

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

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| SETTING RATES AND TERMS AND     | ) | CASE NO. 8566   |
| CONDITIONS OF PURCHASE OF       | ) | A. KENTUCKY POWER COMPANY   |
| ELECTRIC POWER FROM SMALL POWER | ) | B. KENTUCKY UTILITIES COMPANY   |
| PRODUCERS AND COGENERATORS BY   | ) | C. BEREA COLLEGE ELECTRIC   |
| REGULATED ELECTRIC UTILITIES    | ) | D. LOUISVILLE GAS AND ELECTRIC<br>COMPANY   |
|                                 |   | E. UNION LIGHT, HEAT AND POWER<br>COMPANY   |
|                                 |   | F. BIG RIVERS ELECTRIC CORPORA-<br>TION, GREEN RIVER ELECTRIC<br>CORPORATION, HENDERSON-UNION<br>RECC, MEADE COUNTY RECC,<br>JACKSON PURCHASE ELECTRIC<br>CORPORATION   |
|                                 |   | G. EAST KENTUCKY POWER COOPERA-<br>TIVE, INC., BIG SANDY RECC,<br>BLUEGRASS RECC, CLARK RECC,<br>CUMBERLAND VALLEY RECC, FAR-<br>MERS RECC, FLEMING-MASON<br>RECC, FOX CREEK RECC, GRAY-<br>SON RECC, HARRISON RECC,<br>INTER-COUNTY RECC, JACKSON<br>COUNTY RECC, LICKING VALLEY<br>RECC, NOLIN RECC, OWEN COUN-<br>TY RECC, SALT RIVER RECC,<br>SHELBY RECC, SOUTH KENTUCKY<br>RECC, TAYLOR COUNTY RECC |

O R D E R

On July 22, 1982, the Kentucky Public Service Commission ("Commission") issued an Order establishing this case. All electric utilities regulated by the Commission were made parties to the proceeding and hearings were scheduled for each individual utility. Each utility was ordered to prefile testimony, proposed tariffs and proposed contracts for qualifying facilities ("QFs") under 100 KW and proposed tariffs for QFs over 100 KW.

Motions to intervene were filed by Dickerson Lumber Company ("Dickerson"); Eastern States Energy and Resources, Inc. ("Eastern States"); Division of Consumer Protection in the Attorney General's Office ("Attorney General"); Frankfort Electric and Water Plant Board ("Frankfort"); Kentucky Department of Energy ("KDOE"); and Kentucky Department of Natural Resources, Division of Forestry ("Forestry").

Public hearings were conducted at the Commission's offices in Frankfort, Kentucky, on October 1, 5, 7, 12, 14, 21 and November 7, 1982, for the purposes of cross-examination of witnesses.

Witnesses appearing for the electric utilities were as follows:

**Kentucky Power Company:**

Conrad DeSieno, Vice President - Interconnections and  
Special Contracts - AEP

**Kentucky Utilities Company:**

Robert Hewett - Vice President, Rates and Contracts  
Malcolm Marshall - Member, Board of Directors  
James Tipton - Director of Engineering Special  
Projects  
A. Doyle Baker - Director of System Operations  
Ronald Willhite - Director of Rates and Economic  
Research

**Louisville Gas & Electric Company:**

John Hart - Vice President, Rates and Economic  
Research  
Fred Wright - Vice President, Planning and Marketing  
Services  
Robert Lyons - Assistant Superintendent, Electric  
Productions Department

**Union Light, Heat and Power Company:**

Terry Bruck - Assistant Manager of Electric Operating  
Department - Cincinnati Gas & Electric Company  
A. P. Haskell - Generation Planning Engineer -  
Cincinnati Gas & Electric Company  
Peter Van Curen - Assistant Manager of Rate and  
Economic Research Department - Cincinnati Gas &  
Electric Company

Big Rivers Electric Cooperative Corporation:  
Scott Reed - Vice General Manager, Engineering and  
Transmission

East Kentucky Power Cooperative:  
Paul Atchison - System Planning Manager

Berea College Electric Utility:  
Karl Warming - Business Vice President - Berea College  
Donald Bewley - Utility Administrator

Witnesses providing testimony on behalf of intervenors were as follows:

Frankfort Electric and Water Plant Board:  
Whitfield Russell - Partner - Whitfield Russell  
Associates

Dickerson Lumber Company:  
Eugene Hail - Electrical Consultant  
Wayne O. Lewis - Electrical Consultant

The Union Light, Heat and Power Company ("ULH&P") filed a motion to confine the Commission's decision to evidence adduced in each individual utility's section of the hearing. The Commission is of the opinion that each utility had the opportunity to participate in all hearings. Some utilities did choose to both provide direct testimony and cross-examine witnesses in other portions of the hearings. ULH&P did not choose to avail itself of that opportunity; therefore the motion is denied.

All information requested during the hearings has been filed.

#### Introduction

The Commission in recent Orders has provided notice to the regulated utilities in Kentucky of its intentions to proceed with a least cost strategy for meeting future load growth. Cogeneration and small power production technology is an integral part of this strategy. The KDOE, Forestry and numerous direct contracts with potential QPs have given the Commission reason to believe that there is a substantial

amount of potential power available from various sources in Kentucky. The Commission does not intend to ignore this potential supply source either in its present context of utilities' excess capacity or in the future when regulated utilities file for certificates of convenience and necessity to construct capacity. The Commission is convinced that this respite in demand growth gives all parties (Commission, utilities and QFs) a rare opportunity to prepare in a timely and efficient manner to meet capacity needs for the future in the least cost manner. The Commission would encourage QFs and electric utilities to look beyond a utility's territorial boundary in negotiating capacity sales contracts.

#### Avoided Capacity

The Commission in its Order establishing this proceeding required each utility to submit proposed purchase rates which would include a capacity and energy component. Projections for the capacity component were to be provided in 5-year increments for up to 30 years. The utilities were to base their proposed payments on the potential savings (avoided capacity costs) which would result from deferral, downsizing or cancellation of power plants or capacity purchases within the utility's planning horizon. Maximum flexibility was provided to the utilities to choose a method to reflect these savings.

The Commission views the calculation or determination of capacity purchase rates as consisting of three separate steps. The first step is the determination of the conditions under which the electric utilities would be required to make a capacity payment to QFs. The Commission is of the opinion that capacity payments are appropriate in most circumstances if the QF meets the reliability and dispatchability

criteria which a utility would use for its own generation plant. There are unique conditions on a utility's system which may obviate the necessity for capacity payments. If a utility demonstrates to the Commission's satisfaction that it simultaneously faces insignificant load growth, excess capacity, minimum off-system sales and is neither planning nor constructing capacity within its 10-year planning horizon then the utility cannot avoid capacity related costs at that time so a capacity payment would not be justified. However, the Commission emphasizes that it would be contradictory for utilities to argue for zero avoided capacity costs while proceeding to plan for or construct generating facilities. The burden is on the utility to demonstrate zero avoided capacity costs.

