Decision No. C01-295

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

DOCKET NO. 99A-549E—PHASE II

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR AN ORDER APPROVING ITS 1999 INTEGRATED RESOURCE PLAN.

DECISION APPROVING PHASE II OF INTEGRATED RESOURCE PLAN

Mailed Date: March 28, 2001
Adopted Date: February 23, 2001

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I. BY THE COMMISSION

Statement

1. This matter comes before the Commission for consideration of Phase II of the 1999 Integrated Resource Plan ("IRP") filed by Public Service Company of Colorado ("PSCo" or "Company"). PSCo filed its proposed IRP for Commission review and approval as required by the Commission's Electric Integrated Resource Planning Rules, 4 CCR 723-21. This Phase II proceeding concerns the final portion of PSCo's 1999 IRP to be reviewed by the Commission. In accordance with prior orders, the Commission has already conducted proceedings to review: the Company's plans to obtain wind-powered renewable and demand-side management resources under its 1999 IRP (Docket No. 00A-008E); the

Company's electric energy and demand forecast initially used in its 1999 IRP (Docket No. 00A-007E); and, the Company's planning with respect to its transmission system, especially as related to its 1999 IRP (Docket No. 00A-067E). The Commission has issued decisions in those dockets.

2. This proceeding concerns PSCo's proposed Final 1999 IRP and its plans to acquire a number of new generation resources to meet demand for electricity in the planning period 2002 through 2005. The Company selected the proposed new generation resources through a competitive bidding process. The Company intends to acquire the entire output of these selected generation facilities, which will be built by independent power producers. The Company followed the IRP rule in conducting the bidding process. PSCo filed its Final 1999 IRP on September 13, 2000. In accordance with the request of the Company, we reviewed on an expedited basis those proposed new generation resources with in-service dates in 2001-2002, and Tri-State resources with an in-service date of 2003. Phase I of this docket reviewed and approved those resources. *See* Decision No C00-1464. The remaining new generation resources proposed in the 1999 IRP are reviewed here in this Phase II.

3. PSCo filed its Phase II testimony on October 23, 2000. Intervenors, including Commission Staff, ("Staff") the Office of Consumer Counsel ("OCC"), the City and County of Denver ("Denver"), The Land and Water Fund of the Rockies ("LAW

Fund), and the Colorado Renewable Energy Society ("CRES") filed their Answer Testimony on December 20, 2000. The Company submitted its rebuttal testimony on January 29, 2001, In addition, on January 24, 2001, the Company filed its Supplemental Direct Testimony and a Confidential Update Concerning Public Service Company of Colorado's January 2000 Resource Solicitation. That filing contains a load and resources table (Exhibit 101) that reflects the Company's most recent proposed resource acquisitions for the 1999 IRP.

4. Hearing Commissioner Hix conducted hearings from January 29 through February 2, 2001. Six intervenors actively participated in the hearings: Staff; OCC; Denver; LAW Fund; CRES, and Colorado Independent Energy Association. The OCC and Denver presented witnesses who testified in opposition to the Company's proposal to select the Phase II resources. Staff, the LAW Fund, and CRES witnesses did not oppose the Company's proposed Phase II resources, but did recommend that the Commission add Enron's Lamar Wind bid to the preferred portfolio. Staff also raised concerns about the relationship between the generation resources being approved in this Phase II and transmission issues addressed in Docket No. 00A-067E, and forecasting issues addressed in Docket No. 00A-007E.

5. The parties submitted their Statements of Position on February 14, 2001. PSCo requests expedited ruling

from the Commission to ensure that resources necessary to meet electric demand in the near-

6. future will be timely completed. Now being duly advised, and in accordance with § 40-6-109(6), C.R.S., we find that due and timely execution of our functions imperatively and unavoidably requires that we make the initial decision in this case. We now enter our decision with respect to Phase II of the Company's Final 1999 IRP.

II. DISCUSSION

We first address the reasonableness of PSCo's proposed Phase II portfolio of generation resources and then consider whether Enron's Lamar Wind bid should be added to that portfolio. Finally we address Staff's concerns.

A. Reasonableness of Phase II Portfolio

In this case the Commission must decide if PSCo has met its burden to demonstrate that its Phase II portfolio is a reasonable, least-cost plan comporting with the Integrated Resource Planning Rules.

1. Party Positions

a. OCC

(1) The OCC filed Answer Testimony by Dr. P.B. Schechter. Dr. Schechter makes the same arguments he made in Phase I. *See*, Decision No. C00-1464 at ¶ I.C.3. The OCC asserts that the competitive resource acquisition process used

by the Company is fatally flawed because it omits a self-build plan. The OCC contends that such a self-build plan would serve as a point of reference to determine whether the bid proposals received from independent power producers (IPPs) represent the least cost resources. According to the OCC, without a self-build plan there can be no assurance that the competitive bidding process among the IPPs has produced a least-cost portfolio of resources. In Phase I, the OCC provided its own estimate of PSCo's cost to build new generation. In this Phase II, however, the OCC simply recommends that we order PSCo to create its own least-cost self-build plan for acquiring all resources during the 2002-2005 time period.

(2) According to Dr. Schechter, a proper least-cost plan created by the Company would likely be able to capture significant economies of scale that an analysis such as the one provided by the OCC for Phase I cannot and did not capture. He described two such economies of scale, within a single generating station and among multiple generating stations. Dr. Schechter contended that the economies of scale possible within a single generating station occur when a company constructs a single generating station that consists of, for example, two identical combustion turbines ("CT"). He claimed that such a generation station does not cost twice as much as a generating station consisting of a single turbine of the same make and model. As for economies of scale possible across

multiple generating stations, Dr. Schechter contended that these could emerge from constructing a single large generating station rather than several smaller generating stations. He also suggested that economies of scale from peaking resources were attainable from installing fewer larger CTs, and from combining CTs at multiple sites into peaking plants at single sites.

(3) After the Company produces its least-cost self-build plan, Dr. Schechter suggests, PSCo should let the Phase II bids received in response to its RFP compete with the resources identified in its self-build plan. This will allow the Company to determine whether it should provide some, all, or none of the new capacity required for 2002-2005. The OCC suggests that if PSCo cannot acquire self-build generation in a timely manner, customers should be held harmless for the difference between the least-cost plan that includes self-built generation and the least-cost plan proposed by the Company in its 1999 IRP. As in Phase I, the OCC contends that the Commission's evaluation of PSCo's 1999 IRP for the Phase II bid requires that we look to more than the IRP rules. In particular, the OCC urges the Commission to consider the statutory mandate embodied in § 40-3-101, C.R.S. (Commission must ensure that rates for utility services are just and reasonable).

b. Staff

Staff filed Answer Testimony by Messrs. Saeed Barhaghi, Wendell Winger, and Bruce Mitchell. Mr. Barhaghi provided Staff's review and recommendations with respect to the reasonableness of PSCo's Phase II proposed portfolio of resources. He testified that PSCo has properly represented and evaluated most of the bids received for the 1999 IRP—the one exception being the Enron wind project. Mr. Barhaghi explained that Staff worked with the Company to understand its modeling philosophy and the assumptions underlying the various modeling exercises. Mr. Barhaghi reported that as part of its review Staff requested the Company to perform certain sensitivity runs. The Company did perform those runs and Mr. Barhaghi checked variations from the Company's base plan with regard to assumptions used in the Base Plan and the Preferred Portfolio. In addition, he performed his own modeling runs to examine the impact of various resource selections on the Company's production cost and the system's reliability. Mr. Barhaghi testified that, after reviewing the various model runs and after discussing the various scenarios and assumptions with PSCo, the Company has properly represented and evaluated the bids received with the exception of the Enron Wind Project.

