

AR...  
Jul 21 11:48 AM '07

**BEFORE THE ARKANSAS PUBLIC SERVICE COMMISSION**

**IN THE MATTER OF THE PETITION OF )  
ENERGY ARKANSAS, INC. FOR A )  
DECLARATORY ORDER APPROVING THE )  
DETERMINATION OF AVOIDED COSTS FOR ) DOCKET NO. 04-113-U  
QUALIFIED COGENERATION FACILITIES )  
PURSUANT TO COGENERATION RULES )**

**SURREBUTTAL TESTIMONY OF  
ROBERT M. FAGAN  
SYNAPSE ENERGY ECONOMICS**

**ON BEHALF OF THE  
GENERAL STAFF OF THE  
ARKANSAS PUBLIC SERVICE COMMISSION**

**July 24, 2007**

**1  
1  
0**

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS**  
3 **ADDRESS.**

4 A. My name is Robert M. Fagan. I am a Senior Associate at Synapse Energy  
5 Economics, Inc., 22 Pearl Street, Cambridge, Massachusetts, 02139.

6 **Q. ARE YOU THE SAME ROBERT M. FAGAN WHO FILED DIRECT**  
7 **TESTIMONY IN THIS DOCKET ON JUNE 19, 2007, ON BEHALF OF**  
8 **THE GENERAL STAFF (“STAFF”) OF THE ARKANSAS PUBLIC**  
9 **SERVICE COMMISSION (“COMMISSION”)?**

10 A. Yes.

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. The purpose of my testimony is to first affirm the conclusion I drew in direct  
13 testimony on Entergy Arkansas Inc.’s (“EAI” or “Company”) avoided cost  
14 computation methodology, which is that the methodology is consistent with the  
15 relevant Arkansas statutes, the Commission’s Cogeneration Rules, EAI’s  
16 Cogeneration Tariff (M24), and the general purpose of the federal Public Utility  
17 Regulatory Policies Act (PURPA). I also examine and generally agree with the  
18 key substantive aspects of rebuttal testimony submitted by Entergy’s witnesses,  
19 Mr. Steve Dingle and Mr. William Townsend. I also review Pine Bluff Energy  
20

1 ("PBE") witness Mr. Norwood's testimony and explain why I do not believe he  
2 has supported the conclusions he draws from his analyses.

3 **Q. HOW HAVE YOU AFFIRMED YOUR DIRECT TESTIMONY**  
4 **CONCLUSION THAT THE AVOIDED COST COMPUTATION**  
5 **METHODOLOGY IS CONSISTENT WITH THE RELEVANT**  
6 **ARKANSAS STATUTES, COMMISSION RULES AND THE GENERAL**  
7 **PURPOSE OF PURPA?**

8 A. I reviewed the direct testimony of Mr. Scott Norwood and Mr. Nordhaus of PBE,  
9 the rebuttal testimony of Mr. Dingle and Mr. Townsend of EAI, and the discovery  
10 responses provided by EAI to Staff and PBE data requests. I also reviewed PBE's  
11 responses to Staff and EAI data requests. I reviewed relevant material from a  
12 Louisiana Public Service Commission docket where issues relating to the  
13 calculation of Entergy's avoided costs were extensively addressed. I also  
14 reviewed various deposition transcripts, including the deposition conducted by  
15 Entergy of PBE witness Norwood on July 7, 2007. I analyzed the data contained  
16 in the discovery responses, in particular data on avoided cost rejected purchases,  
17 avoided cost report computations, and Entergy system generation resource data. I  
18 checked the computation of avoided costs for selected hours. I examined the  
19 pattern of avoided costs for the period January 1, 2002 through December 31,  
20 2005. I reviewed the Entergy System Agreement Service Schedule MSS-3  
21 pertaining to inter-company exchange of energy. Lastly, I met with Entergy

1 representatives on-site at an Entergy office to review the avoided cost  
2 “diagnostic” or model, which is central to the actual computation of the avoided  
3 costs.

