

BEFORE THE CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

APPLICATION OF PUBLIC SERVICE COMPANY )  
OF OKLAHOMA (“PSO”) FOR COST RECOVERY )  
AND APPROVAL OF A POWER PURCHASE )  
AGREEMENT (“PPA”) BETWEEN PSO AND )  
EXELON GENERATION, LLC, THE COST OF ) PUD 200900099  
INDEPENDENT EVALUATOR AND THE )  
SOUTHWEST POWER POOL TRANSMISSION STUDY) )  
INCLUDING RECOVERY OF LONG-TERM FIRM )  
SUPPLY CONTRACT EARNINGS THROUGH A )  
LONG-TERM BASE LOAD PURCHASED )  
POWER RIDER )

RESPONSIVE TESTIMONY OF

CRAIG R. ROACH, Ph.D.

AS THE INDEPENDENT EVALUATOR  
FOR THE OKLAHOMA CORPORATION COMMISSION

JULY 14, 2009

BOSTON PACIFIC COMPANY, INC.

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1 **I. QUALIFICATIONS**

2

3 Q. Please state your name, business position, and business address.

4 A. My name is Craig R. Roach. I am the President of Boston Pacific Company, Inc. (Boston  
5 Pacific). My business address is 1100 New York Avenue NW, Suite 490 East,  
6 Washington, DC 20005.

7

8 Q. What is Boston Pacific’s interest in this proceeding?

9 A. Boston Pacific serves the Oklahoma Corporation Commission (the “Commission”) as its  
10 Independent Evaluator (IE) for the 2008 Request for Proposals for Supply-Side Capacity  
11 and Energy Resources (the “2008 RFP”) issued by Public Service Company of Oklahoma  
12 (PSO). The Exelon power purchase contract for which cost recovery is being sought in  
13 this proceeding was the winning bid in the 2008 RFP.

14

15 Q. Please summarize your relevant professional experience.

16 A. I have thirty-three years of experience with investments in, litigation concerning, and  
17 policies for the electricity business and other energy businesses. More specifically,  
18 Boston Pacific has extensive experience as an Independent Evaluator (IE) or market  
19 monitor and I have had important roles in all of these engagements.

20

21 Boston Pacific has served as the monitor for auctions throughout the country, covering  
22 multiple styles of procurement. Our monitoring engagements include (a) New Jersey’s  
23 2007, 2008 and 2009 Basic Generation Service Auctions, (b) the 2005 through 2009  
24 Standard Offer Service (SOS) RFPs for the District of Columbia, (c) Delaware’s 2006-

1 2007, 2007-2008, and 2008-2009 SOS RFPs, (d) Maryland's SOS RFPs in 2004, 2005,  
2 and 2006 for all four utilities, (e) the 2006 Illinois Auction and the 2008 and 2009 Illinois  
3 Ameren and ComEd RFPs, (f) the 2009 Ohio Auction for FirstEnergy, and (g) the 2009  
4 Pennsylvanian RFPs for Allegheny Power. In all of these engagements Boston Pacific  
5 reports to the relevant State Commission. In total, we have monitored or are currently  
6 monitoring over 90,000 MW of electricity procurements of this sort.

7  
8 Boston Pacific also designs and monitors solicitations for resource-specific power and  
9 asset sales. For example, we currently serve the Oregon Commission as the IE for four  
10 RFPs from PacifiCorp. These include the 2012 RFP for unit contingent or firm baseload  
11 service, the 2008 All Source RFP, the 2008 R-1 Renewables RFP, and the 2009  
12 Renewables RFP. For these projects our scope of work encompasses all the steps  
13 necessary for a successful RFP and executed agreements.

14  
15 In addition, Boston Pacific designed and managed a solicitation for the U.S. Virgin  
16 Islands. The RFP invited the development of new renewable energy generation (and  
17 other non-oil generation) in St. Croix and St. Thomas. The Virgin Islands Water and  
18 Power Authority will sign a 20-year PPA with the winning bidders.

19  
20 In a similar vein, Boston Pacific is advising the Mississippi Commission in its review of  
21 Southern Company's proposed Integrated Gasification Combined Cycle (IGCC) facility.  
22 The review covers the full range of issues in choosing among resource options.

23

1 Finally, since 2004, Boston Pacific has served as the Independent Market Monitor /  
2 External Market Advisor to the Southwest Power Pool Regional Transmission  
3 Organization (SPP RTO), which encompasses over 63,000 MW of generation capacity,  
4 47,000 miles of transmission lines, and over 5 million customers across nine states. All  
5 of Boston Pacific's work at the SPP is presented to the Board of Directors and vetted by  
6 working groups made up of dozens of market participants. In our role, we have assisted  
7 in the design and implementation of a real-time locational marginal pricing energy  
8 imbalance market. This energy market successfully came on-line in February of 2007.  
9

10 Q. Do you have experience as an expert witness?

11 A. Yes. I have extensive experience as an expert witness in the electricity business. I have  
12 testified or submitted comments before the FERC on more than 30 occasions and before  
13 24 State Commissions (some on multiple occasions). I also have testified in arbitrations,  
14 in State Courts, in Federal Court, before a City Council, before three Canadian Provincial  
15 Boards, and before a U.S. Congressional Sub-Committee. A list of my testimony and  
16 other publications is attached as Exhibit CRR-01. My testimony has addressed a wide  
17 range of topics, including the methods and results of many RFPs like that issued by PSO.  
18

19 Q. Please summarize your education.

20 A. I earned my Ph.D. in Economics from the University of Wisconsin; I now serve on the  
21 Advisory Board to Wisconsin's Department of Economics. I earned my B.S. in  
22 Economics, *cum laude*, from John Carroll University.  
23

1       **II. PURPOSE AND SUMMARY**

2  
3    Q.     What is the purpose of your Testimony?