c. Denver

Denver filed Answer Testimony by Dr. Carl Hunt. According to Dr. Hunt, PSCo failed to meet its burden of proving that the bid prices will result in fair, reasonable, and low prices for electricity. Dr. Hunt makes basically the same arguments as he did in Phase I, contending that ratepayers will be forced to pay higher rates as a result of the Company's failure to consider self-generation. Dr. Hunt argues that currently PSCo has no incentive to offer a least-cost plan because, under the IRP rules, it can pass on to customers all costs of purchased power. For these reasons, Dr. Hunt recommends that the Commission change the IRP incentive structure by establishing a sharing mechanism and a base to examine the purchased power bids.

d. PSCo

(1) PSCo filed Direct Testimony by David Eves, Karen Hyde, Kurtis Haeger, John Fulton and Alan Taylor on October 23, 2000. In addition, the Company filed rebuttal testimony by David Eves, Kurtis Haeger, John Fulton, Alan Taylor, Eugene Meehan, Janelle Marks, Daniel Ahreas Henry Klaiman, James Hill, and Susan Goodrich on January 19, 2001. In general, PSCo contends that it properly conducted a competitive resource acquisition process to obtain all long-term supply-side resources for the years 2000-2005, in full compliance with the Commission's Electric Integrated Resource Planning Rules, 4 CCR

723-21. According to the Company , its solicitation for supply-side resources was successful, attracting 30 bidders who submitted 300 separate bid proposals for over 9000 megawatts of power. As part of its competitive acquisition process, PSCo used a sophisticated computer modeling program (PROSCREEN) to evaluate each of the bids and its interaction with the Company’s existing system of Company-owned supply-side resources and purchase power agreements. This investigation allowed the Company to select those bids resulting in a portfolio of the lowest cost resources compatible with the Company’s system. The Company provided the Commission with an estimate of the class rate impacts of its preferred plan. Specifically, Table U-3 (Exhibit 121 provided by witness Mr. Ahrens) projects that the average system electric rates resulting from the January 2001 preferred portfolio will increase at a rate less than inflation, thereby reducing the real cost of electricity over the twenty-year planning period.

(2) PSCo argues that it successfully solicited competitively priced power to meet its resource needs over the resource acquisition period. According to the Company, its RFP demonstrates that the resources selected are the best that the market has to offer. The Company argues that virtually all objections to its Phase II preferred plan were issues raised and rejected by the Commission in Phase I.

(3) Witnesses. Eves,. Taylor, and. Meehan presented testimony in rebuttal to Dr. Schechter and Dr. Hunt. For example, Mr. Eves contended that the OCC's and Denver's requests for a self-build plan are diametrically opposed to the competitive policies contained in the IRP rules. Furthermore, he stated that the time constraints of this Phase II (*e.g.,* the necessity of obtaining new generation beginning in 2002) render completely infeasible any suggestion to start the IRP process over with a new set of ground rules. Requiring the Company to develop its own self-build plan and conducting necessary regulatory hearings to decide the matter, would result in nine to twelve months of delay.

(4) Mr. Taylor had several disagreements with Dr. Schechter. He disagreed with Dr. Schechter's suggestion that larger generating facilities are less expensive to build than the same number of MWs acquired from a larger set of smaller facilities. According to Mr. Taylor, Dr. Schechter overlooked three important factors that can offset the economy of scale benefits of a larger facility. First, significant transmission constraints currently limit where new facilities can inject power into the transmission system without major transmission investment. The bid evaluation team analyzed large and small facilities; the smaller facilities won because they were less expensive or had better operating parameters than the larger facilities. Second, the development of large facilities

may make more sense outside of non-attainment areas. However, such development must be accompanied by concurrent permitting and construction of large transmission lines. The bid team evaluated numerous proposals for more distant power plants and incorporated estimates of the transmission investments that such plants would necessitate. Third, there is increased risk in putting "all of one's eggs in one basket." Mr. Taylor argued that if PSCo were to select one or two large facilities to satisfy its entire resource need over the 2002-2005 period, it would expose its customers to significant cost and reliability risks in the event the project(s) encountered permitting, financing, or development problems.

(5) Mr. Taylor concluded that Dr. Schechter was incorrect in arguing that PSCo should develop a self-build plan of large generating plants because of supposed economy-of-scale benefits of large facilities. According to Mr. Taylor, Dr. Schechter failed to recognize countervailing factors: air permitting issues, increased transmission costs, and increased development risks. The evaluation team conducted a balanced evaluation that yielded a resource plan that includes the best combination of small and large resources that the market had to offer.

(6) Mr. Taylor also disagreed with Dr. Schechter's recommendation that Phase II projects be put on hold while PSCo develops estimates for self-build facilities. Such

action, Mr. Taylor suggest, would jeopardize the timely and successful development of the selected resources and harm PSCo's credibility in future power supply bidding. In addition, Mr. Taylor disagreed with Dr. Schechter's suggestion that the Phase II bids, which had to comply with the ten-year contract limit, should compete with thirty-year self-build facilities. This comparison would be unfair and would also compromise PSCo's credibility in future bidding proceedings.

(7) As for Dr. Hunt's testimony, Mr. Taylor disagreed with the suggestion that PSCo's resource plan should be more heavily or completely comprised of baseload facilities. Mr. Taylor noted that the evaluation team did perform optimizations in which PROSCREEN considered resource plans that were more heavily or completely comprised of combined cycle proposals. These portfolios were not determined to be least-cost.

(8) In his rebuttal testimony, Mr. Meehan also opposed the arguments by the OCC and Denver. Mr. Meehan contends that, in essence, Drs. Schechter and Hunt argue that the process followed by the Company is incapable of determining the best plan because it did not include a comparison to a comprehensive utility self-build, rate-base plan. According to Mr. Meehan, the witnesses identified an alternative excluded from the optimization analysis and used that exclusion to assert that it is impossible to know if the resulting optimized plan is

the best plan. However, this assertion assumes certain conditions that do not apply here. For example, the first condition that it must obtain is that it must be feasible to definitively compare the cost of the alternative plan that was not examined to the cost of the IRP plan. This does not apply here because the plan that was considered is a rate-base plan and the IRP plan is a fixed-price plan. This difference makes it difficult to compare the two options.

(9) A second condition lacking in the OCC's and Denver's analyses, according to Mr. Meehan, is that the development and use of the optimum self-build, rate-base plan should have no effect on the offers made by IPP bidders in the competitive bid process. A third condition is that the comparison of plans incorporate all costs, including the cost to the utility of developing the self-build plan and keeping the option open. A fourth condition necessary to the OCC's and Denver's analyses, is an accurate comparison of the potential benefits of diversified ownership versus the increased risk to PSCo of relying on a large plant that may be delayed or cancelled. Mr. Meehan concluded that none of these conditions exist, and, therefore, the fundamental premise advanced by Drs. Schechter and Hunt does not hold in light of the actual circumstances applying here.

(10) Mr. Meehan finally argued that if PSCo had developed a self-build, rate-base plan as part of the

competitive acquisition process, that process could not necessarily be demonstrated to result in the best plan. He contends that had such a plan been filed, parties could assert that the existence of that self-build plan precluded bids from IPPs that may have been lower cost.

