporation is the person supervising the preparation of the responses on behalf of the applicant.
3. The responses and Exhibits are attached hereto and incorporated by reference herein.


Thomas C. Bite
Brite \& Butler, Attorneys-At-Law
P.O. Box 309

Brandenburg, Kentucky 40143
Attorney for Meade County Rural Electric Cooperative Corporation
Telephone: 270-756-2184

The undersigned, Burns E. Mercer, as President \& CEO of Meade County Rural Electric Cooperative Corporation, being duly sworn, states that the responses herein are true and accurate to the best of my knowledge and belief formed after reasonable inquiry.

Dated: September 24, 2010
Meade County Rural Electric Cooperative Corp.


Subscribed, sworn to, and acknowledged before me by Burns E. Mercer, as President \& CEO for Meade County Rural Electric Cooperative Corporation on behalf of said Corporation the $24^{\text {th }}$ day of September, 2010.


## CERTIFICATE OF SERVICE

The undersigned counsel certifies that the foregoing responses have been served upon the following:

Original and Ten Copies
Mr. Jeff Derouen, Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40601
This 24th day of September, 2010
Thermit

Attorney for Meade County Rural Electric Cooperative Corporation

## RECEIVED

SEP 272010
PUBLIC SERFICE COMMISSION

# Meade County Rural Electric Cooperative 

Case No. 2010-00222

Second Data Request of Commission Staff

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

1. Refer to the Application, paragraph No. 25. Meade states that it has not had a depreciation study performed with this application or at any time in the past.
State whether Meade is familiar with the Commission's practice in recent years, for distribution cooperatives that have not had a recent study performed, of requiring that a depreciation study be performed as part of its final Orders in general rate cases.

## Response

Meade County is aware the Commission has issued orders that require consideration be given to performing depreciation studies in recent orders. Meade County is also aware that the order for Farmers Rural Electric Cooperative in Case No. 2008-00030 did not contain a provision to have a depreciation study performed. Meade County has, and continues to, review its depreciation practices. The current reserve ratio falls between the Maximum and Optimum curves within RUS's Depreciation Guideline Curves, being closer to the Optimum Curve.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
2. Refer to revised Exhibit B filed on August 16, 2010
a. Refer to pages 1 and 7 of 120 . Explain why Meade is changing the minimum bill to be stated at a per-day rate.

## Response:

Reflects a more accurate calculation of actual usage when a consumer connects or disconnects between billing cycles.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
2. Refer to revised Exhibit B filed on August 16, 2010
b. Refer to pages 13 and 21 of 120 . Both of these pages contain references to a Fuel Adjustment Clause at Schedule 10, an Environmental Surcharge at Schedule 11, and a Wholesale Power Cost Adjustment at Schedule 14. Schedule 10 is a Small Power and Cogeneration Tariff and Meade is proposing to delete Schedules 11 and 14 as part of this rate case. State whether Meade intended to delete these references on pages 13 and 21. If not, explain why they should remain in the tariff.

## Response:

See revised Tariff sheets for pages 13 and 21 correcting Fuel Cost to schedule 18; Environmental Surcharge to schedule 9 and deleting wholesale power cost adjustment schedule 14, see pages 2 and 3 of this exhibit.

| FOR |  | $\begin{aligned} & \text { Ey } \\ & \text { MAGE } \\ & \text { WATESS } \end{aligned}$ | $3$ |
| :---: | :---: | :---: | :---: |
|  | Entire Territory served |  |  |
|  | Community, Town or City |  |  |
|  | (Original) <br> (Revised) | P.S.C. No. Sheet No. | 38 |
|  |  |  | 13 |
|  |  |  | - |
|  | Canceling <br> (Original) <br> (Revised) | P.S.C. No. <br> Sheet No. | 35 |
|  |  |  | 13 |
|  |  |  |  |

## MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION

## Schedule 3A continued

## CLASSIFICATION OF SERVICE

| Three Phase Power Service, 0 KVA -999 KVA - Optional Time-of-Day (TOD) Rate | RATE PER <br> UNIT |
| :---: | :---: |

power factor. When the power factor is found to be lower than ninety percent ( $90 \%$ ), the consumer will be required to correct its power factor to ninety percent (90\%) at the consumer's expense. The demand shall be defined as ninety percent $(90 \%)$ of the highest average kilovolt-amperes measured during any fifteen consecutive-minute period of the month.

## Fuel Cost Adjustment:

See Schedule 18 for applicable charge.
Environmental Surcharge:
See Schedule 9 for applicable charge.

Minimum Charges:
The minimum charge shall be the highest one of the following charges as determined for the consumer in question:

1. The minimum charge specified in this schedule.
2. The minimum monthly charge specified in the contract for service.

## Minimum Annual Charge for Seasonal Services:

Consumers requiring service only during certain seasons not exceeding nine months per year may guarantee a minimum annual payment of twelve times the minimum monthly charge determined in accordance with the foregoing section in which case there shall be no minimum monthly charge.

## Due Date of Bill:

Payment of consumers monthly bill will be due within ten (10) days from due date of bill.

## Delayed Payment Charge:

The above rates are net, the gross rates being five percent (5\%) higher on the first $\$ 25.00$ and two percent ( $2 \%$ ) on the remainder of the bill. In the event the current monthly bill is not paid within ten (10) days from the due date of the bill, the gross rate shall apply.

| DATE OF ISSUE | August 9, 2010 |  |  |
| :---: | :---: | :---: | :---: |
|  | Month | Day | Year |
| DATE EFFECTIVE | September 12, 2010 |  |  |
|  | Month | Day | Year |
| ISSUED BY |  | PresidentCEO | P. O. Box 489, Brandenburg, KY 40108 |
|  | Name of Officer | Title | Address |

ISSUED BY AUTHORITY OF P.S.C.

## MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION

(Original) Sheet No. 15 (Revised)


# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
2. Refer to revised Exhibit B filed on August 16, 2010
c. Refer to page 27 of 120 , and the application at Exhibit E, page 3. Exhibit E, the Cable Television Attachments section, refers to two-party and three-party ground attachments. However, Exhibit B, page 27, refers to grounding and pedestal attachments. State whether Meade believes that the tariff should be updated to reflect the titles used in the public notice.

## Response:

Meade does not believe that the titles used in the tariff should not be changed.

# Meade County Rural Electric Cooperative 

 Case No. 2010-00222Second Data Request of Commission Staff
3. Refer to revised Exhibit C filed on August 16, 2010
a. Refer to pages 10 and 13 of 135. A text change is being proposed under the "Minimum Monthly Charges" section for each of these tariffs. As proposed, the tariffs would state that the minimum charge shall be the highest of one of two options. One of those options as proposed is "[t]he minimum charge specified in this schedule." However, there is no minimum charge specified in either tariff. Provide the minimum charge amount referred to in this sentence for each of these tariffs.

## Response:

See revised tariff sheet (minimum daily charge) pages 2 and 3 of this exhibit.


## MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION

## Schedule 3 -continued

## CLASSIFICATION OF SERVICE

power factor. When the power factor is found to be bower than ninety percent ( $90 \%$ ), the consumer will be required to correct its power factor to ninety percent ( $90 \%$ ) at the consumer's expense. The demand shall be defined as ninety percent ( $90 \%$ ) of the highest average kilovolt-amperes measured during any fifteen consecutive-minute period of the month.

## Fuel Cost Adjustment 18

See Schedule 10 for applicable ctraige.

## Environmental Surcharge:

See Schedule 11 for applicable charge.
Whotessate Power Gest Adjustment
See Sehedute 14 for applicable charge.

## Minimum Monthly Charges: daily

The minimum-menthly charge shall be the highest one of the following charges as determined for the consumer in question:

## 1 minimum airily

1. The frothy charge specified in this schedule.
2. The minimum monthly charge specified in the contract for service.

## Minimum Annual Charge for Seasonal Services:

Consumers requiring service only during certain seasons not exceeding nine months per year may guarantee a minimum annual payment of twelve times the minimum monthly charge determined in accordance with the foregoing section in which case there shall be no minimum monthly charge.

## Due Date of Bill:

Payment of consumers monthly bill will be due within ten (10) days from due date of bill.

## Delayed Payment Charge:

The above rates are net, the gross rates being five percent (5\%) higher on the and two percent ( $2 \%$ ) on the remainder of the bill. In the event the current monthly bin is not paid within ten (10) days from the due date of the bill, the gross rate shall apply.

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2003


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|  | Community, Town or City |
| :---: | :---: |
|  | P.S.C. No. 35 |
| (Original) | Sheet No. 13 |
| (Revised) |  |
| Canceling | P.S.C. No. |
| (Original) | Sheet No. |
| (Revised) |  |


|  | Community, Town or City |
| :---: | :---: |
|  | P.S.C. No. 35 |
| (Original) | Sheet No. 13 |
| (Revised) |  |
| Canceling | P.S.C. No. |
| (Original) | Sheet No. |
| (Revised) |  |

# MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION 



# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff

## 3. Refer to revised Exhibit C filed on August 16, 2010

b. Refer to page 105 of 135 . Explain why Meade is proposing to delete the customer deposit criteria.

## Response:

Meade is proposing two criteria's for deposits as follows:

1. Previous payment history with the coop.
2. Exchange rating.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

3. Refer to revised Exhibit C filed on August 16, 2010
c. Refer to page 109 of 135 . State whether Meade is proposing to delete the Meter Reading section because customers are no longer required to read their meters. If that is not the reason, explain why the section is being deleted.

## Response:

The Meter Reading section is being deleted because customers are no longer required to read their meter.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
3. Refer to revised Exhibit C filed on August 16, 2010
d. Refer to page 111 of 135 , section (d). Meade refers to a remote meter reading charge as a remote "Reconnect Charge" for "an automated meter reading (AMI)" and a "Disconnect Charge" for an "AMI reading."
(1) Explain why Meade is proposing to delete "Special Meter Reading Charge" as the identification of this section.

## Response:

Meade is proposing to delete "Special Meter Reading Charge" as the identification of this section since customers are no longer required to read their own meter for monthly billings and meters are no longer read manually by Meade.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
3. Refer to revised Exhibit C filed on August 16, 2010
d. Refer to page 111 of 135 , section (d). Meade refers to a remote meter reading charge as a remote "Reconnect Charge" for "an automated meter reading (AMI)" and a "Disconnect Charge" for an "AMI reading."
(2) Explain why a meter reading charge is described as either a reconnect or disconnect charge.

## Response:

Meter reading charge is described as either a connect or disconnect charge as this reading is required when service is activated or disconnected.

# Exhibit 3 <br> Page 8 of 9 <br> Witness: Karen Brown 

# Meade County Rural Electric Cooperative Case No. 2010-00222 <br> Second Data Request of Commission Staff 

## 3. Refer to revised Exhibit C filed on August 16, 2010

d. Refer to page 111 of 135 , section (d). Meade refers to a remote meter reading charge as a remote "Reconnect Charge" for "an automated meter reading (AMI)" and a "Disconnect Charge" for an "AMI reading."
(3) Explain the difference between the two types of remote meter readings referenced in this section, one which requires a "reconnect charge" and the other which requires a "disconnect charge."

## Response:

A remote meter reading "reconnect charge" requires a special meter that has the ability to be activated with a remote switch from the office. A remote meter reading "disconnect charge" requires a special meter that has the ability to be deactivated with a remote switch from the office.

# Meade County Rural Electric Cooperative Case No. 2010-00222 <br> Second Data Request of Commission Staff 

3. Refer to revised Exhibit C filed on August 16, 2010
d. Refer to page 111 of 135 , section (d). Meade refers to a remote meter reading charge as a remote "Reconnect Charge" for "an automated meter reading (AMI)" and a "Disconnect Charge" for an "AMI reading."
(4) Provide the percentage of Meade's meters read manually and the percentage read remotely each month.

## Response:

At the end of the test period Meade billed 28,142 meters of which approximately 350 were manually read or $1.25 \%$.

Remotely $\quad 98.75 \%$
Manually $\quad 1.25 \%$
100.00

## MEADE COUNTY RECC

CASE NO. 2020-00222

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

Refer to Exhibit C of the application.

## a. Question:

Refer to pages 16-17. These pages appear to have been included in the tariff to explain Schedule 3 A, an optional time-of-day tariff. Page 15 states that the only difference in rates between Schedule 3 and 3 A is that the customer charge for 3 A has been increased to recover additional metering costs. Currently, the customer charge is $\$ 34.70$ for Schedule 3 and $\$ 53.68$ for Schedule 3A. As proposed, the customer charge would be $\$ 60.47$ for Schedule 4 and $\$ 60.74$ for Schedule 3A. Pages 16 and 17 appear to include calculations for the current customer charges for Schedules 3 and 3 A.
(1) State whether Meade intended to delete or revise these pages.
(2) Explain why it is no longer necessary for there to be a difference in the customer charges for these schedules.

## a. Response:

(1) Meade plans to delete these pages from its tariff.
(2) The reason for the small difference in the customer charges for these rate schedules is a result of the decision on how the proposed increase was allocated to each rate class and the decision on what part of the retail to change. Meade decided to allocate the increase each rate class by the same percent and to place all the increase upon the customer charge. The customer charges proposed for Schedules 3 and 3A are a direct result or a fallout from the decision criteria provided in the first part of this response.

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

## b. Question:

Refer to pages 34 and 35 of 135 . These pages appear to be Cable Television Attachment ("CATV") calculations. However, these pages match neither the current nor the proposed CATV rates. State whether Meade intended to delete or revise these pages.
b. Response:

Meade intended to delete these pages.

# Exhibit 4 <br> Page <br> 3 of 3 <br> Witness: Burns Mercer <br> Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

## 4. Refer to Exhibit C of the application.

c. Refer to page 53 of 135 , Schedule 11, Restitution Adjustment tariff, Provide an explanation of this tariff, state the number of customers being charged under this tariff, and explain why Meade is proposing to delete it.

## Response:

None, this was a credit from Big Rivers which has been discontinued by Big Rivers.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
5. Meade's current tariff includes a cogeneration standard contract and an emergency response plan which are not included in Meade's proposed tariff. State whether Meade intended to delete these documents from its tariff. If yes, provide the reasons for the deletions.

## Response:

Meade intended to delete the 11 page "cogeneration standard contract" referred to in this section as it has been replaced with schedules 8,9 , and 10 .

We do not intend to delete the emergency response plan, in addition there are no proposed changes.

Item No. 6a
Page 1 of $/$
Witness: Jim Adkins
MEADE COUNTY RECC
CASE NO. 2020-00222

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

Refer to Exhibit Hof the application, the Direct Testimony of James R. Adkins ("Adkins Testimony").
a. Question:

Refer to page 3 of the Adkins Testimony. Mr. Adkins references a report of the Kentucky Association of Electric Cooperatives, "Final Report to the Kentucky Association of Electric Cooperatives PSC Study Committee Standard Filing Procedures and Financial Criteria for Distribution Cooperatives" ("KAEC PSC Study Report") Provide a copy of the referenced report.
a. Response:

A copy of this report is contained in the remaining pages of this response.

# FINAL REPORT TO <br> KENIUCKY ASSOCIATION OF ELECTRIC COOPERATIVES <br> PSC STUDY COMMTTTEE <br> MARGH 3, 1978 

We were instructed by the PSC Study Committee to pursue the following goals:

1. Establish financial criteria for evaluating rate applications.
2. Establish the concept of allowing distribution cooperatives to flow through wholesale power increases.
3. Determine information really needed for the Commission to evaluate cases before them on:
a. Regular rate cases
b. Flow through of wholesale power costs
c. Loan applications
4. Determine how best to interface with the Consumer Protection Department of the Attorney General's Office. The scope of our efforts was to be limited to the distribution cooperatives.

In pursuing these goals, we have reviewed the available documentation on each area involved and discussed each with representatives of REA, CFC, Bank for Cooperatives, the Consumer Protection Department of the Attorney General's Office and the Kentucky Public Service Comaission Staff.

With each of these groups, we have reviewed our ideas and received suggestions for obtaining the best results. This final report represents, in our opinion, the best alternatives developed to date. As you directed, we have focused our attention on the needs of distribution cooperatives.

We view our overall task as one of providing the Kentucky Association of Electric Cooperatives documentation which will enable its members to more economically and more effectively present applications to the Kentucky Public Service Commission (PSC) for changes in rates and to strengthen the relationship between the cooperatives and the PSC Staff. We feel that this two-pronged task and the goals established by the PSC Study Committee will have been achieved upon completion of this effort. To complete the effort we are submitting this report and we will use it as the basis for a workshop with a period of discussion with the member cooperatives alone and another period of discussion with members of the PSC Staff participating. With this in mind, we have organized this report in the following manner: First, steps involved in filing a regular rate case including a standardized format for filing requirements is discussed with an evaluation of the information really needed for the Commission to evaluate cases before them. Next the financial criteria for evaluating rate applications and the recomended procedures for developing the required rate of return (margin) are provided with a discussion of our interface with the Consumer Protection Department of the Attorney General's Office. The last part of this report deals with the subject of flow through by distribution cooperatives of wholesale power increases.
A. Filing a Regular Rate Application With the Kentucky Public Service Commission

A regular rate application, as opposed to a wholesale rate increase flow through application, is one in which the cooperative, due to its own internal costs, requires a change in rates. Since the Kentucky PSC requires the filing of an historic test year (with certain adjustments), it is necessary to choose, within reasonable confines, a recent twelve month period which is considered to be representative of a normal year without the occurrence of significant abnormalities. Rates are established for the future and the Commission allows adjustments to the test year information for "known and measurable" changes and adjustments to eliminate abnormal occurrences to more accurately reflect conditions in the near future. Such adjustments will be discussed below in conjunction with the test year income statement and balance sheet. First, however, it is necessary to review the data required for filing by the Commission. 1. Standardized Data to be Filed Before the Kentucky PSC Attached to this report as Exhibit A is a listing of the data required to be filed by the cooperatives before the PSC. With the possible exception of the articles of incorporation and the narrative description of each mortgage, both of which may simply be referenced to the extent they have been filed previously, the data required by the Commission is needed to evaluate the proposed rates. Except for the billing analysis
described on page 4 of Exhibit $A$ and the adjusted income statement and balance sheet (discussed later in this report); these items are mostly regurgitations of accounting data which should be readily available. In some cases, all that is required is that copies of REA forms be submitted.

Attached to this report as Exhibit B is a tabular format which may be used to display the required information on all the indebtedness of the cooperative. This form may be used to replace Exhibit 2, Schedules 2, 3 and 4 shown on Exhibit A, page 1 attached hereto. Exhibit $C$ is a suggested format for the test year billing analysis. This billing analysis seems to be the piece of information which has caused the most problems for the Commission Staff in the past. The analysis may be done on an annual basis but must contain sufficient detail to enable the revenues under present rates to be checked for the test year and the proposed rates to be tested. For each rate currently in effect and each proposed rate, the annual billing units (customer months, kW and kWh) should be given for each demand and energy block and for any adjustment provisions contained in the rate. The corresponding unit charges and total dollar charges for the year in each rate block should be shown. An example of a billing analysis for a cooperative with only two rate schedules is included on pages 2, 3 and 4 of Exhibit C. Page 4 is the
actual analysis and pages 2 and 3 are the rate schedules upon which the analysis is based. This example will be discussed in more detail at the workshop.
2. Test Year Income Statement and Balance Sheet

The total revenue requirement allowed by the Commission is normally based upon the sum of the test year operation expenses, depreciation expenses, taxes and return (including interest expense and margin):

$$
R R=0+D+T+R
$$

The operation expenses, depreciation expenses, and taxes are taken from the books of the cooperative and the return which is to cover interest expenses and return on equity or patronage capital is developed by multiplying the overall rate of return allowed by the rate base. Therefore, the income statement showing the operation and depreciation expenses and taxes and the balance sheet from which the rate base is developed are two of the most important parts of the rate filing. It is extremely important, then, to be sure these two statements represent the conditions reasonably expected to exist in the near future when the proposed rates will be in effect. The starting point, of course, must be the actual expenses and investment for the test year. This information may then be adjusted to reflect "known and measurable" changes which will occur subsequent to the end of the test year and to annualize changes which occurred during the test year. Examples of
these types of adjustments include: the annualization of any rates which may have become effective during or after the test year, the addition of new non-revenue producing facilities soon after the end of the test year including an adjustment to taxes and depreciation expenses, the acquisition of a new loan and an increase in wage rates during or just after the test year.

The justification supporting any adjustments made must be well documented. In many instances signed contracts may be required to justify an adjustment. For example, a new contract may have been signed with a labor umion, contracts may have been signed for the delivery of new equipment or a loan agreement may have been executed.

Exhibit D attached is a listing of the items normally included in the rate base. End of the test year balances are normally used, but the average of the thirteen monthly balances may be used for materials and supplies, prepayments and fuel stock if the end of year balance is not representative. Again, it is important to present a rate base which is representative of the period the rates will be in effect since the operating margin or return will be developed by multiplying the overall rate of return by the rate base.
B. Financial Criteria for Evaluating Rate Applications

In developing financial criteria for determining and justifying revenue requirements in rate applications, both long and short term financial needs must be considered. In the long term, cooperatives must develop a capital structure sufficient to maintain its financial strength and to meet the requirements of its current and potential future lenders in order to obtain financing at the lowest possible cost and on the most favorable terms. The consensus currently seems to be that this consists of an equity ratio (equity as a percent of total capital) of somewhere between thirty and forty percent and a debt ratio of somewhere between sixty and seventy percent. After reviewing the current condition of the cooperatives in Kentucky, the requirements of REA and associated lending institutions, the requirements of private lending institutions, today's economic climate and the ratemaking practices of the Kentucky Public Service Commission, we recommend a target equity position of forty percent. See Exhibit $E$ for a list of reasons it is necessary to build a substantial equity position. The equity reflected on the books of most of the cooperatives in Kentucky consists of two elements: One, revenue received from members in excess of the operating expense requirements of the cooperative which has been invested in various types of plant,
and two, non-cash amounts representing capital credits assigned to the cooperative from its G\&T power supplier which, of course, cannot be used to finance additional facilities. For example, the equity of some cooperatives in Kentucky at the end of 1976 consisted of two thirds cash and one third non-cash amounts*. Since one of the objectives of this study is to produce an acceptable method of measuring the revenues required to simultaneously meet the cooperatives' needs to finance their plant facilities and reach long-term financial objectives, it is our recommendation that these non-cash G\&T capital credit assignments be excluded from the computation of the equity ratios (equity capital divided by total capital) used in the application of the rate of return method. To do otherwise would be to include factors extraneous to the financing requirements of the cooperative.

Probably the most crucial short term indicator of financial viability is the familiar Times Interest Earned Ratio (TIER). The Capital Credits Study Committee recommended a target IIER of 3.0 while the Kentucky PSC has been using a 2.0 TIER as a ceiling on revenue requirements. In our opinion, the TIER level should definitely be considered in evaluating the overall revenue requirements of a cooperative, but it should be allowed to fluctuate within a "zone of reasonableness" and should be subjugated to reaching and maintaining the capital structure selected as a target by the cooperative.

[^0]C.

Procedure for Developing the Required Rate of Return
The cooperative raises equity for capital expansion practically entirely through its rates, thus, a significant equity position with respect to plant investment can only be generated through charging rates which will produce a sufficient margin. It is necessary to establish such rates in a manner which will produce the appropriate level of margins. For regulatory purposes,* the most widely recognized method for developing this level is to express the return or operating income necessary to meet the "test year" interest expense and required equity additions as a percent of total capital. This percentage is referred to as the "rate of return" and is normally applied to the rate base investment of the utility. If properly measured, this rate of return will allow the cooperative to secure debt capital from current sources at economical rates and to raise equity capital in sufficient amounts to finance plant additions in the desired equity proportions.

