



MEMO

DATE: February 1, 2010
TO: Patricia King
FROM: Jackie Berger
SUBJECT: PECO Electric Affordability Analysis

PECO has asked APPRISE to do an analysis of the electric burden for CAP customers compared to the PUC's targeted energy burden. This memo provides a summary of the analyses that we conducted.

All analyses in this memo were conducted using 2009 electric usage data for customers who were enrolled in PECO's CAP in December 2009. The usage data were multiplied by current electric rates provided by PECO. Energy burden was obtained by using the following formula:

$$(\text{annual electric usage}) * (\text{2010 PECO electric prices}) / (\text{annual household income})$$

Table 1 displays the electric rates provided by PECO that are used in the analyses included in this memo. The Non CAP rates are used in the analyses to demonstrate the discount that is needed off the full electric bill. The current CAP rates are shown for illustrative purpose.

Table 1
 PECO 2010 Electric Rates

| Rate R | | | | | | | | | | | | |
|--------------------------------------|-------------|----------|--------------------------|---------|-------------|----------|-------------|--------------|-------------|----------|-------------|----------|
| Fixed Distribution Service Charge | Non CAP | | CAP A | | CAP B | | CAP C | | CAP D | | CAP E | |
| | 5.31 | | 5.23 | | 5.31 | | 5.31 | | 5.31 | | 5.31 | |
| | Winter | Summer | Over 1,000 kWh - per kWh | | Winter | | Summer | | Winter | | Summer | |
| | 1st 500 kWh | Next kWh | TOTAL COST | per kWh | 1st 650 kWh | Next kWh | 1st 650 kWh | Next 100 kWh | 1st 650 kWh | Next kWh | 1st 650 kWh | Next kWh |
| Transmission Charge | .55 | .64 | .29 | .27 | .08 | .55 | .14 | .40 | .55 | .27 | .55 | .42 |
| Variable Distribution Service Charge | 5.20 | 5.96 | 2.44 | 2.42 | .75 | 4.69 | 1.24 | 3.30 | 4.72 | 2.42 | 4.81 | 3.69 |
| Competitive Transition Charge | 3.42 | 3.97 | 1.49 | 1.37 | .52 | 3.42 | .85 | 2.39 | 3.42 | 1.37 | 3.42 | 2.10 |
| Energy and Capacity Charge | 6.10 | 6.81 | 2.70 | 2.52 | .91 | 6.10 | 1.53 | 4.28 | 6.10 | 2.52 | 6.10 | 3.87 |
| Total Cost per kWh | 15.27 | 17.38 | 6.92 | 6.58 | 2.26 | 14.76 | 3.76 | 10.37 | 14.76 | 6.58 | 14.88 | 10.08 |

| Rate RH - Electric Heat | | | | | | | | | | | | |
|--------------------------------------|-------------|----------|---|---------|-------------|----------|-------------|--------------|-------------|----------|-------------|----------|
| Fixed Distribution Service Charge | Non CAP | | CAP A | | CAP B | | CAP C | | CAP D | | CAP E | |
| | 5.31 | | 5.23 | | 5.31 | | 5.31 | | 5.31 | | 5.31 | |
| | Winter | Summer | Over 2,000 kWh winter, 1,000 kWh summer - per kWh | | Winter | | Summer | | Winter | | Summer | |
| | 1st 600 kWh | Next kWh | TOTAL COST | per kWh | 1st 650 kWh | Next kWh | 1st 650 kWh | Next 100 kWh | 1st 650 kWh | Next kWh | 1st 650 kWh | Next kWh |
| Transmission Charges | .96 | .85 | 1.05 | .27 | .06 | .27 | .14 | .40 | .27 | .56 | .42 | .56 |
| Variable Distribution Service Charge | 4.96 | 5.70 | 6.32 | 2.42 | .71 | 2.16 | 1.19 | 3.15 | 2.21 | 1.19 | 2.30 | 3.52 |
| Competitive Transition Charge | 3.33 | 3.97 | 6.38 | 1.37 | .46 | 1.36 | .82 | 2.33 | 1.36 | .82 | 1.36 | 2.02 |
| Energy and Capacity Charge | 6.36 | 7.10 | 10.17 | 2.52 | .96 | 2.64 | 1.56 | 4.48 | 2.64 | 1.56 | 2.64 | 4.06 |
| Total Cost per kWh | 15.23 | 17.32 | 24.92 | 6.58 | 2.24 | 6.45 | 3.74 | 10.34 | 6.45 | 3.74 | 10.37 | 10.92 |

Table 2 displays the current PUC target burden levels and the proposed target burden levels by poverty group.