4    A.     The purpose of my Testimony is to respond to the Application filed on May 1, 2009 by  
5           the Public Service Company of Oklahoma (PSO) “seeking Commission approval of  
6           recovery of all costs from the Exelon contract, including the costs of the Independent  
7           Evaluator (“IE”) and the Southwest Power Pool Transmission studies.”<sup>1</sup>

8  
9    Q.     What is your bottom line response?

10   A.     My bottom line response is that I support the Application for recovery of all these costs.  
11           Obviously, the vast majority of the cost recovery is for the Exelon contract. As the  
12           winner of PSO’s 2008 RFP, Exelon will sell electric capacity, energy, and ancillary  
13           services to PSO, for nearly ten years, under a Power Purchase Agreement (PPA) from a  
14           520-MW share of an existing, natural gas-fired combined cycle facility located within  
15           PSO’s balancing authority.<sup>2</sup>

16  
17   Q.     What is the basis for your support?

18   A.     The basis for my support for granting cost recovery for the Exelon contract is that during  
19           Boston Pacific’s in-depth involvement in the design and implementation of the RFP as

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<sup>1</sup> *Application of Public Service Company of Oklahoma (“PSO”) for Cost Recovery and Approval of a Power Purchase Agreement (“PPA”) Between PSO and Exelon Generation, LLC, the Cost of the Independent Evaluator and the Southwest Power Pool Transmission Study Including Recovery of Long-Term Firm Supply Contract Earnings Through a Long-Term Base Load Purchased Power Rider, May 1, 2009, (Hereinafter as “PSO Application”), p. 4, item “(p)”.* PSO also sought other relief, but the Cause was bifurcated by Oklahoma Corporation Commission Order No. 568374. This testimony does not address any issues bifurcated from the cost recovery issues.

<sup>2</sup> Boston Pacific submitted a report to the Commission on the 2008 RFP on April 10, 2009. This Testimony covers the same topics as does that report.

1 the Commission's Independent Evaluator, or IE, I saw that the RFP process and outcome  
2 was open, fair, and transparent.

3  
4 PSO's IRP established a need for 450 to 600 MW (note that Exelon's bid is in the center  
5 of this range). The 2008 RFP was created so PSO could acquire resources to meet that  
6 need. From the start I made it clear that the ultimate goal of the 2008 RFP should be to  
7 get the best deal possible for Oklahoma ratepayers in terms of price, risk, reliability and  
8 environmental performance, given market and regulatory conditions.<sup>3</sup> I believe that the  
9 outcome of the 2008 RFP serves this goal.

10  
11 Q. What are the primary ratepayer benefits of the Exelon contract?

12 A. My list of the primary ratepayer benefits of the Exelon contract can be summarized as  
13 follows:

- 14 1. Exelon was the lowest cost option, by a substantial margin, no matter the assumptions  
15 used. For example, costs over the life of the bid were, by our estimates, from 13.7% to  
16 35.7% lower than in the other natural gas-fired bids in this RFP, and lower than in the  
17 coal-fired bids by an ever greater margin;

- 18  
19 2. Exelon guaranteed low capacity payments for ratepayers;

20  

---

<sup>3</sup> *A Note to Potential Bidders From the Independent Evaluator*, Boston Pacific Company, Inc., May 14, 2008.

- 1        3. Exelon guaranteed low heat rates (which will keep energy payments for ratepayers  
2            lower);  
3
- 4        4. The contract includes strong financial incentives/penalties for Exelon to keep reliability  
5            (availability) high;  
6
- 7        5. The contract offers lower costs to ratepayers than a proxy bid for cost-based rates (the  
8            proxy reflected cost estimates in PSO's most recent Integrated Resource Plan (IRP));  
9
- 10       6. The contract offers lower risks for ratepayers than the cost-based rate proxy (since, in  
11            sharp contrast to the Exelon offer, cost-based rates do not offer guaranteed capacity  
12            payments and heat rates nor strong incentives/penalties to keep reliability high);  
13
- 14       7. There is no need for expensive transmission upgrades to assure reliable delivery of  
15            Exelon's power;  
16
- 17       8. There are no development and construction risks since the facility is already built; and  
18

1 9. At 520 MW, the size of the winning bid is in the middle of the estimated range of  
2 capacity need, 450 MW to 600 MW, established by PSO's IRP.

3

4 Q. Does your notion of "getting the best deal" link up to the traditional standard for the  
5 Commission granting rate recovery?

6 A. Yes. The traditional standard is prudence. The heart of the prudence standard is that the  
7 applicant assessed the full range of alternative ways to serve ratepayer needs and, based  
8 on information known at the time of the decision, chose the alternative that best serves  
9 ratepayers. The 2008 RFP was a more compelling way to determine prudence. As I will  
10 document in this Testimony, PSO cast a wide net for alternatives, got a good diversity of  
11 alternatives to assess, and then assessed them openly, fairly, and accurately.

12

13 Q. What do you mean by "more compelling"?

14 A. What I mean by more compelling is that, in contrast to the typical prudence review,  
15 determining prudence through the 2008 RFP is more compelling since the "alternatives"  
16 are real offers made and guaranteed by substantial companies, not just alternatives  
17 conjured up solely for purposes of analysis.