Among the first to apply this concept to cooperatives was James W. Goodwin, former Chief, Retail Rate Branch, Rural Electrification Administration, who developed a formula equating partonage capital contribution through rates to a return on equity. The formula he developed has since been widely used in developing cooperative revenue requirements by cooperatives and regulatory bodies throughout the country.

Before discussing the development of this formula, an understanding of how this "return on equity" fits into the revenue requirement

[^1]model is necessary. The revenue requirement of a cooperative may be written in the following form:
$$
R R=E+D+T+I+P
$$

Where:

| $R R=$ | Revenue Requirement |
| ---: | :--- |
| $E=$ | Operation Expense |
| $D=$ | Depreciation Expense |
| $T=$ | Taxes |
| $I=$ | Interest On Debt |
| $P=$ | Patronage Captial Contribution or |
|  | Return on Equity |

The I\&P is the same as the return discussed above in conjunction with the income statement and the balance sheet and the formula can be re-written as total revenue requirements less operating expenses equals "return" or operating income which is available to meet interest expenses and provide equity capital:

$$
R R-(E+D+T)=(I+P)
$$

The interest expense (I) is, of course, easily determined by the cooperative. However, determining the required equity return (P) presents some difficulty. It is the measurement of the necessary patronage capital contribution which we must focus upon to complete the development of the overall revenue requirement. The value of $P$ must be large enough to provide for the following:

1. Provide equity to finance capital addytions and maintain at least

2. Provide equity necessary to grow to the target equity ratio over the desired period of time.
3. Provide equity for the current gear's revolvement of capital credits and/or special situation equity requirements.

Additional considerations necessary in calculating the proper equity return for cooperatives are:
4. The establishment of the desired or target equity ratio.
5. The time horizon for gaining the target equity position.
6. Generation and transmission cooperative patronage capital assignments should be deducted from the accumulated equity of distribution cooperatives in making all calculations. (These procedures will remain the same if this adjustment is not made; however, in our opinion, the results obtained will be more appropriate if $G \& T$ capital assignments are removed.)

The "Goodwin Formula" was developed to assure the maintenance of the current equity ratio by providing a return sufficient to finance the growth in capital at the current equity ratio and sufficient to retire capital credits on a revolving basis. When applied to a hypothetical capital structure rather than the actual capital structure, the rate of return developed by this formula will build from the current equity position to the target equity position over a complete capital credit revolvement cycle assuming the growth rate remains stable. The "Goodwin Formula" (revised to correct a minor arithmetical error in the original formula) is as follows:

$$
\mathrm{ROR}_{E}=\frac{(1+g)^{\mathrm{n}}+1-(1+g)^{\mathrm{n}}}{(1+g)^{\mathrm{n}}-1} \times 100
$$

Where:

$$
\begin{aligned}
\text { ROR }_{\mathrm{E}} & =\text { Rate of Return on Equity - Percent } \\
\mathrm{g} & =\text { Rate of Captial Growth - Decimal } \\
\mathrm{n} & =\text { Period of Rotation - Years }
\end{aligned}
$$

Restated, this formula provides for a growth in equity sufficient to keep pace with the overall growth in capital needs and to meet the requirement to pay out patronage capital which was earned in the nth preceeding year which also included the payout of equity earned in the nth year preceeding that year, and progressing back to infinity.

This concept of providing for equity growth by stating the equity growth requirements in terms of a rate of return on accumulated equity is excellent, and the "Goodwin Formula" is a fine model in theory. However, as a practical matter, the formula has its frailties. Even though it can be recomputed every year, the formula is based on a long term period (capital credits rotation is generally advised for a period of from 10 to 20 years). It is extremely inflexible in that it is based entirely upon a periodic rotation of capital credits; it does not consider equity payout in special situations; the equity ratio can only be changed through the application of the rate of return on equity calculated to a hypothetical capital structure and even then the growth period is determined
by the rotation period not independently by the user. All these variables must be considered in any model used to calculate a rate of return on equity for cooperatives.

The following formula is proposed as an alternative and considers all of these variables and requires more of a process than a rate application:

$$
\mathrm{RORE}_{E}=r_{\mathrm{NG}}+\mathrm{r}_{\mathrm{BE}}+\mathrm{r}_{\mathrm{EPO}}
$$

Where:

$$
\begin{aligned}
r_{N G}= & \text { Normal (historic) Rate of Growth in Total Capital } \\
r_{B E}= & \text { Rate of Growth Required to Build Equity } \\
r_{E P O}= & \text { Rate of Equity Payout (including rotation } \\
& \text { retirements and/or special situation payouts) }
\end{aligned}
$$

There are basically two ways to measure the rate of return on equity using this formula both of which should yield the same result. The first is to use each of the variables in a mini-forecast to project the absolute level of equity over the next three to five years. The annual compound rate of growth can then be calculated from these projected equity levels and this becomes the required return on equity.

The second method, which we will focus upon now, is to calculate each of the above growth rates and plug them into the formula. To facilitate an understanding of the computations involved, the following example will be used (all equity and total capital figures are assumed to exclude G\&T capital credit assignments) : At the end of 1977 our hypothetical cooperative (KRECI) had accumulated $\$ 300,000$ in equity and $\$ 700,000$ in debt or total
capital of $\$ 1,000,000$. The weighted average cost of debt is 4.5\%. Total capital has grown from \$555,900 in 1970 to $\$ 1,000,000$ in 1977 for an annual compound rate of growth of $8.75 \%$. KRECI has made it a policy to pay out capital credits to the estates of deceased members only and recent history has shown that these payments amount to approximately one-half of one percent of average equity capital each year.

The normal (historical) rate of growth (rNG) for KRECI, of course, is $8.75 \%$. Given that KRECI has a target equity ratio of $40 \%$ which it hopes to attain within a ten year period and that it has a current equity ratio of $30 \%$, Table A (attached at the back of this report) can be used to determine the value of the sum of the normal capital growth rate ( $\mathrm{I}_{\mathrm{NG}}$ ) and the rate of growth required to build equity ( $r_{B E}$ ). Looking on the second page of this table we see that the value of $I_{N G}+r_{B E}$ in this example is found under the $8.75 \%$ column in the $30 \%$ present equity ratio row to be $11.92 \%$. The rate of growth required to build equity may be determined separately by either subtracting the normal rate of capital growth (8.75\%) from the $11.92 \%$ to obtain $3.17 \%$ or it may be computed using the following formula:

$$
\left.I_{B E}=\left(1+r_{N G}\right)\left(\frac{A I}{E}\right)^{1 / n}-1\right)
$$

Where:

```
ING = Normal Rate of Growth in Total Capital
A = Target Equity Ratio Expressed as a Decimal
I = Current Dollar Level of Total Capital
E = Current Dollar Level of Equity
n = Number of Years Desired to Achieve Equity Target
```

Applying the formula to the above example we get:

$$
\begin{aligned}
\mathrm{I}_{\mathrm{BE}} & =(1+.0875) \frac{\left.(.40)(1,000,000)^{1 / 10}-1\right)}{(300,000)} \\
& =(1.0875)(1.02919-1) \\
& =3.17 \%
\end{aligned}
$$

The equity payout of one-half of one percent of average equity capital must then be added to obtain the required rate of return on equity. The equity payout rate is included to insure that the funds needed to be paid out during the coming years will be generated through rates in those years. It should be computed on the basis of the average of the equity paid out during the last several years unless a significant change can be foreseen for the next year. In such a case, the change should be fully supported in the presentation to the Commission.

Plugging the results of these calculations into the formula, we obtain a rate of return on equity as follows:

$$
\begin{aligned}
\operatorname{ROR}_{E} & =(8.75+3.17+1.50) \\
& =13.42 \%
\end{aligned}
$$

Applying this rate of return to the 1977 year end capital structure and using the weighted debt cost, the overall rate of return required is computed as follows:

|  | Capitalization |  | Cost | Weighted Cost Component |
| :---: | :---: | :---: | :---: | :---: |
|  | \$ | \% |  |  |
| Debt | 700,000 | 70 | 0.0450 | 0.0315 |
| Equity | 300,000 | 30 | 0.1342 | 0.0403 |
| Total | 1,000,000 | 100 |  | 0.0718 |

Thus the $13.42 \%$ rate of return on equity when weighted into the actual capital structure produces an overall rate of return or weighted cost of capital of $7.18 \%$. This rate of return is then applied to the total rate base to obtain the return or operating income necessary during the test period to recover interest expense and produce a margin which is consistent with the amount of equity to be applied toward the cooperative capital needs.

The strength of this method is that all the variables associated with determining the required rate of return on equity are considered and flexibility is allowed in determining the planning horizon for obtaining the target equity ratio. This method should also be more palatable to regulators since it is based on the situation as it actually exists as opposed to theoretical circumstances generated by an applicant. This procedure also requires and, in fact, helps develop an understanding of the relationships between the variables included in the model and emphasizes the need for long range financial planning as well as the monitoring of the extent to which financial goals are realized.

As previously noted in this report, the use of booked equity in the return on equity determination could cause significant distortion in the results obtained. The reason, again, is the non-cash equity which has been assigned to the distribution cooperative by its G\&T power supplier. These equity assignments come in fits and starts, are not predictable and are not in any way related to the financing requirements of the distribution cooperative. The rates of the generation cooperatives are usually established on the basis of the
cash capital needs of the cooperative rather than the need to produce any target level of accumulated equity. This method of setting G\&T rates coupled with cyclic economic conditions results in substantial variability in the margins available for assignment to the distribution cooperatives. When the G\&T does generate equity margins, even though they may be moderate in comparison to the investment of the G\&T, they become disproportionately large in relation to the relatively small investment of the distribution members. Also, the losses of the generation cooperative have acted to reduce its equity position, but this reduction has not been transmitted down to the distribution members.* Combined with the fact that this equity assigned at the distribution level is actually developed through the G\&T rates and also booked at the generation level this one-way loss accounting has resulted in there being substantially more equity booked on the combined system than there has been equity generated on the combined system.

When analyzed in detail there are some rather complex offsetting effects which tend to dampen the impact of leaving the G\&T assignments in the capital of the distribution cooperative. The major factor is that the current equity ratio by which the required return on equity is multiplied in deriving the overall rate of return is higher than if the G\&T assignments are removed. However, the rate base is then much less than the total capitalization of the cooperative. Even after considering these offsetting effects,

[^2]however, it seems clear that the extreme volatility, the relative size and the fact that the G\&T capital assignments bear no relationship to the financing requirements of the distribution cooperatives which, after all is the major reason for equity accumulations, and are not included in the rate base by the Kentucky PSC, could so significantly affect the results of the operating income requirement that it should be removed in setting rates for distribution cooperatives. An example of the procedure with and without G\&T capital credits in the capital structure is shown on Exhibit $F$.

As with any process for establishing revenue requirements, this procedure cannot be applied blindly. The test period cash flow needs of the cooperative must be considered, therefore, the interest coverage produced by the resultant rate of return on equity should be computed. In cases where the current equity ratio is extremely low, this method could very easily produce a TIER which is unacceptably low. By the same token, with an exceptionally high current equity ratio the resultant rate of return on equity could produce a TIER above the range acceptable by regulatory authorities. The TIER resulting from application of this procedure may be calculated by the following formula:

$$
T I E R=\frac{(R B)(D C+E C)}{(T C)(D C)}
$$

Where:
$\mathrm{RB}=$ Rate Base
DC $=$ Debt Component of Overall Rate of Return $\mathrm{EC}=$ Equity Component of Overall Rate of Return $T C=$ Total Capital

In the example above (assuming that total capital is equal to total rate base), the calculation of TIER is as follows:

$$
\begin{aligned}
\text { TIER } & =\frac{(1,000,000)(0.315+0.0403)}{(1,000,000)(0.315)} \\
& =2.3
\end{aligned}
$$

If the TIER is lower than acceptable, the target TIER then becomes the factor controlling the determination of required revenue level and thus of the required rate of return overall and on equity. In order to determine what this overall rate of return and rate of return on equity should be given a higher TIER target, the following formula can be used:
$\frac{(R B)(D C+E C)}{(T C)(D C)}=T I E R$
and, where $R B=T L$

$$
E C=(T I E R)(D C)-(D C)
$$

If the target TIER is 3.0 in the above example:

$$
\begin{aligned}
\mathrm{RE} & =(3.0(0.0315)-0.0315 \\
& =0.0630
\end{aligned}
$$

The required rate of return on equity would be:

$$
\begin{aligned}
\text { ROR }_{E} & =\text { EC } \div \text { Equity Ratio } \\
& =0.0630 \div 0.30 \\
& =0.21 \text { or } 21.0 \%
\end{aligned}
$$

The resulting overall rate of return would be:

$$
\begin{aligned}
D C & +E C \text { or } 3.15 \%+6.3 \% \\
& =9.45 \%
\end{aligned}
$$

In summary, the following steps should be used in the determination of the required rate of return to be applied to the rate base of the cooperative producing the required operating income:

1. Compute representative annual compound rate of growth in total capital excluding G\&T capital credit assignments. ( $r_{\text {NG }}$ )
2. Given target time selected to achieve target equity ratio, compute (using the formula or table provided) required rate to build to desired equity ratio. ( $\mathrm{r}_{\mathrm{BE}}$ )

Note: Table computes $\mathrm{r}_{\mathrm{BE}}$ and adds to $\mathrm{r}_{\mathrm{NG}}$. The sum of the two then is printed.
3. Based on historical payout, compute the expected rate of equity payout as a percent of total equity without G\&T capital credit assignments. ( $\mathrm{I}_{\mathrm{EPO}}$ )
4. Rate of return on Equity $=r_{N G}+r_{B E}+r_{E P O}$
5. This rate of return should be checked to be sure the resulting TIER is in the acceptable zone and should be adjusted if it falls below the zone.
6. The rate of return on equity and the weighted cost of debt are then multiplied by the adjusted year-end equity and debt ratios respectively and summed to produce the overall rate of return.

This procedure has been discussed with Ms. Glenda J. Beard, Assistant Attorney General, Consumer Protection Division. Ms. Beard expressed concurrence in the method used, but reserved the right to question the judgemental aspects in its application; e.g., the target equity level and the determination of the appropriate capital growth rate, $\left(r_{N G}\right)$.

## D. Loan Applications

Loan applications still must be filed including the information identified in the Commission's rules and regulations plus the letter of approval from the source of the loan. When such loan applications are for amounts less than ten percent (10\%) of gross plant, it is not necessary to file an Application for Certificate of Public Convenience and Necessity nor will a hearing be required. However, if such applications are for in excess of ten percent (10\%) of gross plant, there is a requirement for the filing of an Application for Certificate of Public Convenience and Necessity including all information required by the Commission's rules and regulations and a hearing will be required. The Commission is now making it a practice to approve loans, as REA and CFC, based upon the cooperative's two (2) year work plan. This generally has the effect of pushing the loan applications above the ten percent (10\%) of gross plant mark while possibly eliminating annual trips to the Commission with loan applications.

## E. Flow Through of Wholesale Power Cost Increases

At the present time there is no provision for the automatic flow through of wholesale power cost increases nor is there any prospect of such a provision in the near future. The Commission Staff is reluctant to consider this type of provision given the Governor's and the Commission's current view of automatic pass through clauses.

An alternative to an automatic provision was recently experienced by the members of East Rentucky Power. This alternative requires that a complete filing be made, however, it does provide for the possibility of a timely pass-through of the increased wholesale costs. In the East Kentucky case, the members were required to file simultaneously using the same test year as East Kentucky showing only the effects of a flow through soon after the wholesale filing. In the future, with the proper coordination it may be possible for the member distribution cooperatives to file concurrently with the power supplier. The Commission will be reviewing these filings to determine whether or not some of the distribution cooperatives are able to absorb any or all of the increase. For this reason and because the individual cooperative may need to increase its rates in addition to the flow through of the wholesale increase or restructure its existing rates, it may be necessary under this alternative to prepare and file an additional application soon after the flow through application is filed.

Although it hasn't been used in the past, there is a paragraph in the regulations of the Commission providing for conferences with the Staff for purposes of settling the case. It may be possible in the future to use this provision to settle flow through cases without holding a hearing. If the current experiment works (i.e.,

East Kentucky) and the system continues in use, it may also be possible in the future to eliminate some of the filing requirements in the purely flow through filings. Such a reduction in filing requirements is not foreseeable in the near future, however.

## F. Conclusion

This report contains information which, if applied, will result in more streamlined, more effective Public Service Commission proceedings which are more productive and more economical for the members of the Kentucky Association of Electric Cooperatives. More effective financial planning may also result from the application of the procedures outlined herein.

Of necessity, the report does not contain sufficient detail to answer all questions which may be raised in the application of the concepts discussed. However, a workshop will be held at which time any questions may be raised and a thorough working knowledge of the procedures should be developed.

OUTLINE OF DISTRIBUTION COOPERATIVE RATE FILING BEFORE KENIUCKY PUBLIC SERVICE COMMISSION

1. Application and Notice
2. Articles of Incorporation - Exhibit I
3. Financial Exhibit - Exhibit 2

Schedule 1 - Narrative Description of Each Mortgage
Schedule 2 - Bonds Authorized \& Issued
Schedule 3 - Table of Data on Outstanding Notes
Schedule 4 - Data on Other Indebtedness
Schedule 5 - Income Statement and Balance Sheet (REA Form 7, Parts A \& C) Actual and Adjusted with Adjustments Clearly Documented
4. Exhibit 3 - Present and Proposed Rate Schedules - Comparable Form
5. Exhibit 4 - Description of Property Including Net Original Cost and Cost to Applicant by Major Plant Account
6. Reasons for Rate Change should be Included in Prepared Testimony.
7. Exhibit 5 - Dollar and Percent Increase, Total and by Rate Group, and Effect on Average Bills
8. Exhibit 6 - Beginning and End of Month Balances in Investments for Each Month of Test Period (REA Form 7, Part C)
9. Exhibit 7 - Total Interest Charged to Construction and Monthly Revenues and Operating Expenses (REA Form 7, Part A)
10. Exhibit 8 - Details of Any Jurisdictional Apportionment Made
11. Exhibit 9 - Test Period Present and Proposed Billing Analysis
12. Exhibit 10-All Revised Tariff Sheets with Symbols in Margins Indicating Changes Made
13. Prepared Testimony and Exhibits of Witnesses.

## STANDARDIZED FILING OF COOPERATIVES

BEFORE THE

## KENIUCKY PUBLIC SERVICE COMMISSION

## 807 KAR 1:010. Rules of Procedure

Section 9. Application or Notice for Authority to Adjust Rates

1. Applications - Section 7

1-1: All applications must be by petition in writing. The petition must set forth the full name and post office address of the applicant, and must contain fully the facts on which the application is based, with a request for the order, authorization, permission or certificate desired and a reference to the particular provision of law requiring or providing for same.

1-2: The original and ten (10) copies must be filed.
1-3: A certified copy of the articles of incorporation and all amendments thereto must be filed. If, however, these were previously filed, it is sufficient to refer to the style and case number of the prior proceeding.
2. Financial Exhibit - Section 6

2-1: Test Period shall be an actual twelve-month period with lonown and measurable adjustments, said period ending not more than ninety (90) days prior to the date the application is filed.

2-2: Short narrative on each mortgage on property of applicant. Include:

- Date of Execution
- Name of Mortgagor
- Name of Mortgagee, or trustee
- Amount of indebtedness authorized to be secured thereby, and
- The amount of indebtedness actually secured, together with any sinking fund provisions

To the extent provided in a previous filing, reference case number.
2-3: Descriptions of bonds authorized:

- Amount authorized
- Amount issued
- Name of issuing utility
- Describe each class separately and how secured
- Date of issue
- Face value
- Rate of interest
- Maturity date
- Amount of interest paid thereon during the last fiscal year

2-4: Description of outstanding notes

- Date of issue
- Amount
- Date of maturity
- Rate of interest
- Holder of note
- Amount of interest paid thereon during last fiscal year

2-5: Description of other indebtedness by class and by security

- Description of each
- Interest paid on each during the last fiscal year

2-6: Detailed income statement and balance sheet - REA Form 7, Parts A \& C
3. In comparative form, a schedule of the present and proposed rates.
4. A description of applicant's property, including a statement of the net original cost (estimated if not known) and the cost to applicant.
5. A statement in full of the reason why the adjustment in rates is required.
6. The amount of the proposed increase or decrease in dollars (\$) and percentage (\%), and the effect upon average consumer bills.
7. Complete financial information, in addition to that contained in the Financial Exhibit above, for the twelve (12) months of the test period.

7-1: Monthly beginning and ending balances of the following accounts: (REA Form 7, Part $C$ for each month beginning with one month prior to the test period,)

- All plant accounts and related reserves
- Prepayments
- Construction work in progress
- Retirement work in progress
- Plant acquisition adjustments
- Materials and supplies

7-2: Twelve (12) monthly REA Form 7, Part A's, including (for the test period):

- Total amount of interest charged to construction
- Monthly revenues and operating expenses

7-3: Details of any apportionment used in deriving that portion of total revenues, expenses, and investment subject to the jurisdiction of the Kentucky Public Service Commission.

7-4: A billing analysis in such detail that the revenues from the present and proposed rates can be readily determined. This should be on an annual basis and should include for each rate schedule the billing units in each block and the revenues in each block under the present and proposed rates for the test period. Kilowathours subject to and revenues (present and proposed) from the fuel adjustment provision should be shown.
8. Forms - Application \& Notice of Adjustment of Rates -
Section 14 (1) (c) \& (d).

## 807 KAR 2:020. Tariffs

1. Section 5.(2)(a) All revisions in tariff sheets shall contain a symbol in the margin indicating the change made. These symbols are as follows:
(C) To signify changed regulation.
(D) To signify discontinued rate, regulation or test.
(I) To signify increase.
(N) To signify new rate and/or new test.
(R) To signify reduction.
(T) To signify change in text.
2. Section 6. Upon the granting of authority for a change in rates, the utility shall file a tariff setting out the rate, classification, charge, or rule and regulation authorized by the commission to become effective. The order may direct, and each page of the tariff so filed shall state that it is "Issued by authority of an order of the Public Service Commission in Case No. $\qquad$ , dated $\qquad$ , 19
$\qquad$
3. Section 7. Notice of proposed rate change must be provided the commission and the customers. Customers may be notified individually by mail or such notice may be published once a week for three (3) consecutive weeks prior to the effective date of such proposed rates or (if a hearing has been scheduled) prior to the date of the hearing, in some newspaper of general circulation in the community or commonities in which the customers to be affected reside, and provided further, that the commission, upon request of the utility, may modify the requirements as to notice other than by posting in any case in which it appears proper to do so. Notice provided for in this section shall contain the proposed rates, and when applicable, the date, time, and place of hearing.
4. Section 8. All information and notice required by these rules shall be furnished to the commission at the time of the filing of any proposed revisions in rates or regulations, and the 20 days statutory notice to the commission will not commence to run and will not be computed until such information and notice is filed.
5. Forms - Section 13.