Table 2
PUC Target Burden Levels

| Rate R | | |
|----------------------|--|---|
| Poverty Level | Current PUC Electric Energy Burden Target | Proposed PUC Electric Energy Burden Target |
| <=25% | 2%-5% | 4% |
| 26% - 50% | 2%-5% | 4% |
| 51% - 75% | 4%-6% | 4% |
| 76% - 100% | 4%-6% | 4% |
| 101% - 125% | 6%-7% | 4% |
| 126% - 150% | 6%-7% | 4% |
| Rate RH | | |
| Poverty Level | Current PUC Electric Energy Burden Target | Proposed PUC Electric Energy Burden Target |
| <=25% | 7%-13% | 10% |
| 26% - 50% | 7%-13% | 10% |
| 51% - 75% | 11%-16% | 10% |
| 76% - 100% | 11%-16% | 10% |
| 101% - 125% | 15%-17% | 10% |
| 126% - 150% | 15%-17% | 10% |

Table 3 displays the number of electric CAP customers as of December 2009 by poverty group. The table shows that there were approximately 130,000 electric CAP customers. Nearly 100,000 of these customers were included in the analyses that are summarized in the following tables, providing for a very robust analysis of customers' need for bill assistance.

Table 3
CAP Poverty Levels

| Poverty Level | Electric CAP Accounts |
|----------------------|------------------------------|
| <=25% | 12,201 |
| 26 to 50% | 18,925 |
| 51 to 75% | 28,361 |
| 76 to 100% | 31,483 |
| 101 to 125% | 20,924 |

| Poverty Level | Electric CAP Accounts |
|---------------|-----------------------|
| 126 to 150% | 14,507 |
| >150% | 940 |
| Missing | 3,278 |
| TOTAL | 130,619 |

Table 4A displays the discount off the 2010 non-discounted electric rates needed by each poverty group to reach the PUC target. The percentage shown is the percentage discount off the total monthly bill that is needed to achieve either the targeted PUC burden level or the targeted PUC minimum payment. Minimum payments of \$12 per month for non-heating and \$30 per month for heating customers are included in these calculations. The table shows that 25 percent of rate R (non-heating) customers with income below 25 percent of the poverty level need a discount of 90 percent or more to reach the current PUC targeted energy burden level and 62 percent of these households need a discount of 75 percent to 90 percent to reach their targeted energy burden. The table shows that 96 percent of rate RH customers with income between 126 and 150 percent of the poverty level do not need a discount to reach their targeted energy burden level.

Table 4A
Projected PECO Electric Discount Needed
Off 2010 Full Electric Rates
Current PUC Energy Burden Targets

| Rate R (Minimum is \$12/Month) | | | | | | | |
|---------------------------------------|---|----------------|----------------|----------------|----------------|----------------|-------------|
| Poverty Level | Percent of Customers With Each Level of Discount Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | |
| | 0% | <10% | 10%-25% | 25%-50% | 50%-75% | 75%-90% | 90%+ |
| <=25% | 0% | 0% | 0% | 1% | 11% | 62% | 25% |
| 26% - 50% | 1% | 0% | 1% | 8% | 45% | 42% | 3% |
| 51% - 75% | 9% | 4% | 10% | 31% | 39% | 7% | 0% |
| 76% - 100% | 23% | 7% | 13% | 30% | 24% | 3% | 0% |
| 101% - 125% | 56% | 8% | 12% | 17% | 6% | 0% | 0% |
| 126% - 150% | 71% | 6% | 10% | 10% | 3% | 0% | 0% |