2. Commission Decision

a. The issue before the Commission is whether the Company adequately demonstrated that its proposed Phase II portfolio for the 1999 Integrated Resource Plan is a reasonable, least-cost plan comporting with the IRP Rules. Except for the Company's exclusion of the Lamar wind project from the portfolio of winning bids (*see* discussion *infra*),we find that PSCo has met its burden of demonstrating that the Phase II portfolio is consistent with the Commission's IRP rules. Specifically, we approve PSCo's final 1999 IRP to include all resources listed on Table U-2 (Exhibit 116) as the January 2001 Preferred Plan. We reject the proposals by the OCC and Denver that the Commission order PSCo to create its own self-build plan for purposes of comparing to it to the winning bids in the preferred portfolio.

b. We rejected similar self-build suggestions proposed by the OCC and Denver in Phase I based on a number of grounds. These included: a lack of credible evidence that a self-build option would likely be cheaper; a finding that the Company complied with the IRP rules by obtaining competitive bids; a lack of any evidence of collusion among the bidders; a finding that a PSCo self-build bid would have discouraged some bidders from participating in the RFP; and a finding that because of the differing risks it is difficult to compare a self build plan with the preferred portfolio. Based on the evidence in this Phase II, we again reject the OCC's and Denver's arguments and find that PSCo's Phase II portfolio is a reasonable least cost plan for the same reasons.

c. This is not to say that we disagree, in principle, with the Schechter-Hunt line of reasoning. Both the OCC and Denver witness present a compelling case, but it falls apart in practice. The IRP rules--whatever their merit--are in effect, and PSCo has followed them here. That the rules allow excluding one of the potentially most efficient, least cost generators, PSCo, is a flaw in their structure. Given the exigencies of meeting customers' generation needs, the Commission cannot double back to start the process over again. Because this is the least cost portfolio under existing IRP rules, we approve it.

d. In Other evidence in this proceeding supports our finding that the Company's preferred portfolio is reasonable. First, Staff witness Barhaghi conducted his own independent review and modeling runs of PSCo's bid evaluation. He testified that the Company properly represented and evaluated the bids (with the exception of the Lamar wind project). Second, we are persuaded by the testimony of PSCo witnesses Eves and Taylor that ordering the Company to produce and evaluate a self-build option at this time would jeopardize the timely and successful development of necessary resources. This is inadvisable especially in light of credible evidence that the proposed portfolio is reasonable. Third, the argument that PSCo's resource plan should be more heavily or completely comprised of baseload facilities was successfully rebutted in the testimony of witnesses Taylor and Meehan. They pointed out that the economies of scale of large size facilities could be offset by a number of factors including transmission costs, environmental considerations, siting disadvantages, and the increased risks of relying on one or two large facilities to meet future needs.

e. Turning to the City and County of Denver's proposals, in Phase I we rejected Dr. Hunt's recommendation to change the IRP incentive structure by establishing a sharing mechanism and a base to which the Commission could compare the purchased power bids. As in Phase I, Dr. Hunt's Phase II proposed baseline relies on Dr. Schechter's cost estimates. Our rejection of Dr. Hunt's proposal in the Phase I decision was grounded, in part, on our finding that Dr. Schechter's estimates of a PSCo self-build baseline were flawed. Inherent in Dr. Hunt's proposal is the question of what baseline costs the Commission would employ for purposes of constructing his recommended sharing mechanism. Since we reject Dr. Schechter's

Phase II suggestion that the Company create its own self-build plan, even if we were interested in implementing Dr. Hunt's sharing mechanism, we would once again face the problem of what base cost to use in examining the bids. There is simply not enough evidence in this proceeding to establish such a baseline.

f. We also reject Dr. Hunt's proposal for changing the structure of incentives within the IRP rules by constructing a sharing mechanism. To the extent such a proposal is even advisable, a rulemaking docket would be the necessary place to consider that suggestion. Dr. Hunt raises interesting questions about the potential for perverse incentives in the current IRP rules and the present Colorado electric market structure. However, even though Dr. Hunt recommended that we change the incentives in the IRP rules, he himself acknowledged that it would be difficult for PSCo to build necessary generation to meet the 2003 and 2004 additional power requirements if we were to order the Company to submit a self-build option at this time. For all these reasons, we reject the suggestions by the OCC and Denver, and approve the resources proposed by the Company in its Phase II portfolio.

B. Lamar Wind Energy Bid

We now consider whether to order PSCo to add the Lamar Wind Energy Bid to the Company's preferred resource plan. Some of the parties advocated that the Company be directed to acquire the Lamar project in addition to those projects included in the preferred portfolio (*i.e.,* the Lamar bid would not replace any other winning bid).

1. Party Positions

e. CRES

(1) CRES filed Answer Testimony by Messrs. Steve Andrews and Ron Larson. Mr. Andrews testified that PSCo's adjusted "base case" natural gas price scenario has a low probability of being achieved. He contended that, long-term gas prices will be at or above PSCo's "super high" fuel scenario. While one wind project is not the solution to controlling gas prices, Mr. Andrews states, it is the only proposal in this docket that will help. Similarly, Mr. Larson testified that it is in the interest of all PSCo's ratepayers to add the Lamar bid to the preferred portfolio.

(2) CRES contends that the proposed wind project will lower customers' rates and should be included in the preferred portfolio for a number of reasons. First, the addition of the wind bid to the electric generation portfolio will have positive rate impacts as shown by Exhibit 102. That document, CRES suggests, shows wind resulting in total benefits of $8-$45 million dollars in 1999 net present value amounts. Second, CRES argues that adding the wind bid has a positive impact as a hedge against gas price risks. CRES maintains that PSCo has seriously underestimated future gas prices. A high gas price forecast, the most likely scenario in CRES' view, means

the wind plant is cost effective even under PSCo's assumptions about ancillary service charges. Third, CRES argues that PSCo's addition of ancillary service costs to the wind bid is unfair and arbitrary; there is no basis for attributing these costs to the bid, particularly at the level suggested by the Company. CRES contends that ancillary service costs are system costs, not properly attributable to a single generation facility. Finally, CRES claims that the Company's method of estimating ancillary costs was improper for a variety of reasons. These include: Company witness Hill based his analysis on a single anemometer reading, which could not account for the dampening effects of a diversity of reactions of individual turbines within the wind farm; PSCo's ancillary service cost analysis ignored the predictability of wind; PSCo's analysis of ancillary service costs improperly used coal plant cycling costs when gas plant cycling would be standard operating procedure; and PSCo's ancillary cost method does not grant extra capacity factor to the fully backed up wind plant. In general, CRES supports Staff's analysis of ancillary service costs. *See* discussion below.

(3) CRES notes that the IRP Rules call for balancing eight diverse criteria to achieve a portfolio of electric generation to meet future electric loads in the public interest. CRES suggests that we consider five kinds of benefits that PSCo's analysis of wind ignored: wind provides a hedge

against the risk of future gas price increases; wind helps manage environmental risks and promotes sustainability; wind offers generation technology and geographic diversity; the siting of wind plants is less risky than fossil fuel plants; and the Lamar plant, in particular, provides an opportunity for economic development in rural Southeast Colorado.