The following forms should be used:
(1) Form of cover sheet for tariffs
(2) Form for filing rules and regulations
(3) Form for filing rate schedules
(4) Form of certificate of notice to the public of change in tariff where no increase of charges results
(5) Form of certificate of notice to the public of change in tariff which results in increased charges
(6) Form of adoption notice

| ANNUALIZED |
| :---: |
| INTEREST |



MATURITY
DATE



| AMOUNT |
| :---: |
| AUTHORIZED |

BONDS
NOTES


TOTAL
FORM
TEST YEAR BILLING ANALYSIS
Number of Customer Months, Unit Total or. kW , or kWh Charge Charge
RATE 1
Customer Charge
Demand Charge
Without Discount
Block 1
Block 2
With Discount
Block 1
Block 2
Energy ChargeSummer
Block 1
Block 2
Winter
Block 1
Block 2
Adjustments
FuelTax
Subtotal
RATE 2,3,...
Use same format as above for each additional rate.
Subtotal
Total

## EXAMPLE

RATE SCHEDULE RS

RESIDENTIAL SERVICE

## AVAILABILITY - Available throughout the entire territory served by the Cooperative.

## APPLICABILITY - Applicable for service to a single family dwelling unit occupied by one family or household. Service provided hereunder shall not be shared with or resold to others.

CHARACTER OF SERVICE - Available for single phase service from local distribution lines of the Cooperative's system at nominal secondary voltage of $120 / 240$ volts.

## NET MONTHLY RATES -

Customer Facilities Charge:
$\$ 4.00$
Energy-Demand Charge:

$$
3.684 \text { cents per } \mathrm{kWh} \text { for the first } 850 \mathrm{kWh} \text {; plus }
$$ 3.364 cents per kWh for all additional kWh .

Provided however, that for the billing months of November through May inclusive, all kWh over 850 kWh shall be billed at 2.791 cents per kWh.

MINLMMM BILL - In consideration of the readiness of the Company to furnish such service, a monthly minimum charge will be made of not less than $\$ 4.00$.

BILLING ADJUSTMENTS - Service under this rate is subject to the Fuel Cost Recovery Adjustment as set forth in Rate Schedule FA.

## EXAMPLE

## RATE SCHEDULE GS-D

GENERAL SERVICE - DEMAND

## AVAILABILITY - Available throughout the entire territory served by the Cooperative.

APPLICABILITY - Applicable for general service on an annual basis covering the entire electrical requirements of any Customer contracting for not less than twenty (20) kilowatts except for service to which another Rate Schedule is applicable. Service to two or more premises shall not be combined nor shall service furnished hereunder be shared with or resold to others. All service shall be taken at the same voltage and from a single delivery point.

CHARACTER OF SERVICE - The delivery voltage to the Customer shall be the voltage of the available secondary distribution lines of the Company for the locality in which service is to be rendered. Three phase service may be furnished at the request of the Customer subject to the Rules and Regulations of the Cooperative which govern the extension of the three phase service.

## NET MONTHLY RATES -

Customer Facilities Charge:
$\$ 20.50$

Demand Charge:
$\$ 2.67$ per kW of billing demand.
Energy Charge:
For the first 180 kWh per kW of billing demand
3.132 c per kWh for all kWh

For all over 180 kWh per kW of billing demand
2.619¢ per kWh for all kWh

MINIMUM MONTHLY BILLLS - In consideration of the rediness of the Company to furnish such service, no monthly bill will be rendered for less than the Customer Facilities Charge plus the Demand Charge.

DEDUCTION FOR PRIMARY SERVICE - For service hereunder that is rendered and metered at the available primary voltage a reduction of fifteen (15) cents per kW of billing demand will be made; however such decuction shall not reduce the minimum monthly bill specified above.

BILLING ADJUSTMENTS - Service under this rate is subject to the Fuel Cost Recovery Adjustment as set forth in Rate Schedule FA.

## EXAMPLE

TEST YEAR BILLING ANALYSIS

## PRESENT RATES

Number of
Customer Months Unit Total or kWh or $\mathrm{kW} \quad$ Charge Charge

## RATE RS - RESIDENTIAL SERVICE

Customer Charge
Energy-Demand Charge
First 850 kWh First 850 kWh
All Additional kWh June - October November - May

144,000
$\$ 4.00$
$\$ 576,000$
Energy-Demand Charge

| $122,400,000$ | 3.684 C | $4,509,216$ |
| ---: | ---: | ---: |
| $9,000,000$ | 3.364 C | 302,760 |
| $12,600,000$ | 2.791 C | 351,666 |
| $144,000,000$ | $0.222 ¢$ |  |
|  |  |  |

Fuel Adjustment
$144,000,000$
$0.222 c$
319,680
Subtotal RS
$\$ 6,059,322$
RATE GS-D-GENERAL SERVICE-DEMAND

| Customer Charge | 480 | \$20.50 | \$ | 9,840 |
| :---: | :---: | :---: | :---: | :---: |
| Demand Charge |  |  |  |  |
| Secondary Voltage | 36,000 | \$ 2.67 |  | 96,120 |
| Primary Voltage | 12,000 | \$ 2.52 |  | 30,240 |
| Energy Charge |  |  |  |  |
| First 180 kWh per kW | 8,640,000 | 3.132c |  | 270,605 |
| All Over 180 kWh per kW | 10,560,000 | 2.619 ¢ |  | 276,566 |
| Fuel Adjustment | 19,200,000 | 0.222¢ |  | 42,624 |
| Subtotal GS-D |  |  | \$ | 725,995 |
| TOTAL |  |  |  | 785,317 |

# ITEMS INCLUDED IN RATE BASE <br> BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION 

1. NET PLANT (ORIGINAI COST LESS ACCUMULATED DEPRECIATION)
2. CONSTRUCIION WORK IN PROGRESS
3. MATERIALS AND SUPPIIES
4. PREPAYMENTS
5. FUEL STOCK
6. CASH WORKING CAPITAL ALLOWANCE(NORMALIY TOTAL $0 \& M$ EXPENSE IESS ALL TAXES,LESS PURCHASED POWER, LESS DEPRECIATION IFINCLUDED IN 0 \& $M$ EXPENSE TIMES 12.5\%)
LESS:
7. CUSTOMER ADVANCES FOR CONSTRUCTION
8. FOR TVA SERVED COOPERATIVES CONTRIBUTIONS FOR DEBT SERVICE
9. REA requires the accumulation of $40 \%$ equity before significant amounts of capital credits may be paid out.
10. The National Utilities Cooperative Finance Corporation (CFC) generally advocates an equity ratio of somewhere between 30 and $40 \%$. However, in the REA/CFC Common Mortgage, there is a provision restricting a system from reducing its equity until a $40 \%$ level is reached. This mortgage also calls for CFC approval before the merger or consolidation of two cooperatives where the resulting system would not have or could not maintain a $40 \%$ equity level.
11. It is generally recognized by the financial community that electric utilities should maintain $35-40 \%$ equity ratios in order to reduce the risk of loan default.
12. REA will not finance $100 \%$ of a cooperatives plant facilities.
13. REA operates its loan advances on a reimbursement process whereby loan funds are advanced upon completion of facilities normally constructed by distribution cooperatives.
14. CFC subscriptions must be paid from equity funds.
15. Working capital funds are required for daily operations.
16. Equity must be generated to meet equity payout requirements.
17. Equity is required to meet contingencies which cannot be foreseen.

EXAMPIE

## COMPARISON OF RESULTS OF PROCEDURE

WITH AND WITHOUT G\&T CAPITAI ASSIGNMENTS

## ASSUMPTIONS

1. 9\% Capital Growth ( $\Psi_{N G}$ ) - With and Without G\&T Assignment.
2. $40 \%$ of Equity is from G\&T Assignments.
3. $10,000,000$ is Total Capital
4. 6,000,000 is Total Debt
5. 4,000,000 is Total Equity
6. $1,600,000$ is G\&T Assignment
7. $4 \%$ is Cost of Debt
8. 8,400,000 is Rate Base
9. There are no Equity Payouts.

WITH G\&T ASSIGNMENTS
WITHOUT G\&T ASSIGNMENTS
Rate of Return on Equity

$$
\begin{aligned}
& \mathrm{ROR}_{\mathrm{E}}=\mathrm{I}_{\mathrm{NG}}+\mathrm{I}_{\mathrm{BE}}{ }^{\star}+\mathrm{r}_{\mathrm{EPO}} \\
& =9.0+0.0+0.0=9.0+3.7^{\star}+0.0 \\
& =9.0 \% \quad=12.7 \% \\
& * \mathrm{r}_{\mathrm{BE}}=0.0 \\
& \text { OVERALL RATE OF RETURN }
\end{aligned}
$$

|  | AMOUNT | PERCENT | COST | $\begin{gathered} \text { WEIGHTE } \\ \text { COST } \\ \hline \end{gathered}$ | AMOUNT | PERCENT | COST |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEBT | 6,000,000 | 60\% | . 040 | . 024 | 6,000,000 | 71\% | . 040 |
| EQUITY | 4,000,000 | 40\% | . 090 | . 036 | 2,400,000 | 29\% | . 127 |
| TOTAL | 10,000,000 | 100\% |  | $\begin{array}{r} .060 \\ 6.0 \% \\ \hline \end{array}$ | 8,400,000 |  |  |
| RETURN |  |  |  |  |  |  |  |
| TOTAL |  | $(8,400,000)(.060)=\$ 504,000$ |  |  | $(8,400,000)(.065)=\$ 546,000$ |  |  |
| INTERESI | I EXPENSE | $(6,000,000)(.040)=240,000$ |  |  | $(6,000,000)(.040)=240,000$ |  |  |
| EQUITY |  | \$ $\$ 264,000$ |  |  | ( $\$ 3$ 306,000 |  |  |

ANNUAL EQUITY COST INDICATED BY CAPITAL STRUCTURE

$$
\begin{aligned}
&(4,000,000)(.09)= \$ 360,000 \quad(2,400,000)(.127)=\$ 305,000 \\
&-36-
\end{aligned}
$$



|  |  | 4.00 | 4.25 | リ. $\mathrm{S}^{0}$ | 4.75 | 5.00 | 5.25 | 5.b0 | 5.75 | 6.00 | 6.25 | 6.50 | 0.75 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | 10. | 11.46 | 11.73 | 12.00 | 12.27 | 12.54 | 12.80 | 13.07 | 13.34 | 13.61 . | 13.08 | 14.14 | 14.41 |
| 20 | 11. | 10.53 | 11.20 | 11.47 | 11.73 | 12.00 | 12.27 | 12.53 | 12.80 | 13.07 : | 13.33 | 13.60 | 13.87 |
| 20 | 12. | 10.45 | 10.72 | 10.90 | 11.25 | 11.51 | 11.70 | 12.05 | 12.31 | 12.50 | 12.84 | 13.11 | 13.37 |
| 20 | 13. | 10.01 | 10.2e | 10.54 | 10.01 | 11.01 | 11.33 | 11.60 | 11.86 | 12.13 | 12.39 | 12.65 | 14.92 |
| 20 | 14. | 9.tu | 9.87 | 10.13 | 10.40 | 10.66 | 10.92 | 11.19 | 11.45 | 11.71 | 11.98 | 12.24 | 12.50 |
| 20 | 15. | 5.23 | 9.49 | 9.75 | 10.02 | 10.28 | 10.54 | 10.80 | 11.07 | 11.33 | 11.59 | 11.85 | 12.12 |
| 20 | 16. | 8.88 | 9.14 | 9.10 | 9.66 | 9.92 | 10.10 | 10.45 | 10.71 | 10.97 | 11.23 | 11.49 | 11.75 |
| 20 | 17. | 4.55 | - 0.1 | 9.101 | 9.33 | 9.59 | 4.85 | 10.11 | 10.37 | 10.63 | 10.39 | 11.16 | 11.42 |
| 20 | 18. | 0.24 | 8.50 | 8.76 | 9.02 | 9.28 | 9.54 | 9.40 | 10.06 | 10.32 | 10.58 | 10.04 | 11.10 |
| 20 | 19. | 7.94 | 8.20 | 8.46 | 13.72 | 8.98 | 9.24 | 9.50 | 9.76 | 10.02 | 10.28 | 10.54 | 10.80 |
| 20 | 20. | 1.67 | 7.93 | 8.19 | 0.44 | 8.70 | 8.96 | 9.22 | 9.48 | 4.74 | 10.00 | 10.26 | 10.51 |
| 20 | 21. | 7.41 | 7.66 | 7.92 | d. 18 | 8.44 | 8.70 | 0.95 | 9.21 | 9.47 | 9.73 | 9.99 | 14.25 |
| 20 | 22. | 7.16 | 7.41 | 7.67 | 7.93 | 8.17 | 8.414 | 8.70 | 8.96 | $9 . ? 2$ | 9.47 | 9.73 | 4.99 |
| 20 | 23. | 6.52 | 7.17 | 7.45 | 7.69 | 7.94 | 0.20 | 8.46 | 8.72 | 8.97 | 9.23 | 9.49 | Y. 74 |
| 20 | 24. | 6.69 | 6.95 | 7.20 | 7.46 | 7.72 | 7.97 | B. 23 | 8.49 | 8.74 | 9.00 | 9.26 | 9.51 |
| 20 | 25. | 6.47 | 6.73 | 6.98 | 7.24 | 7.50 | 7.75 | 8.01 | 8.26 | 8.52 | 0.78 | 9.03 | 9.29 |
| 10 | 26. | 8.54 | 8.84 | 9.10 | 9.36 | 9.62 | 9.08 | 10.14 | 10.41 | 10.67 | 10.93 | 11.19 | 11.45 |
| 10 | 27. | \%. 17 | 8.43 | 0.69 | 0.95 | 9.21 | 9.47 | 9.73 | 9.99 | 10.25 | 10.51 | 10.77 | 11.03 |
| 10 | 28. | 7.78 | 8.04 | 0.79 | R. 5.5 | 0.81 | 9.07 | 9.33 | 9.59 | 9.85 | 10.11 | 10.37 | 10.63 |
| 10 | 29. | 7.40 | 7.66 | 7.92 | 0.17 | 8.45 | 8.69 | 0.95 | 9.21 | 9.46 | 9.72 | 9.98 | 14.24 |
| 10 | 30. | 7.04 | 7.29 | 7.55 | 7.81 | 8.06 | 8.32 | 8.58 | 8.84 | 9.04 | 9.35 | 9.61 | Y. C \% 7 |
| 10 | 31. | 0.60 | 6.94 | 7.20 | 7.45 | 7.71 | 7.97 | 8.22 | 0.48 | 8.74 | 0.99 | 9.25 | Y. 51 |
| 10 | 32. | 6.35 | 0.60 | 6.86 | 7.11 | 7.31 | 7.62 | 7.88 | 3.14 | 8.39 | 3.6 | 8.90 | 4.16 |
| 10 | 33. | 6.02 | 6.27 | 6.53 | 0.70 | 7.04 | 7.29 | 7.55 | 7.80 | 8.06 | 8.31 | 8.57 | 8.82 |
| 10 | 34. | 5.70 | 5.46 | 6.21 | 6.47 | 6.72 | 6.97 | 7.23 | 7.48 | 7.711 | 7.94 | 8.24 | -. 50 |
| 10 | 35. | 5.40 | 5.65 | 5.90 | 6.16 | 6.41 | 6.66 | 6.42 | 7.17 | 7.42 | 7.68 | 7.93 | H. 19 |
| 10 | 36. | 5.10 | 5.35 | 5.61 | 13. 36 | 6.11 | 6.36 | 6.62 | 6.87 | 7.12 | 7.38 | 7.63 | 1.88 |
| 10 | 37. | 4.81 | 5.47 | 5.32 | 5.57 | 5.82 | 6.07 | 5.33 | 6.58 | 0.83 | 7.08 | 7.33 | 1.59 |
| 10 | 34. | 4.53 | 4.79 | 5.04 | 5.29 | 5.54 | 5.79 | 6.04 | 6.29 | 6.55 | 6.80 | 7.05 | 1.30 |
| 10 | 34. | 4.26 | 4.51 | 4.76 | 5.02 | 5.21 | 5.52 | 5.17 | 6.02 | 6.27 | 6.52 | 6.17 | 1.02 |
| 10 | 40. | 4.00 | 4.25 | 4.50 | 4.75 | 5.00 | 5.25 | 5.50 | 5.75 | 6.00 | 6.25 | 6.50 | 6.75 |

RF GULHEL RATL OF RETURN UN EQUITY GEFORE EGIITY PAYOUI

hroulhen knie of hetulin un equity gefone equity parout

| numbek | finistivt |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Of YEARS | Lgully |  |  |  | AHITAL | IE OF | IU | CCENT |  |  |  |  |  |
| TU TAKGEI | Hallo |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (HLHEENT) |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 10.110 | 10.25 | 10.50 | 10.75 | 11.00 | 11.25 | 11.50 | 11.75 | 12.00 | 12.25 | 12.30 | 12.75 |
| 20 | 10. | 17.50 | 18.16 | 11.113 | 18.70 | 10.97 | 19.23 | 19.50 | 19.77 | 20.04 . | 20.31 | 20.57 | 20.84 |
| 20 | 11. | 17.33 | 17.60 | 17.017 | 13.13 | 18.40 | 18.67 | 10.93 | 19.20 | 14.47 | 19.73 | 20.00 | 20.27 |
| 20 | 12. | 10.83 | 17.09 | 17.36 | 11.62 | 17.14 | 18.15 | 18.42 | 18.68 | 18.95 | 19.21 | 19.4 A | 14.75 |
| 20 | 13. | 11.36 | 16.62 | 16.89 | 17.15 | 17.42 | 17.68 | 17.95 | 18.21 | 18.47 | 10.74 | 19.00 | 14.27 |
| 20 | 14. | 13.93 | 16.19 | 16.16 | 10.72 | 16.98 | 17.25 | 17.51 | 17.77 | 18.04 | 10.30 | 18.56 | 14.03 |
| 20 | 13. | 15.53 | 15.79 | 16.05 | 10.32 | 16.50 | 16.84 | 17.10 | 17.37 | 17.63 | 17.89 | 18.15 | 18.42 |
| 20 | 16. | 15.16 | 15.42 | 15.68 | 15.94 | 16.20 | 16.47 | 16.73 | 16.99 | 17.25 | 17.31 | 17.77 | 18.04 |
| 20 | 17. | 14.E1 | 15.07 | 15.33 | 15.59 | 15.85 | 16.11 | 16.37 | 16.63 | 16.90 | 17.16 | 17.42 | $1!.60$ |
| 20 | 18. | 14.48 | 14.74 | 15.00 | 15.26 | 15.52 | 15.78 | 16.04 | 16.30 | 16.56 | 16.82 | 17.08 | 11.34 |
| 20 | 19. | 14.17 | 14.43 | 14.69 | 14.95 | 15.21 | 15.47 | 15.73 | 15.49 | 16.25 | 16.51 | 16.77 | 11.03 |
| 20 | 20. | 13.80 | 14.14 | 14.40 | 14.66 | 14.91 | 15.17 | 15.43 | 15.69 | 13.95 | 16.8 .1 | 16.47 | 16.73 |
| 20 | 21. | 13.60 | 13.86 | 14.12 | 14.30 | 14.65 | 14.89 | 15.15 | 15.41 | 15.67 | 15.93 | 16.18 | 16.44 |
| 20 | 22. | 13.34 | 13.60 | 13.85 | 14.11 | 14.31 | 14.63 | 14.80 | 15.14 | 15.40 | 15.66 | 15.91 | 16.17 |
| 20 | 23. | 13.09 | 13.34 | 13.60 | 13.86 | 14.11 | 14.37 | 14.63 | 14.89 | 15.14 | 15.40 | 15.66 | 15.91 |
| 20 | 24. | 12.85 | 13.10 | 13.36 | 13.62 | 13.81 | 14.13 | 14.30 | 14.64 | 14.90 | 15.15 | 15.41 | 1).6? |
| 20 | 25. | 12.62 | 12.87 | 13.13 | 13.38 | 13.64 | 13.90 | 14.15 | 14.41 | 14.66 | 14.92 | 15.18 | 15.43 |
| 10 | 26. | 14.24 | 15.10 | 15.36 | 15.63 | 15.89 | 16.15 | 16.41 | 16.67 | 16.93 | 17.19 | 17.45 | 1:.71 |
| 10 | 27. | 14.41 | 14.67 | 14.93 | 15.19 | 15.45 | 15.71 | 15.97 | 16.23 | 16.49 | 16.75 | 17.01 | 11.27 |
| 10 | 28. | 13.99 | 14.25. | 14.51 | 14.77 | 15.03 | 15.29 | 15.55 | 15.81 | 16.07 | 16.33 | 16.54 | 18.817 |
| 10 | 25. | 13.59 | 13.85 | 14.11 | 14.37 | 14.63 | 14.89 | 15.14 | 15.40 | 15.66 | 15.42 | 16.18 | 16.43 |
| 10 | 30. | 13.21 | 13.47 | 13.73 | 13.98 | 14.24 | 14.50 | 14.75 | 15.01 | 15.27 | 15.53 | 15.78 | 16.04 |
| 10 | 31. | 12.84 | 13.10 | 13.35 | 13.61 | 13.87 | 14.12 | 14.38 | 14.64 | 14.89 | 15.15 | 15.40 | 13.66 |
| 10 | 32. | 12.48 | 12.74 | 12.99 | 13.25 | 13.5U | 13.76 | 14.02 | 14.27 | 14.53 | 14.78 | 15.04 | 15.24 |
| 10 | 33. | 12.14 | 12.39 | 12.65 | 12.90 | 13.16 | 13.41 | 13.67 | 13.92 | 14.18 | 14.43 | 14.69 | 14.94 |
| 10 | 34. | 11.80 | 12.06 | 12.31 | 12.56 | 12.82 | 13.07 | 13.33 | 13.58 | 13.84 | 14.09 | 14.34 | 14.60 |
| 10 | 35. | 11.48 | 11.7. | 11.99 | 12.24 | 12.49 | 12.75 | 13.00 | 13.25 | 13.51 | 13.76 | 14.01 | 14.27 |
| 10 | 36. | 11.17 | 11.42 | 11.67 | 11.92 | 12.18 | 12.43 | 12.68 | 12.93 | 13.19 | 13.44 | 13.69 | 13.94 |
| 10 | 37. | 10.86 | 11.11 | 11.36 | 11.62 | 11.01 | 12.12 | 12.37 | 12.62 | 12.88 | 13.13 | 13.38 | 13.63 |
| 10 | 38. | 10.57 | 10.82 | 11.67 | 11.32 | 11.57 | 11.82 | 12.07 | 12.32 | 12.58 | 12.83 | 13.08 | 15.33 |
| 10 | 39. | 10.28 | 10.53 | 10.70 | 11.03 | 11.20 | 11.53 | 11.78 | 12.03 | 12.20 | 12.53 | 12.79 | 13.174 |
| - 10 | 40. | 10.00 | 10.25 | 10.50 | 10.75 | 11.00 | 11.25 | 11.50 | 11.75 | 12.00 | 12.25 | 12.50 | 14.75 |

