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PENNSYLVANIA PUBLIC UTILITY COMMISSION
COMMONWEALTH OF PENNSYLVANIA
HARRISBURG PENNSYLVANIA

'91 JAN -4 P2:08

December 31, 1990

Samuel J. Chilk, Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTENTION: Docketing and Service Branch

RE: NRC Policy Statement Concerning Possible Safety Impacts of Economic Performance Incentives.

Dear Mr. Chilk:

By letter dated October 26, 1990, State Programs Director Carlton Kammerer invited the Pennsylvania Public Utility Commission to provide comments to the U.S. Nuclear Regulatory Commission ("NRC") on the above-referenced policy statement. In Pennsylvania, the Philadelphia Electric Company ("PECO") does have a nuclear performance incentive program and the Commission's comments have been drafted with this particular program in mind.

Of the four main areas of NRC concern, none is applicable to the PECO nuclear performance clause.

1. <u>The Use of Sharp Thresholds</u>: The PECO clause is based on the overall performance experienced by the company's total nuclear system as opposed to an individual plant. Measurement of performance based on the total nuclear system greatly reduces any incentive to operate an unsafe plant in order to reach or exceed the targeted performance levels. Moreover, because the PECO clause has a gradient system of penalty assessment, a substantial portion of replacement power costs is not borne by the utility until the performance of the overall nuclear system falls below 45% capacity.

2. <u>Short-Term Performance Measures</u>: The NRC's policy statement does not specifically identify the length of "short time intervals." The PECO clause uses a full twelve month period to measure performance. PECO's use of the total system performance measurement, rather than a plant specific measurement, mitigates any adverse impact generally associated with a short measurement period.

3. <u>Null Zones</u>: The PECO clause has a "null zone" of 60% to 70%. Rewards and penalties are not applicable to performance within this zone.

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4. <u>SALP Scores</u>: The PECO clause does not use SALP scores in any manner.

Thank you for inviting the Commission to participate in the activities of the NRC. A copy of PECO's performance incentive clause is enclosed for your reference. If you have any questions or require additional information, please do not hesitate to call.

Very truly yours,

Wm H. Smith

William H. Smith
Chairman

Enclosure

cc: Kathryn G. Sophy, Assistant Counsel
Dennis P. Dougherty, Bureau of Audits

ENERGY COST ADJUSTMENT (ECA) *

The ECA provides for the modification of base electric rates to reflect the dynamic nature of th Company's fuel costs. An ECA charge or credit (the ECA factor) shall apply to any and all electri service furnished pursuant to this tariff, and the ECA factor shall be charged, or credited, as th case may be, for each kilowatt-hour billed, except that service furnished under the Supplementa Energy Provision of the Night Service Rider shall not be subject to the ECA factor nor shall the fue and/or purchased power costs incurred to furnish such service be included in the calculation thereof The ECA factor shall be calculated, to the nearest one-thousandth of one mill per kilowatt-hour, i accordance with the following formula, the various components of which are hereafter defined:

$$ECA = \left[\frac{F}{Sg} - B - \frac{E}{Sn} + \frac{P}{Sn} \right] \times \frac{1}{1 - GRT}$$

The ECA factor shall be calculated annually, and each ECA factor thus calculated shall be reflected on applicable customers' bills for service within a prospective twelve-month period (the Application Year, as hereafter defined) beginning April 1 of each year. The Company's annual calculation of the ECA factor, together with required supporting data, shall be filed with the Secretary of the Commission by March 1 of each year and shall become effective for service rendered on or after April 1 of each year, unless otherwise ordered by the Commission.

The annual periods to be used in calculating each ECA factor are as follows:

The Application Year is a period beginning on the day the Company's ECA factor would becom effective hereunder unless otherwise ordered by the Commission; i.e., April 1, and ending twelv months thereafter, i.e., March 31.

The Reconciliation Year is a twelve-month period beginning on February 1 of the calendar yea immediately preceding the calendar year in which the Application Year begins, and ending o January 31 of the same calendar year in which the Application Year begins; and,

The Performance Year shall be the calendar year (January 1 through December 31) ending prio to the end of, but within, the Reconciliation Year.

ECA No. 1 will become effective on the later of April 1, 1990, or the effective date of bas rates established pursuant to a general rate increase request under Section 1308(d) of the Publi Utility Code, filed on July 21, 1989. The following annual periods shall be used to calculate ECA No 1 in lieu of those set forth above:

Application Year No. 1 will be the period beginning on the effective date of ECA No. 1 an ending March 31, 1991;

Reconciliation Year No. 1 will be the nine-month period beginning May 1, 1989 and endin January 31, 1990; and,

Performance Year No. 1, calendar year 1989, shall not be applicable to ECA No. 1.