18

19 Q. Are there additional, broader concerns addressed by the 2008 RFP?

20 A. Yes. More broadly, the successful conclusion of the 2008 RFP resolved the  
21 Commission's primary concern when it rejected the results of PSO's previous RFP – the

1 2005 RFP. Specifically, the 2008 RFP assured the inclusion and evaluation of a full  
2 range of alternatives; both coal and gas-fired bids were evaluated, as were a diversity of  
3 transaction types. We should add for context that PSO also reports that it has completed  
4 a separate RFP for electric generation using renewable fuels and is implementing a series  
5 of steps for demand-side programs; separating these efforts was discussed in the  
6 Collaborative process leading to the 2008 RFP and these efforts further address the  
7 Commission's concern that a full range of alternatives be considered.<sup>4</sup>

8  
9 In addition, because Exelon won fair and square against a significant number of bidders,  
10 including AEP affiliate bids, I believe the competitive bidding process in Oklahoma has  
11 gained credibility that will benefit ratepayers in future solicitations by attracting more  
12 bidders and more aggressive bids.

13  
14 Q. Is there other information relevant to the Commission's decision in this proceeding?

15 A. Yes. Also relevant to the Commission's decision is the issue of whether PSO met the  
16 primary requirements in the Oklahoma competitive bidding rules.

17  
18 Q. Did PSO meet those requirements?

19 A. Yes, I believe PSO has complied with all the rules. I will summarize that compliance  
20 with three points.

21  

---

<sup>4</sup> PSO Application, p. 1-2, items "(b)" through "(e)".

1 First, as required by the Oklahoma Competitive Procurement Rules<sup>5</sup> (the “rules”), on  
2 April 7, 2009, PSO notified the Commission, the Attorney General, the IE and all bidders  
3 of the successful bid. This notification explained to all parties the rationale and analysis  
4 leading to the choice of the winning bidder. Since there were no complaints stating  
5 objections filed by any of the parties in response to the notification by PSO, also as  
6 required by the rules, we conclude that bidders felt that the decision was within both the  
7 rules and the RFP, as well as the bid evaluation procedures contained therein. To this  
8 point, we note that Boston Pacific, as the IE, independently ranked the bids for the Initial  
9 Short List and came to agreement with PSO on the rankings. We also assessed additional  
10 evaluation of risk, as called for by the RFP, which showed further that the Exelon offer  
11 was the top choice under all specific scenarios – that is, it was the best deal no matter  
12 how the future was assumed to unfold.

13  
14 Second, the 2008 RFP was conducted in compliance with the Oklahoma competitive  
15 bidding rules because it was “an open, transparent, fair and nondiscriminatory  
16 competitive bidding process”<sup>6</sup> which served the public interest. As I explain in more  
17 detail later herein, I believe the 2008 RFP had many features to make it an attractive  
18 opportunity for bidders to compete to serve the ratepayers of Oklahoma. Indeed, the  
19 proof that it was a good opportunity is seen in the significant number of bidders  
20 participating. The 2008 RFP also complied with the other, more specific requirements of  
21 the bid rules.

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<sup>5</sup> Oklahoma Administrative Code, Title 165, Chapter 35, Subchapter 34 (OAC 165: 35-34)

<sup>6</sup> OAC 165: 35-34-1(b)

1 Third, the 2008 RFP was consistent with the processes and guidelines specified in the  
2 RFP documents including those stating bid evaluation procedures. While we say it was  
3 consistent, we do not mean that there were no accommodations made for bidders.  
4 Indeed, all of the bids were inconsistent (nonconforming) with the RFP in some way.  
5 PSO's approach, which the IE supported, was to evaluate all the bids on the basis of price  
6 and to let the ranking on price dictate which bidders made the Initial Short List. The only  
7 bids rejected on the basis of non-conformance were those who were not able to provide  
8 sufficient information for a price evaluation, did not indicate a willingness to sign the  
9 contract upon notification of winning, or could not guarantee delivery of electricity into  
10 SPP.

11  
12 Q. Were there accommodations for the winning bidder?

13 A. Yes. For the winning bidder, the most notable accommodation was that, while the RFP  
14 called for a minimum term of 15 years, the winning bidder offered a term of about 10  
15 years. We did substantial analysis showing that the shorter term is not what allowed the  
16 winning bidder to win – indeed, in the final analysis, the shorter term lessened the  
17 winning bidder's cost advantage over the other bids. Further, while we explored the  
18 possibility of extending the contract offer, we felt it was not in the best interest of  
19 ratepayers to do so at this time.

20  
21 Q. Were other terms negotiated with the winning bidder?

22 A. Yes. Negotiations with the winning bidder, Exelon, did not touch on the price offer, but  
23 non-price terms of the PPA were negotiated. Two of the negotiated sections of the PPA

1 were notable. The first relates to credit and collateral. The second relates to  
2 environmental change in law. Other sections of the PPA were deepened considerably in  
3 the detail on how the PPA actually would be implemented and these also are notable.  
4 The IE monitored the negotiation and, on balance, felt all the negotiated changes were  
5 within the bounds of reasonableness and in the best interest of ratepayers.  
6  
7

8 **III. BACKGROUND ON OKLAHOMA’S COMPETITIVE PROCUREMENT**  
9 **RULES**  
10

11 Q. You mentioned Oklahoma’s competitive procurement rules. What are the relevant  
12 requirements of those rules?

13 A. Under Oklahoma’s Competitive Procurement Rules,<sup>7</sup> (the “rules”) PSO must “promptly  
14 submit its decision concerning the successful bid with the Commission and mail copies of  
15 such submission to all bidders, the Independent Evaluator, and the Attorney General.  
16 Included within that mailing, the utility shall provide the non-winning bidders the  
17 rationale and analysis used for the selection of the winning bid.”<sup>8</sup> The rules go on to  
18 state the process that bidders, the IE, and the AG must follow thereafter:  
19

20 “(1) Any unsuccessful bidder, the Independent Evaluator, or the Attorney General shall have  
21 fifteen (15) days following submission of the successful bid decision with the  
22 Commission to file with the Commission a complaint challenging the decision as not

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<sup>7</sup> OAC 165: 35-34

<sup>8</sup> OAC 165: 35-34-3 (f)

1 meeting the criteria for decision specified in this subchapter or waiver previously  
2 obtained pursuant to 165:35-34-3(e) and the RFP document and bid evaluation  
3 procedures developed pursuant to 165:35-34-3(a).