IUMEEH
IU TAHGEI

|  |  | 4.00 | 4.25 | 4.50 | 4.75 | 5.00 | 5.25 | 5.50 | 5.75 | 6.00 | 6. 25 | 6.30 | 6.75 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15 | 10. | 14.07 | 14.34 | 14.62 | 14.89 | 15.11 | 15.44 | 15.72 | 15.49 | 16.26 | 16.54 | 16.01 | 11.09 |
| 15 | 11. | 13.35 | 13.62 | 13.89 | 14.16 | 14.44 | 14.71 | 14.48 | 15.25 | 13.53 | 15.00 | 16.07 | 16.34 |
| 15 | 12. | 12.69 | 12.96 | 13.23 | 13.50 | 13.78 | 14.05 | 14.32 | 14.59 | 14.86 | 15.13 | 15.40 | 13.6 ? |
| 15 | 13. | 12.09 | 12.36 | 12.63 | 12.90 | 13.17 | 13.44 | 13.71 | 13.98 | 14.25 | 14.52 | 14.79 | 15.06 |
| 15 | 14. | 11.54 | 11.81 | 12.08 | 12.34 | 12.61 | 12.88 | 13.15 | 13.4 ? | 13.68 | 13.95 | 14.22 | 14.49 |
| 15 | 15. | 11.03 | 11.29 | 11.56 | 11.83 | 12.10 | 12.36 | 12.63 | 12.90 | 13.16 | 13.43 | 13.70 | 13.96 |
| 15 | 16. | 10.55 | 10.82 | 11.08 | 11.35 | 11.61 | 11.48 | 12.15 | 12.41 | 12.68 | 12.94 | 13.21 | 13.47 |
| 15 | 17. | 10.11 | 10.37 | 10.63 | 10.90 | 11.16 | 11.43 | 11.69 | 11.96 | 12.22 | 12.49 | 12.75 | 15.02 |
| 15 | 18. | 9.69 | 9.95 | 10.21 | 10.48 | 10.74 | 11.00 | 11.27 | 11.53 | 11.10 | 12.06 | 12.32 | 12.59 |
| 15 | 19. | 9.29 | 9.55 | 9.02 | 10.08 | 10.34 | 10.61 | 10.87 | 11.13 | 11.39 | 11.66 | 11.92 | 12.18 |
| 15 | 20. | 4.92 | 9.18 | 9.44 | 7.70 | 9.91 | 10.23 | 10.49 | 10.75 | 11.01 | 11.20 | 11.54 | 11.10 |
| 15 | 21. | 4.56 | 4.42 | 9.09 | 9.35 | 9.61 | 9.87 | 10.13 | 10.39 | 10.65 | 10.91 | 11.17 | 11.44 |
| 15 | 22. | 8.23 | 0.49 | 0.75 | 9.01 | 9.27 | 9.33 | 9.79 | 10.05 | 10.31 | 10.57 | 10.83 | 11.09 |
| 15 | 23. | 7.91 | 6. 17 | 8.43 | 8.69 | 8.9 | 9.21 | 9.46 | 9.72 | 9.98 | 10.24 | 10.50 | 10.76 |
| 15 | 24. | 7.60 | 7.06 | 0.12 | 0.38 | 0.64 | 8.90 | 9.15 | 9.41 | 4.67 | 9.93 | 10.19 | 10.45 |
| 15 | 25. | 7.31 | 7.57 | 7.43 | 0.08 | 8.34 | 8.60 | 8.86 | 9.12 | 4.37 | 9.63 | 9.09 | 10.15 |
| 5 | 26. | 13.36 | 13.63 | 13.90 | 14.18 | 14.45 | 14.72 | 14.99 | 15.27 | 15.54 | 15.81 | 16.08 | 16.36 |
| 5 | 27. | 12.51 | 12.78 | 13.05 | 13.32 | 13.54 | 13.86 | 14.13 | 14.40 | 14.67 | 14.94 | 15.21 | 15.40 |
| 5 | 28. | 11.E9 | 11.96 | 12.23 | 12.50 | 12.76 | 13.03 | 13.30 | 13.57 | 13.84 | 14.11 | 14.37 | 14.64 |
| 5 | 29. | 10.51 | 11.10 | 11.44 | 11.71 | 11.90 | 12.24 | 12.51 | 12.77 | 13.04 | 13.31 | 13.57 | 13.04 |
| 5 | 30. | 10.16 | 10.42 | 10.69 | 10.95 | 11.22 | 11.40 | 11.75 | 12.01 | 12.28 | 12.54 | 12.81 | 13.07 |
| 5 | 31. | 4.44 | 9.70 | 9.97 | 10.23 | 10.44 | 10.75 | 11.0? | 11.28 | 11.54 | 11.81 | 12.07 | 12.33 |
| 5 | 32. | 0.75 | 9.01 | 9.27 | 9.53 | 9.79 | 10.05 | 10.31 | 10.50 | 10.84 | 11.10 | 11.36 | 11.62 |
| 5 | 33. | C.04 | 0.34 | 0.60 | 0.86 | 9.12 | 9.30 | 9.64 | 9.90 | 10.16 | 10.42 | 10.68 | 10.94 |
| 5 | 34. | 7.44 | 7.69 | 7.95 | 8.21 | 8.41 | 8.73 | 8.99 | 9.24 | 9.50 | 9.76 | 10.02 | 14.20 |
| 5 | 35. | 6.21 | 7.07 | 7.33 | 7.59 | 7.84 | 8.10 | 8.36 | 8.61 | 8.87 | 9.13 | 9.38 | Y. 64 |
| 5 | 36. | 6.21 | 6.47 | 6.73 | 6.98 | 7.24 | 7.49 | 7.75 | 8.00 | 8.26 | 0.51 | 0.77 | Y.0? |
| 5 | 37. | 3.63 | 5.09 | 6.14 | 6.40 | 6.65 | 6.90 | 7.16 | 7.41 | 7.67 | 7.42 | 8.17 | 8.43 |
| 5 | 38. | 4.07 | 3.32 | 5.58 | 5.83 | 6.08 | 6.34 | 6.59 | 6.84 | 7.09 | 7.35 | 7.60 | 1.85 |
| 5 | 39. | 4.53 | 4.78 | 5.03 | 5.28 | 5.53 | 5.78 | 6.04 | 6.29 | 6.54 | 6.79 | 7.04 | 1.29 |
| 5 | 40. | 4.00 | 4.25 | 4.50 | 4.75 | 5.00 | 5.25 | 5.50 | 5.75 | 6.00 | 6.2b | 6.50 | 0.75 |

## RF (AUILEO RATE OF RETUKN UN EQUITY BEFOKL EQUITY PAYOUT

|  |  | 7.00 | 7.25 | 7.4.0 | 7.75 | 0.00 | 8.25 | 8. 50 | 0.75 | Y. 00 | 9.23 | 9.30 | Y. 75 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15 | 10. | 17.30 | 17.63 | 17.71 | 11.18 | 10.46 | 10.73 | 19.01 | 14. 20 | 14.6ti. | 19.13 | 20.10 | 20.38 |
| 15 | 11. | 16.t2 | 16.39 | 17.16 | 11.43 | 17.71 | 17.98 | 13.25 | 1.1.52 | 10.80: | 14.07 | 19.34 | 17.61 |
| 15 | 12. | 15.54 | 16.21 | 16.48 | 10.76 | 17.03 | 17.30 | 17.57 | 17.84 | 14.11 | 13.38 | 18.65 | 18.92 |
| 15 | 13. | 15.33 | 15.69 | 15.86 | 16.13 | 16.40 | 16.67 | 16.94 | 17.21 | 17.18 | 17.75 | 10.02 | 18.27 |
| 15 | 14. | 14.76 | 15.0.3 | 15.29 | 15.36 | 15.83 | 16.10 | 16.37 | 16.63 | 16.90 | 17.17 | 17.44 | 11.71 |
| 15 | 15. | 14.23 | 14.50 | 14.76 | 15.03 | 15.30 | 15.56 | 15.83 | 16.10 | 16.37 | 16.63 | 16.90 | 11.17 |
| 15 | 16. | 13.74 | 14.01 | 14.27 | 14.54 | 14.80 | 15.07 | 15.33 | 15.60 | 15.87 | 16.13 | 16.40 | 16.66 |
| 15 | 17. | 13.28 | 13.55 | 13.81 | 14.08 | 14.34 | 14.60 | 14.87 | 15.13 | 15.40 | 15.66 | 15.93 | 16.19 |
| 15 | 10. | 12.85 | 13.11 | 13.30 | 13.64 | 13.91 | 14.17 | 14.43 | 14.70 | 14.96 | 15.22 | 15.49 | 15.75 |
| 15 | 14. | 12.44 | 12.71 | 12.97 | 13.23 | 13.50 | 13.76 | 14.02 | 14.28 | 14.55 | 14.01 | 15.07 | 15.33 |
| 15 | 20. | 12.06 | 12.32 | 12.50 | 12.85 | 13.11 | 13.37 | 13.63 | 13.49 | 14.16 | 14.42 | 14.68 | 14.94 |
| 15 | 21. | 11.70 | 11.96 | 12.22 | 12.48 | 12.74 | 13.00 | 13.26 | 13.52 | 13.78 | 14.05 | 14.31 | 14.57 |
| 15 | 22. | 11.35 | 11.61 | 11.07 | 12.13 | 12.39 | 12.65 | 12.91 | 13.17 | 13.43 | 13.69 | 13.45 | 14.21 |
| 15 | 23. | 11.02 | 11.29 | 11.54 | 11.80 | 12.06 | 12.32 | 12.58 | 12.84 | 13.10 | 13.36 | 13.62 | 13.87 |
| 15 | 24. | 10.71 | 10.47 | 11.22 | 11.48 | 11.74 | 12.00 | 12.26 | 12.52 | 12.78 | 13.03 | 13.29 | 13.55 |
| 15 | 25. | 10.42 | 10.66 | 10.92 | 11.10 | 11.44 | 11.70 | 11.95 | 12.21 | 12.47 | 12.73 | 12.99 | 15.24 |
| 5 | 2fo. | 16.63 | 16.90 | 17.17 | 17.45 | 17.72 | 17.99 | 18.26 | 18.53 | 18.81 | 19.00 | 19.35 | 14.6 ? |
| 5 | $2 \%$ | 15.75 | 16.02 | 16.29 | 16.56 | 16.83 | 17.10 | 17.37 | 17.64 | 17.91 | 18.18 | 10.45 | 14.73 |
| 5 | 2 B . | 14.51 | 15.19 | 15.45 | 15.72 | 15.94 | 16.25 | 16.52 | 16.79 | 17.06 | 17.33 | 17.60 | 11.87 |
| 5 | 29. | 14.11 | 14.37 | 14.64 | 14.91 | 15.17 | 15.44 | 15.71 | 15.97 | 16.24 | 16.51 | 16.77 | 11.04 |
| 5 | 30. | 13.84 | 13.67 | 13.67 | 14.13 | 14.40 | 14.66 | 14.93 | 15.19 | 15.46 | 15.12 | 15.99 | 16.25 |
| 5 | 31. | 12.E0 | 12.06 | 13.12 | 13.39 | 13.65 | 13.91 | 14.17 | 14.44 | 14.70 | 14.96 | 15.23 | 15.49 |
| 5 | 32. | 11.48 | 12.11 | 12.41 | 12.67 | 12.93 | 13.19 | 13.45 | 1.3.71 | 13.97 | 14.21 | 14.50 | 14.76 |
| 5 | 23. | 11.20 | 11.46 | 11.72 | 11.98 | 12.24 | 12.50 | 12.76 | 33.0? | 13.28 | 13.54 | 13.80 | 14.115 |
| 5 | 34. | 10.54 | 10.79 | 11.05 | 11.31 | 11.51 | 11.83 | 12.08 | 12.34 | 12.60 | 12.86 | 13.12 | 13.38 |
| 5 | 35. | 9.90 | 10.15 | 10.41 | 10.67 | 10.92 | 11.18 | 11.44 | 11.69 | 11.95 | 12.21 | 12.46 | 12.7? |
| 5 | 36. | 9.28 | 5.53 | 9.79 | 10.04 | 10.30 | 10.56 | 10.81 | 11.07 | 11.32 | 11.58 | 11.03 | 12.09 |
| 5 | 37. | 0.68 | 0.94 | 9.14 | 3.44 | 9.70 | 9.45 | 10.21 | 10.46 | 10.71 | 10.97 | 11.22 | 11.47 |
| 5 | 30. | 0.10 | 8.36 | 0.61 | U. 86 | 9.11 | 9.37 | 9.62 | 9.87 | 10,12 | 10.38 | 10.63 | 10.88 |
| 5 | 39. | 7.54 | 7.79 | 0.05 | 6.30 | H.5 | 8. HO | 9.05 | 9.30 | Y. 55 | 9.80 | 10.116 | 10.31 |
| 5 | 40. | 7.00 | 7.25 | 7.50 | 7.75 | 0.00 | 0.25 | 8.50 | 8.75 | 9.00 | 9.25 | 9.50 | Y. 75 |


| or YenRS <br> 10 TAKGE! | $\begin{gathered} \text { tquily } \\ \text { Ratlu } \\ \text { (HtIICEN) } \end{gathered}$ | CAIITAL IINTE OI GROWTH IN FERCENT |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 10.00 | 10.45 | 10.b0 | 10.75 | 11.00 | 11.25 | 11.50 |  | 12.00 | 12. 25 |  |  |
|  |  |  |  |  |  |  |  |  | 11.75 |  |  | 12.50 | 12.75 |
| 15 | 10. | 20.t5 | 20.42 | c1.? 4 | 21.47 | 21.75 | 2¢.0\% | 22.30 | 22.57 | 22.84 | 23.12 | 23.34 | 23.67 |
| 15 | 11. | 19.49 | 20.16 | 20.43 | 20.70 | 20.98 | 21.2\% | 21.52 | 21.79 | 22.01 | 22.34 | 22.61 | 22.89 |
| 15 | 12. | 14.19 | $19.4 E$ | 19.73 | 20.01 | 20.28 | 20.55 | 20.82 | 21.09 | 21.36 | 21.63 | 21.40 | 22.17 |
| 15 | 13. | 14.56 | 16.0 .3 | 19.10 | 19.37 | 19.64 | 19.91 | 20.10 | 20.44 | 20.71 | 20.98 | 21.25 | 21.52 |
| 15 | 14. | 17.57 | 10.211 | $10.5: 1$ | 18.78 | 19.05 | 19.32. | 19.58 | 19.85 | 20.12 | 20.39 | 20.66 | 20.92 |
| 15 | 15. | 17.43 | 17.70 | 17.97 | 18.23 | 18.50 | 18.77 | 19.03 | 19.30 | 19.57 | 19.84 | 20.10 | 20.37 |
| 15 | 16. | 16.93 | 17.19 | 17.46 | 11.73 | 17.94 | 18.26 | 18.52 | 18.79 | 19.05 | 19.32 | 19.59 | 14.85 |
| 15 | 17. | 16.46 | 16.72 | 16.99 | 17.25 | 17.52 | 17.78 | 18.05 | 18.31 | 18.57 | 18.84 | 19.10 | 14.37 |
| 15 | 10. | 10.01 | 16.28 | 16.54 | 16.61 | 17.01 | 17.33 | 17.60 | 17.86 | 10.12 | 18.39 | 10.65 | 14.91 |
| 15 | 19. | 15.60 | 15.86 | 16.12 | 16.39 | 16.65 | 16.91 | 17.17 | 17.44 | 17.70 | 17.96 | 18.22 | 18.49 |
| 15 | 20. | 14.20 | 15.46 | 15.73 | 15.49 | 16.23 | 16.51 | 16.77 | 17.04 | 17.30 | 17.56 | 17.82 | 18.09 |
| 15 | 21. | 14.23 | 15.09 | 15.35 | 11.61 | 15.87 | 16.13 | 16.39 | 16.66 | 16.92 | 17.18 | 17.44 | 11.70 |
| 15 | 22. | 14.47 | 14.73 | 14.49 | 14.25 | 15.51 | 15.77 | 16.03 | 16.29 | 16.55 | 16.01 | 17.07 | 11.33 |
| 15 | 23. | 14.13 | 14.39 | 14.55 | 14.91 | 15.17 | 15.43 | 15.69 | 15.95 | 16.21 | 16.47 | 16.73 | 16.99 |
| 15 | 24. | 12.81 | 14.07 | 14.33 | 14.59 | 14.85 | 15.10 | 15.36 | 15.62 | 15.88 | 16.14 | 16.40 | 16.66 |
| 15 | 25. | 13.50 14.90 | 13.76 | 14.02 20.114 | 14.28 | 14.53 | 14.79 | 15.05 | 15.31 | 13.56 | 15.82 | 16.08 | 16.34 |
| 5 | 2 F | 14.90 | 20.17 | 20.114 | 20.71 | 20.94 | 21.26 | 21.33 | 21.40 | 22.08 | 22.15 | 22.62 | 24.89 |
| 5 | 27. | 15.00 | 19.27 | 19.54 | 19.81 | 20.04 | 20.35 | 20.62 | 20.89 | 21.16 | 21.43 | 21.70 | 21.97 |
| 5 | 20. | 10.13 | 18.40 | 18.67 | 18.94 | 19.62 | 19.48 | 19.74 | 20.01 | 20.28 | 20.55 | 20.82 | 21.09 |
| 5 | 24. | 17.31 | 17.37 | 17.84 | 10.11 | 18.37 | 18.64 | 18.91 | 19.17 | 19.44 | 19.71 | 19.97 | 20.24 |
| 5 | 30. | 16.51 | 16.78 | 17.04 | 11.31 | 17.57 | 17.04 | 18.10 | 10.37 | 18.63 | 13.90 | 19.16 | 14.45 |
| 5 | 31. | 15.75 | 16.02 | 16.28 15.54 | 16.54 | 16.81 | 17.07 | 17.33 | 17.59 | 17.86 | 10.12 | 18.38 | 18.65 |
| 5 5 | 32. | 15.02 14.31 | 15.28 14.57 | 15.54 14.15 | 14.00 14.09 | 16.07 15.35 | 16.33 | 16.59 | 16.85 | 17.11 | 17.37 | 17.63 | 11.90 |
| 5 | 34. | 13.63 | 13.89 | 14.15 | 14.41 | 14.67 | 14.93 | 15.87 15.18 | 16.13 15.44 | 16.39 16.70 | 16.65 | 16.91 | 11.17 |
| 5 | 35. | 12.98 | 13.23 | 13.49 | 13.75 | 14.00 | 14.26 | 14.52 | 14.77 | 15.03 | 15.29 | 16.22 15.54 | 15.80 |
| 5 | 36. | 12.34 | 12.60 | 12.85 | 13.11 | 13.36 | 13.62 | 13.87 | 14.13 | 14.39 | 14.64 | 14.90 | 15.15 |
| 5 | 37. | 11.73 | 11.97 | 12.24 | 12.49 | 12.74 | 13.00 | 13.25 | 13.51 | 13.76 | 14.01 | 14.27 | 14.5 ? |
| 5 | 30. | 11.13 | 11.39 | 11.6.4 | 11.89 | 12.14 | 12.40 | 12.65 | 12.90 | 13.15 | 13.41 | 13.66 | 13.91 |
| 5 | 39. | 10.56 | 10.41 | 11.016 | 11.31 | 11.56 | 11.81. | 12.07 | 12.32 | 12.57 | 12.02 | 13.107 | 13.32 |
| 5 | 40. | 10.00 | 10.25 | 10.50 | 10.75 | 11.00 | 11.25 | 11.50 | 11.75 | 12.00 | 12.25 | 12.50 | 12.75 |

RFGUIREG RATE OF RETURA UN COUITY DEFOME ENHITY PAYOUI

|  |  | 4.00 | 4.25 | 4.50 | 4.75 | 5.00 | 5.25 | 5.50 | 5.75 | 6.00 | 6.25 | 6.50 | 6.75 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 10. | 19.46 | 19.75 | 20.114 | 20.33 | 20.61 | 20.90 | 21.19 | 21.47 | 21.76. | 22.05 | ?2. 34 | 22.6.2 |
| 10 | 11. | 18.33 | 16.62 | 11.90 | $1+18$ | 19.41 | 19.75 | 20.04 | 20.32 | $20.61{ }^{\prime}$ | 20.189 | 21.11 | 21.46 |
| 10 | 12. | 17.31 | 17.59 | $17.8 \%$ | 18.15 | 18.45 | 18.72 | 19.10 | 19.20 | 14.56 | 19.84 | 20.13 | 20.41 |
| 10 | 13. | 16.37 | 16.65 | 16.53 | 17.21 | 17.49 | 17.77 | 18.45 | 18.33 | 1H.61 | 18.89 | 19.17 | 14.45 |
| 10 | 14. | 15.51 | 15.79 | 16.07 | 10.34 | 16.62 | 16.90 | 17.10 | 17.46 | 17.73 | 10.101 | 18.29 | 14.57 |
| 10 | 15. | 14.72 | 14.99 | 15.2? | 15.54 | 15.02 | 16.10 | 16.37 | 16.65 | 16.92 | 17.20 | 17.48 | 11.75 |
| 10 | 16. | 15.48 | 14.25 | 14.53 | 14.80 | 15.08 | 15.35 | 15.62 | 15.40 | 16.17 | 16.45 | 16.72 | 16.99 |
| 10 | 17. | 13.29 | 13.56 | 13.84 | 14.11 | 14.38 | 14.65 | 14.92 | 15.20 | 15.47 | 15.74 | 16.41 | 16.29 |
| 10 | 18. | 12.65 | 12.92 | 13.19 | 13.46 | 13.73 | 14.00 | 14.27 | 14.54 | 14.81 | 15.00 | 15.35 | 15.62 |
| 10 | 19. | 12.04 | 12.31 | 12.5.8 | 12.135 | 13.11 | 13.30 | 13.65 | 13.92 | 14.19 | 14.46 | 14.73 | 15.00 |
| 10 | 20. | 11.40 | 11.13 | 12.10 | 12.27 | 12.54 | 12.40 | 13.07 | 13.34 | 13.61 | 13.110 | 14.14 | 14.41 |
| 10 | 21. | 10.52 | 11.19 | 11.46 | 11.72 | 11.94 | 12.26 | 12.52 | 12.79 | 13.06 | 13.32 | 13.59 | 13.15 |
| 10 | 22. | 10.41 | 10.67 | 10.94 | 11.20 | 11.47 | 11.78 | 12.00 | 12.26 | 12.53 | 12.80 | 13.06 | 15.33 |
| 10 | 23. | 5.92 | 10.18 | 10.45 | 10.71 | 10.97 | 11.24 | 11.50 | 11.77 | 12.03 | 12.30 | 12.56 | 12.82 |
| 10 | 24. | 4.45 | 9.71 | 9.98 | 10.24 | 10.50 | 10.77 | 11.03 | 11.29 | 11.56 | 11.02 | 12.08 | 12.34 |
| 10 | 25. | 9.00 | 9.27 | 9.53 | 9.79 | 10.05 | 10.31 | 10.68 | 10.04 | 11.10 | 11.36 | 11.63 | 11.89 |
| 3 | 26. | 20.06 | 20.35 | 20.6 .4 | 20.93 | 21.21 | 21.50 | 21.79 | 22.08 | 22.37 | 22.66 | 22.95 | 23.23 |
| 3 | 27. | 18.56 | 18.84 | 19.13 | 19.41 | 19.70 | 19.98 | 20.27 | 20.55 | 21.84 | 21.12 | 2.1 .41 | 21.69 |
| 3 | 28. | 17.13 | 17.41 | 17.69 | 17.97 | 10.26 | 10.54 | 18.82 | 19.10 | 19.38 | 19.65 | 19.95 | 20.23 |
| 3 | 29. | 15.77 | 16.05 | 16.32 | 16.60 | 16.84 | 17.16 | 17.44 | 17.72 | 17.99 | 10.27 | 13.55 | 18.83 |
| 3 | 30. | 14.47 | 14.74 | 15.02 | 15.29 | 15.51 | 15.04 | 16.12 | 16.39 | 16.67 | 16.94 | 17.22 | 11.49 |
| 3 | 31. | 13.22 | 13.49 | 13.77 | 14.04 | 14.31 | 14.58 | 14.86 | 15.13 | 15.40 | 15.67 | 15.94 | 16.2 ? |
| 3 | 32. | 12.03 | 12.30 | 12.57 | 12.84 | 13.11 | 13.38 | 13.65 | 13.42 | 14.19 | 14.45 | 14.72 | 14.99 |
| 3 | 33. | 10.29 | 11.15 | 11.42 | 11.69 | 11.95 | 12.22 | 12.49 | 12.75 | 13.02 | 13.29 | 13.55 | 19.87 |
| 3 | 34. | 4.79 | 10.05 | 10.32 | 10.58 | 10.85 | 11.11 | 11.37 | 11.64 | 11.90 | 12.16 | 12.43 | 12.69 |
| 3 | 35. | 8.73 | 9.00 | 9.26 | 9.52 | 5.78 | 10.04 | 10.30 | 10.56 | 10.82 | 11.09 | 11.35 | 11.61 |
| 3 | 36. | 7.72 | 7.98 | 8.24 | 8.49 | 8.75 | 9.01 | 9.27 | 9.53 | 4. 79 | 10.05 | 10.31 | 10.47 |
| 3 | 37. | 6.74 | E. 99 | 7.25 | 7.51 | 7.76 | 8.02 | 8.28 | 8.53 | 8.79 | 9.05 | 9.30 | 4.56 |
| 3 | 38. | 5.79 | 6.05 | 6.30 | 6.56 | 6.41 | 7.07 | 7.32 | 7.57 | 7.83 | 8.08 | 8.34 | 8.59 |
| 3 | 35. | 4. と8 | b.13 | 5.39 | 5.64 | 5.89 | 6.14 | 6.39 | 6.65 | 6.90 | 7.15 | 7.40 | 1.65 |
| 3 | 40. | 4.00 | 4.25 | 4.50 | 4.75 | 5.00 | 5.25 | 5.50 | 5.75 | 6.00 | 6.25 | 6.50 | 6.75 |