4 **Q. PLEASE SUMMARIZE YOUR FINDINGS.**

5 A. Based on my review of discovery responses, analysis of avoided cost  
6 computations for selected hours, and my reading of the direct testimony of PBE  
7 witnesses and rebuttal testimony of EAI witnesses, it is my opinion that the  
8 avoided cost methodology used by EAI is consistent with the relevant Arkansas  
9 statutes, the Arkansas Commission’s Cogeneration Rules, EAI’s Cogeneration  
10 Tariff (M24), and the general purpose of PURPA.

11 The methodology systematically identifies the resources that would have  
12 been used to supply energy in any given hour had the qualified facility (“QF”)  
13 energy output (“Put”; together, “QF Put”) not been made, and appropriately  
14 applies the costs (for EAI generation) or prices (for market alternatives) of these  
15 resources to their avoided energy output to determine an average overall hourly  
16 avoided cost per MWh of QF Put for each hour.

17 The nature of the primary change in avoided cost computation made in  
18 September 2003 by EAI was to properly include the effect of the market  
19 availability of economy energy to serve load on Entergy’s system. In particular,  
20 primarily during off-peak hours relatively low-cost energy is available on a short-  
21 term basis to meet a portion of Entergy’s system load. This is consistent with an

1 understanding of the regional electricity market and the patterns of supply and  
2 demand during peak and off-peak periods. Some of this low-cost economy  
3 energy is not able to be purchased by Entergy, either on a day-ahead basis or on a  
4 current-day basis, because of the existence of QF energy on Entergy's system.  
5 These "avoided cost rejected purchases" represent a lost opportunity to Entergy's  
6 customers. The rejected purchases are generally relatively low-cost purchases  
7 that cannot be made because Entergy must plan for operating a secure and  
8 balanced electrical system while accepting QF output and the delivery uncertainty  
9 associated with its injection onto Entergy's system. These avoided cost rejected  
10 purchases are documented by Entergy based on the "offers" they receive on a  
11 daily basis from prospective market suppliers. This is raw data provided by  
12 Entergy and appears to reasonably represent the actual prospective purchase  
13 transactions that could have been made by Entergy if QF Put did not exist.

14 Relatively higher-cost Entergy system resources fueled by natural gas or  
15 oil comprise only a portion of the resources whose output is avoided by the QF  
16 Put. During off-peak hours, such generating units often comprise only a small  
17 portion or no part at all of resources whose output is avoided by the QF Put.  
18 Generally, during off-peak hours these resources may be needed to maintain a  
19 securely-operated system – by providing voltage support, ramping capability, or  
20 operating reserve – but in general they are not the cheapest resources available to  
21 meet incremental energy needs in the absence of QF output.



1 listing of EAI generation eligible<sup>3</sup> to contribute towards computation of the  
2 avoided cost, along with the actual generation output of that unit for the hour, the  
3 operational limits applicable to the unit for that hour, the “dispatch cost” or the  
4 marginal operating cost of the unit, and the “billing cost” or average hourly  
5 dispatch cost.<sup>4</sup> In addition to information for the generating units owned by the  
6 Entergy operating companies (including EAI), the avoided cost report also  
7 contains the “rejected purchases” eligible to contribute towards the computation  
8 of avoided cost<sup>5</sup>, associated with that hour, and their price and quantity rejected.

9 These two categories of resources – Entergy’s own generation, and supply  
10 resources from the market – represent the sources of supply that would have been  
11 used but for the delivery to Entergy’s system of QF output.

12 For the 48 hours covering August 9, 2004 and October 10, 2004, I  
13 recomputed avoided costs based on the information contained in the reports, and  
14 obtained the same value as that obtained by EAI. I performed this calculation by  
15 creating a weighted average dispatch cost for the quantity of QF Put for that hour,  
16 from those resources that would have been used if the QF output was not placed  
17 onto Entergy’s system: i.e., the dispatch cost of resources “but for” the QF Put

---

<sup>3</sup> A unit would have to be able to “ramp up” and would have to be ‘in-merit’ to meet load otherwise met by the QF output for that hour.

<sup>4</sup>It is my understanding that the billing cost is the average hourly dispatch cost of a unit. Instantaneous dispatch rates could be higher or lower than average hourly dispatch costs due to varying incremental costs over any given hour.