4  
5 (2) In the event of the filing of such a complaint, after notice to all bidders and hearing, the  
6 Commission shall determine whether the utility's decision reveals either a clear  
7 departure from the criteria stated in these rules or previously obtained waiver, the RFP  
8 Document and bid evaluation procedures for decision or is erroneous, in which event  
9 the utility shall be required immediately to rebid, in accordance with this Subchapter,  
10 the items which were the subject of such determination.”

11  
12 Q. Did PSO submit its decision to choose Exelon as the winning bid as required?

13 A. Yes.

14  
15 Q. Were any complaints filed in response to PSO's filing?

16 A. No. Neither the Attorney General or any of the bidders filed a complaint. That's  
17 encouraging. I read the absence of complaints as an indication that everyone felt that the  
18 decision was within both the Oklahoma Competitive Procurement Rules and the RFP, as  
19 well as the bid evaluation procedures contained therein. That is, that bidders found the  
20 2008 RFP to be a fair place to win or lose.

21  
22 Q. How is the remainder of your Testimony structured?

1 A. The remainder of my Testimony is divided into three sections, addressing my views on  
2 (a) the rationale and analysis used to select the winner, (b) compliance with the  
3 competitive bidding rules, and (c) consistency with the 2008 RFP document including bid  
4 evaluation procedures.

5  
6

7 **IV. RATIONALE AND ANALYSIS USED FOR THE SELECTION OF THE**  
8 **WINNING BID**

9

10 Q. How do you picture the rationale and analysis for selecting the winning bidder?

11 A. As I picture it, the rationale and analysis for the selection of the winning bid is reflected  
12 in the full scope of the 2008 RFP extending from pre-qualification of bidders through  
13 contract negotiation with the winner. For that reason I think it is best to describe each  
14 phase of the RFP.

15

16 Q. What is your overall conclusion based on these descriptions of each step?

17 A. My overall conclusion is that PSO's 2008 RFP was, as required by Oklahoma's bid rules,  
18 "an open, transparent, fair and nondiscriminatory competitive bidding process" which  
19 serves the public interest of all consumers.

20

21 Q. What are the key steps in the RFP process?

22 A. There are six key steps in the 2008 RFP: (a) pre-qualifying bidders; (b) bidder submittal  
23 of offers; (c) assessing conformance of the bids; (d) evaluating the bids and selecting the

1 Initial Short List; (e) additional evaluation of the bids to determine the Award Group; and  
2 (f) negotiation with the top-ranked (and eventually the winning) bidder.

3  
4 Note, too, that a collaborative process (the “Collaborative”) was used to design the RFP  
5 and this is another major step in the RFP process. There was active participation in the  
6 Collaborative by Commission Staff, the Attorney General, potential suppliers, consumer  
7 groups, and PSO. I discuss the resulting RFP design in a separate section later in this  
8 testimony.

9  
10 **A. Pre-Qualification**

11  
12 Q. Let me ask you to describe the outcome of each of the six key steps. Please start with  
13 pre-qualification.

14 A. There was a significant response to PSO’s 2008 RFP in terms of the number of bidders  
15 who sought pre-qualification as well as in the diversity of bids offered. Twelve different  
16 bidders requested pre-qualification for 17 separate bids. Importantly, all requests for pre-  
17 qualification were granted; no one who wanted to bid was denied the right to bid.

18  
19 Q. What do you mean by diversity?

20 A. We found good diversity among the bids in terms of technology type, existing versus new  
21 power plants, location of the power plants, and transaction type. Fourteen of the 17 pre-  
22 qualified bids were natural-gas-fired combined cycle technology, while the other 3 bids  
23 were coal-fired. Some geographic diversity also was achieved. Of the 17 bids seeking

1 prequalification, 12 were within the Southwest Power Pool (SPP) area and, of those, 7  
2 were within PSO's area (the boundaries of its Balancing Authority). Finally, diversity  
3 across transaction types was achieved. The bids seeking pre-qualification included 9  
4 Tolling Service Agreements (TSAs), 5 Power Purchase Agreements (PPAs), and 3 Asset  
5 Purchase and Sale Agreements (APSAs).

6  
7 **B. Bids Submitted**

8  
9 Q. How many of the pre-qualified bidders actually bid?

10 A. The response in terms of the number of actual bidders and bids also was significant.  
11 Of the twelve bidders that completed the prequalification process, 8 bidders submitted  
12 bids. These 8 submitted a total of 15 bids – 10 Base bids and 5 Alternate bids. The  
13 number of bidders and bids indicates this was a competitive process.

14  
15 Q. Did you find diversity at this stage as well?

16 A. Yes. We also found diversity among the actual bids in terms of technology type, existing  
17 versus new power plants, the location of the power plants, and the transaction type. Of  
18 the 15 submitted Base and Alternate bids, 9 were for natural-gas fired combined cycle  
19 facilities and 6 were for coal-fired facilities. For context, note that one of the  
20 Commission's chief concerns with the previous PSO RFP, in which the Commission  
21 rejected the winning bid, was that a full range of alternatives were not evaluated. The  
22 absence of natural gas-fired combined cycle facilities was explicitly noted by the

1 Commission.<sup>9</sup> The Commission's explicit concern was resolved in the 2008 RFP since 9  
2 gas-fired bids were offered in addition to 6 coal bids.

3  
4 Q. Did the outcome of the 2008 RFP address in other ways the Commission's concern that a  
5 full range of alternatives be assessed?