|  |  | 1.00 | 7.25 | 7.10 | 7.75 | E. 00 | 8.25 | 8.50 | 0.75 | 4.00 | 9.25 | 9.50 | Y. 75 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 10. | 22.91 | 23.20 | 23.49 | 23.77 | 24.06 | 24.35 | 24.63 | 24.42 | 25.21 | 25.30 | 25.71 | 26.07 |
| 10 | 11. | 21.74 | 22.0 | 2.?. 31 | 22.60 | 22.88 | 23.17 | 23.45 | 23.74 | 24.02 | 24.30 | 24.59 | 24.87 |
| 10 | 12. | 20.64 | 20.47 | 21.25 | 21.54 | 21.82 | 22.10 | 22.30 | 22.66 | 22.95 | 23.23 | 23.51 | 23.79 |
| 10 | 13. | 15.73 | 20.01 | 20.29 | 20.57 | 20.05 | 21.13 | 21.41 | 21.69 | 21.97 | 22.25 | 2?.53 | 22.81 |
| 10 | 14. | 10.84 | 15.12 | 19.40 | 19.68 | 19.96 | 20.23 | 20.51 | 20.79 | 21.07 | 21.34 | 21.62 | 21.90 |
| 10 | 15. | 18.03 | 10.30 | 18.50 | 10.05 | 19.13 | 19.41 | 19.68 | 19.96 | 20.23 | 20.51 | 20.70 | 21.06 |
| 10 | 16. | 17.27 | 17.54 | 17.92 | 18.09 | 14.36 | 18.64 | 18.41 | 19.19 | 19.46 | 19.73 | 20.01 | 20.28 |
| 10 | 17. | 16.56 | 16.83 | 17.10 | 17.38 | 17.63 | 17.92 | 18.19 | 18.47 | 10.74 | 19.01 | 19.20 | 14.55 |
| 10 | 18. | 15.89 | 16.17 | 16.44 | 16.71 | 16.98 | 17.25 | 17.52 | 17.79 | 18.00 | 18.33 | 18.60 | 18.87 |
| 10 | 14. | 15.27 | 15.54 | 15.111 | 10.08 | 16.36 | 16.62 | 16.89 | 17.15 | 17.42 | 17.69 | 17.96 | 18.23 |
| 10 | 20. | 14.68 | 14.95 | 15.22 | 15.48 | 15.7 | 16.02 | 15.24 | 16.56 | 16.82 | 17.04 | 17.36 | 11.63 |
| 10 | 21. | 14.12 | 14.39 | 14.65 | 14.92 | 15.14 | 15.45 | 15.72 | 15.94 | 16.25 | 16.52 | 16.79 | 11.05 |
| 10 | 22. | 13.59 | 13.66 | 14.12 | 14.39 | 14.65 | 14.92 | 15.18 | 15.45 | 15.72 | 15.98 | 16.25 | 16.51 |
| 10 | 23. | 13.09 | 13.35 | 13.62 | 13.88 | 14.15 | 14.41 | 14.67 | 14.94 | 15.20 | 15.47 | 15.73 | 15.99 |
| 10 | 24. | 12.61 | 12.87 | 13.13 | 13.40 | 13.66 | 13.92 | 14.19 | 14.45 | 14.71 | 14.98 | 15.24 | 15.50 |
| 10 | 25. | 12.15 | 12.41 | 12.E7 | 12.94 | 13.20 | 13.46 | 13.72 | 13.98 | 14.25 | 14.51 | 14.77 | 15.03 |
| 3 | 26. | 23.52 | 23.01 | 24.10 | 24.39 | 24.68 | ? 4.97 | 25.25 | 25.54 | 25.83 | 26.12 | 26.41 | 26.70 |
| 3 | 27. | 21.98 | 22.26 | 22.55 | 22.83 | 23.12 | 23.40 | 23.69 | 23.97 | 24.26 | 24.511 | 24.83 | 25.11 |
| 3 | 28. | 20.51 | 20.79 | 21.07 | 21.35 | 21.63 | 21.92 | 22.20 | 22.40 | 22.76 | 23.04 | 23.32 | 23.61 |
| 3 | 29. | 19.11 | 19.39 | 14.66 | 19.94 | 20.22 | 20.50 | 20.78 | 21.06 | 21.33 | 21.61 | 21.119 | 22.17 |
| 3 | 30. | 17.77 | 18.04 | 18.32 | 18.59 | 10.87 | 19.14 | 19.42 | 19.69 | 19.97 | 20.25 | 20.52 | 2U. 80 |
| 3 | 31. | 16.49 | 16.76 | 17.03 | 17.31 | 17.58 | 17.85 | 18.12 | 10.39 | 18.67 | 10.94 | 19.21 | 14.48 |
| 3 | 32. | 11.26 | 15.53 | 15.100 | 16.07 | 16.34 | 16.61 | 16.88 | 17.15 | 17.42 | 17.69 | 17.96 | 10.22 |
| 3 | 33. | 14.09 | 14.35 | 14.52 | 14.89 | 15.15 | 15.42 | 15.64 | 12.95 | 16.22 | 16.49 | 16.15 | 11.0 ? |
| 3 | 34. | 12.96 | 13.22 | 13.48 | 13.75 | 14.01 | 14.28 | 14.54 | 14.80 | 15.07 | 15.33 | 15.60 | 15.86 |
| 3 | 35. | 11.87 | 12.13 | 12.39 | 12.65 | 12.92 | 13.18 | 13.44 | 13.70 | 13.96 | 14.22 | 14.48 | 14.75 |
| 3 | 36. | 10.82 | 11.00 | 11.34 | 11.60 | 11.06 | 12.12 | 12.38 | 12.64 | 12.90 | 13.16 | 13.41 | 13.67 |
| 3 | 37. | 9.82 | 10.07 | 10.33 | 10.59 | 10.84 | 11.10 | 11.36 | 11.61 | 11.87 | 12.13 | 12.30 | 12.64 |
| 3 | 34. | 8.05 | 9.10 | 9.35 | 9.61 | 9.80 | 10.12 | 10.37 | 10.63 | 10.88 | 11.13 | 11.39 | 11.64 |
| 3 | 39. | 7.91 | 8.16 | 0.41 | 3.66 | 8.92 | 9.17 | 4.42 | 9.67 | 9.92 | 10.16 | 10.43 | 10.60 |
| 3 | 40. | 7.00 | 7.25 | 7.50 | 7.75 | 8.00 | 8.25 | 8.30 | 8.75 | Y. 00 | 9.25 | 9.30 | Y. 75 |


|  |  | 4.00 | 4.25 | 4.50 | 4.75 | 3.0U | 5.25 | 5.50 | 5.75 | 6.00 | $t_{1}, 25$ | 6.50 | 6.75 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | 11. | 10.72 | 10.39 | 11.26 | 11.52 | 11.74 | 12.05 | 12.32 | 12.59 | 12.85 | 13.12 | 13.38 | 13.65 |
| 20 | 11. | 10.20 | 10.46 | 10.73 | 10.99 | 11.26 | 11.52 | 11.79 | 12.05 | 12.32 | 12.58 | 12.85 | 13.11 |
| 20 | 12. | 4.72 | 9.98 | 10.25 | 10.51 | 10.77 | 11.04 | 11.30 | 11.56 | 11.83 | 12.09 | 12.36 | 12.6? |
| 20 | 13. | 4.28 | 9.54 | Y. 81 | 10.07 | 10.33 | 10.59 | 10.86 | 11.12 | 11.38 | 11.64 | 11.41 | 12.17 |
| 20 | 14. | 0.80 | 9.14 | 9.40 | 9.66 | 9.92 | 10.18 | 10.45 | 10.71 | 10.97 | 11.23 | 11.49 | 11.75 |
| 20 | 15. | 8.50 | 8.76 | 9.02 | 9. 28 | 9.54 | 9.80 | 10.07 | 10.33 | 10.59 | 10.85 | 11.11 | 11.37 |
| 20 | 16. | 0.15 | 0.41 | 0.67 | 0.93 | 9.14 | 9.45 | 9.71 | 9.97 | 10.23 | 10.49 | 10.75 | 11.01 |
| 20 | 17. | 7.82 | 8.00 | B. 34 | 0.60 | 8.06 | 9.12 | 9.30 | 9.64 | 9.90 | 10.16 | 10.112 | 10.67 |
| 10 | 18. | 11.15 | 11.42 | 11.69 | 11.95 | 12.2 .2 | 12.49 | 12.75 | 13.0? | 13.29 | 13.56 | 13.82 | 14.09 |
| 10 | 19. | 14.55 | 10.62 | 11.08 | 11.35 | 11.61 | 11.8 t | 12.15 | 12.41 | 12.60 | 12.94 | 13.21 | 15.47 |
| 10 | 20. | 4.99 | 10.25 | 10.51 | 10.78 | 11.04 | 11.31 | 11.67 | 11.84 | 12.16 | 12.37 | 12.63 | 12.89 |
| 10 | 21. | 9.45 | 9.71 | 9.98 | 10.24 | 10.54 | 10.77 | 11.03 | 11.29 | 11.56 | 11.82 | 12.08 | 12.34 |
| 10 | 22. | 8.94 | 9.20 | 9.47 | 9.73 | 9.94 | 10.25 | 10.51 | 10.78 | 11.04 | 11.30 | 11.56 | 11.82 |
| 10 | 23. | 8.46 | 0.72 | 8.98 | 9.24 | 9.50 | 9.76 | 10.02 | 10.20 | 10.55 | 10.81 | 11.07 | 11.33 |
| 10 | 24. | 8.00 | 8.26 | 8.52 | Я. 78 | 9.04 | 9.30 | 9.56 | 9.82 | 10.08 | 10.34 | 10.59 | 10.85 |
| 10 | 25. | 7.56 | 7.82 | 8.08 | 0.33 | 8.54 | 8.85 | 9.11 | 9.37 | 9.63 | 9.89 | 10.14 | 10.40 |
| 10 | 26. | 7.14 | 7.40 | 7.65 | 7.41 | 8.11 | 8.43 | 6.68 | 8.94 | 9.20 | 9.46 | 9.71 | Y. 97 |
| 10 | 27. | 6.73 | E.Y9 | 7.25 | 7.50 | 7.76 | 0.02 | 0.27 | 0.53 | 8.79 | 9.04 | 9.30 | Y. 56 |
| 5 | 28. | 8.75 | Y. 01 | 9.27 | 9.33 | 9.74 | 10.05 | 10.31 | 10.58 | 10.84 | 11.10 | 11.36 | 11.62 |
| 5 | 29. | 7.49 | 8.25 | 8.51 | 0.76 | 9.02 | 9.28 | 9.54 | 9.80 | 10.00 | 10.32 | 10.58 | 14.84 |
| 5 | 30. | 7.26 | 7.51 | 7.77 | 8.03 | 8.29 | 8.55 | 8.80 | 9.06 | 9.32 | 9.58 | 9.83 | 14.09 |
| 5 | 31. | 6.56 | 6.81 | 7.07. | 7.32 | 7.51 | 7.84 | 8.09 | 8.35 | 0.60 | 8.06 | 9.12 | Y. 37 |
| 5 | 32. | 5.88 | 6.14 | 6.39 | 6.64 | 6.90 | 7.15 | 7.41 | 7.66 | 7.92 | 8.17 | 8.43 | $8.6 n$ |
| 3 | 33. | 6.06 | 6.31 | 6.57 | 6.82 | 7.00 | 7.33 | 7.39 | 1.04 | 8.10 | 8.36 | 8.61 | 0.06 |
| 3 | 34. | 5.01 | 5.26 | 5.51 | 5.77 | 6.02 | 6.27 | 6.52 | 6.78 | 7.03 | 7.20 | 7.53 | 1.79 |
| 3 | 35. | 4.00 | 4.25 | 4.50 | 4.75 | 5.00 | 5.25 | 5.50 | 5.75 | 6.00 | 6.25 | 6.50 | 6.75 |


|  |  | 7.00 | 7.25 | 7. 50 | 1.75 | 8.00 | 4. 25 | 8.50 | 0.75 | Y. 00 | 9.25 | 9.50 | Y. 7.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | 10. | 12.92 | 14.10 | 14.45 | 14.12 | 14.914 | 15.25 | 15.51 | $15.7 \%$ | $16.05 \%$ | 16.31 | 16.58 | 16.84 |
| 20 | 11. | 13.3 J | 13.64 | 13.90 | $1+.17$ | 14.43 | 14.70 | 14.96 | 15.23 | 13.4.3: | 15.76 | $16.0 \%$ | 16.24 |
| 20 | 12. | 12.80 | 13.15 | 13.41 | 13.67 | 13.44 | 14.20 | 14.47 | 14.73 | 14.94 | 15.26 | 15.52 | 15.70 |
| 20 | 13. | 12.40 | 12.69 | 12.96 | 13.2? | 13.48 | 13.75 | 14.01 | 14.27 | 14.53 | 14.80 | 15.06 | 15.3? |
| 20 | 14. | 12.02 | 12.29 | 12.54 | 12.80 | 13.06 | 13.32 | 13.54 | 13.85 | 14.11 | 14.37 | 11.63 | 14.90 |
| 20 | 15. | 11.63 | 11.619 | 12.15 | 12.41 | 12.61 | 12.93 | 13.20 | 13.46 | 13.72 | 13.91 | 14.8.4 | 14.50 |
| 20 | 16. | 11.27 | 11.53 | 11.79 | 12.05 | 12.31 | 12.57 | 12.83 | 13.09 | 13.35 | 13.61 | 13.87 | 14.13 |
| 20 | 17. | 10.93 | 11.19 | 11.45 | 11.71 | 11.97 | 12.23 | 12.49 | 12.75 | 13.01 | 13.27 | 13.53 | 13.79 |
| 10 | 18. | 14.30 | 14.62 | 14.89 | 15.16 | 15.43 | 15.69 | 15.96 | 16.23 | 16.49 | 16.76 | 17.03 | 11.30 |
| 10 | 19. | 13.74 | 14.01 | 14.27 | 14.54 | 14.80 | 15.07 | 15.34 | 15.60 | 15.87 | 16.13 | 16.40 | 16.66 |
| 10 | 20. | 13.16 | 13.42 | 13.69 | 13.95 | 14.22 | 14.48 | 14.74 | 15.01 | 15.27 | 15.34 | 15.10 | 16.07 |
| 10 | 21. | 12.E1 | 12.07 | 13.13 | 13.40 | 13.66 | 13.92 | 14.19 | 14.45 | 14.71 | 14.98 | 15.24 | 15.50 |
| 10 | 22. | 12.09 | 12.35 | 12.E1 | 12.87 | 13.13 | 13.34 | 13.66 | 13.92 | 14.18 | 14.44 | 14.70 | 14.97 |
| 10 | 23. | 11.59 | 11.85 | 12.11 | 12.37 | 12.63 | 12.89 | 13.15 | 13.41 | 13.67 | 13.93 | 14.20 | 14.46 |
| 10 | 24. | 11.11 | 11.37 | 11.63 | 11.89 | 12.15 | 12.41 | 12.67 | 12.93 | 13.19 | 13.45 | 13.71 | 13.97 |
| 10 | 25. | 10.66 | 10.42 | 11.18 | 11.44 | 11.70 | 11.45 | 12.21 | 12.47 | 12.73 | 12.49 | 13.25 | 13.51 |
| 10 | 26. | 10.23 | 10.149 | 10.74 | 11.00 | 11.26 | 11.52 | 11.77 | 12.03 | 12.29 | 12.55 | 12.80 | 13.06 |
| 10 | 27. | Y. 81 | 10.07 | 10.33 | 10.58 | 10.84 | 11.10 | 11.35 | 11.61 , | 11.87 | 12.12 | 12.38 | 12.64 |
| 5 | 24. | 11.08 | 12.14 | 12.41 | 12.67 | 12.93 | 13.19 | 13.45 | $13.71{ }^{\prime}$ | 13.97 | 14.24 | 14.50 | 14.76 |
| 5 | 29. | 11.10 | 11.36 | 11.62 | 11.88 | 12.14 | 12.40 | 12.66 | 12.92 | 13.16 | 1.3 .44 | 13.70 | 13.96 |
| 5 | 30. | 10.35 | 10.61 | 10.87 | 11.12 | 11.38 | 11.64 | 11.90 | 12.15 | 12.41 | 12.67 | 12.93 | 15.19 |
| 5 | 31. | 4.63 | 9.89 | 10.14 | 10.40 | 10.65 | 10.91 | 11.17 | 11.42 | 11.68 | 11.93 | 12.19 | 12.45 |
| 5 | 32. | 4.93 | 9.19 | 9.44 | 9.70 | 9.93 | 10.21 | 10.46 | 10.72 | 10.97 | 11.23 | 11.48 | 11.73 |
| 3 | 33. | 9.12 | 9.37 | 9.63 | 9.88 | 10.14 | 10.39 | 10.65 | 10.90 | 11.16 | 11.41 | 11.67 | 11.9? |
| 3 | 34. | 8.04 | 8.29 | 8.54 | 8.80 | 9.05 | 9.30 | 9.55 | 9.81 | 10.06 | 10.31 | 10.56 | 10.82 |
| 3 | 35. | 7.00 | 7.25 | 7.50 | $\% .75$ | 8.00 | 8.25 | 8.50 | 8.75 | 4.00 | 9.25 | 9.50 | Y. 75 |




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| 10 | 13. | 15.07 | 13.34 | 13.61 | 13.89 | 14.16 | 14.43 | 14.70 | 14.97 | 15.25 | 15.52 | 15.79 | 16.05 |
| 10 | 14. | 12.24 | 12.61 | 12.70 | 13.05 | 13.32 | 15.59 | 13.85 | 14.12 | 14.39 | 14.66 | 14.93 | 15.20 |
| 10 | 15. | 11.46 | 11.73 | 12.110 | 12.27 | 12.54 | 12.80 | 13.07 | 13.34 | 13.61 | 13.88 | 14.14 | 14.43 |
| 10 | 16. | 10.75 | 11.01 | 11.20 | 11.55 | 11.81 | 12.08 | 12.34 | 12.61 | 12.88 | 13.14 | 13.41 | 13.68 |
| 10 | 17. | 10.08 | 10.34 | 10.61 | 10.87 | 11.14 | 11.40 | 11.67 | 11.93 | 12.19 | 12.46 | 12.12 | 12.99 |
| 10 | 18. | 9.45 | 4.71 | 9.98 | 10.24 | 10.50 | 10.77 | 11.03 | 11.29 | 11.56 | 11.8? | 12.00 | 12.34 |
| 10 | 19. | 8.26 | 5.12 | 9.30 | 9.65 | 9.91 | 10.17 | 10.43 | 10.69 | 10.95 | 11.22 | 11.48 | 11.74 |
| 10 | 20. | 8.20 | 8.be | 8.12 | 9.08 | 9.34 | 9.61 | 9.87 | 10.13 | 10.39 | 10.65 | 10.91 | 11.17 |
| 10 | 21. | 7.18 | 8.04 | 8.29 | 8.55 | 8.81 | 9.07 | 9.33 | 9.59 | 9.85 | 10.11 | 10.37 | 10.63 |
| 10 | 22. | 7.28 | 7.53 | 7.79 | 8.05 | 0.31 | 4.57 | 4.42 | 9.08 | 9.34 | 9.60 | 9.135 | 14.11 |
| 5 | 23. | 9.60 | 9.94 | 10.20 | 10.47 | 10.71 | 10.99 | 11.26 | 11.52 | 11.79 | 12.05 | 12.31 | 12.54 |
| 5 | 24. | 8.75 | 9.01 | 9.27 | 9.53 | 9.74 | 10.05 | 10.31 | 10.58 | 10.04 | 11.10 | 11.36 | 11.62 |
| 5 | 25. | 7.46 | 8.12 | 0.38 | 0.64 | 0.90 | 9.16 | 9.42 | 9.68 | 9.94 | 10.20 | 10.46 | 10.71 |
| 5 | 27. | 1.02 | 7.29 | 7.53 | 7.79 | 8.0 | 3.31 | 8.56 | 8.82 | 9.08 | 9.33 | 9.39 | 4.85 |
| 5 | 27. | 0.21 | 6.47 | 6.73 | 6.98 | 7.24 | 7.49 | 7.75 | 8.00 | 0.26 | 8.51 | 0.77 | 4.02 |
| 3 | 28. | 6.42 | 6.68 | 6.93 | 7.19 | 7.44 | 7.70 | 7.95 | 8.21 | 8.47 | 0.72 | 8.98 | 4.73 |
| 3 | 29. | 5.18 | 5.43 | 5.69 | 5.94 | 6.19 | 6.45 | 6.70 | 6.95 | 7.20 | 7.46 | 7.71 | 1.96 |
| 3 | 30. | 4.00 | 4.25 | 4.50 | 4.75 | 5.00 | 3.25 | 5.50 | 5.75 | 6.00 | 6.25 | 6.50 | 6.75 |