(4) In general, CRES requests that we order the Company to negotiate in good faith for the Lamar wind project, instead of directly ordering PSCo to enter into a contract with Enron. CRES suggests that a contract on the terms proposed in the bid would be in the public interest. As such, CRES contends, we should approve the Phase II portfolio proposed by PSCo, but direct the Company to negotiate in good faith for the acquisition of the 162 MW wind project in Lamar.

f. Law Fund

(1) The LAW Fund filed Answer Testimony by Messrs. John Nielsen and Jim Caldwell, and Dr. Michael Milligan. The LAW Fund argues that the Lamar wind project would be a cost-effective addition to the Company’s preferred plan of supply-side resources as measured on a capacity and energy basis. Based on the Company’s most recent estimates, the LAW Fund contends, the addition of the Lamar project to the Company’s preferred plan would result in an estimated $45 million in net benefits (present value 1999 dollars) to the PSCo system on a capacity and energy basis under the Company’s high gas price

scenario. According to the LAW Fund, even assuming the Company's optimistic base gas price scenario, the addition of the Lamar bid to the Company's preferred plan would still result in an estimated $8 million in net benefits on a capacity and energy basis to the Company's system. And, additional benefits such as diversity of generation mix; no air emissions, and economic development make the Lamar project even more compelling.

(2) The LAW Fund further maintains: The Company ignored these additional benefits and instead focused on the potential for additional ancillary service and transmission costs as the basis for rejecting a cost-effective bid. The evidence demonstrates that the Company's estimate of $41-48 million in increased ancillary service costs resulting from the addition of the Lamar project to the PSCo system are dramatically overstated. PSCo's estimate fails to recognize that meteorological forecasting and persistence modeling can increase the predictability of the output of a wind plant by as much as 80 to 90 percent. Of the remaining variability in output that cannot be predicted, PSCo fails to acknowledge that roughly fifty percent of that variability will never be experienced due to the network dampening effect of other uncorrelated variability in generation and load on the system. PSCo predicts that, as part of its ancillary services cost estimate, its existing inventory of predominantly forty to fifty

year-old coal-fired plants would incur an estimated $17 million in cycling costs to provide regulation service for the Lamar wind project. However, the record demonstrates that the incurrence of these cycling costs would be unnecessary and imprudent, because, as a result of this IRP, thousands of MWs of new state-of-the-art gas-fired generation owned by third parties will be available on the Company's system. That generation will provide regulation service much more efficiently and at a fraction of the cost, as compared to PSCo's aging coal-fired plants. According to the LAW Fund, the record establishes that the ancillary service costs associated with the Lamar bid would be in the range of $5-6 million, not the $41-48 million estimate proposed by the Company. As such, the Lamar bid remains cost-effective under PSCo's base and high fuel price scenarios, even if ancillary service costs are attributed to the project and even when the additional benefits of the project are not considered.

(3) PSCo witness Goodrich provided a separate estimate of ancillary costs for Lamar amounting to $38 million. The LAW Fund, however, notes that $35.6 million of that amount is the result of Ms. Goodrich's imposition of energy imbalance charges on the project. According to the LAW Fund, Ms. Goodrich created a hypothetical example of what the Federal Energy Regulatory Commission ("FERC"), pursuant to the transmission tariff of the Western Area Power Administration

(“WAPA”), would allow a transmission provider to recover for ancillary services from the Lamar facility, if such a facility attempted to deliver power into the transmission provider’s service territory. In response, the LAW Fund emphasizes that WAPA’s tariffs are acknowledged not to be cost-based, but, rather, are intended to be punitive. The LAW Fund states that in Order 2000 FERC signaled that the power industry should move towards real-time balancing markets and away from the antiquated and punitive notion of energy imbalance charges. The LAW Fund further notes that during cross-examination Ms. Goodrich conceded that, had she used more sophisticated modeling techniques (other than naïve persistence modeling), even her energy imbalance charges would certainly have been less. According to the LAW Fund, Ms. Goodrich’s analysis, when framed in the context of the most recent regulatory decisions, also supports an ancillary service cost estimate in the range of $5-6 million.

(4) In his Answer Testimony, LAW Fund witness Caldwell argues that PSCo proposes to “charge” the Lamar project for its allegedly extraordinary contribution to ancillary service costs; however, the Company is not charging any extraordinary ancillary service costs to other specific resources. He contends that it is not common industry practice to allocate a portion of system-wide ancillary service costs to a particular generator or a particular load in either a

resource-planning context or in actual operations. Mr. Caldwell maintains that historically ancillary service costs have been generally considered to be network costs, shared by all, and not associated with individual resources. For example, Mr. Caldwell asserts, nuclear plants contribute disproportionately to need for spinning reserves, but are rarely charged for this service. Similarly, certain industrial loads, such as arc steel mills, can have sudden, large changes in demand that tax the ancillary service resources in a local control area. Nevertheless, such loads are rarely charged for their contribution to ancillary service costs. Mr. Caldwell also claims that PSCo used an unrealistically low network dampening effect of 15%, which overstated the need for ancillary services.

(5) The LAW Fund states that several Company witnesses have suggested that the assignment of a $36 million capacity benefit to the Lamar wind project may have been overly generous. Yet, according to the LAW Fund, that $36 million capacity benefit was PSCo's own calculation based on PSCo's own method. The LAW Fund claims that PSCo witness Mr. Eves acknowledged during cross-examination that PSCo had developed the method in response to a stipulation in the 1996 IRP settlement, and that the other parties to the settlement had accepted the method.

(6) As for the Company's concerns about Lamar's potential impacts on the transmission infrastructure,

the LAW Fund points out that PSCo did not raise these concerns until its rebuttal testimony. According to the LAW Fund, the Company's concerns appear to focus on the potential for transmission constraints south of Denver, from Midway to Daniels Park, during the 2003-2004 time frame. However, Company witness Eves testified that transmission constraints would not be a problem in 2002, and that such constraints would disappear beginning in 2005 once the Midway-Daniels Park transmission project is completed. The LAW Fund contends that within the two-year period 2003-2004 transmission constraints would be an issue only a fraction of the time. Such constraints would only arise if the output of Lamar is greater than 48.6 MW (projected to occur roughly half the time) and other generation sources south of Denver are running at or near full capacity. The LAW Fund suggests that these transmission constraints could be mitigated (*e.g.,* by working with Tri-State and other transmission providers or generators in the area) during the 2003-2004 time frame.

(7) The Law Fund requests that we order PSCo to negotiate in good faith with Enron on the terms and conditions for bringing the Lamar facility on-line by the end of 2001 or early 2002, subject to receipt of federal production tax credits and required regulatory approvals. The Law Fund contends that as part of that negotiation process, we should direct PSCo and Enron to identify strategies for mitigating any

potential ancillary service and transmission cost impacts properly associated with the Lamar facility.

g. Staff

Mr. Barhaghi presented Staff's general observation that the Company properly represented and evaluated most of the bids received for the 1999 IRP, the exception being the Lamar bid. Mr. Barhaghi contended that PSCo used an extreme approach in evaluating the Lamar project, especially in its assignment of additional costs to the wind resource. In analyzing the levelized cost (stated in $/MWh), Mr. Barhaghi found the wind project to be the lowest cost resource in the entire proposed portfolio (except for the proposed 0.7 MW hydroelectric project). He claimed that the wind project became non-competitive, according to the Company, only when PSCo added additional cycling and regulating costs to the bid. Mr. Barhaghi was unaware of such additional ancillary service costs being attributed to wind resources in any other jurisdiction. Additionally, Mr. Barhaghi was unaware of any theoretical or experimental basis supporting the level of ancillary costs attributed to the Lamar project. To put PSCo's proposed level of ancillary costs into perspective, Mr. Barhaghi calculated the Rocky Mountain Reserve Group ("RMRG") call requirements for PSCo's system. Those criteria require 7.0% of load for primary spinning reserve and 3.5% of load for secondary spinning reserve. Under these requirements the Lamar project would require 11MWs and 5.5MWs, respectively of additional regulation. Mr. Barhaghi's PROSYM calculation of the cost of this additional regulation was $3.6 million (NPV in 1999 dollars). He recommended that we order the Company to add the Lamar bid to the preferred portfolio, provided the resource could be in-service in time to qualify for the federal production tax credit.

h. PSCo

(1) PSCo opposes contracting for the Lamar wind facility, contending that the bid will add approximately $33 million (1999 NPV $) to its revenue requirement. Witnesses Eves and Hill both testified that the evaluation team was generous to the Lamar bid in assigning capacity credit. They contended that PSCo's assignment of a credit of 48.6 MWs on a 162 MWs nameplate rating (30% of nameplate rating) is high considering that other utilities in the Western Systems Coordinating Counsel ("WSCC") credit wind with capacity of 17% to 20% only. The Company then notes that it gave this intermittent resource a credit of $7 per kW-Month, the same value it gave to controllable dispatchable gas turbines. According to Mr. Eves, there is a real possibility that WSCC would treat the wind project as providing significantly less effective firm capacity.

