

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

| | | |
|--|---|--------------------------------|
| In the Matter of the Application of |) | |
| KCP&L Greater Missouri Operations |) | |
| Company for Approval to Make |) | Docket No. ER-2010-0356 |
| Certain Changes in its Charges for |) | |
| Electric Service |) | |

APPLICATION TO INTERVENE
By ROBERT WAGNER

Pursuant to 4 C.R.S. 240-2.075 of the Missouri Public Service Commission’s Rules of Practice and Procedures, Robert Wagner, in his capacity as an individual person (hereinafter referred to as the Applicant) hereby applies for leave to intervene in the above-referenced proceeding of KCP&L Greater Missouri Operations (hereinafter referred to as GMO or the Company). In support of this Application, Applicant respectfully states as follows:

A. INTERVENTION

1. Status: Robert Wagner is President of the Board of Directors of the International Dark Sky Association (IDA), a non-profit organization incorporated in the State of Arizona and internationally recognized as a leading authority on outdoor lighting issues. This Application to Intervene is limited to outdoor lighting matters as follows:

Private Area Lighting - Revised Sheet 47, 91, 92 and 93

Municipal Street Lighting - Revised Sheet 41, 42, 43, 88, 89, 90

Robert Wagner, acting as an individual, would proceed pro se .

2. IDA’s membership is approximately 6,500 worldwide, with members in Missouri. IDA was founded in 1988 on concern that light pollution was interfering with astronomical observation. Since then, IDA’s mission purpose has expanded to include energy conservation, human health and environmental consequences of light at night. IDA’s website is at www.darksky.org.

3. IDA has participated as an Intervenor in electric utility rate cases in other states. In 2007 IDA participated in Connecticut Public Utilities Docket 07-07-01, and again in 2009 in Docket 09-12-05 resulting in the adoption of an order for the utility company to establish a Midnight Option for streetlights. (See Exhibit A). IDA is currently an Intervenor in Oregon PUC Docket UE-215 in the rate case of Portland General Electric, for street and area lighting. IDA is also currently an Intervenor in the KCP&L Kansas Docket No. 10-KCPE-415-RTS.

4. Why a Rate for Part Night Streetlights is in the Public Interest.

GMO's Private Area Lighting (Sheet 47), and its Municipal Streetlighting (Sheets 41 - 43 and 88-90) are each restricted only to all night service. (Sheet 42, Conditions of Service, Section 2) Burn hours for each service are listed for each rate at 4,100 hours annually (dusk-to-dawn). Advances in photocell technology now offer electronic photocells capable of regulating the burn hours of a streetlight with an internal clock, so that streetlights can be turned off at 11PM or midnight, and turned back on at 6AM during the winter. The use of programmable photocells for part night lighting has been tested and proven to be a stable and reliable technology through which municipalities can conserve energy and reduce expenses for street lighting. Utility regulators in Connecticut required in a 2007 rate case that Connecticut Light and Power to add a Midnight Option to their streetlight tariff. In 2009 New Hampshire enacted a law requiring the regulators to include a part night streetlight rate for all streetlight tariffs.

5. Why Including Rates for 50, 70 and 100 Watt High Pressure Sodium Lamps is in the Public Interest.

Revised Sheet 43 for Municipal Street Lighting lists 100 watt High Pressure Sodium (HPS) lamps as the lowest standard HPS lamp available. There is no listing for High Pressure Sodium (HPS) 50 or 70 watt HPS lamps. Rates for 50 and 70 watt HPS lamps are part of the Streetlight tariff for many utilities. Revised Sheet 41 also omits a rate for 100 watt high pressure sodium streetlights. The omission of rates for the 50, 70 and 100 watt HPS lamps forces municipalities and individuals to purchase higher wattage than may be necessary, thereby wasting energy at higher costs. Listing lower wattages will promote energy conservation. In the 1970's, mercury vapor lamps were standard. The 400 watt mercury vapor lamps were commonly used

used in central business districts, and 100 watt mercury vapor were common on residential roads. The 100 watt mercury vapor lamp had an initial lumen output of 4,000 lumen. When the HPS lamps were introduced, they were much more energy efficient. A 50 watt HPS lamp produced the same 4,000 initial lumen output as the existing 100 watt mercury vapor lamp. A number of utility companies used street lighting as a revenue recovery tool for energy generated during off-peak and were concerned with revenue loss in switching from a 100 watt mercury vapor to a 50 watt high pressure sodium streetlight. Instead of including the 50 watt HPS in their new rate offering when HPS became available, these utility companies switched their lowest wattage offering from 100 watt mercury vapor (4,000 lumen) to 70 watt high pressure sodium (6,300 lumen), resulting in 63.5% increase in light and a 71% increase in energy use when compared to the 50 watt high pressure sodium. OGM's own Sheet 89 includes the 70 watt HPS lamps. Municipalities and individuals should not be required to purchase higher illumination levels (higher wattages) than necessary. Listing 50 and 70 watt HPS will promote consideration of these energy conservation choices by municipalities and private area lighting customers.

6. Limitation and Scope

This Petition to Intervene is limited to addressing the public interest in requiring OGM to develop a new rate for Part Night street and area lighting under Sheets 41, 43, 88 and 89. and to incorporate, within these schedules, rates for lower wattage High Pressure Sodium lamps used in typical street lighting applications in other parts of the country.

7. Proceeding Pro Se

Robert Wagner will act pro se in these proceedings:

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7. The Commission's regulations allow intervention when a person has an interest in the proceeding which may be directly affected and which is not adequately represented by existing parties, and as to which the person may be bound by the action of the Commission in the proceeding. Intervention is also permitted where participation may be in the public interest.