A Performance Adjustment, as hereafter defined, shall be included for the first time in the calculation of ECA No. 2. Accordingly, the Performance Year applicable for ECA No. 2 shall be calendar year 1990. However, if a Performance Adjustment is calculated based on that period, the amount thereof shall be appropriately prorated to reflect only the time period from the effective date of ECA No. 1 to December 31, 1990.

* The provisions of this ECA will not be used for billing until the Commission accepts the Company's compliance filing at Docket No. R-891364.

(C) Indicates change.

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ENERGY COST ADJUSTMENT (ECA) - Continued *

In addition, the components of the foregoing formula shall have the following definitions:

F = The estimated energy-related cost of net energy generated in the Company's fossil a nuclear generating stations, excluding the cost of energy generated and sold to oth utilities on a firm basis, plus the Company's energy-related cost of net energy purchas and net energy interchanged plus the assigned test power costs for the Application Yea and excluding energy sold under the Supplemental Energy provision of the Night Service Rider, defined as follows:
FOSSIL GENERATION - the costs charged to fuel Accounts 501 and 547 which are computed the basis of the cost of fuel delivered to the generating site at which it is consume plus the cost of disposing of solid waste from sulfur oxides removal devices.
NUCLEAR GENERATION - the costs charged to fuel Accounts 518 and 521 which are computed the basis of the costs of such fuel delivered at the generating site at which it consumed after deducting therefrom the present salvage or reuse value of such fuel These costs shall include all charges associated with the permanent disposal of nucle fuel.
NET ENERGY PURCHASES - the amounts charged or credited to Account 555, excluding demar charges other than those associated with agreements for the purchase of energy at a cos (including associated demand charges) that is less than the cost of obtaining energy fro alternative sources.
NET ENERGY INTERCHANGED - the amounts charged or credited to Account 555, excludin charges or credits for demand related costs.
TEST POWER - the amounts charged to Account 557 for the value assigned to the energ produced from the facilities undergoing operational tests prior to being placed int commercial operation.

In projecting the Company's energy costs for the Application Year, the estimated cost of energ generated and sold to other utilties on a firm basis and the estimated net effect on the Company' energy costs forecast for the Application Year from any unit whose costs are not currently reflecte in base rates shall be excluded. When the in-service date of such a unit can be estimated wit reasonable certainty, the Company shall file with the Commission no later than 30 days prior to th unit's expected in-service date for an interim revision of the ECA factor then in effect to reflec the estimated effect of the unit's operation on the Company's energy costs. Such interim revision o the ECA shall not become effective unless and until rates reflecting the unit's base rate revenue requirements become effective by order of the Commission.

B = Energy cost of 16.43, mills per kilowatt-hour included in base rates.(1)

E = Experienced net over or under collection of the cost of energy during the Reconciliation Year, including interest. Interest shall be computed monthly at the appropriate rate as provided in Section 1308(d) of the Public Utility Code from the month the over or under collection occurs to the effective month such over collection is refunded and such under collection is recouped. Interest will only be paid on net over-collections subject to reconciliation. Customers shall not be charged interest on net undercollections.

Sg = The Company's projected gross kilowatt-hour sales to all customers, excluding firm sales to other utilities, during the Application Year.

Sn = The Company's projected net kilowatt-hour sales to which the ECA applies during the Application Year.

GRT = The Pennsylvania gross receipts tax rate in effect during the period of service.

NOTE: (1) Value requested in a general rate increase under Section 1308(d) of the Public Utility Code, filed on July 21, 1989. Final value will be set at conclusion of base rate case.

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ENERGY COST ADJUSTMENT (ECA) - Continued *

P = A positive (Incentive) or negative (Penalty) Performance Adjustment, based on the overa performance of the Company's nuclear generating units during the Performance Year, whi shall be included in the calculation of the ECA factor for the Application Year beginni after the end of such Performance Year. All of the generation taken into account calculating the Performance Adjustment shall be based upon the Company's ownership sha of the nuclear units in service and included in the Company's rate base during t Performance Year, with an appropriate proration for any nuclear unit that did not me those criteria for the entire Performance Year. All generation shall also be adjusted reflect only the proportion of such generation used to meet the demands for electrici of the Company's Pennsylvania jurisdictional customers during the Performance Year. recognition of the adoption of the Performance Adjustment as set forth herein, t Pennsylvania Public Utility Commission will not initiate any proceeding for the expres or implied purpose of disallowing the Company's recovery of replacement power costs d to nuclear unit outages or de-ratings alleged to have been imprudent or unreasonabl unless such nuclear unit was out of service for more than 120 consecutive days or did n achieve a capacity factor of 50% or more for a Performance Year. Whether any Performanc Adjustment shall be made and, if so, the magnitude of such adjustment, shall b determined in accordance with the following criteria:

NO ADJUSTMENT. If the overall performance of the Company's nuclear units for Performance Year is within the Acceptable Range of Standard Operation (SO), the incentiv or penalty adjustment is zero. The SO shall be performance by the Company's nuclea generators, measured on the basis of the System Average Nuclear Capacity Factor (SANCF) bounded by a minimum SANCF of 60% and a maximum SANCF of 70%. The SANCF is the electri energy actually generated during Performance Year by the Company's nuclear units properl included in such calculation under the terms hereof expressed as a proportion of th electric energy those units could theoretically produce if they operated at 100% of thei maximum dependable capacity during each hour of the Performance Year.

INCENTIVE ADJUSTMENT. If the SANCF achieved during the Performance Year is greate than 70%, then an Incentive Adjustment shall be calculated in the manner hereafte described. For each increment, as set forth below, by which the achieved SANCF exceede 70%, the Company will be permitted to recover from customers, and to retain, sums equa to the percentages, as also set forth below, of the Unit Replacement Power Costs (URPC) as hereafter defined, that were avoided by reason of each incremental increase in th SANCF above 70%:

SANCF	INCENTIVE ADJUSTMENT
(1) Greater than 70% but not exceeding 75%:	The Incentive Adjustment shall be 20% of the URPC avoided by performance in excess of a 70% SANCF;
(2) Greater than 75% but not exceeding 85%	The Incentive Adjustment shall be (1), above, plus 30% of the URPC avoided by performance in excess of a 75% SANCF;
(3) Greater than 85%	The Incentive Adjustment shall be (1) and (2), above, plus 40% of the URPC avoided performance in excess of an 85% SANCF.

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ENERGY COST ADJUSTMENT (ECA) - Continued *

PENALTY ADJUSTMENT. If the SANCF achieved during the Performance Year is less tha 60%, then a Penalty Adjustment shall be calculated in the manner hereafter described For each increment, as set forth below, by which the achieved SANCF falls below 60%, th Company will not be permitted to recover from customers or, if recovered must refund to customers, sums equal to the percentages, as also set forth below, of the URPC, as hereafter defined, that were incurred by reason of the occurrence of each incremental decrease in the SANCF below 60%:

SANCF	PENALTY ADJUSTMENT
(1) Less than 60% but not less than 55%:	The Penalty Adjustment shall be 20% of the URPC incurred by performance below a 60% SANCF;
(2) Less than 55% but not less than 45%:	The Penalty Adjustment shall be (1), above, plus 30% of the URPC incurred by performance below a 55% SANCF;
(3) Less than 45%:	The Penalty Adjustment shall be (1) and (2), above, plus 40% of the URPC incurred by performance below a 45% SANCF.

The formula and the defined components thereof set forth below shall be used to calculate the Performance Adjustment (P) Incentive or Penalty applicable when the Company's SANCF is above 70% or below 60%, respectively, for a Performance Year. Each calculation, except for projected Minemouth generation, shall be based on data for the applicable Performance Year.

GN Net MWH generation produced by Nuclear Units
GM Net MWH generation produced by Minemouth Coal units
GC Net MWH generation produced by Urban Coal units
GO Net MWH generation produced by Oil units
GIC Net MWH generation produced by Internal Combustion units
GI Net MWH generation supplied by Interchange

PHM Amount of projected Application Year Minemouth Coal MWH generation not required for PECo base load operation, divided by projected Application Year MWH generation produced by Minemouth Coal units.

LG Lost Generation, i.e., generation not produced by any unit otherwise includable in the calculation of the Performance Adjustment, expressed in MWH, for which the Company is not permitted to recover the associated replacement power cost by reason of a Commission Order precluding such recovery.

UNRC Unit Non-Recoverable Cost associated with LG and used to calculate a replacement power cost disallowance within a Commission Order.

OF Generation, expressed in MWH, not produced by any nuclear unit because the Company operated such unit at less than its available capacity in order to accommodate the purchase and receipt of electric power from generators that are Qualifying Facilities, under PURPA Section 210, pursuant to contracts, or other obligations, that required the Company to purchase and receive such electric power.