<sup>5</sup> Those purchases that meet certain criteria, as described in a later section of this testimony.

1 that would have been used by Entergy to meet hourly load requirements. These  
2 calculations are shown in Confidential Surrebuttal Exhibit RMF-2.

3 **Q. WHAT ADDITIONAL REVIEW OF AVOIDED COST COMPUTATION**  
4 **DID YOU PERFORM?**

5 A. I reviewed the avoided cost computations and report output for a sample of days  
6 and hours provided by EAI in response to PBE's Data Request PBE 1-41,  
7 included here as Confidential Surrebuttal Exhibit RMF-3. Those computations  
8 were done for 8 hours, 2 hours each on January 5, 2004, April 8, 2004, July 8,  
9 2004 and September 26, 2004. I also examined directly the pattern of hourly  
10 avoided costs between 2002 and 2005. That pattern is shown graphically in  
11 Confidential Surrebuttal Exhibit RMF-4.

12 **Q. WHAT DO YOU DISCERN FROM THE HOURLY PATTERN OF**  
13 **AVOIDED COSTS SHOWN IN CONFIDENTIAL SURREBUTTAL**  
14 **EXHIBIT RMF-4?**

15 A. The distinguishing feature of the graph is how the pattern changes after the  
16 introduction of the revisions to the avoided cost computation method in  
17 September, 2003. During off-peak hours, subsequent to September 2003, the  
18 avoided cost computation more appropriately captures the effect of off-peak  
19 availability of economy energy, illustrated by the greater incidence of lower-cost



1 off-peak periods relative to on-peak periods, compared to the time prior to  
2 September 2003.

3 **Q. WHAT OTHER DATA EXAMINATION DID YOU CONDUCT?**

4 A. I reviewed the data provided in response to PBE Data Request PBE 1-48. The  
5 text of that response is included here as Confidential Surrebuttal Exhibit RMF-5.  
6 Those data included the “avoided cost rejected purchases” that were documented  
7 by EAI. For the 48 hours noted above (August 9, 2007 and October 10, 2004) I  
8 confirmed that the “rejected purchase” entries included on the avoided cost report  
9 were consistent with the data in the response to PBE Data Request PBE 1-48.

10 **Q. WHAT DO YOU CONCLUDE FROM YOUR REVIEW OF THE**  
11 **COMPUTATION OF AVOIDED COSTS AND EXAMINATION OF THE**  
12 **PATTERN OF AVOIDED COSTS?**

13 A. I conclude that the computation has been done properly for the hours I have  
14 examined. I have not seen anything that would indicate the computation may not  
15 be being performed correctly for all hours.

16 **III. REVIEW OF PBE DIRECT AND EAI REBUTTAL TESTIMONY**

17 **Q. WHAT ARE THE KEY SUBSTANTIVE ISSUES RAISED IN PBE’S**  
18 **DIRECT TESTIMONY OR EAI’S REBUTTAL TESTIMONY THAT**  
19 **POTENTIALLY IMPACT THE COMPUTATION OF AVOIDED COST?**

- 1 A. The key issues include the following, each of which is discussed in turn below:
- 2 1) The nature of the energy product represented by the QF Put, i.e., the firmness  
3 and/or predictability of the energy, and thus the nature (and price or cost) of  
4 the energy avoided by the QF Put.
- 5 2) The extent to which QF Put, especially during off-peak hours, displaces  
6 Entergy system gas or oil-fired generation; or instead displaces short-term  
7 (i.e., next-day or current-day) purchases Entergy would have made from the  
8 regional wholesale electricity marketplace.
- 9 3) The reasonableness of the “avoided cost rejected purchases” methodology  
10 used in its avoided cost computation.
- 11 4) The reasonableness of the Entergy system supply sources used in its avoided  
12 cost computation.
- 13 5) The significance of Entergy off-system sales made at prices different (higher)  
14 than the same-period computed avoided cost for QF Put energy.
- 15 6) The pricing of Entergy pool purchases by EAI at values higher than the  
16 avoided cost used for QF Put in the same period.
- 17 7) The relevance of EAI QF Put quantity or share of EAI supply compared to the  
18 total QF Put to the entire Entergy system.
- 19 8) The way in which Entergy off-system sales are treated when avoided costs are  
20 computed.