(2) In its portfolio optimizations PSCo also assumed that the Lamar facility would need only 49 MWs of

transmission capacity, rather than the 162MWs it would actually need when all the wind turbines were turning. The Company contends that had it assumed 162 MWs of transmission capacity would be necessary, the bid would have exceeded contract path limitations and would likely trigger expensive transmission infrastructure improvements.

(3) According to PSCo, intervenors in this docket ignored the favorable assumptions the Company afforded the Lamar bid. Moreover, PSCo maintains, keeping sufficient unloaded generation available to follow variations in output from the wind facility has real costs, for fuel and other production costs and for additional wear and tear on equipment. These regulation and cycling costs are real and significant.

(4) According to the Company, only two parties offered quantification of these costs, the Company itself and Staff. PSCo witness Hill refined his analysis of these costs in response to criticisms raised by the LAW Fund. *See* Exhibit AA. Mr. Hill estimated regulation and cycling costs to be in the range of $41 to $48 million (1999 NPV $). Regulation costs ranged from $23.6 million to $30.8 million (1999 NPV $) depending upon the fuel cost assumptions; cycling costs (costs of wear and tear on facilities used for spinning reserves) were estimated at approximately $17 million (1999 NPV $). According to the Company, these cycling cost estimates are conservative because: (1) they were expressed in 1996

dollars and were not escalated; and (2) the replacement power cost assumed in the analysis was significantly lower than today’s prices. When the costs for regulation and cycling are added to the portfolio containing the Lamar facility, PSCo asserts, the additional cost of the preferred portfolio with Lamar included amounts to $33 million (1999 NPV $) using base case fuel assumptions.

(5) The Company contends that Mr. Barhaghi did not properly estimate regulating reserve costs. Mr. Barhaghi performed a calculation unrelated to regulating reserve, but rather related to contingency reserves (*i.e.,* reserves intended to cover the unexpected loss of an entire facility, not for variations in output from a facility). Mr. Barhaghi calculated the additional contingency reserve required if the Lamar facility were added to PSCo system load. However, he ignored the hour-to-hour variation in output from the facility. Furthermore, Mr. Barhaghi (in Exhibit 118) inappropriately applied the RMRG contingency reserve criteria to estimate the level of regulating reserves needed. Thus, Mr. Barhaghi’s PROSYM estimate of $3.5 million is a function of his inaccurate assumption that only 5.5 MWs of regulating reserve would be required. This contrasts to the Company’s analysis in which 56 MWs of regulating reserve is required for the Lamar facility. In his analysis, Mr. Barhaghi ignored that the Company must comply with WSCC minimum operating criteria for

both contingency reserves and regulating reserves, and these reserve requirements are additive. For these reasons, the Commission should not rely on Mr. Barhaghi's regulation cost estimates in considering the Lamar bid.

(6) PSCo witness Goodrich responded to the testimony of Mr. Caldwell. Her separate evaluation of ancillary costs attributable to Lamar purports to quantify the costs that FERC would allow a transmission provider to collect for the ancillary services resulting from the intermittent nature of a wind resource. She determined that PSCo would be charged $37 to $38 million (1999 NPV) by a transmission provider for delivery of power from this resource.

(7) As for witness Mr. Nielsen's (LAW Fund) spreadsheet analysis, the Company responded that Mr. Nielsen assumed that the energy from an intermittent wind facility would command the same market price at Four Corners or in the Southwest Power Pool ("SPP') as would firm energy. However, had Mr. Nielsen used PSCo's marginal cost, a more appropriate analysis, instead of the market price for energy at Four Corners and SPP as a proxy for Lamar's energy value, Mr. Nielsen would have derived a negative value for the wind resource under all fuel sensitivities considered by PSCo. PSCo claims that when all quantifiable costs and benefits are taken into account, the wind project is not a good bargain even under Mr. Nielsen's analytical approach.

(8) Generally, PSCo argues that none of the quantitative objections to the Company's analysis of a wind resource have any merit. Furthermore, the Company suggests that any consideration of non-quantifiable benefits takes this issue out of the realm of an economic decision and places it into the realm of a policy "set-aside," essentially a reopening of Docket No. 00A-008E (demand-side management and renewables docket).

(9) With respect to the argument that it is not fair to assign regulation costs to a particular resource because they should be considered as system costs, the Company responds that it does consider regulation costs to be system costs. However, this does not mean that these costs should be ignored in this docket. Similarly, the Company argues that it is irrelevant that currently large fluctuating loads (*e.g.,* the CF&I arc furnace) are not specifically charged for the regulation costs they impose on the system. The incremental regulation cost created by a large wind farm such as Lamar still exist, and all parties, including the wind proponents, acknowledge that these costs would affect electric rate customers.

(10) Witness Haeger's rebuttal testimony addressed CRES' claims that the gas price forecasts used by PSCo in the Phase II bid evaluation are too low. He contends that the forecasts used by the Company to evaluate Phase II resources are well within the range of expected gas prices for the next

ten to fifteen years. In fact, with the futures market, PSCo could now fix the price of gas to be used in the generation for the bids in question. As a result, even with the recent market run-up in prices, PSCo is still in a position today to acquire the gas necessary for the proposed generation at a price below the high gas price scenario in the early years, and near the adjusted base case scenario in the later years of the proposed purchase power contracts.

(11) If the Commission favors additional wind resources, the Company suggests, it should be allowed to issue a new RFP. The existing Lamar bid is now stale. Moreover, the Company maintains that Enron’s bid internalized the cost of a thirty-two mile transmission line to connect to a PSCo substation. There is a strong probability that competition among suppliers using different sites could reduce the cost of wind power. PSCo points to a recent wind solicitation by Southwest Power that resulted in prices substantially lower than the Lamar bid. Additionally, PSCo contends that a Commission order directing it to buy from a specific wind supplier would significantly impair its bargaining leverage in negotiating many complex terms.

(12) The Company finally requests that the Commission assure full cost recovery for any mandated wind purchase. According to PSCo, we are usurping management prerogative by ordering it to acquire a specific resource.

Moreover, normal rate mechanisms will not achieve full cost recovery for power purchases from Lamar. Presently, the Company's electric rates are frozen and since the Lamar bid is not cost effective, PSCo asserts, that purchase will erode its earnings. Therefore, the Company contends that if we mandate this purchase, we should do so only with a dollar-for-dollar recovery of the amounts paid to Lamar (*e.g.,* by adopting a special wind rider such as that suggested in Docket No. 00A-008E).