CN Booked Fuel costs attributable to Nuclear units
CM Booked Fuel costs attributable to Minemouth Coal units
CC Booked Fuel costs attributable to Urban Coal units
CO Booked Fuel costs attributable to Oil units
CIC Booked Fuel costs attributable to Internal Combustion units
CI Booked Fuel costs attributable to Interchange

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ENERGY COST ADJUSTMENT (ECA) - Continued *

H High limit of Standard Oper. ion range = 70% CF
L Low limit of Standard Operation range = 60% CF

PEC = PECo maximum net dependable nuclear capacity, as reported to the NRC multiplied by the number of hours in performance year

$$SANCF = \frac{GN + LG + OF}{PEC}$$

$$UREC = \frac{(PMM \times CM) + CC + CO + CIC + CI}{(PMM \times GM) + GC + GO + GIC + GI} = \text{Unit Replacement Energy Cost}$$

$$UNEC = \frac{CN}{GN} = \text{Unit Nuclear Energy Cost}$$

URPC = UREC - UNEC = Unit Replacement Power Cost

UDC = UNRC - URPC = Unit Differential Cost

RCA = LG X UDC = Replacement Cost Adjustment reflecting the incremental cost above or below URPC of the specific Commission-ordered disallowance.

DSTD Absolute percent deviation from standard CF below L or above H to nearest 0.1% - if between L and H, equals zero

GP Gross performance factor

IF DSTD equals zero
GP = 0
If DSTD is more than zero but less than or equal to 5%
GP = ((PEC x URPC x DSTD) - RCA) x 20%
If DSTD is more than 5% but less than or equal to 15%
GP = (PEC x URPC x 5% x 20%) +
((PEC x URPC x (DSTD - 5%)) - RCA) x 30%
If DSTD is more than 15% but less than or equal to 20%
GP = (PEC x URPC x 5% x 20%) +
(PEC x URPC x 10% x 30%) +
((PEC x URPC x (DSTD - 15%)) - RCA) x 40%

If DSTD indicates a deviation above H, GP is an incentive
IF DSTD indicates a deviation below L, GP is a penalty

P= GP, adjusted by allocation factor for Pennsylvania jurisdictional customers

Minimum bills shall not be reduced by reason of this ECA. This factor shall be applied to all kilowatt-hours supplied and such charge shall be in addition to any minimum applicable.

The Company may Petition the Commission to enter an order suspending the Performance Adjustment for any Performance Year when the SANCF is below 40% and a material contributing cause of the overall full or partial nuclear outage time during that year was a force majeure. For the purposes of the ECA, a force majeure shall constitute the non-operation, or operation at less than maximum dependable capacity, of any nuclear unit due to a force or forces beyond the Company's reasonable ability to control, as of the time the non-operation or reduced operation occurs, including without limiting the

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ENERGY COST ADJUSTMENT (ECA) - Continued *

generality of the foregoing: storm; flood; fire; earthquake; explosion; civil disturbance; labor dispute; act of God or public enemy; or restraint by any statute, regulation or the order or action of any court, regulatory agency or other public authority having or purporting to have jurisdiction in the premises. The actions by a regulatory agency which may constitute a force majeure will include the issuance by the Nuclear Regulatory Commission ("NRC") of a policy statement or comparable expression of an NRC position adverse to the adoption of nuclear performance standards. The declaration of a force majeure as aforesaid shall not prejudice, limit or qualify the Commission's exercise of its jurisdiction, power and authority to investigate the costs claimed by the Company for recovery from customers and to allow the Company to recover only such costs that meet applicable legal standards for recovery.

The Company shall file quarterly reports within thirty (30) days following the conclusion of each Application Year quarter. These reports will be in such form as the Commission shall have prescribed. The third quarter report shall be accompanied by a tentative estimate of the ECA factor for the next Application Year.

The operation of the ECA shall be subjected to review and audit by the Commission at such intervals as the Commission shall determine. The Commission shall continuously review the reasonableness and lawfulness of the amounts of the charges and credits produced by the ECA and the charges and credits included therein.

If from such audit shall be determined, by final order entered after notice and hearing, that this ECA has been erroneously or improperly utilized, the Company will rectify such error or impropriety, and in accordance with the terms of the order, apply credits against future ECA's for such revenues as shall have been erroneously or improperly collected. The Commission's Order shall be subject to the right of appeal.

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