1           **1) Nature of QF Put Energy**

2   **Q.    HOW IS THE NATURE OF THE QF PUT ENERGY, I.E., ITS FIRMNESS**  
3           **OR PREDICTABILITY, RELATED TO THE COMPUTATION OF**  
4           **AVOIDED COST?**

5   **A.    The nature of the QF Put, in particular its unpredictability and non-firmness, is**  
6           **extremely relevant to the avoided cost computation because these attributes of the**  
7           **QF Put energy define its value. By definition, QF Put is not dispatchable. As**  
8           **noted by Mr. Dingle,**

9                   QF Put, which is unscheduled, non-firm, and as-available, cannot  
10                   perform this load following role. Again, it must be remembered  
11                   that the System dispatcher cannot rely on QF Put for reliability  
12                   purposes.<sup>6</sup>

13                   Thus non-firm QF Put energy, unlike firm energy - be it daily or monthly  
14                   or longer – is not capacity-backed<sup>7</sup>, and thus it is not only reasonable but required  
15                   of Entergy to operate its system as if the QF Put could disappear from the system  
16                   with no notice. This contrasts with firm or even non-firm energy transacted either  
17                   between Entergy companies or between Entergy and external entities, which is far  
18                   more predicable. This attribute of QF Put energy has implications for the level of  
19                   load-following and contingency operating reserves<sup>8</sup> carried by Entergy – i.e., all

---

<sup>6</sup> Dingle Rebuttal Testimony, p. 15 l. 3-6.

<sup>7</sup> There is no assurance that the capacity providing the QF Put in any given moment will continue to be available in any sort of dispatchable or reliable manner.

<sup>8</sup> “Load-following” operating reserves are those generation resources which are available to respond to second-to-second, minute-to-minute, intra-hourly, and intra-day changes in system supply requirements because of the net load fluctuations on the system. Contingency reserves are required to respond to unpredictable events such as forced outages of generation or transmission.

1 else equal Entergy needs to carry more operating reserve than they otherwise  
2 would because of the QF Put. Even though these reserves are often gas or oil-  
3 fired reserves, with relatively high incremental costs for energy, the energy they  
4 do provide is often secondary to their role as load-following resources, and thus is  
5 not “avoidable.” As noted by Mr. Dingle,

6 For example, the Operating Companies’ older gas-fired generation  
7 functions largely in specific supply roles that cannot be displaced  
8 by the QF Put. For example, the Operating Companies’ gas-fired  
9 generation is often used to provide load-following service.<sup>9</sup>

10 **2) Extent of Displacement of Entergy Gas by QF Put**

11 **Q. WHAT DOES THE NATURE OF THE QF PUT IMPLY FOR THE**  
12 **ABILITY OF THE QF PUT TO DISPLACE GAS-FIRED GENERATION**  
13 **DURING OFF-PEAK PERIODS?**

14 **A.** It implies that QF Put cannot, in general, displace such gas-fired generation if the  
15 Entergy system is to remain reliably operated. During low-load, off-peak periods,  
16 older gas-fired generation is more likely to be operating at low levels of output,  
17 and is more likely to be operating for reasons other than providing economical, in-  
18 merit energy. Other sources of energy from the marketplace would reasonably be  
19 expected to be less expensive than this energy, as noted by Mr. Townsend in his  
20 Direct Testimony concerning the month of September 2003 (Exhibit TWT-1)<sup>10</sup>.

---

<sup>9</sup> Dingle Rebuttal Testimony, p. 14, l. 19-22.

<sup>10</sup> Townsend Direct Testimony, Exhibit TWT-1.

1 Q. IS THERE EVIDENCE THAT THE OUTPUT OF ENTERGY'S OLDER  
2 GAS-FIRED GENERATION IS GENERALLY NOT "AVOIDABLE"  
3 DURING OFF-PEAK HOURS?

4 A. Yes. The avoided cost reports themselves document the operation of these types  
5 of resources at "low limit" of operation for off-peak hours, and for some  
6 resources, operation above their low limits during on-peak hours. See  
7 Confidential Surrebuttal Exhibit RMF-1.