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|  |  | 7.00 | 7.25 | 7.50 | 7.75 | H. 01 | 0.25 | 8.50 | 8.75 | Y. 00 | 9.25 | 9.5 | 4.75 |
| 20 | 10. | 13.04 | 13.31 | 13.57 | 13.83 | 14.10 | 14.36 | 14.63 | 14.09 | 15.15 | 15.42 | 15.68 | 13.95 |
| 20 | 11. | 12.50 | 12.77 | 13.03 | 13.29 | 13.50 | 13.48 | 14.011 | 111.34 | 14.61 | 14.87 | 15.13 | 15.40 |
| 20 | 12. | $1<.02$ | 12.20 | 12.54 | 12.80 | 13.06 | 13.32 | 13.59 | 13.05 | 14.11 | 14.37 | 14.63 | 14.90 |
| 10 | 13. | 14.33 | 16.60 | 16.88 | 17.15 | 17.42 | 17.69 | 17.96 | 18.24 | 14.51 | 18.78 | 19.05 | 17.32 |
| 10 | 14. | 12.47 | 15.74 | 16.01 | 16.28 | 16.53 | 16.82 | 17.09 | 17.36 | 17.63 | 17.90 | 18.17 | 18.44 |
| 10 | 15. | 14.68 | 14.95 | 15.22 | 15.48 | 15.75 | 16.02 | 16.29 | 16.56 | 16.02 | 17.09 | 17.3 F | 11.63 |
| 10 | 16. | 12.94 | 14.21 | 14.47 | 14.74 | 15.01 | 15.27 | 15.54 | 15.81 | 16.07 | 16.34 | 16.60 | 16.87 |
| 10 | 17. | 13.25 | 13.52 | 13.78 | 14.05 | 14.31 | 14.50 | 14.84 | 15.11 | 15.37 | 15.63 | 15.90 | 16.16 |
| 10 | 10. | 12.61 | 12.87 | 13.13 | 13.40 | 13.66 | 13.92 | 14.19 | 14.45 | 14.71 | 14.98 | 15.24 | 15.50 |
| 10 | 19. | 12.00 | 12.26 | 12.52 | 12.79 | 13.05 | 13.31 | 13.57 | 13.83 | 14.09 | 14.36 | 14.62 | 14.80 |
| 10 | 20. | 11.43 | 11.69 | 11.95 | 12.21 | 12.41 | 12.73 | 12.99 | 13.25 | 15.51 | 13.77 | 14.03 | 14.9 ? 9 |
| 10 | 21. | 10.89 | 11.14 | 11.40 | 11.616 | 11.92 | 12.18 | 12.44 | 12.70 | 12.96 | 13.2? | 13.48 | 13.74 |
| 10 | 22. | 10.37 | 14.63 | 10.09 | 11.14 | 11.40 | 11.66 | 11.92 | 12.18 | 12.43 | 12.69 | 12.45 | 13.21 |
| 5 | 23. | 12.04 | 13.10 | 13.37 | 13.63 | 13.89 | 14.16 | 14.42 | 14.69 | 14.95 | 15.21 | 15.48 | 15.74 |
| 5 | 24. | 11.88 | 12.14 | 12.41 | 12.67 | 12.93 | 13.19 | 13.45 | 13.71 | 13.97 | 14.24 | 14.50 | 14.76 |
| 5 | 23. | 10.97 | 11.2x | 11.49 | 11.75 | 12.01 | 12.27 | 12.53 | 12.79 | 13.05 | 13.31 | 13.57 | 13.83 |
| 5 | $2 \epsilon$. | 10.11 | 10.36 | 10.6,2 | 10.88 | 11.14 | 11.39 | 11.65 | 11.91 | 12.16 | 12.42 | 12.68 | 12.94 |
| 5 | 27. | 9.20 | 9.53 | 9.79 | 10.04 | 10.30 | 10.56 | 10.01 | 11.07 | 11.32 | 11.50 | 11.83 | 12.09 |
| 3 | 20. | 4.49 | 9.75 | 10.70 | 10.26 | 10.51 | 10.77 | 11.02 | 11.20 | 11.54 | 11.79 | 12.05 | 12.30 |
| 3 | 29. | $0.2 \%$ | 8.47 | 8.72 | 0.97 | 9.23 | 9.47 | 9.73 | 9.99 | 10.24 | 10.119 | 10.74 | 11.00 |
| 3 | 30. | 7.00 | 7.25 | 7.50 | 1.75 | 8.00 | 8. 25 | 8.50 | 0.75 | 9.00 | 9.25 | 9.50 | 4.75 |

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|  |  | 10.00 | 10.25 | 10.50 | 11.75 | 11.00 | 11.25 | 11.50 | 11.75 | 12.00 | 12.25 | 12.00 | 12.75 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | 10. | 16.21 | 16.48 | 16.74 | 17.00 | 17.21 | 17.5.3 | 17.80 | 10.06 | $110.38^{\circ}$ | 18.39 | 18.6! | 1Y.1? |
| 20 | 11. | 15.66 | 15.92 | 16.18 | 16.45 | 16.71 | 16.47 | 17.24 | 17.50 | $17.76{ }^{\prime}$ | 10.0? | 18.29 | 113.55 |
| 20 | 12. | 12.16 | 15.42 | 15.6: 0 | 15.94 | 16.20 | 16.47 | 16.73 | 16.99 | 17.25 | 17.51 | 17.77 | 14.04 |
| 10 | 13. | 19.59 | 19.87 | 20.14 | 20.41 | 20.68 | 20.95 | 21.23 | 21.50 | 21.77 | 22.04 | 22.31 | 22.58 |
| 10 | 14. | 14.71 | 18.97 | 19.25 | 19.53 | 19.7\% | 20.06 | 20.33 | 20.60 | 20.07 | 21.14 | 21.41 | 21.60 |
| 10 | 15. | 17.40 | 10.16 | 18.43 | 18.70 | 10.91 | 19.23 | 19.50 | 19.77 | 30.04 | 20.31 | 20.57 | 20.811 |
| 10 | 16. | 17.14 | 17.40 | 17.67 | 17.94 | 18.20 | 18.47 | 18.73 | 19.00 | 14.27 | 19.53 | 19.60 | 211.0 ? |
| 10 | 17. | 16.43 | 16.69 | 16.96 | 17.22 | 17.44 | 17.75 | 18.02 | 18.28 | 18.55 | 18.81 | 19.07 | 19.34 |
| 10 | 18. | 15.77 | 16.03 | 16.29 | 16.55 | 16.82 | 17.00 | 17.34 | 17.61 | 17.87 | 18.13 | 18.40 | 14.66 |
| 10 | 19. | 15.14 | 15.40 | 15.66 | 15.93 | 16.19 | 16.45 | 16.71 | 16.97 | 17.23 | 17.50 | 17.76 | 16.02 |
| 10 | 20. | 14.55 | 14.01 | 15.07 | 15.33 | 15.54 | 15.85 | 16.11 | 16.37 | 16.63 | 16.89 | 17.16 | 17.42 |
| 10 | 21. | 13.99 | 14.25 | 14. 51 | 14.77 | 15.03 | 15.29 | 15.55 | 15.81 | 16.07 | 16.33 | 16.59 | 16.84 |
| 10 | 22. | 13.47 | 13.7? | 13.98 | 14.24 | 14.50 | 14.75 | 15.01 | 15.27 | 15.53 | 15.79 | 16.04 | 16.30 |
| 5 | 23. | 16.00 | 16.27 | 16.53 | 16.79 | 17.06 | 17.32 | 17.59 | 17.05 | 18.11 | 18.38 | 10.64 | 14.90 |
| 5 | 24. | 13.02 | 15.28 | 15.54 | 15.80 | 16.07 | 16.33 | 16.59 | 16.85 | 17.11 | 17.37 | 17.63 | 11.90 |
| 5 | 25. | 14.09 | 14.34 | 14.60 | 14.86 | 15.12 | 15.38 | 15.64 | 15.90 | 16.16 | 16.4 ? | 16.68 | 16.94 |
| 5 | 26. | 13.19 | 13.45 | 13.71 | 13.97 | 14.22 | 14.40 | 14.74 | 14.99 | 13.25 | 15.51 | 15.77 | 16.02 |
| 5 | 27. | 12.24 | 12.60 | 12.15 | 13.11 | 13.36 | 13.62 | 13.87 | 14.13 | 14.39 | 14.64 | 14.90 | 15.15 |
| 3 | 20. | 12.56 | 12.81 | 13.07 | 13.33 | 13.54 | 13.84 | 14.09 | 14.35 | 14.61 | 14.06 | 15.12 | 13.37 |
| 3 | 29. | 11.25 | 11.50 | 11.76 | 12.01 | 12.26 | 12.51 | 12.77 | 13.02 | 15.27 | 13.53 | 13.76 | 14.03 |
| 3 | 30. | 10.00 | 10.25 | 10.50 | 10.75 | 11.00 | 11.25 | 11.50 | 11.75 | 12.00 | 12.25 | 12.50 | 12.75 |

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

b. Question:

State whether Mr. Adkins is aware of any rate cases before this Commission where the proposed equity level methodology submitted by Meade has been proposed by an electric distribution cooperative.
b. Response:

The equity level methodology has been proposed by an electric distribution cooperative in the application of Jackson County RECC in Case No. 93-088. The equity level methodology was proposed in the Nolin RECC in Case 90-046 by the Public Service Commission Staff in testimony presented by Mr. Gary L. Forman.

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

c. Question:

Refer to Exhibit JRA-1 of the Adkins Testimony. Provide the work papers, spreadsheets, reference materials, etc. as well as a narrative explanation of how the calculations were determined.
c. Response:

Exhibit JRA-1 presents the data applicable to Meade County RECC for the methodology identified in the documents submitted as a part of the responses to Items 6 a and 6 b . Meade's equity to capitalization ratio has been less than optimal and has not grown since Meade's last increase in rates. As a result, Meade did not choose to pay any capital credits during 2009. Because of the desire of Meade to increase its equity to a more reasonable level while maintaining the ability to pay capital credits on a consistent basis, Meade has chosen to use an approach that integrates its Capital Management Policy and its long range capital needs and better reflects its equity level and capital credit payment needs consistent with these documents. This approach or methodology develops a reasonable rate of return on capitalization to arrive at the return required on the equity component of the cooperative's capital structure consistent with its Capital Management Policy. An appropriately designed and executed Capital Management Policy where this type approach is used to determine its revenue requirements will allow the cooperative to pay all of its expenses, pay capital credits to its members, and build equity to a desired level.

Meade used the approach outlined in the KAEC PSC Study Report. James W. Goodwin, a former executive with the Rural Electrification Administration, developed a

Item No. 6 c
Page 2 of 3
Witness: Jim Adkins
formula approach or a return on equity for electric cooperatives with the objective to determine a rate of return which would provide for growth or maintenance of a desired equity level, to allow sufficient margins to pay capital credits over a desired cycle and to provide sufficient equity capital for system growth. The KAEC PSC Study Report methodology is a variation of the approach developed and advocated by Mr. Goodwin. This report has a comprehensive narrative that describes this approach very well.

Specifically, Exhibit JRA-1 to the Direct Testimony of James R. Adkins is the application of Meade's data to this approach. The first table in this Exhibit contains the capital growth needs of Meade and is based on its most recent 10 Year Financial Forecast completed in 2009 by RUS representatives. The second table provides the formula that is used to determine the proper return on equity. The third table provides the capitalization as of the end of the test year. The wrong table was filed as a part of this Exhibit. The correct table that was used for all calculations is provided below and should replace the third table in Exhibit JRA-1 to the Direct Testimony of James R. Adkins.

| Revised Capitalization |  |  |
| :--- | ---: | ---: |
| As of Test Year End |  |  |
| Equity | $24,382,615$ | $31.1 \%$ |
| Debt | $54,013,405$ | $68.9 \%$ |
| Total Capital | $78,396,020$ | $100.0 \%$ |

The fourth table provides the results of the formula in the second table. The first column provides the target equity level and time frame to achieve it. The second column is the rate of growth required to build equity or the "Rbe" in the formula which considers the current equity level, the target equity, the dollar amount of total capital, and the years to achieve this equity level. The third column or the "Rng" in the formula or the normal rate of capital growth. The normal rate of capital growth is based on the growth in the

Item No. 6 c
Page 3 of 3
Witness: Jim Adkins
capitalization amounts from the first table. This normal rate of capital growth is 3.29 percent per year. The fourth column is the "Rep" factor in the formula and represents the equity payout percentage. Meade has a twenty year rotation cycle on a first in first out. An average rate of 5.0 percent has been utilized which is based on the quotient of one divided by twenty (twenty year rotation cycle). The fifth column is the rate of return on equity which is a product of columns two multiplied by columns three and four. The sixth column represents the margin amounts that would result from the application of the return on equity applied to the current equity level.

Table five provides the TIER that would result from the margins from Table 4 and really is an extension of the fourth table. It also provides the amount and percent of increase based on the various equity level target and years to obtain that equity amount. Meade has chosen a target equity level of forty percent to be reached in fifteen years. Provided below is the fifth table provided in a manner that better aligns the TIER and increases amounts with the target equity and time frames.

| TIER Amounts and Rate Increase Amounts |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| for Various Returns on Equity |  |  |  |  |  |
| Equity Target | Test Year |  | Normalized |  |  |
| \& Time Line | Interest | TIER | Test Yr Margins | Increase | \% Increase |
| 40\%-10 yr | 2,457,385 | 2.41 | 1,462,333 | 2,004,869 | 6.45\% |
| 40\%-20 Yr | 2,457,385 | 2.28 | 1,462,333 | 1,681,978 | 5.41\% |
| $35 \%-10 \mathrm{Yr}$ | 2,457,385 | 2.27 | 1,462,333 | 1,662,283 | 5.34\% |
| $35 \%-20 \mathrm{Yr}$ | 2,457,385 | 2.21 | 1,462,333 | 1,512,262 | 4.86\% |
| $35 \%-15 \mathrm{Yr}$ | 2,457,385 | 2.23 | 1,462,333 | 1,562,180 | 5.02\% |
| 40\%-15 yr | 2,457,385 | 2.32 | 1,462,333 | 1,789,159 | 5.75\% |
|  | Rate Reven |  | 31,101,422 |  |  |

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

Refer to the Adkins Testimony and Schedule R, pages 19-21 of 41.

## a. Question:

On page 8 of his testimony, Mr. Adkins states that the minimum-size method was used for Account 365, Overhead Conductor; and that the zero-intercept method was used for Accounts 364, Poles, and Account 368, Transformers. However, pages 19-21 of Schedule $R$ indicate that the aero-intercept method was also used for Account 365 . Confirm that this is correct or state where in Schedule $R$ the minimum-size method is used for Account 365.
a. Response:

The zero-intercept method was also used for Account 364, Poles. Page 8 contains an error and the minimum-size method was not used for Account 364, Poles.
b. Question:

Refer to page 12 of which Mr. Adkins states that Meade proposes to increase the pole rental charge from $\$ 0.25$ to $\$ 1$, an increase of 300 percent.
(1) Explain how an increase of this magnitude is consistent with the principle of gradualism.
(2) Provide the number of customers that would be affected by the increase.
b. Response:
(1) An increase of 300 percent on the surface cannot be argued to be consistent with the concept of gradualism. However, the requested rate of $\$ 1$ is still
significantly below the cost to serve and the current rate of $\$ 0.25$ is much too low. The increase amount of $\$ 0.75$ is not significantly large in real terms. A proposed change to this rate should have been requested long before now.
(2) 2,640 poles were billed for this charge as of the end of the test year.
c. Question:

Refer to page 13 at which Mr. Adkins states that " $[t]$ he amount of the increase in the customer charge probably does not meet the gradualism criterion." State the customer charges to which Mr. Adkins is referring and whether Mr. Adkins believes that the proposed increases in the customer charges are reasonable.
c. Response:

The customer charges referred to are those customer charges for Rate Schedules and $1 R, 2 R$ and $3 R$. The percentage increases are large. These proposed customer charges and the proposed increase are still reasonable because they are still below the cost to serve and the other rates within each rate schedule have not changed.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
8. Refer to Exhibit J of the Application.
a. Refer to page 1 of 6 . Meade's tariff includes Schedule 4, Large Power Service $1,000 \mathrm{KVA}$ and Larger TOD, which does not appear in the revenue analysis. Confirm that there are no customers taking service under this tariff.

Response:
Meade has zero customers receiving service under Schedule 4, Large Power Service 1,000 KVA and Larger TOD.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 

Second Data Request of Commission Staff

## 8. Refer to Exhibit J of the Application.

b. Meade has a tariff rider for Renewable Resource Energy-Schedule 16. State the number of customers on this rider, the amount of revenues received during the test year, and the account in which this revenue is recorded.

Response:
One (1) customer received 1 block of "Renewable Resource Energy - Schedule 16" in the amount of $\$ 3.68$ for 7 months for a total of $\$ 25.76$. This revenue was recorded as an additional charge in revenue account number 440.100 .

# Exhibit 8 <br> Page 3 of 4 

Witness: Karen Brown

# Meade County Rural Electric Cooperative Case No. 2010-00222 <br> Second Data Request of Commission Staff 

8. Refer to Exhibit J of the Application.
c. Refer to page 4 of 6 . Provide an explanation for the "Contract facility" revenue of $\$ 25,121$ shown on this page.

Response:
Meade has one customer on a 10 year contract for special facilities required for this operation.
The monthly charge is $\$ 2,093.42$.

# Exhibit 8 <br> Page 4 of 4 

Witness: Karen Brown

# Meade County Rural Electric Cooperative Case No. 2010-00222 <br> Second Data Request of Commission Staff 

## 8. Refer to Exhibit J of the Application.

d. Refer to page 6 of 6 .
(1) Refer to the eighth light listed on the page. This schedule shows the current and proposed rate for the 400 MV--Unmetered, Pole Rental to be $\$ 9.81$ and $\$ 9.80$, respectively. Provide the location of the current rate in Meade's current tariff and the proposed rate in the proposed tariff.

## Response:

Exhibit C, Schedule 5-400 Watt unmetered, per month rate is on page 21 of 135 , currently $\$ 9.56$ plus $\$ .25$ per month pole charge $=\$ 9.81$. Exhibit C, Schedule 5 , page 22 of 135 'Special Terms and Conditions". The proposed rate, Exhibit C, Schedule 5, is $\$ 9.80$ for the lights plus $\$ 1.00$ per month for the pole

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

9. Provide a copy of Exhibits J and R electronically on CD-ROM in Microsoft Excel format with all formulas intact and unprotected.

## Response:

Attached to the original copy is a CD-ROM containing the requested information.
.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
10. Refer to Exhibit K of the application.
a. Refer to page 2 of 7 . The amount for Materials has increased 263 percent from March 2009 to January 2010. Provide an explanation for this level of increase

## Response:

Meade County is planning to replace copper conductor with aluminum conductor. Additional conductor was purchased in anticipation of this replacement.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
10. Refer to Exhibit K of the application.
b. Refer to page 4 of 7. Provide an explanation for the magnitude of the amount of Materials and Supplies in the calendar year 2009 of $\$ 16,690,857$.

## Response:

This was an input error only. The Material and Supplies amount should have been $\$ 1,669,087$.

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

Refer to Exhibit R, page 8 of 41 .
a. Question:

Account 935, Maintenance of General Plant, is shown as having been allocated using the General Plant percentages from the Rate Base Schedule. However, the allocation appears to be based on Rate Base percentages from the Rate Base Schedule. Confirm that Rate Base percentages were incorrectly used. Provide the effect that a correction would have on the results of the cost-of-service study ("COSS").

## b. Response:

The allocation of Account 935, Maintenance of General Plant has been made on the basis of the Rate Base percentages from the Rate Base Schedule. The impact upon the revenue requirements for each rate class by changing this allocation to one based on the basis of the General Plant percentages are shown on page 2 of this Exhibit. As one can readily see, a significant difference does not exist between the two methods.
 RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST
REVENUE REQUIREMENTS BY RATE CLASS

| Function | Amount | Green <br> Power | 1R <br> Residential <br> Schl \& Chur | $2 R$ Commercial Rate | $\begin{gathered} 3 R \\ \text { Gen Svc } \\ 0-999 \mathrm{kVa} \\ \hline \end{gathered}$ | $\begin{gathered} 3 \mathrm{~A} \\ \text { TOD } \\ \text { Rate } \\ \hline \end{gathered}$ |  | Outdoor <br> Lighting |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue Requirements |  |  |  |  |  |  |  |  |
| Based on Filed COSS | 34,216,998 | 100 | 26,181,078 | 2,240,401 | 4,765,134 | 2,691 |  | 1,027,593 |
| Revenue Requirements |  |  |  |  |  |  |  |  |
| Revision of 935 Allocation | 34,216,998 | 100 | 26,182,628 | 2,241,185 | 4,762,955 | 2,685 |  | 1,027,444 |
| Differenc in Dollar Amount | - | \$ - | \$ (1,550) | \$ (785) | \$ 2,179 | \$ 6 | \$ | 149 |
| Difference In Percent |  | 0.00\% | -0.01\% | -0.04\% | 0.05\% | 0.23\% |  | 0.01\% |

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

b. Question:

Depreciation - Distribution Plant and Depreciation - General Plant are shown as having been allocated using the Net Plant percentages from the Rate Base Schedule. However, the allocation for Depreciation - Distribution Plant appears to be based on the Distribution Plant percentages, and Depreciation - General Plant appears to be based on the General Plant percentages. Confirm that Meade intended to use theses allocation percentages. If not, and a correction, provide copies of all exhibits that would be revised as a result of the correction.
b. Response:

Meade used the depreciation allocation methods it intended to use. Footnote No. 6 as written in the filed COSS was wrong. It should have referenced the use of the Distribution Plant percentages and the General Plant percentages.

Refer to Exhibit R, page 9 of 41 , footnote 6 at the bottom of the page.
a. Question:

The first number under the Total column, $\$ 16,129,440$ appears to be the total of Overhead Conductors and Devices rather than Poles, Towers and Fixtures as labeled. Confirm that this total is mislabeled.
a. Response:

It is confirmed that this total is mislabeled.
b. The second number under the Total column, $\$ 1,894,878$, appears to be the total of Underground Conductor rather than Overhead Conductors as labeled. Confirm that this total is mislabeled.
b. Response:

It is confirmed that this total is mislabeled.
c. Question:

Explain where in the COSS the allocations calculated in footnote 6 are used.
c. Response:

The calculations in footnote 6 should not have been included while footnote 6 was written in error. Please see the response Item 11 b .

# RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST 

Question:
Refer to Exhibit R, page 11 of 41. Explain how the General Plant allocation percentages were calculated.
Response:
The general plant allocation percentages on page 41 comes from footnote 7 on page 10 of 41 .
.

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

Refer to Exhibit R, pages 29 and 30 of 41.
a. Question:

Refer to the Transformers table at the bottom of page 29. The amounts in the Relative Weight column do not equal column 3 multiplied by column 4 for rates 3 R and 3 A . Explain how the amounts in this column were calculated. If a correction is needed, provided the effect a correction would have on the results of the COSS.
a. Response:

The amounts in column 3 and column 4 for rates 3 R and 3 A have additional multiplier of 3 in the calculations for the Relative Weight column. The allocation of the customer-related portion of the various plant accounts is based on the number of customers by classes of service with appropriate weightings and adjustments. Weighting factors reflect the differences in the characteristics within a class and between classes. This additional multiplier of 3 was utilized to better reflect the allocation of the customer related transformer costs to each rate class in the judgment of this witness. The classes 3 R and 3A have a significant range in size of customers that can be assigned to these two rate classes. And this additional multiplier has been utilized to better assure a better allocation of transformer related customer costs.
b. Question:

Refer to the Services table at the top of page 30. The amounts in the Cost of Service column do not equal column 2 multiplied by column 3 for rates 3 R and 3 A . Explain how the amounts in this column were calculated. If a correction is needed, provide the effect a correction would have on the results of the COSS.