2. Commission Decision

a. We find that adding Enron's Lamar wind energy bid to PSCo's preferred resource plan is in the public interest and comports with the IRP rules. This determination is based solely on our finding that the acquisition of the Lamar facility will likely lower the cost of electricity for Colorado's ratepayers. After a careful analysis of the economics of the wind bid, we find that it is justified on purely economic grounds, without weighing other benefits of wind generation that could be considered under the IRP rules.

b. The parties presented arguments about a number of factors that we consider in analysis of the Lamar facility. Generally, the economic analysis centered on the proper measurement of economic costs and benefits. Disputed issues included: energy and capacity benefits, gas price forecasts, additional ancillary service costs, and possible transmission constraints. The most significant factors for our decision related to ancillary service costs and the gas price forecasts. Ancillary cost estimates ranged from approximately $3 million to approximately $48 million. The Company’s final (January 2001) gas price forecast contained a base case gas price scenario and a high gas price scenario. The combination of these two factors presented the Commission with four estimates of the total dollar benefit of adding Lamar to the preferred portfolio. In general, the results of this analysis suggest that the economic benefit is positive, except under the combination of high estimated ancillary costs and low estimated future gas prices. Thus, a combination that contains either low ancillary costs or a higher estimate of future gas prices results in a wind bid that is economically justifiable. We conclude that the likely level of ancillary costs is toward the lower end of the range of estimates in evidence. Additionally, we conclude that there is a substantial probability that future gas prices will be higher than the Company’s base gas forecast.

c. In order to more systematically explain our decision we specifically address each of the disputed issues: ancillary service costs, gas price forecasts, energy benefits, capacity benefits, transmission constraints, and other IRP criteria. The parties raised two other practical considerations which we address. These include: How will the Company recover the costs of the Lamar facility; and should we order PSCo to issue another wind RFP, or direct it to engage in good faith negotiations with Enron Wind?

C. Ancillary Service Costs

1. The particular ancillary services at issue here are the incremental ancillary services attributable to the Lamar bid. LAW Fund witness Caldwell described ancillary services as those services related to maintaining real time balance between generation and load services. These include regulation, load following, and spinning reserve services. To compensate for fluctuations in delivery of power from nondispatchable generating units such as wind turbines, the Company must regulate the system by adding generation. The Company asserts that the incremental ancillary services attributable to the Lamar facility will cost $41 to $48 million over the fifteen-year life of the contract. Staff and the LAW Fund estimated these costs to be in the range of $3 to $6 million.

2. We determine that the level of ancillary services costs is in the lower ranges of these estimates is based on several findings. The record indicates that PSCo's method of calculating ancillary costs for a wind project is not required or mandated by the North American Electric Reliability Council ("NERC"), the Western Systems Coordinating Council (PSCo's reliability council), or RMRG (the power pool of which PSCo is a member). *See* February 2 Transcript, pages 70-71. That method is not used by any other utility, not even PSCo's sister

operating companies in Xcel. *See* February 2, Transcript, pages 256 and 260-261. Consequently, the Commission has no industry or regulatory standard with which to evaluate the validity of PSCo's method. We agree with the LAW Fund and other parties that PSCo's method does not adequately account for the ability of meteorological forecasting and persistence modeling to increase the predictability of the output of a wind plant, thereby reducing the need for regulation service. We also agree with LAW Fund witness Caldwell that the Company's assumption of a fifteen percent network dampening effect is less than is likely to be experienced. In addition, we agree with Staff, the LAW Fund, and CRES that PSCo's $17 million estimate for cycling costs (wear and tear) to provide regulation services for Lamar is excessive. PSCo's method assumed regulation and load following would be provided by existing coal-fired baseload facilities, even though gas-fired plants could provide these services at lower costs.

3. PSCo attempted to bolster its estimate of ancillary cost estimates in the rebuttal testimony of Ms. Goodrich. Her testimony purported to measure the costs that FERC would allow a transmission provider to collect for ancillary services associated with the intermittent nature of a wind resource. According to her analysis, PSCo would be charged $37 to $38 million (1999 NPV) by a transmission provider for delivery of power from Lamar. However, we discount this

testimony because Ms. Goodrich's estimate was mostly based on energy imbalance charges derived from a WAPA tariff that is not cost based, but rather is intended to be punitive.

4. In the absence of any other industry standard, we find Mr. Barhaghi's testimony persuasive. He testified (Answer Testimony, page 10) that, to put PSCo's proposed ancillary costs into perspective, under RMRG call requirements for PSCo's system, which require 7.0% of load for primary and 3.5% of load for secondary spinning reserve, the Lamar facility would require 11MWs and 5.5MWs of additional regulation. Using these values as a proxy for regulating costs, his PROSYM calculation of these cost is $3.6 million (NPV in 1999 dollars). This is $3.6 million over a fifteen-year period in a system with over $1.0 billion in annual production costs, a relatively miniscule amount. We note Mr. Barhaghi's testimony that, in terms of levelized cost stated in $/MWh, the wind project was the lowest cost resource in the entire portfolio (except for one small (0.7 MW) hydroelectric project). As Mr. Barhaghi pointed out, the Lamar bid appears non-competitive only when the Company attributes significant cycling and regulation costs to the project.

5. PSCo points out that FERC Orders 888 and 2000 move the industry in the direction of unbundling and separately charging ancillary service costs for transmission service. However, as LAW Fund witness Nielsen noted (Answer Testimony ,

pages 4-5), PSCo proposes to charge the Lamar project for its purported contribution to ancillary service costs, but does not directly attribute any such costs to other resources. PSCo witness Klaiman agreed that it has not been common industry practice to allocate system-wide ancillary service costs to a particular generator or a particular load in either a resource-planning context or in actual operations. For example, Mr. Klaiman agreed that certain industrial loads like electric arc furnaces impose ancillary service costs on the system, but traditionally these costs have not been allocated to such loads. Historically, ancillary service costs have been considered to be system costs shared by all components of the system.

6. We agree that, as an intermittent resource, wind does impose incremental ancillary service costs on the system. However, we decline to adopt any particular method for determining such costs based on this record.[1] While some ancillary service costs, in excess of costs for conventional generation, are attributable to the wind bid, we do not agree with the estimates provided by the Company. Rather, we find that a reasonable estimate of ancillary costs is likely to be closer to that offered by Staff and the LAW fund. Pursuant to

[1] Indeed, we are hopeful that projects such as this one will allow us to better know and quantify the ancillary costs that should be attributed to wind projects.

these estimates, the Lamar project will be cost effective under the Company's base case and high gas price scenario's.

D. Natural Gas Price Forecasts

1. The natural gas price forecast is another significant factor in our analysis because higher prices drive up the marginal cost of producing electricity from natural-gas-fired generators. Under these circumstances, the value of wind to the PSCo system increases comparatively, as the energy from the wind plant is valued at the Company's marginal cost of providing power. Under PSCo's high gas price forecast, the total benefits of the wind plant are positive for all but the very highest estimate of ancillary service costs.

2. As explained above, the Commission concludes that there is a substantial probability that future gas prices will be higher than the Company's base gas forecast. It is obviously difficult to predict natural gas prices. The Company itself adjusted its own forecast upwards twice in the last six months. We note that even the Company's most recent base forecast (confidential Exhibit 105) still begins several dollars lower than current natural gas prices. We also face the prospect that the unprecedented growth in natural-gas-fired electric generation nationwide will likely result in the natural gas

3. market being driven by demand-side factors more than in the past. Based on the record here, we conclude that it is prudent to lean toward the higher range of the gas forecast

to protect Colorado's ratepayers against the substantial possibility that natural gas prices will rise above PSCo's base case. We note that even if the Company's base forecast of natural gas prices turns out to be accurate the Lamar bid is still economic unless ancillary costs are at the high end of the estimates.