8 Q. HOW IS THIS REFLECTED IN THE AVOIDED COST  
9 COMPUTATIONS?

10 A. The existence of off-peak "avoided cost rejected purchases" illustrates the  
11 availability of relatively low-cost energy (priced according to market) during off-  
12 peak periods. The price offered for purchase of this energy becomes part of the  
13 avoided cost computation. Off-peak rejected purchases are generally less  
14 expensive than the cost of "turning up" the more expensive, gas-fired resources  
15 and thus they would be chosen to replace QF Put before more expensive,  
16 incremental output from gas-fired resources.

17 **3) Reasonableness of Avoided Cost Rejected Purchases**

18 Q. HOW ARE "AVOIDED COST REJECTED PURCHASES"  
19 DETERMINED?

1 A. Entergy maintains a database of all offers to sell to Entergy, both those accepted  
2 and those rejected. After applying criteria on seller identification, quantity, start  
3 and end times, offer price and transmission availability, it determines whether or  
4 not a rejected purchase meets the threshold requirements to be considered an  
5 “avoided cost rejected purchase.”<sup>11</sup> If so it is used as a possible source of energy  
6 “avoided” by the QF Put.

7 **Q. IS THIS A REASONABLE WAY OF ESTIMATING AVAILABILITY OF**  
8 **ECONOMY ENERGY THAT MIGHT OTHERWISE BE PURCHASED**  
9 **ABSENT THE QF PUT?**

10 A. Yes. In fact, short of the establishment of a transparent day-ahead and/or real  
11 time spot market, or direct use of imprecise market price metrics such as the MW  
12 Daily “Into Entergy” price, it is the only way because the avoided cost  
13 computation must include alternative purchases that could have been made by  
14 Entergy absent the QF Put. Notably, Mr. Norwood has not presented any  
15 alternative method of establishing documentation of well-understood market  
16 phenomena: availability of lower-cost energy during periods of reduced demand.  
17 This is exactly what EAI has instituted with its September 2003 changes.

---

<sup>11</sup> Townsend Rebuttal Testimony, p. 21, l. 3-20, and footnote 6.

1 **Q. IS A SEPARATE INDEPENDENT AUDIT NEEDED TO DETERMINE**  
2 **WHETHER EAI'S AVOIDED COST METHODOLOGY IS CONSISTENT**  
3 **WITH THE APPLICABLE RULES AND STATUTES?**

4 A. No. The Commission did not contemplate an audit when it set the scope of the  
5 Docket in Order No. 2 (at 5): "Accordingly, EAI's Petition is granted for the  
6 limited purpose of determining whether EAI's avoided cost calculation  
7 methodology, as "refined" by EAI in September, 2003, is consistent with and in  
8 compliance with PURPA, Ark. Code Ann. § 23-3-701 *et seq.*, and the  
9 Commission's *Cogeneration Rules.*" In addition, I have not seen anything that  
10 would show that the Entergy avoided cost calculation methodology has been  
11 applied improperly as it affects EAI's avoided costs. Indeed, the information I  
12 have reviewed indicates Entergy's avoided cost methodology is reasonable and  
13 has been applied appropriately.

14 **Q. ARE THERE PROVISIONS IN THE LOUISIANA OR TEXAS**  
15 **SETTLEMENTS FOR CONDUCTING AN INDEPENDENT AUDIT OF**  
16 **ENTERGY'S AVOIDED COST CALCULATIONS?**

17 A. Yes. The Louisiana settlement contains a provision where the QFs can request  
18 that an audit be conducted of Entergy's avoided cost calculations by an  
19 independent auditor. The Texas settlement concerning the calculation of  
20 Entergy's avoided costs also includes an audit provision. The vast majority of the  
21 QF put to the Entergy system originates from QF facilities located in those states.

1 If an audit of Entergy's avoided costs is conducted for either Texas or Louisiana, I  
2 recommend that the Commission require EAI to provide a copy of it to the  
3 Commission and the General Staff, and to require that Entergy make available for  
4 review the auditor's workpapers relating to such an audit.