Kentucky Utilities Company ("KU") in response to the draft Order proposed that the Commission add two additional criteria in determining conditions under which capacity payments to QFs would be appropriate. KU stated "sufficient advance notice of when the QF will commit the facility" and "the duration of the QF's availability on the utility system" are essential to the utility's planning. The Commission is of the opinion that sufficient notice of date of QF operation and duration of availability are important considerations in the development of QF capacity purchase contracts. However, Kentucky Power has demonstrated in this proceeding there may be avoided capacity costs even with very short term QF power availability. Therefore the Commission will reject the additional criteria proposed by KU for determining whether any capacity payment to a QF is appropriate.

The second step is the selection of the proper methodology to reflect the utility's avoided capacity costs. The Commission has given the utilities great leeway in their choices of methodologies to evaluate avoided capacity cost. The Commission is aware that there is no universally accepted methodology because each utility has a different system generation mix and load configuration. The Commission is of the opinion that if a method properly reflects the savings from changes in system planning conditions and is reproducible by other interested parties, then it is acceptable for current use.

The third step requires the conversion of the utility's avoided capacity costs into a capacity purchase rate. The conversion may require some assumptions and research on the part of the utility in determining both the individual and aggregate supply characteristics of the QFs and how these supply characteristics can be used to meet the utility's planning requirements. However, the Commission is of the opinion that the use of assumptions is routine in utilities' generation planning and that utilities have the necessary expertise to evaluate QFs' supply characteristics and to incorporate them into their capacity planning. Therefore, the Commission will require each covered utility to prepare and file a study by October 1, 1984, giving a detailed explanation of how it intends to identify, evaluate and incorporate QF power in its planning requirements. KU and other utilities objecting to KDOE hydro-electric capacity estimates and other potential QF capacity estimates will have ample opportunity to respond on the potential for such in this report.<sup>1</sup>

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<sup>1</sup>KU Draft Order Comments, p. 3.

## Kentucky Power

Kentucky Power is a wholly-owned subsidiary of American Electric Power ("AEP") and is a participating member of AEP's power pool. AEP is constructing a power generating plant at Rockport, Indiana. The first unit is scheduled to come on line in December, 1984, with the second following in December, 1988. Currently, AEP has surplus generation and in order for it to defer, cancel or reduce the size of a unit, it will require at least 1000 MW of reliable QF power.<sup>2</sup>

Kentucky Power, because of planning and construction constraints, has proposed different capacity credits for two different time periods of the contract. Period I would be for contract periods of 2 to 8 years. Eight years is the minimum construction period for coal generating units. Short-term purchases from QFs during this period would not affect in-service dates of future units. Therefore, Kentucky Power proposed to base its purchase rate on the revenue it would receive from off-system sales of QF power. Kentucky Power witness, Mr. Conrad DeSieno, estimated that Kentucky Power could resell 60 percent of QF capacity provided on-peak and 30 percent off-peak at \$5 per kilowatt-month. This results in a short-term purchase rate of \$3 per kilowatt-month for on-peak purchases and \$1.50 per kilowatt-month for off-peak purchases from QFs.<sup>3</sup>

The Commission is of the opinion that the proposed capacity payment of Kentucky Power for Period I is appropriate. Although a

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<sup>2</sup>DeSieno testimony, p. 30.

<sup>3</sup>Ibid., pp. 20 and 21.

contract of longer duration will provide greater benefit to the utility in its construction planning, the Commission believes that there is some capacity value associated with short-term QF power. The Commission commends Kentucky Power for its recognition of this value and accepts its proposed Period I rates.

Contracts for purchases of QF power exceeding 8 years may affect the in-service date of future units. Accordingly, the capacity payment beginning in the ninth year of a contract is calculated differently. Period II rates would be based on the fixed carrying charges for the installed cost of the last unit in service prior to the ninth year of the contract. To reflect the higher value of longer term contracts, Kentucky Power would use a weighting factor which would provide full value for QF capacity contracted for 41 years.<sup>4</sup> A lesser value would be applied to contracts of shorter duration. Because of the calculation of the weighting factor in the tariff Kentucky Power cannot propose actual Period II rates at this time but instead must do it on a QF specific basis.

The Commission is concerned with a number of elements in Kentucky Power's proposed Period II determination of avoided costs. It is the Commission's opinion that the choice of the last plant placed in service prior to allowing Period II capacity payments results in a downward bias on capacity rates. Inflation and environmental controls have escalated the costs of constructing generating units; without some demonstration that the costs of future plants will stabilize, the

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<sup>4</sup>Ibid., p. 23.



Commission would be reluctant to rely on the last plant constructed as indicative of avoided capacity costs. The Commission will require Kentucky Power to base its avoided capacity cost on the estimated costs of construction of its next deferrable plant. In addition, the Commission is of the opinion that the weighting factor  $\frac{CT-8}{33}$ <sup>5</sup> would result in undervaluing long-term contracts. Kentucky Power would require a 41-year contract for a QF to receive full avoided costs, which results in capacity being required for a period longer than the expected life of its own plants. The Commission agrees with the concept of a Period I and II, but is of the opinion that the differentiation should not place more restrictive requirements on QFs than Kentucky Power has experienced with its generating units. In response to objections raised in the draft Order in its original Phase II rate Kentucky Power has proposed some revisions in its original tariff. First, Kentucky Power proposed to base its avoided capacity costs on the installed cost of the last unit to be declared in commercial operation escalated by the Handy-Whitman construction index. In addition, Kentucky Power proposed substituting  $\frac{CT}{33}$  for its original weighting factor of  $\frac{CT-8}{33}$ . It is the opinion of the Commission that its objections to Kentucky Power's tariff have been satisfied with these modifications. Therefore the Commission will adopt the changes in the tariff as proposed by Kentucky Power.

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<sup>5</sup> $\frac{CT-8}{33}$  = weighting factor, where CT = contract length, 8 = construction period for coal plant, 33 = service life of coal plant.

Kentucky Utilities

KU is currently constructing a 500 MW generating unit at Ghent, Kentucky. Ghent IV is scheduled for an in-service date of October, 1984. In addition, KU has commenced the initial engineering and environmental studies necessary for certification for construction of two generating units at Hancock, Kentucky. Since its initial filing, KU has deferred the planned in-service date for Hancock I to 1993.<sup>6</sup> KU did not propose a methodology for determining avoided capacity costs in this proceeding. KU's witness, Mr. James W. Tipton, testified, "It is extremely unlikely that a small amount of such capacity [QF] could be utilized to avoid capacity costs through deferral or downsizing of planned units."<sup>7</sup> He further stated that, "KU resources will more than adequately provide all of KU's capacity needs through the year 1991."<sup>8</sup> It is KU's contention that "without knowing the operational characteristics and amount of capacity involved, a determination of avoided costs would at best be only a guess."<sup>9</sup> KU can only foresee a 1-year period in its planning horizon in which a capacity payment to the QFs may be justified.