E. Energy Benefits

Energy benefits are calculated by multiplying the quantity of electricity produced by a measure of the value of each unit of that energy to the Company. Initially LAW Fund witness Neilsen and PSCo witness Hill disagreed as to whether the appropriate measure of that value is the market price for energy or the Company's avoided marginal cost of generation. Mr. Nielsen (Exhibit 102) eventually agreed to the Company's marginal cost measure; therefore, the dispute as to the dollar value (1999 NPV) of the wind energy benefits to PSCo was essentially settled. In Exhibit 102 the energy benefits are calculated as a negative $28 million in the base gas price scenario and a positive $9 million in the high gas price scenario.

F. Capacity Benefit Calculations

1. Capacity benefits are another component to determining the overall benefits of the wind bid to PSCo's system. Generally, the capacity benefit is calculated by multiplying the quantity of capacity credited to a generation

resource by the dollars per kW month assigned to that capacity. The record does not contain a thorough analysis of the amount of the capacity credit attributable to Lamar because, as various parties pointed out, it is derived by a method created by PSCo that no other party objects to. PSCo did not provide information related to its existing Ponnequin wind farm. We expect the Company to include an analysis of Ponnequin, Lamar, and its other wind resources in future cases where wind capacity and ancillary services are considered. Further, we expect such analysis to consider the combined effect of multiple wind farms operating together to better understand the reliability and system impacts of multiple wind sources in diverse locations, and compared to conventional resources. Based on the limited evidence in this record, we accept PSCo's estimated capacity credit of 48MWs as attributable to the Lamar project.

2. The Company priced the capacity for Lamar at $7 per Kw/mo. Mr. Barhaghi suggested adding $1 to the Company's price because of the zero emissions characteristic of wind. Since the Commission is interested in determining whether the wind bid is justifiable on a strictly economic basis, we considered the $7 price in our analysis. This results in our finding that the capacity benefit attributable to Lamar is approximately $36 million (1999 NPV) as calculated in Exhibit 102.

G. Transmission Constraints

We conclude that potential transmission infrastructure impacts of the Lamar facility should be given minimal weight in our decision. The Company introduced this concern in its rebuttal testimony. At the hearing, witness Eves testified that the Company's concerns regarding transmission constraints are focused on the two-year period 2003-2004, and for the area south of Denver from Midway to Daniels Park. Those constraints will be relieved beginning in 2005 once the Midway-Daniels Park transmission project is completed. Thus, the Company's concerns are effectively limited to a two-year period during the fifteen-year life of the proposed Lamar contract. Even for this two-year period, the evidence provided by the Company does not give us a good basis for determining the actual likelihood of a transmission constraint occurring.

H. Other IRP Criterion

We stated earlier that our decision is justified solely by the economics of Enron's wind bid. As explained above, our decision is based on our findings regarding the likely level of ancillary service costs and probable natural gas price levels. The fuel diversity and environmental advantages of the Lamar Wind resource may provide additional economic benefits, but we did not weigh them here..

I. PSCo’s Recovery of Wind Costs

1. In cross-examination, Mr. Barhaghi agreed that the energy price in the Lamar bid is in excess of the Incentive Coast Adjustment (“ICA”) baseline. Consequently, if PSCo buys power from Lamar it will be able to recover only one-half of the difference through the ICA. Mr. Barhaghi believed that the Commission could treat Lamar costs differently from other costs recovered in the ICA. The Company specifically requests that it be granted full cost recovery, if it is directed to acquire the Lamar project. It suggests adoption of a special wind rider to ensure full cost recovery.

2. We agree with the Company that it should be granted an opportunity to recover all of the costs associated with power purchases from Lamar, especially since this purchase is pursuant to our directive in this decision. However, there is no need for us to specify the cost recovery mechanism here. This decision directs the Company to attempt to acquire the Lamar facility as part of its 1999 IRP. We now confirm that PSCo is entitled to an opportunity to recover the costs associated with any power purchases from Lamar. After the Company enters into a contract with Enron for the Lamar facility, it may propose a specific cost recovery mechanism to the Commission by an appropriate filing.

J. Good Faith Negotiation Versus Rebidding of Wind

1. The Company asserts that it is uncertain at this juncture whether Enron is willing to proceed under the terms of its original bid. If the Commission favors acquisition of a wind resource for this IRP, PSCo suggests that it be permitted to solicit new bids for additional wind power. According to the Company, there is a strong probability that competition among wind suppliers using different sites than Lamar could reduce the cost of this power (*e.g.,* due to transmission costs associated with the Lamar facility). PSCo refers to the testimony of witness Eves concerning a recent wind solicitation by Southwest Power that resulted in prices substantially lower than the Lamar bid. Furthermore, PSCo contends that a Commission order to buy from a specific wind supplier would significantly impair the Company's bargaining leverage in negotiating many complex contractual terms. PSCo urges us to permit it to issue a new RFP conditioned on the extension of the federal production tax credits.

2. In contrast, the Law Fund requests that we order PSCo to negotiate in good faith with Enron on the terms and conditions for bringing the Lamar facility on-line by the end of 2001 or early 2002, subject to receipt of federal production tax credits and required regulatory approvals.

3. We reject the Company's suggestion to authorize another bid for wind power. In the first place, we note that

PSCo itself vehemently opposed suggestions by parties such as the OCC and Denver that appeared to reopen the competitive bidding process conducted by the Company (*e.g.,* the suggestion that we order the Company to prepare a self-build plan and compare those results to the bid results). PSCo stressed the importance of preserving the integrity and credibility of the competitive bidding process. As is the case with the other bidders who participated in PSCo's RFP, all interested wind bidders had a fair and full opportunity to submit proposals to the Company. It would be unfair to Enron to now authorize a new RFP on the hope and speculation that better proposals will be forthcoming. Second, we note that the evidence here indicates that the Lamar proposal is economically sound in comparison to other bids received by the Company and now being considered by the Commission. There is no acceptable reason for simply ignoring that evidence and authorizing a new RFP. Third, part of what makes the wind bid economic, is the availability of federal tax credits due to expire on December 31, 2001. To rebid, would jeopardize the availability of those credits and thus the economic viability of the project.

4. As for the Company's concern that its bargaining position with Enron would be compromised by a directive that it acquire the Lamar facility, we respond: Critical components of Enron's proposal should have been established in its response to the Company's RFP, including elements such as price. Nothing in

this order suggests that Enron is now permitted to change any part of its bid without consent of the Company. Moreover, we are not *mandating* that PSCo acquire the Lamar proposal. Instead, as suggested by CRES and the LAW Fund, we direct that the Company enter into good faith negotiations with Enron to attempt to bring the Lamar facility online in a timely manner. PSCo will be directed to file a report regarding the status of those negotiations within sixty days following the effective date of this order. If negotiations with Enron are unsuccessful, we expect the Company to provide good and full explanation for that failure. (The Commission may request a response from interested persons, including Enron, to confirm that negotiations were unsuccessful for valid reasons.)