5 **Q. WHAT DO YOU CONCLUDE REGARDING ENTERGY'S**  
6 **METHODOLOGY FOR IDENTIFYING AND INCLUDING REJECTED**  
7 **PURCHASES IN THE EAI AVOIDED COST CALCUALTION?**

8 A. I conclude that Entergy's methodology for identifying and including rejected  
9 purchases in the EAI avoided cost calculation is appropriate.

10  
11 **4) Entergy System Supply Sources Used in Avoided Cost Computation**

12 **Q. DOES EAI USE A REASONABLE SET OF ENTERGY SYSTEM SUPPLY**  
13 **SOURCES WHEN COMPUTING AVOIDED COSTS?**

14 A. Yes, it appears so. I reviewed the set of Entergy's generation system data  
15 provided in response to Staff Data Request APSC 6-2, and I reviewed similar, yet  
16 less comprehensive, data from Entergy's public statistical information.<sup>12</sup> Based on  
17 my replication of avoided cost computation for 48 hours, and my more cursory  
18 review of the days and hours contained in the avoided cost reports provided in

---

<sup>12</sup> Entergy Statistical Report and Investor Guide 2006.



1 response to PBE Data Request PBE 1-41, it appears that Entergy's generation  
2 units are properly accounted for in the computation.

3 **5) Pricing of Off-System Sales vs. Avoided Cost for QF Put**

4 **Q. IS IT REASONABLE THAT THERE EXIST OFF-SYSTEM SALES BY**  
5 **ENTERGY AT PRICES HIGHER THAN THE AVOIDED COSTS FOR QF**  
6 **PUT DURING THE SAME PERIOD?**

7 A. Yes. The energy products transacted in these separate instances are highly  
8 differentiated. Entergy off-system sales likely come with a delivery guarantee  
9 that the QF Put does not come with; this is entirely consistent with the workings  
10 of bilateral electricity markets and the definition of "as-available" spot energy  
11 "Put" by the QF. As noted by Mr. Dingle,

12 Finally, Mr. Norwood's comparison of the QF Put to off-system  
13 sales illustrates his lack of understanding about the power market.  
14 When the Company makes an off-system sale, it is committing to  
15 deliver energy to the buyer with some contractually-specified  
16 level<sup>[1]</sup> of firmness. The buyer has some contractually-specified  
17 right to rely upon the delivery of that energy. A QF is not  
18 committing to deliver energy to the Company in any hour. The  
19 Company can not rely on the energy to be delivered. **They are**  
20 **fundamentally two different products whose value can be quite**  
21 **different.**<sup>13</sup> (emphasis added)

---

<sup>13</sup> Dingle Rebuttal Testimony, p. 33, l. 11-19.

1           **6) Pricing of Entergy Pool Purchases By EAI vs. Avoided Cost for QF**  
2           **Put**

3   **Q.    IS IT REASONABLE TO SEE ENTERGY POOL PURCHASES BY EAI**  
4           **AT PRICES THAT ARE HIGHER THAN THE AVOIDED COSTS PAID**  
5           **TO QF PUT FOR THE SAME PERIOD?**

6   **A.    Yes. The reasons are similar to those noted above for off-system sales differences**  
7           **– the product purchased by EAI is different from QF Put energy. Energy**  
8           **available from the Entergy pool to EAI is capacity-backed, dependable energy**  
9           **that can help EAI meet balancing requirements or other short-term or long-term**  
10          **needs.<sup>14</sup> QF Put energy is not available for either balancing requirements or for**  
11          **any defined need, because of its unpredictability. As noted by Mr. Dingle,**

12                   **In practice, that means that in those few hours in which EAI is**  
13                   **purchasing energy from the exchange, it is purchasing energy**  
14                   **produced by relatively-higher cost gas-fired generators that are**  
15                   **committed to run for reliability or other operational purposes. In**  
16                   **other words, EAI is purchasing the highest cost energy assigned to**  
17                   **those companies on an after-the-fact basis. Energy acquired**  
18                   **through the Exchange cannot be avoided.<sup>15</sup>**

---

<sup>14</sup> The Entergy System Agreement contains Service Schedule MSS-3, which is a FERC tariff schedule on the pricing of inter-company energy. Two sections are most relevant: 1) Section 30.02 states that “The System Capability shall be operated as scheduled and/or controlled by the System Operator to obtain the lowest reasonable cost of energy all the Companies consistent with the requirements of daily operating generation reserve, voltage control, electrical availability, loading of facilities and continuity of serve to the customers of each company.” Section 30.03, Allocation of Energy, states that “energy from the lowest cost source available” is first allocated to the Companies having a share of that source, and second to supply the “pool” energy. The Entergy System Agreement was provided as response to PBE Data Request PBE 2-DR-51.