| Rate RH (Minimum is \$30/Month) | | | | | | | |
|--|---|----------------|----------------|----------------|----------------|----------------|-------------|
| Poverty Level | Percent of Customers With Each Level of Discount Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | |
| | 0% | <10% | 10%-25% | 25%-50% | 50%-75% | 75%-90% | 90%+ |
| <=25% | 1% | 0% | 1% | 6% | 33% | 56% | 3% |
| 26% - 50% | 5% | 3% | 6% | 26% | 51% | 9% | 0% |
| 51% - 75% | 46% | 9% | 16% | 21% | 7% | 0% | 0% |

| Rate RH (Minimum is \$30/Month) | | | | | | | |
|--|---|----------------|----------------|----------------|----------------|----------------|-------------|
| Poverty Level | Percent of Customers With Each Level of Discount Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | |
| | 0% | <10% | 10%-25% | 25%-50% | 50%-75% | 75%-90% | 90%+ |
| 76% - 100% | 70% | 8% | 11% | 10% | 2% | 0% | 0% |
| 101% - 125% | 92% | 3% | 3% | 2% | 0% | 0% | 0% |
| 126% - 150% | 96% | 1% | 2% | 1% | 0% | 0% | 0% |

Table 4B displays the discount off the 2010 non-discounted electric rates needed by each poverty group to reach the PUC target. The table shows that the same data as in 4A, except that the discount needed is separated into five percent increments to allow for a more detailed analysis.

Table 4B
Projected PECO Electric Discount Needed
Off 2010 Full Electric Rates
Current PUC Energy Burden Targets
By 5 Percentage Point Increments

| Rate R (Minimum is \$12/Month) | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|--|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| Poverty Level | Percent of Customers With Each Level of Discount Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | | | | | | | | | | | | | | |
| | <=5% | 5-10% | 10-15% | 15-20% | 20-25% | 25-30% | 30-35% | 35-40% | 40-45% | 45-50% | 50-55% | 55-60% | 60-65% | 65-70% | 70-75% | 75-80% | 80-85% | 85-90% | 90-95% | >=95% |
| <=25% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 1% | 1% | 3% | 6% | 11% | 20% | 31% | 23% | 2% |
| 26% - 50% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 2% | 2% | 3% | 4% | 6% | 9% | 11% | 15% | 17% | 16% | 10% | 3% | 0% |
| 51% - 75% | 9% | 2% | 3% | 3% | 4% | 4% | 5% | 6% | 7% | 8% | 8% | 8% | 9% | 7% | 6% | 4% | 2% | 1% | 0% | 0% |
| 76% - 100% | 23% | 3% | 4% | 5% | 5% | 6% | 6% | 6% | 6% | 6% | 6% | 6% | 5% | 4% | 3% | 2% | 1% | 0% | 0% | 0% |
| 101% - 125% | 56% | 4% | 4% | 4% | 4% | 4% | 4% | 3% | 3% | 2% | 2% | 2% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| 126% - 150% | 71% | 3% | 3% | 3% | 3% | 2% | 2% | 2% | 2% | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Rate RH (Minimum is \$30/Month) | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|--|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| Poverty Level | Percent of Customers With Each Level of Discount Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | | | | | | | | | | | | | | |
| | <=5% | 5-10% | 10-15% | 15-20% | 20-25% | 25-30% | 30-35% | 35-40% | 40-45% | 45-50% | 50-55% | 55-60% | 60-65% | 65-70% | 70-75% | 75-80% | 80-85% | 85-90% | 90-95% | >=95% |
| <=25% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 2% | 3% | 3% | 3% | 4% | 9% | 14% | 21% | 22% | 14% | 3% | 0% |
| 26% - 50% | 5% | 2% | 2% | 2% | 2% | 3% | 4% | 5% | 5% | 8% | 8% | 10% | 11% | 15% | 8% | 6% | 2% | 1% | 0% | 0% |
| 51% - 75% | 46% | 5% | 6% | 6% | 6% | 6% | 6% | 4% | 4% | 4% | 3% | 2% | 2% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| 76% - 100% | 70% | 4% | 4% | 4% | 3% | 3% | 2% | 2% | 2% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| 101% - 125% | 92% | 2% | 1% | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| 126% - 150% | 96% | 0% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

Table 5 separates out the customers that would receive the minimum payment amount instead of the discount, because the discount would take them below the \$12 per month minimum payment recommended for non-heating customers or the \$30 per month minimum payment recommended for heating customers.