## b. Response:

For rate 3 A , an additional multiplier of 3 has been utilized in the calculations for the amount listed in the Cost of Service column. The allocation of the customer-related portion of the various plant accounts is based on the number of customers by classes of service with appropriate weightings and adjustments. Weighting factors reflect the differences in the characteristics within a class and between classes. This additional multiplier of 3 was utilized to better reflect the allocation of the customer related transformer costs to each rate class in the judgment of this witness.

For rate $3 R$, the amount in the Cost of Service column is based on the below schedule. Since there is a wide size range of customers within this class, a different method was determined to be a better fit to recognize the size range of customers.

| Rate 3R | Length of | Cost Per | Cost per | Number |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Type | Wire | Unit | Customer | of Cust. | Total |
| $0-100 \mathrm{KVA}$ | 120.00 | 2.46 | 885.60 | 169.00 | 149,666 |
| $101-1000 \mathrm{KVA}$ | 120.00 | 2.46 | 885.60 | 173.00 | 153,209 |
| $1000 \mathrm{KVA}+$ | 120.00 | 3.13 | $1,126.80$ | 4.00 | 4,507 |
| Total |  |  |  | 346 | 307,382 |
| Average |  |  |  |  | 888.39 |

# MEADE COUNTY RECC 

 CASE NO. 2020-00222
## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

Question:
Refer to Exhibit R, page 32 and 41 of 41. Explain the origin of the $\$ 893,370$ shown as Revenue from Rates for the Lighting Class.

## Response:

The Revenue from Rates for the Lighting Class on page 32 of $\$ 893,370$ was from a previous draft of the billing analysis and then copied to page 41 . When the billing analysis was changed, this update was not made to pages 32 and 41.

RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

Questions:
Refer to Exhibits R, pages 39 and 40 of 41 in which Meade calculates proposed customer charges. Provide the calculation for the customer charges if all customerrelated costs were recovered through the customer charges.

## Response:

Provided below is the requested monthly related costs per consumer broken down by rate class.


## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

## Question:

Refer to Exhibit R, page 40 of 41 . Can the amounts shown as Transformer investment for the three levels of KVA be found in the COSS. If yes, provide the location of the amounts. If no, explain.

Response:
These amounts are not provided in the COSS as filed. Provided below is the basis for these amounts.

| Transformer Investment - Rate 3R |  |  |  |
| :--- | ---: | ---: | ---: |
| Rate 3 R |  | Number |  |
| Type | Cost | of Cust, | Total |
| 50 KVA | 902.60 | 169.00 | 152,540 |
| 112.5 KVA PA | $5,949.00$ | 173.00 | $1,029,177$ |
| $2-500$ KVA PA | $16,941.70$ | 4.00 | 67,767 |
| Total |  | 346 | $1,249,484$ |
|  |  |  | 3,611 |

Refer to Exhibit S, page 1, which shows the amount of the proposed increase based on attaining a Times Interest Earned Ratio ("TIER") of 2.32X.
a. Question:

Describe how Meade determined that 232X was the appropriate TIER on which to base its requested increase.
a. Response:

Please see the response to Item No. 6 in this information request for this explanation.
b. Question:

Is Meade aware of any studies performed by the Rural Utilities Service ("RUS") or the National Rural Utilities Cooperative Finance Corporation ("CFC") on the subject of the appropriate TIER level for an electric distribution cooperative? If yes, identify the studies and when they were performed.
b. Response:

Meade County is not aware of any studies performed by RUS or CFC on the appropriate TIER level.

Meade County Rural Electric Cooperative
Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
a. Refer to page 3. Provide an explanation of how costs are assigned to Accounts 417.101 through 417.1 14, Expenses-Wildblue.

Response:
Actual costs of materials and supplies are allocated to the following accounts as appropriate. Payroll and benefits are distributed based on number of hours required to assist customers, prepare billings and provide other miscellaneous services.

$$
\text { COS Expenses - Wildblue } 417.101
$$

Expenses - Wildblue - Equipment
417.102

Expenses - Wildblue - Installation fees
417.103

Expenses - Wildblue -Cost-of-Service Other 417.104
Expenses - Wildblue - payroll - A\&G Customer Support 417.105
Expenses - Wildblue - A\&G Billing 417.106
Expenses - Wildblue - Payroll - Other Customer Expenses 417.107
Expenses - Wildblue - advertising 417.108
Expenses - Wildblue - bad debt 417.109
Expenses - Wildblue - depreciation 417.110
Expenses - Wildblue - Payroll - A\&G 417.111
Expenses - Wildblue - Interest Expense 417.112
Expenses - Wildblue - Amortization 417.113
Expenses - Wildblue - Service Calls 417.114

# Meade County Rural Electric Cooperative Case No. 2010-00222 <br> Second Data Request of Commission Staff 

19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
b. Refer to page 9. Provide a detailed breakdown of Accounts 451 and 454, Miscellaneous Service Revenue and Rent from Electric Property.

## Response:

Connection, collection and after hours service fees are recorded in Account 451.000 "Miscellaneous Service Revenue".

Detail of Acct. 451 - Miscellaneous Service Revenue - Test Year
Connection fees $\$ 80,225.00$
Collection Fees
55,268.00
After hours fees $\quad 2,070.00$
Total
$\$ 137,563.00$

Detail of Acct. 454 - Rent from Electric Property - Test Year
Joint Use Pole Rental $\quad \$ 242,714.00$
Fordsville Office Rental $\quad \underline{18,000.00}$
Total
$\$ 260,714.00$

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
c. For Account 451 and 454, provide the March 31 balances for most recent fiveyear period.

## Response:

March 31 - Account 451 Balances
$2009 \quad \$ 140,580$
2008 154,495
2007 160,978
$2006 \quad 169,740$
$2005 \quad 162,869$
March 31 - Account 454 Balances
$2009 \quad \$ 263,721$
2008 237,802
2007 210,627
2006 193,483
2005 161,092

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
d. Page 11 shows that Account 580.000, Operation-Supervision \& Engineering, increased from $\$ 287,254$ in the 12 months preceding the test year to $\$ 327,749$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

Response:
Account 580.000 Post-retirement and Pension benefits represent $48 \%$ of the increase from $\$ 287,254$ to $\$ 327,749$ and Labor increases for individuals for step promotions represent the remainder of the increase.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

19. Refer to Exhibit $X$ of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
e. Page 11 shows that Account 583.00, Overhead Line Expense, increased from $\$ 763,681$ in the 12 months preceding the test year to $\$ 849,400$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

Response:
Account 583.000 Labor for first time Transformer and OCR purchases represent $51 \%$ of the increase; Property taxes represent $28 \%$; payroll and benefits represent $21 \%$ of the increase from $\$ 763,681$ to $\$ 849,400$.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 

## Second Data Request of Commission Staff

19. Refer to Exhibit $X$ of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
f. Page I 1 shows that Account 586.000, Meter Expense, increased from \$217,494 in the 12 months preceding the test year to $\$ 295,401$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

## Response:

Account 586.000 an increase in rates to change and test statistical meters and an increase in the number of meters represents $95 \%$; payroll and benefits represent $5 \%$ of the increase from $\$ 217,494$ to $\$ 295,401$. There were 1,800 more meters changed and tested in the test year.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 

Second Data Request of Commission Staff
19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
g. Page 13 shows that Account 588.000, Misc Distribution Expense, increased from $\$ 455,966$ in the 12 months preceding the test year to $\$ 641,545$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

Response:
In Account 588.000 a $\$ 56,000$ credit to health insurance to true up the account in December 2008 resulted in test year payroll and benefits at $55 \%$ of the increase. The remaining $45 \%$ increase is a result of OMS training and other computer software and supplies.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit $X$ of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
h. Page 13 shows that Account 590.000, Maintenance-Supervision \& Engineering, increased from $\$ 308,314$ in the 12 months preceding the test year to $\$ 351,958$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

## Response:

In Account 590.000 there was a credit to Pension expense in December 2008 for $\$ 12,400$ to trueup the expenses for the year. Two employees reached 30 years of service early in the year and the expense was not adjusted until December. This resulted in test year expenses to appear 47\% greater than the prior year. The remainder or $53 \%$ of the increase was other payroll and benefit expenses.

# Meade County Rural Electric Cooperative 

 Case No. 2010-00222Second Data Request of Commission Staff
19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
i. Page 15 shows that Account 593.100, Maintenance, increased from $\$ 825,911$ in the 12 months preceding the test year to $\$ 970,332$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

Response:
In Account 593.100 98\% of the increase from $\$ 824,911$ to $\$ 970,332$ is attributed to an increase in right-of-way tree trimming contracts and $2 \%$ to payroll and benefit expenses.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 

Second Data Request of Commission Staff
19. Refer to Exhibit $X$ of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
j. Page 15 shows that Account 593.400, Maintenance-Service Orders, increased from $\$ 188,479$ in the 12 months preceding the test year to $\$ 292,475$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

Response:
In Account 593.400 48\% of the increase from $\$ 188,479$ to $\$ 292,475$ is attributed to an increase in right-of-way clearing to service orders, $15 \%$ in transportation expenses, and $37 \%$ in payroll and benefit expenses.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222

## Second Data Request of Commission Staff

19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
k. Page 17 shows that Account 902.100, Special Meter Reading Expenses, decreased from $\$ 141,991$ in the 12 months preceding the test year to $\$ 57,181$ in the test year. Provide a detailed explanation for why this expense decreased by this magnitude.

Response:
In Account 902.100 a credit received from a vendor for approximately $\$ 89,000$ for warranty repairs to AMI meter modules attributes to $100 \%$ of the decrease from $\$ 141,991$ to $\$ 57,181$.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.

1. Page 17 shows that Account 903.000, Customer Records \& Collections Exp, increased from $\$ 212,120$ in the 12 months preceding the test year to $\$ 281,907$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude

Response:
In Account $903.00064 \%$ of the increase is for contractor costs for field technicians and $36 \%$ for payroll and benefit expenses for the increase from $\$ 212,120$ to $\$ 281,907$.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
m. Refer to pages 17 and 19, Accounts 903.201 through 903.210. Provide an explanation why there is only activity in these accounts for the ninth month. Explain the purpose of these added accounts.

## Response:

Data for Accounts 903.201 through 903.210 was summarized into the $G / L$ control account 903.200 for all but the ninth month.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
n. Refer to pages 19 and 21, Accounts 903.301 through 903.305. Provide an explanation why there is only activity in these accounts for the ninth month. Explain the purpose of these added accounts.

## Response:

Data for Accounts 903.301 through 903.305 was summarized into the $G / L$ control account 903.300 for all but the ninth month.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
o. Refer to page 21, Accounts 903.501 through 903.507. Provide an explanation why there is only activity in these accounts for the ninth month. Explain the purpose of these added accounts.

Response:
Data for Accounts 903.501 through 903.507 was summarized into the $G / L$ control account 903.500 for all but the ninth month.

Meade County Rural Electric Cooperative
Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
p. Refer to page 23, Accounts 903.601 through 903.607 . Provide an explanation why there is only activity in these accounts for the ninth month. Explain the purpose of these added accounts.

Response:
Data for Accounts 903.601 through 903.6 .7 was summarized into the $G / L$ control account 903.600 for all but the ninth month.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit $X$ of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
q. Page 23 shows that Account 910.000, Misc Customer Serv \& Inform Exp, increased from $\$ 58,992$ in the 12 months preceding the test year to $\$ 71,486$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

Response:
In Account 910.000 an 18\% increase in transportation costs and $82 \%$ increase in payroll and benefit expenses accounts for the increase from $\$ 58,992$ to $\$ 71,486$.

# Meade County Rural Electric Cooperative 

 Case No. 2010-00222Second Data Request of Commission Staff
19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
r. Page 28 shows that Account 920.000, Administrative \& General Salaries, increased from $\$ 379,264$ in the 12 months preceding the test year to $\$ 443,222$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

## Response:

In Account 920.000 the entire increase is attributable to payroll for step increases, retirement and post-retirement expenses from $\$ 379,264$ to $\$ 443,222$.

Even though there is an increase in A\&G expenses it is important to keep in mind that we are coming from low levels of A\&G expense per consumer, for example, in the latest KRTA (Key Ratio Trend Analysis) available for the calendar year 2009 Meade ranked in the bottom 30 of 816 coops ( $\$ 49.73 \mathrm{v}$. $\$ 115.92$ ) across the nation in the amount of $A \& G$ expense per consumer.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit $X$ of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
s. Page 33 shows that Account 930.200 , Misc General Exp, increased from $\$ 138,866$ in the 12 months preceding the test year to $\$ 166,954$ in the test year. Provide a detailed explanation for why this expense increased by this magnitude.

Response:
In Account 930.200 the entire increase is attributable to payroll for step increases, retirement and post-retirement expenses from $\$ 138,866$ to $\$ 166,954$.

# Meade County Rural Electric Cooperative Case No. 2010-00222 <br> Second Data Request of Commission Staff 

19. Refer to Exhibit X of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
t. Page 33 shows that Account 930.300, Misc General Exp-Directors Fee Expense, decreased from $\$ 109,323$ in the 12 months preceding the test year to $\$ 96,882$ in the test year. Provide a detailed explanation for why this expense decreased by this magnitude.

## Response:

Directors were paid for additional special meetings in 2008 that were not required in the test year resulting in a decrease of fees from the preceding 12 months to the test year.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
19. Refer to Exhibit $X$ of the application, which provides a comparison of income statement account levels for the test period and the 12 months immediately preceding the test period.
u. Page 33 shows that Account 935.000 , Maintenance of General Property, decreased from $\$ 143,468$ in the 12 months preceding the test year to $\$ 110,607$ in the test year. Provide a detailed explanation for why this expense decreased by this magnitude.

## Response:

In Account 935.000 trim, pavement and tile floor repairs account for $100 \%$ of the reduction in expenses from $\$ 143,468$ to $\$ 110,607$.

# Meade County Rural Electric Cooperative 

## Second Data Request of Commission Staff

20. Refer to Exhibit I, page 1 of the application. Meade states that employees may elect to be paid for up to 12 days for unused sick time and 5 days of unused vacation time. Provide a copy of Meade's policy for paying unused sick and vacation days.

## Response:

See attached Vacation and Sick Leave policies, pages 2 through 7, this exhibit. Vacation exchange is found in Policy No. 514, Item II D and Sick Leave reimbursement in Policy No. 516, Item II, L.

# MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION 

POLICY NO. 514
SUBJECT: Vacation Leave
Effective Date: September 1, 1991 (Original)
Revised: September 19, 2007; Effective January 1, 2008

## I. PURPOSE

To define guidelines for vacation leave for all employees.
II. POLICY
A. All full-time hourly employees of the Cooperative shall earn vacation leave in accordance with the following schedule:

| Years of Employment | Vacation Leave Earned |
| :--- | :---: |
| 6 months to 1 year <br> $(6$ months must be completed by <br> November $1^{\text {st }}$ of that year $)$ | 5 days |
| $1^{\text {st }}$ year through $5^{\text {th }}$ year |  |
| $6^{\text {th }}$ year after hire | 10 days |
| $7^{\text {th }}$ year after hire | 11 days |
| $8^{\text {th }}$ year after hire | 12 days |
| $9^{\text {th }}$ year after hire | 13 days |
| $10^{\text {th }}$ year after hire | 14 days |
| $11^{\text {th }}$ year after hire | 15 days |
| $12^{\text {th }}$ year after hire | 16 days |
| $13^{\text {th }}$ year after hire | 17 days |
| $14^{\text {th }}$ year after hire | 18 days |
| $15^{\text {th }}$ year after hire | 19 days |

B. All full-time salaried employees of the Cooperative shall earn vacation leave in accordance with the following schedule:

| Years of Employment | Vacation Leave Earned |
| :--- | :---: |
| 6 months to 1 year <br> (6 months must be completed by <br> November $1^{\text {st }}$ of that year) | 5 days |
| $1^{\text {st }}$ year through $5^{\text {th }}$ year |  |
| $6^{\text {th }}$ year through $10^{\text {th }}$ year | 10 days |
| $11^{\text {th }}$ year after hire | 15 days |
| $12^{\text {th }}$ year after hire | 16 days |
| $13^{\text {th }}$ year after hire | 17 days |
| $14^{\text {th }}$ year after hire | 18 days |
| $15^{\text {th }}$ year after hire | 19 days |
| $16^{\text {th }}$ year through $25^{\text {th }}$ year | 20 days |
| $26^{\text {th }}$ year + | 20 days |

C. Two (2) consecutive workweeks shall be the maximum vacation period allowed at any one time. Vacation may be taken one day at a time if desired, if the details can be worked out with the employee's immediate supervisor. The only exception to this one day rule would be that the one day would not precede or follow a paid holiday.
D. All vacation leave must be taken within the calendar year or forfeited. However, those employees with more than 80 hours of paid vacation leave each year may opt to exchange up to 40 hours (no more) for pay comparable to the wage which that employee currently receives. Request for exchange shall be made in writing and submitted to Management.
E. No vacation leave shall be taken without prior approval of an authorized supervisor, subject to the approval of the Management. The right to designate vacation periods is reserved to the Cooperative at all times. Every effort will be made to assign vacation periods of the employees' choice. In the event of a dispute or conflict as to choice of vacation periods between
employees, seniority shall govern insofar as compatible with the Cooperative's operation.
F. All requests for vacation leave shall be made at the earliest possible date. Holidays falling in vacation periods will not be charged against vacation time. Vacation time may be used as sick leave after all sick leave time is used.
G. A vacation leave form must be signed by employees and approved by department head for any vacation leave taken.
H. Upon termination of employment, employees shall be paid for all accumulated vacation leave within the year.
I. Accumulated vacation leave shall not exceed four regular workweeks for an hourly employee and five regular workweeks for a salaried employee.
J. It shall not be the policy of the Cooperative to ask employees to work on the weekend before, weekend during, or the weekend following an employee's vacation. This policy will be waived only during extreme emergencies. If an employee is so requested to work, his vacation time will be considered as time worked in the computation of overtime.
K. It shall be the discretion of the hiring supervisor and the President/CEO to give new hires vacation credit for previous utility experience and also previous professional experience.

## III. RESPONSIBILITY FOR ENFORCEMENT

The President/CEO, or duly authorized personnel delegated by the President/CEO, shall be responsible for the communication and enforcement of this policy.



Burns E. Mercer, President/CEO

# MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION 

POLICY NO. 516<br>SUBJECT: Sick Leave<br>Effective: September 1, 1991 (Original)<br>Revised: September 19, 2007; Effective January 1, 2008

## I. PURPOSE

To specify guidelines for administering and utilizing sick leave.

## II. POLICY

A. Regular employees, after completing their probationary period, will begin to accumulate sick leave at the rate of one eight hour working day per calendar month. Probationary time will be used in computing sick leave days.
B. Unused sick leave shall accumulate from year to year up to a maximum of ninety (90) working days.
C. Sick leave will be paid only during a bonafide illness of the employee. No sick leave will be paid when illness or injury arises out of participation in unlawful activities.
D. A physician's certificate as to the existence or continuance of illness or disability may be required. A certificate may be waived for the first two days, with the approval of the supervisor and the management. Illness during a vacation period will not be credited to sick leave.
E. When an employee is unable to report to work due to illness or any other reason, they must notify their supervisor at the earliest possible time; but in no case less than one hour prior to regular work time. Failure to do so may mean disallowance of sick leave for the day.
F. In case of injury at work for the Cooperative, for which Workman's Compensation is applicable, an employee will be eligible to use accumulated sick leave only to the extent that it is necessary to assure him his regular straight time pay during his absence from work as a result of an injury on the job.
G. Sick Leave time may be used by the employee to attend to the illness of immediate family (wife, husband, son or daughter, father or mother, or in-law of the same relation).
H. A Sick Leave day, or any portion thereof, taken the day before and/or the day after a company paid holiday will be counted as two (2) sick days against the employee's sick leave. If an employee does not have two (2) sick days accumulated, the employee will forfeit their pay for the holiday.
I. Maternity cases shall be reported to the supervisor at the earliest possible date. Each case will be considered individually, but an employee may request a leave of absence beginning at the end of the seventh month, if desired. This leave of absence may be granted for maternity cases for up to a period of five months, providing the employee desires to return to work within that time. Unpaid leave of absence request is to be in writing, stating beginning and approximate ending dates and approved by the supervisor.
J. Sick leave forms must be completed in detail and signed by the employee and approved by the supervisor for any sick leave taken before sick leave payment will be allowed. Sick leave will not be paid until the proper approved forms have been received by the Accounting Department. Abuse of sick leave will not be tolerated and may be cause for termination if such is proved.
K. Sick leave time will be considered as time worked in the computation of overtime.
L. Employees accruing sick leave over ninety (90) days will be reimbursed annually at applicable pay rate for one-half of all excess days. The time period for computation of reimbursement will be November 1 through October 31.
M. At retirement, employees will be paid at applicable pay rate for one-half of the remaining sick days accumulated under the ninety (90) days cited in paragraph "B". Terminating employees, voluntary or involuntary, will not receive compensation for any unused sick days.
N. Employees on paid leave, sick or vacation, will continue to accrue sick leave at the normal rate for the duration of paid leave time. Employees on unpaid leave or disciplinary leave will not accrue sick leave hours.

## III. RESPONSIBILITY FOR ENFORCEMENT

A. It shall be the duty of the immediate supervisor to monitor sick leave usage.
B. The President/CEO, or duly authorized personnel delegated by the President/CEO, shall be responsible for the communication and enforcement of this Policy.



# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
21. Refer to Exhibit 1, page 1. Meade states that wage increases are granted on November 1 of each year and there was no salary increase during the test year. State whether the Board of Directors has determined or granted a salary increase for the upcoming November 1 date for the current year

## Response:

The Board of Directors will review whether to grant wage increases. It has not been determined if increases will be granted at this time, however, Meade County anticipates the Board will grant an increase for November 1, 2010.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
22. Refer to Exhibit 1, page 3 through 5 of the application.
a. If an employee worked 2,080 regular hours during the test period, explain why the employee would also have payments for vacation/sick leave and why those payments should be included in normalized wages

## Response:

To encourage employees to work on a regular basis, therefore, not requiring Meade County the have to hire additional employees, accumulated unused vacation and sick days are paid to employees. Vacation is paid for unused days up to 5 days per year for employees that earn over 15 days per year. Employees can elect to be paid for up to 90 hours per year for unused sick leave days during the year. Sick leave is paid at $1 / 2$ the hourly pay rate.

Having employees working facilitates the planning process for crews, office services, and other functions. Meade County feels that work is more productive with full crews and full staffing than if employees sporatically use vacation and sick days.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
22. Refer to Exhibit 1, page 3 through 5 of the application.
b. For each employee listed in Table 1 below, explain in detail why they worked less than 2,080 hours in the test period.

| Table 1 |  |  |
| :--- | :---: | :--- |
|  | Employee No. | Regular Hours |
| $(1)$ | 154 | $1,970.5$ |
| $(2)$ | 167 | 2,072 |
| $(3)$ | 173 | $1,693.5$ |
| $(4)$ | 184 | 1,840 |
| $(5)$ | 186 | 633 |

Response:

Emp. No 154 - on worker comp for part of year; Emp No. 167 - took one (1) day off with no pay; Emp No. 173 - from part time to full time; Emp No. 184 - new employee; Emp No. 186 new employee.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

22. Refer to Exhibit 1, page 3 through 5 of the application.
c. Explain why 2,080 hours was used in calculating normalized wages rather than the actual hours worked during the test period.

## Response:

There are normally 2,080 working hours in a normal year. The hours were normalized as if an employee had worked a full year.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 

Second Data Request of Commission Staff
22. Refer to Exhibit 1, page 3 through 5 of the application.
d. Provide an update of any additional labor costs incurred subsequent to the end of the test year. Provide an explanation for the reason for the changes and update Exhibit 1, page 3 through 5, for these changes as of August 31, 2010.