<sup>15</sup> Dingle Rebuttal Testimony, p. 11, l. 16-22.

1           **7) Relevance of Centralized Dispatch and EAI vs. Total Entergy QF Puts**

2   **Q.    IS THE FACT THAT ENTERGY CENTRALLY DISPATCHES ITS**  
3           **GENERATION SYSTEM, RATHER THAN SEPARATELY DISPATCHES**  
4           **BY RETAIL COMPANY, RELEVANT TO THE AVOIDED COST**  
5           **COMPUTATION?**

6   **A.**    Yes. Mr. Norwood states in his Direct Testimony at page 14, lines 5-6 that “It  
7           would be unlikely that Entergy would ever reject purchases or make emergency  
8           sales as a result of the very small level of QF energy which is supplied to EAI in  
9           Arkansas.” However, the fact of centralized dispatch, not the existence of a QF  
10          purchase transaction between PBE and EAI, is what is relevant to whether or not  
11          rejected purchases or emergency sales may occur, because these transactions  
12          occur in the context of overall system dispatch. PBE’s response to Staff Data  
13          Request 1-1 to PBE is attached as Surrebuttal Exhibit RMF-6. PBE’s response  
14          concerning Mr. Norwood’s testimony is inconsistent, as it seems to recognize that  
15          QF Puts in other Entergy areas affect the system supply curve (and thus EAI’s  
16          avoided costs), but also maintains that they are not factors in Arkansas.

17           **8) Exclusion of Off-System Sales Costs from Supply Curve**

18   **Q.    BASED ON YOUR REVIEW, IS ENTERGY APPROPRIATELY**  
19           **EXCLUDING THE COST OF OFF-SYSTEM SALES WHEN**  
20           **COMPUTING AVOIDED COSTS?**

1 A. Yes. Entergy's treatment of off-system sales in the avoided cost calculation is  
2 proper and consistent with the principle that by paying the avoided cost for energy  
3 delivered by a QF, the utility and its native load customers will be indifferent to  
4 the source of the energy. This can only be the case if the energy that is used as  
5 the starting point for the calculation of avoided cost is the native load energy.  
6 Moreover, as noted by Mr. Dingle in his rebuttal at page 29, lines 1-6, Entergy's  
7 application of the principle of beginning the calculation of avoided cost at the  
8 Operating Companies' native load has been in use since the Company performed  
9 the initial calculation of avoided cost after the passage of PURPA. Entergy's  
10 treatment of off-system sales in the avoided cost calculation is not a new issue and  
11 has not been revised as part of Entergy's refinements to the avoided cost  
12 calculation that the Company implemented starting in September 2003. Finally, I  
13 note that EAI witness Dingle, at pages 24-33 of his rebuttal testimony, has  
14 responded at some length to the criticisms raised by PBE relating to the treatment  
15 of off-system sales in Entergy's avoided cost calculation.

#### 16 IV. RECOMMENDATIONS

17 **Q. WHAT ACTIONS DO YOU RECOMMEND THE COMMISSION TAKE?**

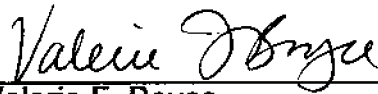
18 A. I recommend the Commission approve EAI's petition for a declaratory order that  
19 EAI's avoided cost computation methodology is consistent with Arkansas statute,  
20 the Commission's Cogeneration rules, and the general purpose of PURPA.

1 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

2 A. Yes.

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing has been served on all parties of record by forwarding the same by first class mail, postage prepaid, this 24<sup>th</sup> day of July, 2007.

  
\_\_\_\_\_  
Valerie F. Boyce