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<sup>6</sup>Case No. 8624, General Adjustment of Electric Rates of Kentucky Utilities Company.

<sup>7</sup>Tipton testimony, p. 26.

<sup>8</sup>Ibid., p. 13.

<sup>9</sup>Ibid., p. 34.

The witness for Frankfort, Mr. Whitfield Russell, proposed that the Commission reject "KU's position that there are no avoided capacity costs attributable to qualifying facilities."<sup>10</sup> Mr. Russell contended that KU currently has "excess capacity"<sup>11</sup> and that Ghent IV could be deferred until 1986 without violating KU's 20 percent reserve margin target. Mr. Russell further proposed that the Commission base KU's avoided capacity costs on the savings achieved by plant deferral, particularly considering the feasibility of further deferral of Ghent IV.

The Commission is of the opinion that Mr. Russell's analysis is consistent with the Commission's conception of avoided capacity costs. However, the Commission does not agree that the costs should be determined by the savings on deferral of Ghent IV. Though KU did not provide any cost-benefit studies on deferring Ghent IV in this proceeding, or any other convincing evidence that Ghent IV was not deferrable, the Commission is still reluctant to use Ghent IV as a basis for setting avoided capacity costs. Ghent IV is scheduled for completion within 12 months so it is highly unlikely that additional savings would result from further deferral. However, in future proceedings the Commission will presume that any unit is deferrable unless a utility can demonstrate with complete documentation that cost of further deferral exceeds the benefits of remaining on its construction schedule.

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<sup>10</sup>Russell testimony, p. 15.

<sup>11</sup>Ibid., p. 16.

The Commission is fully aware that the development of cogeneration and small power production in Kentucky is in a "Catch 22" situation and any decision made to encourage its development through capacity purchase payments will have certain risks attached to it. On the one hand, KU and other utilities argue that without sufficient reliable QF power secured by a contract, the utility cannot avoid construction of generating capacity.<sup>12</sup> If the utility proceeds under these assumptions it runs the risk that all of the QF capacity which is under contract will be rendered excess when a generating plant comes on line. On the other hand, however, without an avoided capacity payment, QFs in Kentucky cannot meet financial feasibility requirements of the investment community, the net result of which will be the failure to develop QF power. The Commission is of the opinion that opportunities offered to the utilities to delay, cancel or downsize expensive and large new capacity additions by the development of this technology more than offset the risk associated with its development. Therefore, the Commission will require KU to file both its avoided cost methodology and capacity purchase rates based on avoided capacity costs in its next rate case, or demonstrate to the Commission's satisfaction that a capacity cost component is not appropriate as specified in this Order and 807 KAR 5:054.

Union Light, Heat and Power Company

ULH&P receives its total power requirements from Cincinnati Gas and Electric Company ("CG&E"). Rates and conditions of purchase are

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<sup>12</sup>Tipton testimony, pp. 28 and 29.

subject to a wholesale tariff approved by the Federal Energy Regulatory Commission ("FERC"). ULH&P is an integral part of the CG&E operational and planning system. CG&E has under construction the Zimmer Nuclear Generating Station with 800 MW of capacity at Moscow, Ohio. CG&E owns 40 percent interest in Zimmer. Zimmer is approximately 97 percent complete with construction work now suspended pending the outcome of a Nuclear Regulatory Commission study. Since the completion of these hearings CG&E has cancelled the nuclear unit at Zimmer and is proposing to replace it with a coal plant, and has further deferred East Bend Unit I in Boone County, Kentucky.

ULH&P witness, Mr. Terry Bruck, provided testimony on the avoided capacity cost methodology. Mr. Bruck proposed a cap on avoided capacity costs based on CG&E's firm purchase power rates at the time the QF initiates its purchase negotiations with ULH&P. Because the cost of constructing new capacity is greater than the cost of purchasing embedded capacity from an interconnected utility, ULH&P contends that any purchase of QF power at a rate greater than it "could purchase equivalent power. . . would result in a subsidy by our ratepayers."<sup>13</sup> It is the opinion of the Commission that the implementation of ULH&P's proposed purchase rate cap would not provide the maximum incentive to QFs. The intention of the Commission is to promote the development of QF capacity as an alternative to the construction of new and more expensive capacity. To the extent that the capacity rate does not reflect the full avoided costs of capacity, there may be marginal QFs

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<sup>13</sup>Bruck testimony, p. 6.

which are denied the opportunity to sell power. The Commission would agree that the purchase of economy and short-term power may effectively place a ceiling on avoided energy costs, but not capacity costs. In the opinion of the Commission, Kentucky Power has provided an effective means to address ULH&P's short term concerns by proposing a period I and II rate based on length of contract. ULH&P may want to consider this approach in its next rate case. However, in this proceeding, the Commission rejects ULH&P's cap on capacity purchase rates.

ULH&P has proposed an avoided capacity cost methodology based on the estimated decreases in capacity construction costs which may result from the purchase of QF power. The QF would select a unit in CG&E current official generation expansion plan as the capacity it would replace. CG&E would recompute the cost of construction of the planned plant excluding the capacity provided by the QF. The difference in the cost of the originally planned plant and the theoretically smaller plant resulting from the QF purchase would be the avoided capacity costs. Mr. Allan Haskell, witness for ULH&P, stated "All capacity related payments would be based upon the cost estimate of this theoretical unit."<sup>14</sup> ULH&P does not propose to provide capacity purchase rates because it is impossible to designate a unit which may be chosen by a prospective QF a priori.

The Commission is of the opinion that ULH&P has selected an avoided capacity cost methodology which is theoretically sound.

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<sup>14</sup>Haskel testimony, p. 4.