Response:
Changes from the application are as follows:

- Employees No. 166 and 173 from part time to full time.
- Employee No. 184 and 186 new employees.
- Employees No. 135; 173; 180; 182; 183 all step increases.
- There were no retirees during the twelve (12) months ended August 31, 2010.



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Meade County Rural Electric Cooperative Case No．2010－00222
as of August 31， 2010


## 981 <br> 3.5 <br> Subtotal 101，346．5 5，972．5

Part Time \＆Summer Employees
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754.0
934.1
994.0
451.5
956.5
341.8
508.0
385.0
$6.620^{\circ} \angle$ peloiqns
$\begin{array}{cr}\text { Retired Employees } \\ & 22 \\ & 0.0 \\ 56 & 0.0 \\ 87 & 0.0 \\ \text { Subtotal } & \\ & \\ \text { Total } & \\ & \\ & 137,546.4\end{array}$

0 226，322

0 16,069
$\begin{array}{r}7.550 \\ 7.540 \\ 10,154 \\ 10,805 \\ 14.515 \\ 9,565 \\ 3,523 \\ 4,426 \\ 3,349 \\ \\ \hline 71,427\end{array}$
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# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

23. Refer to Exhibit 3, page 2, of the application, which shows the test-year actual and normalized total depreciation expense and the test-year actual and normalized depreciation expense charged to transportation clearing. Provide the same information for each of the calendar years 2000 to 2009.

## Response:

## Depreciation

Year Expense Clearing
2009 2,956,264 461,502
2008 2,842,245 486,323

2007 2,702,560 395,392
2006 2,497,883 452,918
$2005 \quad 2,318,515 \quad 371,387$
2004 2,176,161 343,977
2003 2,069,065 304,920
2002 2,000,863 287,292
$2001 \quad 1,875,298 \quad 264,671$
2000 1,706,303 303,469

Meade County Rural Electric Cooperative Case No. 2010-00222

Second Data Request of Commission Staff
24. Refer to Exhibit 3, page 4, of the application, which shows distribution plant in service, accumulated depreciation for distribution plant, and the reserve ratio percentages for distribution plant for each of the years 1995 through 1999 and 2005 through 2008. Provide the same information as of the end of the test year and for the years from 2000 through 2004.

Response:

| Year | Distribution <br> Plant in | Accumulated <br> Eepreciation <br> for | Reserve | Ratio of Current <br> Distribution Plant <br> to Distribution <br> Plant 10 Years |
| :---: | :---: | :---: | :---: | :---: |
| Snded | $\underline{\text { Service }}$ | Distribution | $\underline{\text { Ratio }}$ | $\underline{\text { Prior }}$ |
| 2009 | $82,006,321$ | $20,716,588$ | $25.26 \%$ | 1.85 |
| 2008 | $79,412,895$ | $19,148,191$ | $24.11 \%$ | 1.94 |
| 2007 | $76,020,263$ | $17,461,623$ | $22.97 \%$ | 2.03 |
| 2006 | $71,399,630$ | $16,181,781$ | $22.66 \%$ | 2.04 |
| 2005 | $66,374,927$ | $14,810,722$ | $22.31 \%$ | 2.08 |
|  |  |  |  |  |
| 2004 | $62,260,936$ | $13,927,986$ | $22.37 \%$ |  |
| 2003 | $58,231,350$ | $12,910,540$ | $22.17 \%$ |  |
| 2002 | $54,739,430$ | $11,835,646$ | $21.62 \%$ |  |
| 2001 | $51,255,660$ | $11,264,997$ | $21.98 \%$ |  |
| 2000 | $47,530,430$ | $10,575,145$ | $22.25 \%$ |  |
|  |  |  |  |  |
| 1999 | $44,363,056$ | $9,937,785$ | $22.40 \%$ |  |
| 1998 | $40,845,433$ | $9,289,706$ | $22.74 \%$ |  |
| 1997 | $37,522,573$ | $8,632,283$ | $23.01 \%$ |  |
| 1996 | $34,972,409$ | $8,178,601$ | $23.39 \%$ |  |
| 1995 | $31,958,257$ | $7,742,742$ | $24.23 \%$ |  |

# Meade County Rural Electric Cooperative Case No. 2010-00222 <br> Second Data Request of Commission Staff 

25. Refer to Exhibit 5, page 2. This is a schedule of Meade's outstanding long-term debt.
a. Provide an update of the schedule on pages 2 and 3 that reflects the current interest rates for long-term debt applied to the long.term debt balances as of the end of the proposed test year.

Response:
Attached

Meade County Rural Electric
Case No. 2010-00222


71,859
RUS loans

| B290 | Jun-97 | Jun-32 |
| :--- | :---: | :---: |
| B295 | Jun-97 | Jun-32 |
| B310 | Oct-03 | Oct-38 |
| B311 | Oct-03 | Oct-38 |
| B312 | Oct-03 | Oct-38 |
| B313 | Oct-03 | Oct-38 |
| B314 | Oct-03 | Oct-38 |
| B315 | Oct-03 | Oct-38 |
| B320 | Dec-08 | Dec-43 |
| B321 | Dec-08 | Dec-43 |
| B322 | Dec-08 | Dec-43 |
| B323 | Dec-08 | Dec-43 |
| B324 | Dec-08 | Dec-43 |
| B325 | Dec-08 | Dec-43 |
| B326 | Dec-08 | Dec-43 |


| $1,916,239$ | $3.750 \%$ |
| :--- | :--- |
| $1,834,158$ | $4.870 \%$ |
| $2,393,040$ | $4.670 \%$ |
| $2,790,511$ | $4.180 \%$ |
| $1,867,507$ | $4.490 \%$ |
| $1,865,671$ | $4.440 \%$ |
| $2,842,965$ | $5.060 \%$ |
| $2,829,566$ | $3.380 \%$ |
| $2,935,459$ | $4.860 \%$ |
| $1,939,101$ | $3.020 \%$ |
| $1,956,089$ | $3.640 \%$ |
| $2,943,487$ | $3.650 \%$ |
| $2,462,958$ | $3.550 \%$ |
| $1,979,994$ | $3.550 \%$ |
| $2,626,000$ | $3.550 \%$ |

## FFB loans

| H010 | Nov-98 | Oct-33 | 353,112 | $6.490 \%$ | 22,917 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| H015 | Sep-00 | Aug-35 | $1,099,549$ | $4.474 \%$ | 49,194 |
| H020 | Sep-02 | Aug-37 | $1,686,808$ | $4.777 \%$ | 80,579 |
| H025 | Sep-02 | Aug-37 | $1,683,414$ | $3.753 \%$ | 63,179 |
| F030 | Mar-03 | Feb-38 | $\boxed{4,583,923}$ | $4.069 \%$ | 186,520 |
|  |  |  | $9,406,806$ |  | 402,388 |

## CFC loans



[^3]
# Meade County Rural Electric Cooperative 

 Case No. 2010-00222Second Data Request of Commission Staff
25. Refer to Exhibit 5, page 2. This is a schedule of Meade's outstanding long-term debt.
b. Provide an explanation for the variance between the annualized interest expense and the test-year interest costs for RUS loan numbers B323, B324, B325 and B326.

## Response:

The variance on loan number B323, B324, and B325 are due the estimated accrual on these loans and the actual interest calculated. The variance for loan number B326 is due the date of the advance, which was not for the full test year.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
26. Refer to Exhibit 7, page 1. Meade states that the retirement and security ("R\&S") contribution rate is determined by the National Rural Electric Cooperative Association. Provide a copy of the documentation supporting the R\&S rate of 28.78 percent used for the proposed adjustment to pension benefits.

Response:
Attached as page 2 of this exhibit is a copy of the document from NRECA supporting the R\&S rate of 28.78 percent for the proposed adjustment to pension benefits.

| System \#: | $01-18018-001 \quad$ Plan ID: RNR01A |  |
| :--- | :--- | :--- |
| Name: | MEADE COUNTY RECC |  |


| Year | Benefit Level | System Cost | Employee Contribution | Plan | COLA | Average Age | 100\% Death Benefit | Salary Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1992 | 1.50 | 10.70 | 0.00 | 30 | No | 42 | No | BS |
| ) 1993 | 1.50 | 11.30 | 0.00 | 30 | No | 42 | No | BS |
| 1994 | 1.50 | 12.72 | 0.00 | 30 | No | 42 | No | BS |
| F. 1995 | 150 | 1272 | 0.00 | 30 | No | 42 | No | BS |
| 1996 | 1.70 | 12.98 | 0.00 | 30 | No | 40 | Yes | BS |
| \%) 1997 | 1.70 | 10,95 | 0.00 | 30 | No | 41 | Yes | BS |
| 1998 | 1.70 | 11.32 | 0.00 | 30 | No | 41 | Yes | BS |
| - 1999 | 170 | 11.51 | 0.00 | 30 | No | 41 | Yes | BS |
| 2000 | 1.70 | 12.15 | 0.00 | 30 | No | 43 | Yes | BS |
| \%e 2001 , | 170 | 13.30 | 0.00 | 30 | No | 43 | Yes | BS |
| 2002 | 1.70 | 14.07 | 0.00 | 30 | No | 43 | Yes | BS |
| - $\quad 2003$ | 170 | 14.73. | 0.00 | 30 | No | 44 | Yes | BS |
| 2004 | 1.70 | 15.22 | 0.00 | 30 | No | 44 | Yes | BS |
| Ma 2005 | 170 | 16.06 | 0.00 | 30 | No | 44 | Yes | BS |
| 2006 | 1.70 | 17.17 | 0.00 | 30 | No | 45 | Yes | BS |
| - 2007. | 170 | 18.35 | 0.00 | 30 | No | 46 | Yes | BS |
| 2008 | 1.70 | 18.72 | 0.00 | 30 | No | 46 | Yes | BS |
| \# 20.2009 , | 170 | 20.78 | 0.00 | 30 | No | 46 | Yes | BS |
| 2010 | 1.70 | 28.78 | 0.00 | 30 | No | 47 | Yes | BS |
| \% 2011 . | 1.70 | 29.02 | - 000 | 30 | No | 48 | Yes | BS |

Billing Rate History


Note: The System Cost is the total of the Trust Contribution and the Administrative Fee.

Your Retirement Security Plan's salary type is "base salary." As a result, your contribution cost is applied as a percentage of each participant's annualized base rate of pay in effect on November 15, 2010, which is that participant's effective salary for the 2011 plan year. Beginning with your January 2011 monthly statement, the estimated amount due will be based on this percentage. Rates noted are for the plan in effect as of January 1 for each year.

## Exhibit 27

Page / of 2 Witness: Jim Adkins

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
27. Refer to Exhibit 12 of the application, where Meade estimates the expenses associated with this rate case. On a monthly basis, beginning in April 2009, provide the amount of Meade's actual rate case expenses, by category, as was done in the estimate. Consider this an ongoing request which is to be updated monthly.

Response:
Attached
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## Meade County Rural Electric Case No. 2010-00222 <br> Second Information Request of Staff Rate Case Expenses

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> Herald News Publishing
> Meade Co Messenger
> Grayson Co News

## Subtotal <br> 

Total expenses

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
28. Refer to Exhibit 13.
a. Refer to page 1 of 3 . The existing rates for the three-party anchor attachment and three-party ground attachment are shown as $\$ 4.72$ and $\$ .15$, respectively. The amounts in Meade's current tariff are $\$ 3.74$ and $\$ .17$, respectively. Explain the discrepancy between the rates shown on this page and those in Meade's tariff.

## Response:

See the revised CATV attachment computations. This reflects a lower rate for the three-party attachment in relation to the two-party attachment rate.

# Meade County Rural Electric Cooperative Case No. 2010-00222 <br> Second Data Request of Commission Staff 

28. Refer to Exhibit 13.
b. Refer to page 2 of 3 .
(1) Provide all documents and workpapers supporting the pole sizes and costs used in the calculation of the weighted average costs. Include in the response whether the gross investment costs shown on this page are gross or net.

## Response:

Attached are the continuing property records (CPR's) that indicate the quantities and amounts for each of the elements for poles. It should be noted that the Three-Party Pole cost in the application did not include the $40^{\prime}$ poles with the $45^{\prime}$ poles. This has been remedied in this response. The investment is shown as gross costs.

|  | Quantity | Cost | Average |
| :---: | ---: | :---: | :---: |
| $35^{\prime}$-40'Poles | 27,840 | $14,680,250$ | 527.31 |
| $40^{\prime}$-45'Poles | 29,191 | $15,837,457$ | 542.55 |






























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# Meade County Rural Electric Cooperative 

## Case No. 2010-00222

## Second Data Request of Commission Staff

28. Refer to Exhibit 13.
b. Refer to page 2 of 3 .
(2) Explain why it is reasonable for a three-party pole attachment to be higher than a two-party pole attachment. Include in the response the calculation of the present rates which resulted in a lower charge for the three-party pole attachment.

## Response:

See the revised CATV attachment computations. This reflects a lower rate for the three-party attachment in relation to the two-party attachment rate.
A. 1. Two-Party Pole Cost:

| Size | Quantity Amount | Weighted Average Cost |  |
| :---: | :---: | :---: | :---: |
| $35^{\prime}-40^{\prime}$ Poles | 27,840 | $\$ 14,680,250$ | $\underline{\$ 527.31}$ |

2. Three-Party Pole Cost:

| Size | Quantity | Amount | Weighted Average Cost |
| :---: | :---: | :---: | :---: |
| $40-45$ ' Poles | 29,426 | $\$ 15,837,457$ | $\underline{\$ 538.21}$ |

3. Average cost of anchors \$94.01
B. 1. Pole Charge:
a. Two party $=$
\$527.31
85\%
17.77\%
0.1224
$\$ 9.75$
b. Three party $=\$ 538.21$
85\%
$17.77 \% \quad 0.0759$
\$6.17
4. Pole Charge, with ground attachments:
a. Two party =
$\$ 527.31$
85\%
$\$ 12.50$
17.77\%
0.1224
\$0.27
b. Three party $=\$ 538.21$
85\%
$\$ 12.50$
$17.77 \%$
0.0759
\$0.17
5. Anchor Charge:
a. Two party $=$
$\$ 94.01$
17.77\%
0.50
$\$ 8.35$
b. Three party $=\$ 94.01$
$17.77 \% \quad 0.33$
$\$ 5.51$
(1) Remove miscellaneous allocations to pole accounts when using Record Units in the continuing property record (CPR's) system, per PSC Administrative Case No. 251

Meade County has not made any adjustments or modifications to its CPR's during the current or previous several years.
Exhibi 28
Meade County Rural Electric
Case No. 2010-00222
CATV Pole Attachments
as of December 31, 2009
Fixed charges on investment from PSC Annual Report at December 31, 2009.
Total Distribution Expense ..... 4,704,658
Reference Page 14
Customer Accounts Expense ..... $1,253,665$
Reference Page 15
Customer Service and Informational Expense ..... 230,731
Reference Page 15
Administrative and General ..... 1,392,256
Reference Page 15
Depreciation Expense ..... 2,956,264
Reference Page 13
Taxes Other than Income Taxes ..... 32,462
Reference Page 13
Sub total ..... $10,570,036$
Divided by Total Utility Plant ..... 91,162,723 ..... $11.59 \%$
Line 2, Page 1
Cost of Money
Rate of Return on Investment allowed in the last GeneralRate Request, Case No. 2009-002228.26\%
Net plant ratio for distribution plant:
Distribution plant Accumulated depreciation

$$
\frac{82,006,321}{20,716,588}
$$ ..... $25.3 \%$

Rate of return ( times 1 minus reserve ratio) ..... $6.17 \%$
Annual carrying charges$17.77 \%$
Meade County Rural Electric CATV Pole Attachments
as of December 31, 2009


# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
28. Refer to Exhibit 13.
c. Refer to page 3 of 3 wherein the rate of return used in the CATV calculation is shown as 6.47 percent.
(1) State where in the Order in Meade's most recent general rate case the 6.47 percent rate of return is shown.

## Response:

The calculation of rate of return from Meade County's most recent general rate case is as follows:
Normalized test year margins (Exh S) ..... 234,981
Increase granted in Order ..... 1,905,793
Adjusted margins ..... 2,140,774
Normalized interest on long term debt ..... 2,188,093
Margins plus interest ..... 4,328,867
Net rate base (Exh K) ..... $60,295,462$
Rate of return ..... $7.18 \%$

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 

Second Data Request of Commission Staff
28. Refer to Exhibit 13.
c. Refer to page 3 of 3 wherein the rate of return used in the CATV calculation is shown as 6.47 percent.
(2) Provide a revised Exhibit 13 using the rate of return proposed in this case.

Response:
A revised Exhibit 13 is attached with the updated average cost for poles and the rate of return requested in this application, with the proposed rate being $8.26 \%$.
d. The parties and attachments are as follows:

|  | Windjammer | Insight | Mediacom |
| :--- | ---: | ---: | ---: |
| 2 party Pole |  |  |  |
| 3 party Pole | 263 | 675 | 742 |
| 2 party Anchor | 1,557 | 4,349 | 1,246 |
| 3 party Anchor |  |  | 1 |
| 2 party Ground | 97 |  |  |
| 3 party Ground |  | 423 | 496 |

# Exhibit 29 <br> Page ( of 4 <br> Witness: Karen Brown 

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
29. Refer to Exhibit 14 of the application.
a. Refer to page 1 of 6 . The existing rate for Temporary Service is shown as $\$ 35,00$. However, Meade's tariff shows the amount to be $\$ 60$. Explain the discrepancy between the rate shown on this page and Meade's tariff.

## Response:

The tariff reflects a $\$ 35.00$ pole fee plus a service charge of $\$ 25.00$ for a total of $\$ 60.00$.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
29. Refer to Exhibit 14 of the application.
b. Refer to page 2 of 6 . At the bottom of the page, under "Other Direct Costs", explain why it is appropriate to divide the annual cost per employee by 1,784 hours rather than 2,080 hours.

## Response:

2,080 is the total number of hours an employee can work if they perform 8 hours of work each day. Since employees receive vacation, holidays, and sick days off from work, the direct costs should be divided by the actual hours worked on an annual basis.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
29. Refer to Exhibit 14 of the application.
c. Refer to page 3 of 6 .
(1) Provide justification for the 240 minutes of serviceman time and 45 minutes of clerical time for the Tampering charge.

## Response:

When there are suspicions of tampering, Meade County sends two (2) linemen to investigate the situation. If there is evidence of tampering, there are both written reports and pictures taken of the tampering. Extreme care is exercised since tampering usually results in a dangerous situation for both the consumer and Meade County's linemen. Also, the linemen are apprised that tampering could result in legal action by either the Cooperative against the consumer, or by the consumer against the Cooperative. The average time expended is at least two (2) hours for this encounter ( 2 men $\times 2$ hours $\times 60$ minutes $=240$ minutes). Again, clerical time is expanded greatly to document the tampering, ensure that all information is documented in the file, and notes are placed in the consumers records to document the result of the findings. Usually this information is reviewed by the CSR Supervisor to ensure all necessary information is included in the consumer's file.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
29. Refer to Exhibit 14 of the application.
c. Refer to page 3 of 6 .
(2) Given that the hourly rate used to calculate the "Direct Labor Charge" for the nonrecurring charges consists of both the 85.77 percent actual hours worked and 14.23 percent non-working hours (as calculated by Meade on page 2 of 6 ), explain why it is appropriate to also include the "Direct Wage Expense" which is calculated using the 14.23 percent non-working hours (Le., explain how the 14.23 percent is not included twice).

## Response:

Using the "Direct Labor Charge" allows this rate to include vacation, holiday, and sick time. The "Direct Wage Expense" is only the benefits that are associated with labor. This method allows Meade County to capture both the direct and other benefits in addition to the direct labor. This is not double-recovery in that Meade County's computer software does not allocate benefits to labor charged to vacation, holiday, and sick time.

# MEADE COUNTY RECC 

CASE NO. 2020-00222

## RESPONSE TO COMMISSION STAFF'S SECOND INFORMATION REQUEST

## Question:

State whether the Special Meter Reading Charge will always be in reference to a remote meter reading. If so, provide justification for the time incurred by the service man and office clerk.

## Response:

The Special Meter Reading Charge applies to other types of meter readings.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

31. State whether Meade has made any recent changes in the accounting for the following items:
a. Recognition of income and expense;
b. Capitalization threshold for assets;
c. Expensing of costs; and
d. Prepayments

## Response:

Meade has not made any changes in accounting practices and none are anticipated.

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
32. In the September 1, 2010 issue of Energy Finance Daily, it was reported that Meade received an $\$ 18.6$ million loan from United States Department of Agriculture for work on its distribution system.
a. Describe in detail and provide quantification of the impact(s) this loan has on the financial assumptions put forward in this rate case.

## Response:

The impact of the $\$ 18.6$ million loan impacts Exhibit H, James Adkins testimony in Exhibit JRA-1 data. This information was obtained from the Financial Forecast, as prepared by the RUS Field Representative, in connection with the loan application filed with RUS. This is the only place in the application that reflects this loan.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

32. In the September 1, 2010 issue of Energy Finance Daily, it was reported that Meade received an $\$ 18.6$ million loan from United States Department of Agriculture for work on its distribution system.
b. Provide the date the loan proceeds were received and the terms of the loan.

## Response:

There have been no loan advances. The loan is still pending awaiting final RUS approval. Until RUS makes its final determination, Meade County is not able to advance loan funds.

# Meade County Rural Electric Cooperative <br> Case No. 2010-00222 <br> Second Data Request of Commission Staff 

32. In the September 1, 2010 issue of Energy Finance Daily, it was reported that Meade received an $\$ 18.6$ million loan from United States Department of Agriculture for work on its distribution system.
c. Describe in detail how Meade will use the proceeds from this loan.

## Response:

Meade County will use the proceeds to finance a portion of the construction projects included with the work plan and loan application.

# Exhibit 32 <br> Page 4 of $\psi$ <br> Witness: Jim Adkins 

# Meade County Rural Electric Cooperative 

Case No. 2010-00222
Second Data Request of Commission Staff
32. In the September 1, 2010 issue of Energy Finance Daily, it was reported that Meade received an $\$ 18.6$ million loan from United States Department of Agriculture for work on its distribution system.
d. Does Meade plan to use any of these funds or any other funds for the development of smart meter or smart grid technology? If so, describe these plans in detail.

## Response:

Meade County has already installed automated meter information (AMI) technology for all but demand meters on its system. The projects included in the work plan are normal construction and replacement activities. There are no funds designated for either smart meter or smart grid technology. Meade County has filed the work plan with this Commission in Case No. 200900496.


[^0]:    * From the 1976 REA Bulletin $1-1$ assuming investment in associated organizations is all G\&T capital credit assignments.

[^1]:    * We recognize that a 10 -year Financial Forecast serves this purpose but unfortunately it is not fully held by regulators to meet the "known and measurable" criteria.

[^2]:    * In 1977 REA changed its accounting policy to allow losses to be used by G\&T's to offset future margins thus eliminating this problem in the future. However, the equity generated at the G\&T level will still be booked in both the G\&T and distribution books.

[^3]:    Annualized cost rate [Total Col. (j) / Total Col. (d)]
    4.59\%

    Actual test year cost rate [Total $\mathrm{Col}(\mathrm{k}) /$ Total Reported in $\mathrm{Col}(\mathrm{d})]$