6 A. Yes. Also in the context of consideration of alternatives, please note that PSO has  
7 completed a separate RFP for 200 MW of renewable power to be online by December 31,  
8 2010, and is implementing demand-side management programs and embarking on  
9 programs for more permanent demand-side measures.<sup>10</sup> The decision to pursue separate  
10 approaches for renewable generation and demand-side measures was discussed in the  
11 Collaborative. The pursuit of these separate approaches is further support that the  
12 Commission's concern over the 2005 RFP has been resolved.

13  
14 Also important is the fact that during the Collaborative process there was substantial  
15 interest in assuring that existing power plants bid into this RFP; the logic was that  
16 ratepayers might benefit from lower power prices driven by the current excess of power  
17 plant capacity in the area. That interest was satisfied since 11 of the 15 Base or Alternate  
18 bids were offers from existing power plants.

19  
20 Location was another possible kind of alternative. Location within SPP, or more  
21 narrowly, within PSO's area, was thought to enhance reliability and to lessen the need for

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<sup>9</sup> Order No. 545239. *Application of Public Service Company of Oklahoma for a Determination that Additional Baseload Electric Generating Capacity Will be Used and Useful* at Attachment B at 100. (October 11, 2007) (Hereinafter as "Order No. 545239").

<sup>10</sup> PSO Application, p. 1-2, items "(c-e)".

1 substantial transmission system upgrades. Six of the 15 Base or Alternate bids were in  
2 SPP, with 4 of those bids, including the winning bidder, within the PSO area.

3  
4 There also was consideration of alternatives in terms of transaction types. Eight of the  
5 Base and Alternate bids were TSAs, 4 were APSAs, and 3 were PPAs. Again, in the  
6 Collaborative there was interest in determining whether a comparison of the three types  
7 would find existing asset sales through an APSA a real bargain. That question was  
8 answered in the 2008 RFP.

9  
10 **C. Conformance with the RFP**

11  
12 Q. Did all of the bids conform to all of the requirements of the 2008 RFP?

13 A. No. The focus was on the acceptance of the model contract terms and conditions. The  
14 2008 RFP set mandatory and non-mandatory contract provisions for bidders. Bidders  
15 were not allowed to take exceptions to the former, but were allowed to take exceptions to  
16 the latter in their bid submissions. Despite this, it is fair to say that all bids were non-  
17 conforming in some way with respect to the mandatory provisions and/or by failure to  
18 state exceptions explicitly.

19  
20 Q. Were any of the bids rejected for non-conformance?

21 A. Yes. In the end, after providing bidders an opportunity to correct non-conformances,  
22 three base bids were rejected because of significant non-conformance. As the IE, we  
23 concurred with these decisions.

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Still, in the spirit of getting the best deal for ratepayers, in the first phase of bid evaluation Boston Pacific evaluated the price offers of two of the three rejected bids alongside conforming bids; the third rejected bid did not provide sufficient price information, so it could not be evaluated. Again, all of the other bids also were non-conforming in less significant ways. However, we thought it would be best to assess as many price offers as possible and then, if the price was especially good for ratepayers, non-conformities could be addressed through negotiation.

Q. Would you briefly characterize the nature of the non-conformances?

A. Yes. Several of the bids were non-conforming in the sense that they did not agree to the mandatory provisions of the standard contract included in the RFP or did not specify the exceptions taken to the non-mandatory provisions of the contract. In addition, most of the bidders required negotiation on other important contract provisions such as the nature and extent of change-in-law provisions, heat rate guarantees, and credit/collateral requirements. The offers that were rejected were non-conforming by way of not providing sufficient information for a price evaluation, were not able to guarantee delivery of power from outside SPP to the SPP border, or were not willing to sign the contract at the time they were chosen as a winning bid.

**D. Bid Evaluation to Select the Initial Short List**

Q. How were bids chosen for the Initial Short List?

1 A. For the purpose of choosing the Initial Short List, the bids were ranked according to the  
2 price offered by the bidder over the life of the contract. That is, the IE and PSO first used  
3 the bidders' price to project the capacity, fuel, operations and maintenance, and potential  
4 emissions cost payments ratepayers would make if that bidder won. We then calculated  
5 the present value of the projected payments using PSO's cost of capital as the discount  
6 rate. Finally we calculated the financial average payment over the life of the contract –  
7 this financial average is called an “annuity” and it is the equal annual payment over the  
8 life of the contract with the same present value as the projected payments. The annuity  
9 was expressed in terms of dollars per megawatt.

10

11 Note that PSO intended to evaluate only Base bids for the Initial Short List, but, as  
12 allowed under the RFP, the IE requested that Alternate bids also be evaluated.

13

14 Q. Please summarize your rankings for the Initial Short List.

15 A. Table One in Exhibit CRR-02 displays the ranking of the Base and Alternate bids as  
16 determined by the IE using its own independent model and assumptions.

17

18 Most importantly, as can be seen in the Table, the top-ranked bid (ultimately, the winning  
19 bid) was significantly lower in price than the other bids. Specifically, the competing  
20 natural gas-fired bids were from 13.7% to 35.7% more expensive. The Table also  
21 provides other descriptive information on each of the bids: transaction type, life of the  
22 contract (or estimated remaining plant life for APSAs), location, size of the bid in MW,  
23 and whether the power was from an existing or proposed (new) power plant.

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Q. Were there other issues with choosing the Initial Short List that should be discussed here?