However there are two areas which concern the Commission. First, ULH&P does not propose to offer any information to QFs to assist them in choosing a generating unit other than "our current load forecasts, our current generation forecast."<sup>15</sup> The Commission does not believe that this information is adequate for a QF to proceed in planning its facility. Furthermore, the Commission's regulation requires that each utility file its capacity purchase rate which is then subject to negotiation based on the unique circumstances of the QF. ULH&P can prepare estimates of the avoided costs per KW for each of the different types of units in CG&E generation plan if it desires. However ULH&P intends to proceed, the Commission remains of the opinion that a capacity purchase rate will facilitate the development of QFs in Kentucky and it will require ULH&P to file a capacity purchase rate in its next case. The second area of concern is the timing and eligibility of QFs for capacity payments. ULH&P proposes "Between the application date and the commercial date of any CG&E units under construction, the QF will be ineligible for a capacity credit in any year during which the reserves exceed the current reliability index. . ."<sup>16</sup> The Commission is of the opinion that capacity payments of the utility should commence when the savings begin to occur. If a utility is able to downsize or defer capacity construction the savings will begin immediately and not in the actual year of commercial operation. Hence it is appropriate that capacity

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<sup>15</sup> Transcript of Evidence ("T.E."), October 12, 1982, p. 80.

<sup>16</sup> Haskel testimony, p, 7.

payments occur when deferral occurs and not when commercial operation begins. Furthermore if the Commission ties the capacity payment to CG&E reliability index this would place the QF at risk for poor generation planning decisions by CG&E. Therefore the Commission will reject ULH&P's proposal linking capacity purchase payments to CG&E's reliability index and will require that ULH&P commence capacity payments when the avoided costs occur.

Louisville Gas and Electric Company

Louisville Gas and Electric Company ("LG&E") is currently constructing a 495 MW coal-fired generating unit (Trimble Unit #1) in Trimble County, Kentucky. Mr. Fred Wright testified in this proceeding that for Trimble Unit #1, "there is no overall economic advantage to deferring this unit."<sup>17</sup> However, during the hearing, Mr. Wright stated that LG&E was considering deferring Trimble Unit #1 and since the hearing LG&E has deferred Trimble Unit #1 to 1987.<sup>18</sup>

LG&E proposed that its avoided capacity payment be based on the cost associated with avoiding a combustion turbine. Mr. John Hart stated that, "calculated avoided capacity costs should be based on a combustion turbine in order to obtain needed flexibility in the planning and construction program of the company...."<sup>19</sup> The Commission wishes to give all the utilities in this proceeding flexibility in selection of their means of determining avoided capacity costs.

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<sup>17</sup>Wright testimony, p. 11.

<sup>18</sup>Case No. 8616, General Adjustment in Electric and Gas Rates of LG&E.

<sup>19</sup>Hart testimony, p. 7.



The Commission is of the opinion that LG&E's proposed avoided capacity methodology meets its requirements for determining avoided capacity cost. Since the FERC rules and the Commission regulation require energy costs and capacity costs to be matched when avoided costs are determined by base load units, the same requirement should apply when avoided capacity costs are determined using combustion turbine generation.<sup>20</sup> If a combustion turbine is the basis for determining a capacity payment, for consistency's sake, the Commission will require LG&E to use the energy costs associated with the combustion turbine model rather than Trimble I to meet future load growth. Therefore, the energy costs under a legally enforceable obligation will be properly matched with the capacity payment as required by the FERC rule.

LG&E has proposed that capacity purchase rates should commence at the earliest in 1986. According to Mr. Wright, "...to meet the currently scheduled start-up date (June, 1992) for Trimble County Unit #2,"<sup>21</sup> firm commitments for equipment acquisition will begin sometime after 1986. It is the position of LG&E that capacity cost savings will begin with the deferral, downsizing or cancellation of Trimble Unit #2. The Commission does not agree with LG&E's proposal to commence capacity related payments starting in 1986. LG&E has indicated that Trimble Unit #1 is deferrable indefinitely.<sup>22</sup> If LG&E

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<sup>20</sup>FERC Order No. 69, pp. 73 and 74.

<sup>21</sup>Wright testimony, p. 11.

<sup>22</sup>Final Order, Case No. 8616, General Adjustment of Electric and Gas Rates of LG&E, pp. 38 & 39.

has available sufficient QF capacity to defer Trimble Unit #1 for a period beyond 1986, then there would be immediate savings associated with deferral. The Commission realizes that this requires LG&E to judge whether a QF can offer sufficient reliability and capacity to permit LG&E to defer Trimble County Unit #1; however, there is little difference in making this decision and other decisions LG&E currently makes in forecasting its load and how it expects to meet that load. Therefore, the Commission will require LG&E to file a proposed capacity payment based on its avoided capacity costs in its next rate case.

Big Rivers Electric Cooperative Corporation

Big Rivers Electric Cooperative Corporation ("Big Rivers") provides electric power to four distribution cooperatives: Henderson-Union, Green River, Meade County, and Jackson Purchase. Big Rivers is currently constructing a 450 MW unit, Wilson Unit No. 1, which is scheduled for an in-service date of July 1984.<sup>23</sup> When asked if Wilson 1 was deferrable, Mr. Scott Reed stated, "We made a study in 1981, which we investigated that possibility and made the decision at that point that it would not be economic to do so."<sup>24</sup> When Wilson 1 comes on line, Big Rivers' reserve margins will exceed 50 percent.<sup>25</sup> Big Rivers currently projects 2 percent annual load growth into the

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<sup>23</sup> Big Rivers' response to Commission Order, dated July 22, 1982, Exhibit 6.

<sup>24</sup> T.E., October 14, 1982, p. 42.

<sup>25</sup> T.E., October 14, 1982, p. 42.

1990's, with sufficient generating reserves to meet its load growth to 1996.

Big Rivers proposed to use its wholesale contract rate as the basis for determining capacity purchase rates. Big Rivers adjusted the wholesale rate for the fixed costs not associated with production capacity to determine its avoided capacity cost of \$4.12 per KW. The Commission agrees that the proposed method is a good first approximation for the avoided capacity costs. However, the Commission believes that a more appropriate measure of avoided capacity costs is based on the deferral, downsizing or cancelling of the next scheduled generating unit. Big Rivers did not propose to offer a capacity payment to QFs at the present time since it cannot avoid any capacity costs for the foreseeable future.

The Commission is of the opinion that Big Rivers has provided some evidence that it cannot avoid capacity costs in the foreseeable future. However, the Commission will require Big Rivers to address the conditions it has raised in this Order in its next rate case. Otherwise, the Commission will require a capacity purchase rate be filed in Big Rivers' next case.

#### East Kentucky Power Cooperative

East Kentucky Power Cooperative ("EKP") is in the process of constructing a 600 MW generating unit, JK Smith, at Trapp, Kentucky. The JK Smith Unit 1 was originally scheduled for commercial operation in 1985 and subsequently deferred to 1992. Unit 2 was cancelled.

EKP did not propose a method for determining avoided capacity costs. EKP witness, Mr. Paul Atchison, testified that, "within the 1982-92 planning horizon there is no capacity needed or planned which

we anticipate could be deferred by the foreseeable level of purchases of additional generation capacity from cogenerators or small power producers."<sup>26</sup> Furthermore, Mr. Atchison stated, "we are. . .looking at a diversity power arrangement which could provide another 150 megawatts, which could provide the capacity for deferring Smith, I believe, until 1992."<sup>27</sup> EKP has projected slower growth between now and 1992 than it experienced in the previous decade.