K. Other PUC Trial Staff Issues

1. Forecasting Concerns

a. Parties' Positions

(1) In his Answer Testimony, Staff witness Winger raised concerns with the Company's use of its August Forecast Scenario in determining its needs for capacity in the years 2003-2005. Staff recommends that the Commission approve the acquisition of resources based on the August 2000 demand forecast. However, Staff also recommends that the Commission not approve the method used by the Company to produce the August Forecast Scenario. Staff claims this is wholly consistent with PSCo witness Mark's testimony that the Company is not asking the

Commission to approve the method used to develop the August forecast.

(2) Staff requests that we direct PSCo to implement the Commission’s forecasting suggestions in Decision No. C00-590 (Mailed Date of June 1, 2000). Staff claims that in view of PSCo’s inaction since that decision was issued, more definitive direction is needed. Additionally, Mr. Winger recommended that we order PSCo to obtain expert consulting assistance to advise the Company with respect to changes necessary to improve its forecasting method and to assist it with the implementation of recommended improvements. However, in light of PSCo’s testimony that it had already retained an outside expert, Staff now believes that this recommendation has already been addressed, at least in part. Staff states that it remains concerned about PSCo’s use of the consultant. For that reason, Staff requests that we require PSCo to inform the Commission, by notice filed in this docket, of its decision with respect to retaining the consultant for the implementation phase.

(3) Finally, Staff recommended that we direct PSCo to file a new demand forecast on or before March 15, 2001, so that the forecasting method can be investigated and examined by the Commission and interested parties. This new forecast could be filed in this docket or by an application seeking Commission approval of the forecasting method. In

Staff’s view, the Commission should make it clear that the investigation and examination will occur separate and apart from consideration of any other issue.

(4) Denver also expressed concerned about the accuracy of PSCo’s current load forecast. According to Denver, the Company has under-forecast future load. Denver supports Staff’s recommendation that PSCo develop a new load forecast and present it to the Commission.

(5) In her rebuttal testimony PSCo witness Marks discussed the development of the August Forecast Scenario submitted in PSCo’s 1999 IRP Annual Update and Supplemental Analysis (filed in October 2000). She responded to Mr. Winger’s assertion that the August Forecast Scenario is improper and that it supported a preconceived increase in the forecasted peak demand. Ms. Marks opposes Staff’s recommendations that we order PSCo to redo the forecast by March 15, 2001, and that the new forecast be submitted for Commission review and approval.

(6) Generally, PSCo contends that the August Forecast Scenario represents an attempt to develop a logical interim forecast adjustment to use for resource selection, until such time as the forecast can be formally revised. The Company anticipates having a new forecast completed, incorporating the results of this assessment, by April 30, 2001. The Company states that it is not asking the Commission to approve the method used in the August Forecast

Scenario as the proper method for use in future Company forecasts. However, the Company is asking the Commission to approve a resource acquisition plan, as set forth in Exhibit 116, that is based upon the peak demand projections derived from the August forecast.

b. Commission Decision

(1) Staff and the Company now agree that we should approve a resource acquisition plan based upon the peak demand projections derived from the August forecast scenario. Staff and the Company also agree that we should not approve PSCo's August forecast scenario as the proper method for use in future forecasts. Therefore, we will approve the Company's Phase II resource acquisition plan based upon the peak demand projection derived from the August forecast. We are not approving PSCo's August forecast scenario as the proper method to be used in the future.

(2) We will not adopt Staff's recommendation to order the Company to implement our suggestions in Decision No. C00-590. In that decision, we *encouraged* the Company to address certain criticisms of its forecasts in the future. We did not *direct* that future forecasts be performed in a specific manner. Based on the evidence presented here, there is still no reason for us to mandate a specific forecasting method. PSCo is examining its forecasting procedures. The Company has now retained an outside consultant to assist it in

improving its forecasting method. Staff will be able to review the new forecast in the near future. At that time, Staff can make further recommendations to the Commission if it still has concerns with the new forecast. Additionally, in view of PSCo's testimony that it has already retained an outside expert to assist it in improving its forecasting methods, it is unnecessary at this point to order the Company to obtain such consulting services.

(3) Based on the Company's representations in its Statement of Position, it appears that April 30, 2001 is an acceptable date for the Company for the filing of the new forecast. Given the timing of the instant decision, we direct PSCo to file its new forecast within 60 days of the mailed date of this order. The new forecast will be filed in this docket, and interested parties may request a hearing within 30 days of that filing.

2. Transmission Concerns

a. Parties' Positions

(1) In his Answer Testimony, Staff witness Mitchell reports on his review of available information regarding PSCo's transmission system during 2000-2005 IRP period. As a general matter, Mr. Mitchell was dissatisfied with the information available from the Company and could not determine whether PSCo had adequately planned and budgeted for its transmission needs through 2005. After Mr. Mitchell filed

his testimony , two events occurred that affect Staff's recommendations. First, on January 24, 2001, PSCo announced a new preferred portfolio. PSCo witness Fulton acknowledged that the Company has not conducted necessary analyses and studies to determine the impact of the January portfolio on PSCo's transmission system. Similarly, PSCo also states that it has not completed the necessary tests, studies, and analyses to determine the impact of the entire 1999 resource acquisition portfolio on PSCo's transmission system. Consequently, according to Staff, there is insufficient evidence on the record to determine whether PSCo's transmission system will be adequate in the period through 2005. A second factor post-dating Mr. Mitchell's testimony is the Commission's decision in Docket No. 00A-067E.There the Commission ordered PSCo to file certain reports, tests results, analyses, and other information relating to its transmission system within 60 days of the final decision in this docket. As a result of these developments, Staff now recommends that we defer consideration of transmission-related issues to Docket No. 00A-067E. Staff further recommends that we retain the option of holding an evidentiary hearing on the future adequacy of PSCo's transmission system after the required reports are filed, and after Staff and other interested parties have had the opportunity to examine and to investigate PSCo's reports.

(2) The Company also suggests that since the Commission has shifted all transmission issues to Docket No. 00A-067E, no further argument on transmission issues is warranted here.

b. Commission Decision

Given our decision in Docket No. 00A-067E and in light of the Company's and Staff's recognition that transmission issues are being considered in that docket, no further action on such matters is necessary here. We adopt Staff's recommendation and defer consideration of IRP transmission-related issues to Docket No. 00A-067E. We will retain the option of holding an evidentiary hearing on the future adequacy of PSCo's transmission system after the reports are filed in Docket No. 00A-067E, and after Staff and other interested parties have had the opportunity to examine and to investigate PSCo's reports.

III. ORDER

A. The Commission Orders That:

1. The Motion for Variation from Page Limits on Statement of Position filed by Public Service Company of Colorado on February 14, 2001 is granted.

2. Phase II of Public Service Company of Colorado's Final 1999 Integrated Resource Plan, as reflected in Exhibit 101, is approved consistent with the above discussion. Public

Service is directed to negotiate in good faith with Enron Wind for the purpose of attempting to enter into a contract for the Lamar wind facility consistent with the above discussion. Within sixty days of the effective date of this decision, Public Service shall file a report in this docket regarding the status of its contract negotiations with Enron.

3. The twenty day period provided for in § 40-6-114, C.R.S., within which to file applications for rehearing, reargument, or reconsideration begins on the first day following the Mailed Date of this decision.

4. This Order is effective immediately upon its Mailed Date.

B. ADOPTED IN COMMISSIONERS' DELIBERATIONS MEETING February 23, 2001.

(S E A L)

ATTEST: A TRUE COPY

Bruce N. Smith
Director

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

RAYMOND L. GIFFORD

ROBERT J. HIX

POLLY PAGE

Commissioners

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