A. Yes. Three other issues were notable and are reflected in Table One. First we wanted to be sure that the primary non-conformity in the top-ranked bid – the fact that it was offered for about 10 years – was not the reason it was the top-ranked bid. We assessed this in several ways. As mentioned in the notes in Table One, we ranked it using an assumed 15-year contract; that is, we extended its payments out by extending the year-by-year escalation in its contract offer. Separately, with the Strategist model discussed below, PSO shortened the other bids to 15 years, while increasing Exelon to 15 years (making the bids all comparable in length) to see if that changed the ranking – it did not. We also assessed whether the generic fill-in technology – the power plant assumed to provide power after each contract ended – was making the winning bid look less expensive; the answer was no, the generic fill-in technology actually made the winning bid look more expensive.

Second, we were especially sensitive to the assumptions about bids that would have power sales beginning earlier than or later than 2012. For the two APSAs that offered an earlier start date, we looked at two different ways to model the cost of the early start – neither changed the ranking. One of the TSAs came on in 2013 instead of 2012. How we modeled the on-line date did change the ranking slightly, but this bidder still made it on to the Initial Short List. We note where we made different assumptions about the costs or cost savings of the early and late starts in Table One by using the term, “modified evaluation due to the on-line date.”

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Finally, we independently determined the Initial Short List. The RFP states that, in each category of technology, bids within 20 percent of the highest ranked proposal go to the Short List. As can be seen in Table One, there is a natural breaking point among natural gas bids just above the 20 percent level, which we used to chose the top four natural gas-fired bids. In addition, as prescribed in the RFP, we chose the one conforming coal-fired bid. Although PSO and the IE did independent rankings, we ultimately agreed on the five short-listed bidders. As required by the RFP, the five short-listed bidders were asked to demonstrate that they could meet the collateral requirement of the contracts. All five successfully made such a demonstration.

**E. Bid Evaluation to Select the Award Group**

- Q. What was the next stage of the 2008 RFP process?
- A. The next stage was a deeper evaluation of the five short-listed bids to determine the Award Group – the likely winner and backup bidder. The analysis involved the use of the commercially-available planning model, called Strategist, to conduct further evaluation of the five short-listed bids, most notably an evaluation of ratepayer risk under different scenarios of how the future may unfold. In addition, the evaluation at this stage included estimates of transmission integration costs and debt equivalence calculations for each bid. Although these added evaluation steps were thoroughly implemented and discussed, the final ranking of the bids was the same as found in Table One, based on the annuity calculation.

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Q. Why was this added bid evaluation conducted in different scenarios?

A. For Boston Pacific, the most important reason for conducting this further evaluation is that it embodied an explicit consideration of uncertainty. That is, five different scenarios were developed and the rankings were re-done in each of these scenarios. The point of re-ranking under each of these scenarios is to choose the bid that offers the best price to ratepayers no matter how the future unfolds. The five scenarios were entitled Base Case, Low Power Prices, Low CO<sub>2</sub> Price, High Power Price, and High CO<sub>2</sub> Price. The assumptions for all five scenarios were vetted in the Collaborative. A weighted average of the ratepayer costs for each bid under the five scenarios was calculated with the weights for each scenario announced by PSO in the Collaborative.

Q. Any other element of this added bid evaluation that is worth highlighting here?

A. Yes. Also included in the ranking was a hypothetical bid called the “IRP Reference Case”. This was a cost estimate for a natural gas-fired combined cycle plant based on the cost and performance estimates used in PSO’s 2008 Update of its Integrated Resource Plan (IRP). The use of this IRP Reference Case was meant to indicate whether the best estimate of a cost-of-service offer – the IRP Reference Case – would beat the other fixed-price offers. The analysis here suggested the answer is no, even before the higher ratepayer risk of a cost-of-service offer is considered.

Q. What is your primary conclusion from this added bid evaluation?

1 A. Again, the most important conclusion from the added evaluation using the Strategist  
2 Model is this: the top-ranked bid from the Annuity Model – the bid from Exelon – was  
3 also the top-ranked bid in all five scenarios. This means that the choice of the winning  
4 bid is not sensitive to the scenario weights. And, much more importantly, it indicates that  
5 the Exelon bid is able to offer the best deal to ratepayers no matter how the future  
6 unfolds.

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8 **F. Negotiation with the Top-Ranked Bidder**

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10 Q. Were you involved in the negotiation of the final contract with Exelon, the winning  
11 bidder?

12 A. Yes. The IE monitored the negotiation of the final contract between PSO and the  
13 winning bidder. The negotiation clearly took more time than expected. However, the  
14 length of time was not driven by the magnitude or number of exceptions to the contract  
15 taken by the bidder, or by the contentiousness of the negotiation. Rather, it was driven in  
16 large part by an effort to go into considerable detail on the day-to-day implementation of  
17 provisions such as scheduling and dispatch, and into scheduled and forced outages. We  
18 concluded that the negotiated changes were reasonable on balance.

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20 **V. COMPLIANCE WITH COMPETITIVE BIDDING RULES**

21

22 Q. Let's turn to your second topic. Was the 2008 RFP run in a manner compliant with  
23 Oklahoma's competitive bidding rules?

1 A. Yes. Boston Pacific believes the RFP was conducted in compliance with the State’s  
2 competitive bidding rules. That is, as required by those rules, PSO conducted an “open,  
3 transparent, fair and non-discriminatory competitive bid process.” All that was stated in  
4 the previous section about bidder response to and the results of the RFP support this  
5 conclusion. Beyond that there are many specific requirements embedded in the rules  
6 which were met.

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8 Q. Would you please summarize the key requirements of the rules met by PSO?