The table shows that 72 percent of rate R customers and 77 percent of rate RH customers with income less than or equal to 25 percent of the poverty level would need the minimum payment. However, there are no customers in the other income groups that would need the minimum payment.

Table 5
Projected PECO Electric Discount Needed
Off 2010 Full Electric Rates
Current PUC Energy Burden Targets
Minimum Payment Customers Separated Out

| Rate R (Minimum is \$12/Month) | | | | | | | | |
|---------------------------------------|---|----------------|----------------|----------------|----------------|----------------|-------------|------------------------|
| Poverty Level | Percent of Customers With Each Level of Discount Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | | Minimum Payment |
| | 0% | <10% | 10%-25% | 25%-50% | 50%-75% | 75%-90% | 90%+ | |
| <=25% | 0% | 0% | 0% | 0% | 4% | 19% | 4% | 72% |
| 26% - 50% | 1% | 0% | 1% | 8% | 45% | 42% | 3% | 0% |
| 51% - 75% | 9% | 4% | 10% | 31% | 39% | 7% | 0% | 0% |
| 76% - 100% | 23% | 7% | 13% | 30% | 24% | 3% | 0% | 0% |
| 101% - 125% | 56% | 8% | 12% | 17% | 6% | 0% | 0% | 0% |
| 126% - 150% | 71% | 6% | 10% | 10% | 3% | 0% | 0% | 0% |

| Rate RH (Minimum is \$30/Month) | | | | | | | | |
|--|---|----------------|----------------|----------------|----------------|----------------|-------------|------------------------|
| Poverty Level | Percent of Customers With Each Level of Discount Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | | Minimum Payment |
| | 0% | <10% | 10%-25% | 25%-50% | 50%-75% | 75%-90% | 90%+ | |
| <=25% | 1% | 0% | 0% | 2% | 11% | 8% | 1% | 77% |
| 26% - 50% | 5% | 3% | 6% | 26% | 51% | 9% | 0% | 0% |
| 51% - 75% | 46% | 9% | 16% | 21% | 7% | 0% | 0% | 0% |
| 76% - 100% | 70% | 8% | 11% | 10% | 2% | 0% | 0% | 0% |
| 101% - 125% | 92% | 3% | 3% | 2% | 0% | 0% | 0% | 0% |
| 126% - 150% | 96% | 1% | 2% | 1% | 0% | 0% | 0% | 0% |

Table 6 displays the discount off the 2010 non-discounted electric rates needed by each poverty group to reach the proposed PUC energy burden targets. The percentage shown is the percentage discount off the total monthly bill that is needed to achieve either the targeted PUC

burden level or the targeted PUC minimum payment. Minimum payments of \$12 per month for non-heating and \$30 per month for heating customers are included in these calculations. The table shows that 29 percent of rate R customers with income at or below 25 percent of the poverty level would need a discount of 90 percent or more and 61 percent would need a discount of 75 percent to 90 percent to reach the targeted energy burden level. The table shows that 68 percent of rate RH customers with income between 126 and 150 percent of the poverty level would not need a discount to reach the targeted energy burden level.

Table 6
Projected PECO Electric Discount Needed
Off 2010 Full Electric Rates
Proposed PUC Energy Burden Targets

| Rate R (Minimum is \$12/Month) | | | | | | | |
|---------------------------------------|---|----------------|----------------|----------------|----------------|----------------|-------------|
| Targeted Energy Burden is 4% | | | | | | | |
| Poverty Level | Percent of Customers With Each Level of Discount | | | | | | |
| | Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | |
| | 0% | <10% | 10%-25% | 25%-50% | 50%-75% | 75%-90% | 90%+ |
| <=25% | 0% | 0% | 0% | 1% | 9% | 61% | 29% |
| 26% - 50% | 1% | 0% | 0% | 3% | 32% | 56% | 7% |
| 51% - 75% | 2% | 1% | 3% | 17% | 52% | 24% | 1% |
| 76% - 100% | 6% | 3% | 7% | 27% | 45% | 12% | 0% |
| 101% - 125% | 16% | 6% | 13% | 33% | 29% | 4% | 0% |
| 126% - 150% | 26% | 8% | 15% | 30% | 19% | 2% | 0% |