Dickerson Lumber witness Mr. Eugene Hail proposed that EKP offer a capacity purchase rate based on the wholesale contract between EKP and its distribution cooperatives (i.e., Farmers RECC). Mr. Hail testified that "the customers that presently exist of Farmers Electric Coop will not be hurt in any manner by supplanting power that they purchase from East Kentucky by power they purchase from cogenerators."<sup>28</sup> Dickerson Lumber did not propose to adjust the wholesale contract rate for nongenerating related fixed costs.

The Commission in its Order originating this case recognized that EKP was not covered by the reporting requirements of Section 133 of PURPA; EKP was given the option of either providing its wholesale power purchase contracts as a first approximation of the avoided capacity costs or submitting data comparable to Section 133 of PURPA. EKP did provide a wholesale contract but did not provide detailed adjustments necessary to determine a proxy for avoided capacity costs.

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<sup>26</sup>Atchison testimony, p. 4.

<sup>27</sup>T.E., Volume 1, October 21, 1982, p. 61.

<sup>28</sup>T.E., Volume II, October 21, 1982, p. 13.

Instead EKP contends that as a result of the adjustment to wholesale contract rates permitted by the FERC rule for "full requirement" suppliers<sup>29</sup> there would not be an avoided capacity cost.

The Commission is of the opinion that EKP's opposition to the use of the wholesale contract without adjustment is correct. However, the Commission does not concur with EKP's position that it does not have any capacity costs that it can avoid. The Commission has stated that as long as there is capacity being constructed that is not imminently scheduled for completion then it is appropriate for a utility to offer avoided capacity cost purchase rates. EKP, though currently proceeding slowly, does have JK Smith under construction. The Commission will therefore require EKP to file a methodology for determining avoided capacity cost and a capacity purchase rate in its next rate case. Furthermore if EKP or any other utility in future hearings proposes to adjust its wholesale power contract to determine "avoided capacity costs" the Commission will require the utility to file accounting cost detail of all adjustments to the contract capacity rate for its "all requirements" customer.

#### Berea College Electric

The Commission will discuss Berea College Electric's ("Berea's") avoided capacity cost methodology and purchase in the avoided energy cost section of this Order.

#### Purchase of Power

FERC Order No. 69 and the Commission's regulation require each regulated electric utility to interconnect for the purpose of purchase

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<sup>29</sup>FERC Order No. 69, pp. 27-29.

and sale of electricity with any qualifying facility in its retail franchise territory. In Kentucky there are a number of electric utilities which do not generate electricity but instead have full-requirements contracts with a supplying utility. Purchasing from a QF places them in a position of purchasing power from a supplier other than their full-requirements supplier.

EKP and KU proposed that a three-way contract be used, which would include as parties the distribution utility, the QF and the supplying utility. KU and EKP stated that unless their planning departments receive complete information on QF capacity purchased by their full-requirements customers then serious over-building of generating capacity may result.

The Commission rejects this proposal as placing an unnecessary burden on QFs by complicating purchase negotiation. Furthermore, this proposal is contrary to both the FERC rule and this Commission's regulation on utility purchase obligation. A non-generating utility can transfer its purchase obligation only with the express permission of the QF and not by the regulatory requirements of the Commission.<sup>30</sup> To do otherwise would be analogous to the Commission requiring a utility to wheel power when the Commission lacks the necessary statutory authority to require such action.

Big Rivers recognized the planning difficulties of the supplying utility that would occur as the result of not receiving information on purchases of QF capacity by its distribution cooperatives. To solve

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<sup>30</sup> FERC Order No. 69, p. 27.

this problem Big Rivers has proposed to serve as a consultant to its member cooperative even though the purchase obligation will reside with the distribution cooperative. The Commission commends Big Rivers for its imaginative procedure for closing the information gap without placing additional burdens on the QFs. The Commission encourages EKP and KU to use their initiative in developing methods for acquiring information from their "full requirement" customer.

#### Avoided Energy Costs

"Avoided energy costs" are defined in 807 KAR 5:054, Section 5(2)(a), of the Commission regulation. Each QF has the option of providing energy on an "as available" basis or pursuant to "a legally enforceable obligation." Conceptually, these options are similar to "non-firm" power (as available) and "firm" power (legally enforceable obligation). Power delivered at the QF's convenience is as available power. When QFs select this option it results in a utility being able to avoid only variable fuel cost and operation and maintenance expense. Power delivered subject to a legally enforceable obligation would be delivered on a scheduled or planned basis. If a utility is able to schedule the delivery of electricity then it would have the ability to make better use of the energy in meeting its load requirements and hence, the energy could have greater value to the utility. The utility could avoid the use of both "emergency" and peaking power generally resulting in savings from the decreased use of higher cost energy. The Commission is of the opinion that the differences in the types of power should be reflected in a utility's final purchase rate.

There was general agreement among the parties on the proper method for determining "avoided energy costs". It was generally

agreed that avoided energy costs would be equal to the costs of operating the most expensive unit on line in the relevant time period. All utilities used the principles of economic dispatch in dispatching generation units to meet their load. The level of sophistication of the models used to project energy costs varied greatly. There were specific situations which caused the utilities to deviate from the principles of economic dispatch, each of which will be addressed.

#### Kentucky Power

Kentucky Power provided avoided energy costs based on the PROMOD III production costing model developed and maintained by Energy Management Associates. Kentucky Power witness Mr. DeSieno sponsored the model. It is a probabilistic model which emulates AEP system operation. The model treats forced outage of generating units in probabilistic sense and determines incremental energy costs based on AEP's simulated operations.<sup>31</sup>

In translating avoided energy costs into energy purchase rates Mr. DeSieno proposed using a time differentiated multiplier. Kentucky Power proposed using a .8 multiplier for energy purchased on peak and a .6 multiplier for energy purchased off peak.<sup>32</sup> This decrease in proposed purchase rates from avoided energy costs is to reflect administrative and other operational costs incurred by Kentucky Power in purchasing energy from QFs. The Commission is of the opinion that in the initial stage of QF operations the approach used by Kentucky

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<sup>31</sup>DeSieno testimony, pp. 11 and 12.

<sup>32</sup>Ibid., p. 17



Power to reflect the administrative costs is appropriate. However, in future purchase rate hearings these costs should be directly accounted for in the adjustments made to the avoided energy costs.