9 A. Yes. I can summarize those as follows:

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11 1. Draft RFP documents were published and interested parties had an opportunity to  
12 comment on key elements of those documents through a lengthy Collaborative process  
13 and on the documents themselves through written comments after the collaborative.<sup>11</sup>

14

15 2. An IE was engaged by the Commission and the IE was deeply involved in all stages of  
16 the RFP. The IE independently ranked the bids and worked to achieve agreement with  
17 PSO on that ranking. The IE and PSO also were able to come to agreement on the  
18 selection of the winning bidder.<sup>12</sup>

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20 3. No affiliate bias was detected by the IE. Most importantly, all bids, including bids from  
21 the affiliate, were evaluated under the same rules and with the same analytic methods.<sup>13</sup>

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<sup>11</sup> OAC 165: 35-34-3(a)(4)

<sup>12</sup> OAC 165: 35-34-3(b)

<sup>13</sup> OAC 165: 35-34-3(c)

- 1 4. The evaluation was done in a way that sought the lowest reasonable costs for bids.<sup>14</sup>
- 2
- 3 5. As required, the IE was present at the opening of the bids and received original versions
- 4 of all bids.<sup>15</sup>
- 5
- 6 6. Bidders were not allowed to refresh their bid price.<sup>16</sup>
- 7
- 8 7. PSO did seek clarification of offers from all bidders and the IE monitored these
- 9 communications.<sup>17</sup>
- 10
- 11 8. PSO did not waive any evaluation criteria.<sup>18</sup>
- 12
- 13 9. Debt equivalent calculations were required by the RFP and were done, but had no effect
- 14 on the selection of the winning bidder.<sup>19</sup>
- 15
- 16 10. No penalty was imposed on purchased power.<sup>20</sup>
- 17
- 18 11. PSO did not appear to discriminate in favor of its affiliate. In any event, the PSO affiliate
- 19 did not win the RFP.<sup>21</sup>
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<sup>14</sup> OAC 165: 35-34-3(d)(1)(A)

<sup>15</sup> OAC 165: 35-34-3(d)(1)(B)

<sup>16</sup> OAC 165: 35-34-3(d)(2)

<sup>17</sup> OAC 165: 35-34-3(d)(3)

<sup>18</sup> OAC 165: 35-34-3(d)(5)(A)

<sup>19</sup> OAC 165: 35-34-3(d)(5)(B)

<sup>20</sup> OAC 165: 35-34-3(d)(5)(C)

<sup>21</sup> OAC 165: 35-34-3(d)(5)(D)

1 12. The decision was announced and supported as required by the rules.<sup>22</sup>

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3 Q. Do the bidding rules state other, even more specific requirements?

4 A. Yes. The competitive bidding rules state just one explicit requirement for the contract  
5 with the winning bid: “The contract shall contain appropriate guarantees, as set by the  
6 Commission, regarding the reliability of services.”<sup>23</sup> The contract with the winning bid  
7 does indeed have explicit and appropriate guarantees and penalties related to reliability.

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10 **VI. CONSISTENCY WITH THE RULES AND PROCEDURES IN THE**  
11 **REQUEST FOR PROPOSAL**

12  
13 Q. Let’s turn to your third and final topic. Was the 2008 RFP run in a manner consistent  
14 with the rules stated in the RFP documents themselves?

15 A. Yes. Boston Pacific believes the choice of the winning bidder was done in a manner  
16 consistent with the rules and procedures in the 2008 RFP. As documented above, these  
17 rules and procedures succeeded in addressing and resolving the Commission’s primary  
18 basis for rejecting the results of the 2005 RFP – the failure to evaluate a full range of  
19 alternatives. PSO’s 2008 RFP is clearly an improvement over the 2005 RFP because it is  
20 better designed to attract and fairly consider a full range of alternatives. For example, the  
21 2008 RFP eliminated the requirement in the previous 2005 RFP that bidders have a \$500

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<sup>22</sup> OAC 165: 35-34-3(e)

<sup>23</sup> OAC 165: 35-34-3(g)(1)

1 million tangible net worth;<sup>24</sup> that requirement blocked the evaluation of natural gas-fired  
2 combined cycle alternatives in the 2005 RFP.<sup>25</sup> The most important evidence in this  
3 regard is the fact that the 2008 RFP did attract a significant number of bidders.  
4

5 Q. What features of the 2008 RFP do you believe contributed most to the success of the  
6 2008 RFP?

7 A. The most important rules of the RFP were those which helped attract a significant  
8 number of bidders and allowed an evaluation of a full range of alternatives as required by  
9 the Commission. As we have stated elsewhere, we see nine features contributing to this  
10 and the choice of the winning bid is consistent with all nine.  
11

12 1. Comparability: All bidders, including the utility affiliate, bid under the same rules and  
13 were evaluated with the same methods. Affiliate bias was a substantial concern in the  
14 Collaborative. For that reason it is crucial to note that an affiliate, while its bids were  
15 fairly evaluated, did not win.  
16

17 2. Transmission Transparency: Transmission integration requirements were determined  
18 by an independent third party – the Southwest Power Pool Regional Transmission  
19 Organization. As noted, in the end, the transmission integration cost estimates did not  
20 influence the choice of the winning bid, but the independence of the estimates is still  
21 noteworthy.  
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<sup>24</sup> Public Service of Oklahoma Request for Proposals for Baseload Capacity and Energy Resources, December 2005, Section 5.4.1.