| Rate RH (Minimum is \$30/Month) | | | | | | | |
|--|---|----------------|----------------|----------------|----------------|----------------|-------------|
| Targeted Energy Burden is 10% | | | | | | | |
| Poverty Level | Percent of Customers With Each Level of Discount | | | | | | |
| | Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | |
| | 0% | <10% | 10%-25% | 25%-50% | 50%-75% | 75%-90% | 90%+ |
| <=25% | 1% | 0% | 1% | 5% | 28% | 62% | 3% |
| 26% - 50% | 2% | 2% | 2% | 16% | 56% | 22% | 0% |
| 51% - 75% | 13% | 5% | 12% | 36% | 32% | 3% | 0% |
| 76% - 100% | 30% | 9% | 16% | 31% | 14% | 0% | 0% |
| 101% - 125% | 51% | 10% | 16% | 18% | 4% | 0% | 0% |
| 126% - 150% | 68% | 10% | 11% | 10% | 2% | 0% | 0% |

For the proposed PUC burden targets, Table 7 separates out the customers that would receive the minimum payment amount instead of the discount, because the discount would take them below the \$12 per month minimum payment recommended for non-heating customers or the \$30 per month minimum payment recommended for heating customers. The table shows that 77 percent of rate R customers with income at or below 25 percent of the poverty level would need the minimum payment and 84 percent of rate RH customers would need the minimum payment.

Table 7
Projected PECO Electric Discount Needed
Off 2010 Full Electric Rates
Proposed PUC Energy Burden Targets
Minimum Payment Customers Separated Out

| Rate R (Minimum is \$12/Month) | | | | | | | | |
|---------------------------------------|---|----------------|----------------|----------------|----------------|----------------|-------------|------------------------|
| Targeted Energy Burden is 4% | | | | | | | | |
| Poverty Level | Percent of Customers With Each Level of Discount Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | | Minimum Payment |
| | 0% | <10% | 10%-25% | 25%-50% | 50%-75% | 75%-90% | 90%+ | |
| <=25% | 0% | 0% | 0% | 0% | 2% | 15% | 5% | 77% |
| 26% - 50% | 1% | 0% | 0% | 3% | 32% | 55% | 6% | 2% |
| 51% - 75% | 2% | 1% | 3% | 17% | 52% | 24% | 1% | 0% |
| 76% - 100% | 6% | 3% | 7% | 27% | 45% | 12% | 0% | 0% |
| 101% - 125% | 16% | 6% | 13% | 33% | 29% | 4% | 0% | 0% |
| 126% - 150% | 26% | 8% | 15% | 30% | 19% | 2% | 0% | 0% |

| Rate RH (Minimum is \$30/Month) | | | | | | | | |
|--|---|----------------|----------------|----------------|----------------|----------------|-------------|------------------------|
| Targeted Energy Burden is 10% | | | | | | | | |
| Poverty Level | Percent of Customers With Each Level of Discount Off Full 2010 Rate Needed to Achieve PUC Target | | | | | | | Minimum Payment |
| | 0% | <10% | 10%-25% | 25%-50% | 50%-75% | 75%-90% | 90%+ | |
| <=25% | 0% | 0% | 0% | 0% | 5% | 10% | 0% | 84% |
| 26% - 50% | 2% | 2% | 2% | 15% | 55% | 20% | 0% | 3% |
| 51% - 75% | 13% | 5% | 12% | 36% | 32% | 3% | 0% | 0% |
| 76% - 100% | 30% | 9% | 16% | 31% | 14% | 0% | 0% | 0% |
| 101% - 125% | 51% | 10% | 16% | 18% | 4% | 0% | 0% | 0% |
| 126% - 150% | 68% | 10% | 11% | 10% | 2% | 0% | 0% | 0% |