Kentucky Utilities

KU provided avoided energy costs which were based on an internally developed energy dispatching program. KU projected hourly load data, average seasonal peak and off-peak load (MW)<sup>33</sup> for the period 1982-86. KU stated, "This information was provided the System Operations Department and was utilized by them as input in dispatching the Company's generation in increments of 1 MW to determine the energy cost of supplying load."<sup>34</sup> The results of this program were used as "the basis of the Company's 'avoided' energy cost data."<sup>35</sup>

Perhaps the most perplexing question in determining the avoided energy costs of KU is that of how to treat "take or pay" provisions in contracts for compliance coal. The company in its dispatching model treated the costs of energy generated by contract compliance coal at Ghent 2 and 3 as being equal to the generating costs of Brown Unit 3. Mr. Russell, witness for Frankfort pointed out that incremental energy costs for Ghent 2 and 3 would be zero and hence an entirely different dispatching situation may occur.<sup>36</sup> The take or pay coal costs are fixed so it cannot be avoided by purchase from QFs. The Commission

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<sup>33</sup> KU's response to Commission Information Request No. 1, September 13, 1982.

<sup>34</sup> Ibid.

<sup>35</sup> Ibid.

<sup>36</sup> T.E., Volume 1, October 5, 1982, p. 279.

realizes that the take or pay provision would probably distort the results of any incremental energy costs programs; however, the alternatives available to the Commission in this case were limited primarily to what KU had presented. The Commission will require KU to consider other alternatives to its current method of dispatching Ghent 2 and 3 at the same incremental cost as Brown 3. Since KU has the option of selling its compliance coal on the spot market the Commission will require KU to use a proxy for the compliance coal price which is equal to the current spot market cost of compliance coal when filing its avoided energy costs in its next rate case.

The Commission is concerned that KU's methodology for determining avoided energy cost fails to reflect actual system operation. During cross-examination when asked if forced or scheduled outages were taken into account in the energy dispatch program Mr. Hewett replied, "No sir it was not."<sup>37</sup> It is the opinion of the Commission that any production costing model or marginal energy cost model which does not take into account either forced outages or planned maintenance will understate avoided energy costs. Such a model is unacceptable in that it does not reflect actual operations and it fails to encourage QF development. KU used Gilbert & Associates' incremental cost model for its PURPA 133 filings in 1979.<sup>38</sup> The Commission will require that KU either use the same methodology in preparing avoided energy costs or

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<sup>37</sup>Ibid., p. 28.

<sup>38</sup>KU PURPA 133 filing, June 30, 1982.

provide an acceptable alternative which better reflects its actual system operations in its next rate case.

KU converted its avoided energy costs directly into proposed energy purchase rates. KU proposed an energy on-peak purchase rate of 1.423 cents per KWH in summer, 1.464 cents per KWH in winter and an off-peak energy purchase rate of 1.247 cents per KWH at all other times. The Commission will adopt KU's proposed energy purchase rates. However, in KU's next rate case the Commission will require KU to refile its energy purchase rates based on the changes ordered by the Commission in this proceeding.

#### Louisville Gas & Electric

LG&E provided avoided energy costs based on the EBASCO production cost model MARCOSTF 80. The incremental energy cost is estimated with a probabilistic dispatch model. Mr. Robert Lyons testified that, "the energy cost by costing period is almost constant,"<sup>39</sup> so LG&E proposed the use of a single costing period. Using four different levels of demand reduction LG&E averaged the costs to get 1.738 cents per KWH. LG&E converted these avoided energy costs directly into purchase rates.

It is the opinion of the Commission that LG&E's proposed energy purchase rate is appropriate and acceptable for as available purchases. However, the Commission repeats that if LG&E proposes to use a gas turbine for determining avoided capacity costs for purchases of both energy and capacity pursuant to legally enforceable obligations,

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<sup>39</sup>Lyons testimony, p. 5.

then LG&E will be required to use the avoided energy cost associated with gas turbines. This requirement is consistent with both the FERC rule and Commission regulations and avoids the pitfalls associated with mixing of generation technologies in determining the appropriate full avoided cost.

#### Union Light, Heat & Power

ULH&P proposed avoided energy costs based on a "fuel budget" program created by CG&E. The program reflects forced and planned outages on the basis of a random outage approach. CG&E system incremental costs are calculated using the heat rate curves of the various units along with their associated fuel costs. The program simulates the hourly dispatch of the system and the hourly energy cost values are averaged to determine avoided energy cost. ULH&P aggregates the avoided energy costs into peak and off-peak periods. ULH&P applies a 20 percent administrative cost factor for QFs under 100 KW and 15 percent administrative cost factor to QFs over 100 KW and then converts the avoided energy costs into purchase rates by period.

The Commission is of the opinion that ULH&P's proposed avoided energy costs are appropriate; however, ULH&P will be required to develop actual accounting data for administrative costs of the QF program in its next rate case. The Commission approves these ULH&P proposed energy purchase rates for the two classes of QFs.

#### Big Rivers Electric

Big Rivers proposed to determine avoided energy costs based on its current wholesale energy rate. Big Rivers utilized the fuel cost and the variable operation and maintenance expenses as approved in PSC

Case No. 8054, which equaled 14.95 mills per KWH.<sup>40</sup> To this figure Big Rivers proposed to add or subtract the fuel adjustment as appropriate to arrive at the avoided energy cost. Big Rivers does not have either a production costing model or a marginal costing model which would permit it to determine its actual avoided energy costs. Big Rivers converted the avoided energy cost directly into proposed purchase rates.

The Commission is of the opinion and finds Big Rivers' proposed avoided energy cost methodology to be acceptable in providing an approximation of avoided energy costs. The high annual load factor and heavy base load generation configuration of the Big Rivers system provides avoided energy costs very close to the average energy costs. The Commission will require Big Rivers to be able to provide avoided energy costs which meet its specifications as defined in 807 KAR 5:054, Section 5(2)(a), in future rate hearings.

#### East Kentucky Power

EKP utilized the General Electric Optimized Generation Planning Program in determining its incremental avoided energy costs. EKP utilized the current and planned configuration of its generation system in conjunction with its load forecasts to determine a base case for energy costs. EKP assumed 50 MW and 100 MW increments of free power to represent various levels of energy purchased from a QF. EKP then used the differences in the total cost of the three iterations of the programs as proxies for its avoided energy costs. EKP converted the avoided energy costs directly into purchase rates for energy from QFs.

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<sup>40</sup>Reed testimony, p. 6.

Dickerson Lumber Company witness, Mr. Eugene Hail, disagreed with EKP's proposed methodology for determining avoided energy costs. Mr. Hail in cross-examination stated, "wholesale rates are established, between East Kentucky and Farmers and the cost of their energy and capacity is a set and known figure."<sup>41</sup> It is Mr. Hail's contention that the wholesale contract between EKP and Farmers is equivalent to Farmers' avoided energy costs. The Commission would agree with Dickerson Lumber if the "full-requirements" section of FERC Rule 69 did not require the supplying utilities to be in the same financial condition after the purchase of QF power as before its purchase. To the extent that the energy rate in the wholesale contract contains fixed cost components, EKP or Farmers would under-recover revenue lost due to the purchase of QF power and hence, other consumers would assume additional costs. Therefore the Commission does not accept Dickerson Lumber's proposed methodology.