<sup>25</sup> Order No. 545239

- 1           3. Indexing: In the face of perhaps unprecedented cost uncertainty, bidders with new  
2           power plants were allowed to index 100% of their capacity price to approved,  
3           publicly available price indexes during construction instead of having to take the risk  
4           of cost forecasts and then embed higher risk premiums in their bid prices. Eligible  
5           bidders requested indexing for capacity prices. Payments related to fuel use in PPAs  
6           and TSAs were indexed to publicly available natural gas price indices as well.  
7
- 8           4. Flexible Start Dates: To attract existing (already-built) generating resources, bidders  
9           were allowed to offer a start date for sales of power well before the year 2012 in  
10          which the new base load need is identified. To attract new-built resources that might  
11          take a bit more time, start dates as late as 2015 also were allowed. Three of the  
12          bidders took advantage of this feature and we carefully evaluated their offers.  
13
- 14          5. Collateral Required Only At Contract Signature: With the ongoing credit crisis, a  
15          collateral commitment is sometimes hard to come by. The 2008 RFP required  
16          collateral only after a definitive contract is signed. After making the Initial Short  
17          List, all five short-listed bids were asked to and were able to demonstrate an ability to  
18          meet the eventual collateral requirements.  
19
- 20          6. The IRP Sets the Context for Bid Evaluation: PSO's 2008 Integrated Resource Plan  
21          (IRP) Update, which was vetted in the Collaborative, documented the base load need  
22          solicited in this RFP (from 450 MW to 600 MW) and, more importantly, set the  
23          assumptions and methods for evaluating bids such as construction costs, fuel costs,

1 emissions costs, and collateral requirements and method of handling debt  
2 equivalence. As explained above in this testimony, the bid evaluations were  
3 conducted in a thorough manner as prescribed in the RFP.

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5 7. No Separate Non-Price Evaluation: This was a “price-mostly” bid evaluation which  
6 enhances transparency. Although there are notable non-price benefits, there was not a  
7 separate evaluation of non-price factors. The bid with the best price offer, as  
8 indicated by the annuity calculation, won the RFP.

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10 8. Tolling Service Agreement Added: A new transaction type, a Tolling Service  
11 Agreement, was added to the options of a Power Purchase Agreement and, for the  
12 existing resources, an Asset Purchase and Sale Agreement. Both of these additional  
13 transaction types were used by actual bidders giving diversity to the bids.

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15 9. Transparency on the Debt Equivalence Issue: Information on winning bids with and  
16 without the debt equivalence calculation was provided as required by the RFP.  
17 Again, the debt equivalence calculation did not change the ranking and the choice of  
18 the winning bid.

19  
20 Q. Where were the concepts for these nine features mainly proposed?

21 A. Most of these important features emerged from the Collaborative process. Boston Pacific  
22 notes, once again, that we very much appreciate the substantial and substantive  
23 participation of all parties in the Collaborative including, but not limited to, personnel,

1 legal counsel, or consultants from AES Corporation, AEP Service Corporation, Office of  
2 the Attorney General, Calpine Corporation, Commission Staff, LS Power Associates,  
3 Oklahoma Industrial Energy Consumers, PSO, Quality of Service Coalition, Redbud  
4 Energy, and Wal-Mart Stores East.

5  
6 Q. Was the Collaborative process time consuming?

7 A. Yes. This was a time-consuming effort for everyone involved. The Collaborative had  
8 many meetings and conference calls over more than six months from late December 2007  
9 into June 2008. And parties were well prepared, often producing written documents  
10 summarizing a position prior to the meeting or teleconference. The Collaborative did not  
11 come to a consensus on all the major issues. We believe, however, that all the major  
12 issues were openly discussed and that substantial progress was made on each of them.  
13 While all of the major issues were vetted in the Collaborative, we did not vet the key  
14 documents such as the RFP document itself or the key contracts such as the Power  
15 Purchase Agreement (PPA). Comments on the RFP and contracts were solicited during  
16 the 25-Day comment period following the issuance of the Draft 2008 RFP.

17  
18 Q. Does this conclude your Testimony?

19 A. Yes.

**LIST OF TESTIMONY AND OTHER PUBLICATIONS  
FOR CRAIG R. ROACH, Ph.D.**

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**TESTIMONY**

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#### **DISSERTATION**

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**TABLE ONE**  
**IE'S RANKING OF BIDS FOR THE INITIAL SHORTLIST**

**NATURAL GAS TECHNOLOGY**

Bid	% Price Above Low-Cost Bid	Description				
		Type	Length	Location	MWs	New/Exist
A	--	PPA	10	PSO	520	Exist
B	13.7%	TSA	20	PSO	535	Exist
C	18.6%	TSA	35	PSO	382	New
D	21.4%	TSA	15	Outside SPP	502	Exist
C*	23.9%	TSA	35	PSO	382	New
<del>E</del>	<del>24.9%</del>	<del>TSA</del>	<del>20</del>	<del>PSO</del>	<del>515</del>	<del>New</del>
F Alt*	31.8%	APSA	22	SPP	625	Exist
F Alt	32.8%	APSA	22	SPP	625	Exist
F	33.0%	APSA	20	SPP	625	Exist
G Alt*	34.5%	APSA	28	Outside SPP	502	Exist
G	35.3%	APSA	26	Outside SPP	502	Exist
G Alt	35.7%	APSA	28	Outside SPP	502	Exist

**COAL TECHNOLOGY**

H	49.4%	TSA	20	Outside SPP	100	Exist
<del>I</del>	<del>52.6%</del>	<del>PPA</del>	<del>30</del>	<del>Outside SPP</del>	<del>150</del>	<del>New</del>
<del>J</del>	<del>—</del>	<del>TSA</del>	<del>20</del>	<del>Outside SPP</del>	<del>102</del>	<del>Exist</del>

Type: Power Purchase Agreement (PPA), Tolling Services Agreement (TSA), Asset Purchase and Sale Agreement (APSA)

Notes:

Bids that are struck through (E, I, and J) were deemed non-conforming and ultimately rejected. Bid A price annuity assumes a 15-year term. A 10-year term produces a price annuity about 4 percent lower.

Bids C\*, F Alt\*, and G Alt\* reflect a modified evaluation due to the on-line date.

Bids H, I, and J offered alternative bids, of different megawatts, that are not shown in the table. Bid H had physical delivery into SPP.