The Commission will adopt the EKP proposed energy costs based on EKP's stated use of the program results in selling economy power. However, the Commission has serious reservations whether the methodology reflects actual avoided energy costs. The workpapers filed by EKP in this proceeding indicate that during many months the average cost of energy for various EKP generating units far exceeded the avoided energy cost proposed by EKP and yet avoided energy costs should be based upon the operation of the most expensive plant. Without using a methodology which captures this information, the

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<sup>41</sup>T.E., Volume 2, October 21, 1982, p. 15.

Commission cannot accurately estimate the proper level of avoided energy costs. The Commission will address and provide at least a partial solution to this information problem in the Berea section of this Order.

Berea College Electric

Berea receives its total power requirements from KU. Rates and condition of purchase are subject to a wholesale tariff approved by FERC. In accordance with the Commission's Order in this proceeding, Berea has proposed to use its wholesale contract with KU as a basis for determining avoided capacity and energy costs. Berea proposed to convert its capacity cost and energy costs and facilities lease agreement into a "base avoided cost"<sup>42</sup> per KWH. Berea converted the base avoided cost into a proposed purchase rate of 4.06 cents per KWH.

KU objected to Berea's proposed avoided costs on the grounds that it failed to reflect the revenue effect on the full requirements supplying utility. Mr. Wilhite of KU in rebuttal testimony stated,

. . . his basic error arises from the fact that, if Berea should purchase power from a QF, KU will charge back to Berea the difference between (a) the amount which KU would have billed to Berea under KU's filed rate schedule for service to Berea but for the purchase by Berea of the power from the QF, and (b) KU's own avoided costs if KU, instead of Berea, had made the same purchase from the QF.<sup>43</sup>

In its July 22, 1982, Order in this proceeding the Commission gave those utilities which were not required to gather PURPA Section 133 data a certain amount of flexibility in determining their avoided costs. Berea chose the option of utilizing its wholesale power

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<sup>42</sup>Bewley testimony, p. 5.

<sup>43</sup>Wilhite rebuttal, p. 2.

contract rates as the basis for determining avoided capacity and energy costs. KU does have a valid concern in that it may suffer revenue erosion from purchases of QF power because of fixed costs which normally would be recovered from Berea. It is the opinion of the Commission that the FERC rule adequately addresses this subject and provides a method which will permit KU to adequately recover its revenue deficiency. Furthermore, the FERC rule provides Berea a method whereby it would deduct these losses from the previously calculated avoided costs and reduce its payment to the QF accordingly.<sup>44</sup> The Commission is of the opinion that Berea's avoided cost methodology reflects its actual operation and that its proposed purchase rates are proper.

Dickerson Lumber objected to the different treatment of the "all requirements" provision of Berea and Farmers under the draft Order. The Commission in issuing its draft Order realized that some inconsistent treatment may result in this area because of differing positions by the "all requirements" utilities in determining avoided capacity costs. Should the Commission require Farmers to adopt a provision similar to Berea's proposal, any advantage would be shortrun since EKP could simply raise Farmers' rates under the FERC Rule. Thus, no useful purpose would be served in requiring this revision. The Commission has reiterated its interpretation of the FERC rule and can only foresee short term purchase rate differences resulting from its differing treatment of Farmers and Berea. It is the Commission's

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<sup>44</sup>FERC Rule, p. 30.



intention to provide proper long run price signals to QFs primarily so that appropriate QF investment decisions can be made based on the best information available. The Commission is of the opinion that its treatment of Farmers and its explanation of Berea's purchase rates does this; therefore, the Commission will reject Dickerson Lumber's proposed change. However the Commission remains of the opinion that if a QF and utility cannot arrive at an agreement on purchase rates it is the Commission's responsibility to undertake an investigation at any time to determine the proper elements of purchase rates if it receives a complaint from either the QF or utility.

The Commission is concerned that both QFs and the Commission are limited in their ability to reproduce avoided energy cost estimates. The Commission does not have a production costing model which would permit it to estimate avoided energy costs independently for the various utilities. Many potential QFs are limited by size from acquiring the technical equipment and know-how to estimate utility avoided energy cost. In order to alleviate its concerns about the potential for underestimation of avoided energy costs the Commission will require all covered utilities to record and file in a machine readable format 8760 hours of historical system lambdas for its system operation during the previous calendar year. Furthermore to insure a proper interpretation of these lambdas an explanation of events (i.e., retirements, new units, etc.) which may create non-representative situations in the calendar year should be provided by the utility with the lambdas. The first report will be due on April 1, 1985.

## Terms and Conditions of Service in Tariffs and Contracts

The proposed tariffs and contracts have been reviewed with a particular interest to determine if conditions of service, terms of contracts or other procedures specified in the tariffs and contracts might inhibit the development of small power production and cogeneration unnecessarily. Several such instances are noted below. In some cases immediate remedy is required, while in others notice is given that further consideration will be given. Generally the Commission is of the opinion that the utilities and the QFs will need experience to work out all of the details of the contracts and tariffs. Accordingly the Commission plans to continually review the contracts and tariffs in future rate cases and it is expected that modifications will need to be made as experience is gained.

The proposed tariffs, Rate SQF, of KU in items 11 and 12 under the Parallel Operation section require 24-hour notice by the QF to KU's Energy Control Center. The 24-hour notification is so long that it precludes the possibility of "as available" sales.<sup>45</sup> Though KU objected to the deletion of this provision in its comments on the draft Order the Commission remains of the opinion that the provisions should be eliminated. The adoption of such provisions would preclude parallel operations as required in the FERC rule.

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<sup>45</sup>T.E., October 5, 1982, pages 105-106.

Several of the contracts, tariffs or technical guidelines contain a 30- or 60-day notice of cancellation.<sup>46</sup> This appears to be a rather short period, especially in light of the fact that the QF has usually made several long-term commitments to begin operation. These clauses should be excluded or the conditions that would lead to cancellation or termination of a contract should be stated explicitly.

Some of the proposed tariffs and contracts require QFs to obtain a minimum level of insurance protection or bond requirements. However since none of the utilities has much experience with QFs, it is difficult to ascertain what is an adequate level of insurance or bonding. If in the future these requirements appear to be restraining the development of small power production and cogeneration, then the Commission intends to require the agreements be modified accordingly.

It is also expected that some of the technical and engineering requirements as stated in the proposed tariffs and contracts may be more stringent than necessary. For instance, the proposed tariff of Berea and the proposed contract of Big Rivers require the QF to generate at a 90 percent power factor. If this power factor appears to be a restraint on the development of QF power, then some analysis will need to be performed to determine if the power factor can be lowered. The Commission will apply this same approach to other technical and engineering requirements present in other tariffs and contracts.

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<sup>46</sup> See Hewett Exhibit RMH-3, Sheet 2 of 3, for KU. See Van Curen Exhibit PVC-1, page 3, for ULH&P. See LG&E Small Power Production and Cogeneration tariff under section entitled Term of Contract. See EKP Cogeneration and Small Power Production Rate Schedule, Item 16, under section entitled Terms and Conditions.

The proposed tariff of EKP Item 9 under the section Terms and Conditions states that the QF must reimburse EKP for all costs for interconnection. This term of service must be clarified to conform to the Commission's regulation that the QF be required to pay for any additional interconnection costs. Dickerson Lumber in its response to the proposed Order on this issue states:

Another issue that has been a proposed bar to the Company obtaining a contract for sale of its QF power to FRE [Farmers] has been the position that certain expensive facilities not required for the actual interconnection between the Company's QF and FRE, but elsewhere on its system or that of EKP, must be paid as a condition precedent for interconnection.

The Commission will maintain its requirement for clarification in the contract; however, Dickerson may file a complaint against Farmers so that the precise facts of interconnection can be determined and a proper interconnection contract can be achieved.

The proposed tariff and contract of Big Rivers involve a QF dealing directly with Big Rivers. This violates FERC's rules. Big Rivers was aware of this conflict at the hearing,<sup>47</sup> and agreed that it would substitute the names of the distribution cooperatives into the proposed tariff and contract. These substitutions will be necessary when the tariff and contract are refiled. Similarly, Item 2 under Terms and Conditions in EKP's proposed tariff needs to be modified to conform to FERC's rules that QF power must be sold to the interconnected utility unless the QF agrees to do otherwise.

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<sup>47</sup>T.E., October 14, 1982, pages 6-9.

The Commission has reviewed all comments provided by parties to this proceeding. There were specific comments which were not directly addressed in the Final Order because either the Commission addressed the issue in another part of the Order or it has addressed the same comment or issue in a different proceeding.

IT IS THEREFORE ORDERED that a study shall be filed with the Commission by October 1, 1984, giving a detailed explanation of how Kentucky Power will identify, evaluate and incorporate QF power in its generation planning process.

IT IS FURTHER ORDERED that Kentucky Power shall file with the Commission on April 1, 1985, and annually thereafter, a report providing the hourly system lambda for the previous calendar year.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Kentucky Power be and they hereby are adopted.

IT IS FURTHER ORDERED that the capacity purchase rates proposed by Kentucky Power be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Kentucky Power shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that a study shall be filed with the Commission by October 1, 1984, giving a detailed explanation of how KU will identify, evaluate and incorporate QF power in its generation planning process.

IT IS FURTHER ORDERED that KU shall file with the Commission on April 1, 1985, and annually thereafter, a report providing the hourly system lambda for the previous calendar year.

IT IS FURTHER ORDERED that the energy purchase rates proposed by KU be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order KU shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Berea be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Berea shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with the discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that a study shall be filed with the Commission by October 1, 1984, giving a detailed explanation of how LG&E will identify, evaluate and incorporate QF power in its generation planning process.

IT IS FURTHER ORDERED that LG&E shall file with the Commission on April 1, 1985, and annually thereafter, a report providing the hourly system lambda for the previous calendar year.

IT IS FURTHER ORDERED that the energy purchase rates proposed by LG&E be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order LG&E shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that a study shall be filed with the Commission by October 1, 1984, giving a detailed explanation of how ULH&P will identify, evaluate and incorporate QF power in its generation planning process.

IT IS FURTHER ORDERED that ULH&P shall file with the Commission on April 1, 1985, and annually thereafter, a report providing the hourly system lambda for the previous calendar year.

IT IS FURTHER ORDERED that the energy purchase rates proposed by ULH&P be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order ULH&P shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that a study shall be filed with the Commission by October 1, 1984, giving a detailed explanation of how Big Rivers will identify, evaluate and incorporate QF power in its generation planning process.

IT IS FURTHER ORDERED that Big Rivers shall file with the Commission on April 1, 1985, and annually thereafter, a report providing the hourly system lambda for the previous calendar year.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Green River Electric Corporation be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Green River Electric Corporation shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Henderson-Union RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Henderson-Union RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Meade County RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Meade County RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.



IT IS FURTHER ORDERED that the energy purchase rates proposed by Jackson Purchase Electric Corporation be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Jackson Purchase Electric Corporation shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that a study shall be filed with the Commission by October 1, 1984, giving a detailed explanation of how EKP will identify, evaluate and incorporate QF power in its generation planning process.

IT IS FURTHER ORDERED that EKP shall file with the Commission on April 1, 1985, and annually thereafter, a report providing the hourly system lambda for the previous calendar year.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Big Sandy RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Big Sandy RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Bluegrass RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Bluegrass RECC shall file with the Commission its tariff sheets

setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Clark RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Clark RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Cumberland Valley RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Cumberland Valley RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Farmers RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Farmers RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall

be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Fleming-Mason RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Fleming-Mason RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Fox Creek RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Fox Creek RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Grayson RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Grayson RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Harrison RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Harrison RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Inter-County RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Inter-County RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Jackson County RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Jackson County RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Licking Valley RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Licking Valley RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Nolin RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Nolin RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Owen County RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Owen County RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Salt River RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Salt River RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved

herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by Shelby RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Shelby RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

IT IS FURTHER ORDERED that the energy purchase rates proposed by South Kentucky RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order South Kentucky RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

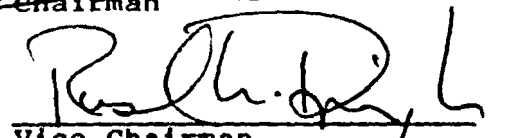
IT IS FURTHER ORDERED that the energy purchase rates proposed by Taylor County RECC be and they hereby are adopted.

IT IS FURTHER ORDERED that within 30 days from the date of this Order Taylor County RECC shall file with the Commission its tariff sheets setting out the terms and conditions of the purchase rates approved herein consistent with our discussion above. Separate tariffs shall be filed for QFs with capacity of 100 KW or less and QFs with capacity over 100 KW.

Done at Frankfort, Kentucky, this 28th day of June, 1984.

PUBLIC SERVICE COMMISSION

  
Chairman

  
Vice Chairman

  
Commissioner

ATTEST:

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Secretary