8. As President of the Board of a nonprofit association specializing in outdoor lighting and energy conservation issues related thereto, Robert Wagner satisfies the standard because Robert Wagner possesses a significant and unique knowledge and interest which may be directly affected and which is not adequately represented by existing participants.

9. This intervention is in the public interest. Energy wasted by street lighting left on during hours when streetlight may not be needed represents a substantial and unnecessary increase in CO2 emission and unnecessarily higher costs for municipal budgets. Accordingly, Robert Wagner's participation in this proceeding is clearly in the public interest.

10. If granted this Application to Intervene, Robert Wagner will limit his intervention to written interrogatories pre-filed testimony and written briefs related to the outdoor lighting issues referenced above. Robert Wagner will conform to all rules of practice and Missouri Public Service Commission's Rules of Practice and Procedures as part of his intervention.

B. CONCLUSION

WHEREFORE, Rober Wagner respectfully requests that the Commission grant this Application to Intervene in this Docket.

Respectfully submitted, June 30, 2010, by:

A handwritten signature in black ink, appearing to read "Robert A. Wagner", is written over a horizontal line.

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Exhibit A - Page 1 from Connecticut Docket 09-12-05 showing Midnight Option streetlight rates

EXHIBIT CRG-11
Comparison Dusk-to-Dawn vs Midnight Option

RATE 117

Dated: January 8, 2010
Page 2 of 2

The Connecticut Light & Power Company
Docket No. 09-12-05
Witness Responsible: C. R. Goodwin
Rate 117 - Partial Service Streetlighting

| | Type/Size | Wattage | Distribution Monthly Rate | Annual kWh | | Annual Bill \$ | | Difference | Percent Change |
|----|-----------------------------|---------|---------------------------|--------------|-----------------|----------------|-----------------|------------|----------------|
| | | | | Dusk-to-Dawn | Midnight Option | Dusk-to-Dawn | Midnight Option | | |
| 11 | <u>Incandescent</u> | | | | | | | | |
| 12 | | 59 | \$2.21 | 245 | 130 | \$57.55 | \$43.06 | -\$14.49 | -25.2% |
| 13 | | 104 | \$2.96 | 432 | 230 | \$90.13 | \$64.60 | -\$25.54 | -28.3% |
| 14 | | 203 | \$1.93 | 842 | 449 | \$129.75 | \$79.90 | -\$49.85 | -38.4% |
| 15 | | 328 | \$1.71 | 1,361 | 725 | \$192.78 | \$112.23 | -\$80.55 | -41.8% |
| 16 | | 449 | \$2.45 | 1,863 | 992 | \$265.22 | \$154.96 | -\$110.26 | -41.6% |
| 17 | | 691 | \$4.35 | 2,868 | 1,527 | \$415.18 | \$245.49 | -\$169.69 | -40.9% |
| 18 | <u>Mercury Vapor</u> | | | | | | | | |
| 19 | | 118 | \$1.09 | 490 | 261 | \$75.01 | \$46.04 | -\$28.98 | -38.6% |
| 20 | | 206 | \$1.67 | 855 | 455 | \$128.29 | \$77.70 | -\$50.59 | -39.4% |
| 21 | | 287 | \$2.46 | 1,191 | 634 | \$180.27 | \$109.79 | -\$70.48 | -39.1% |
| 22 | | 455 | \$3.52 | 1,888 | 1,006 | \$281.23 | \$169.50 | -\$111.73 | -39.7% |
| 23 | | 1103 | \$9.00 | 4,577 | 2,438 | \$687.44 | \$416.58 | -\$270.86 | -39.4% |
| 24 | <u>High Pressure Sodium</u> | | | | | | | | |
| 25 | | 59 | \$0.36 | 245 | 130 | \$35.35 | \$20.86 | -\$14.49 | -41.0% |
| 26 | | 84 | \$0.50 | 349 | 186 | \$50.12 | \$29.49 | -\$20.63 | -41.2% |
| 27 | | 118 | \$0.84 | 490 | 261 | \$72.01 | \$43.04 | -\$28.98 | -40.2% |
| 28 | | 172 | \$1.42 | 714 | 380 | \$107.36 | \$65.12 | -\$42.24 | -39.3% |
| 29 | | 190 | \$1.44 | 789 | 420 | \$117.11 | \$70.46 | -\$46.66 | -39.8% |
| 30 | | 311 | \$2.65 | 1,291 | 687 | \$185.19 | \$118.82 | -\$66.37 | -39.1% |
| 31 | | 472 | \$3.46 | 1,959 | 1,043 | \$289.46 | \$173.55 | -\$115.91 | -40.0% |
| 32 | | 1103 | \$9.00 | 4,577 | 2,438 | \$687.44 | \$416.58 | -\$270.86 | -39.4% |
| 33 | <u>Metal Halide</u> | | | | | | | | |
| 34 | | 72 | \$0.48 | 299 | 159 | \$43.54 | \$25.86 | -\$17.68 | -40.6% |
| 35 | | 89 | \$0.60 | 369 | 197 | \$53.96 | \$32.11 | -\$21.86 | -40.5% |
| 36 | | 119 | \$0.81 | 494 | 263 | \$72.18 | \$42.96 | -\$29.22 | -40.5% |
| 37 | | 207 | \$1.39 | 859 | 457 | \$125.46 | \$74.63 | -\$50.83 | -40.5% |
| 38 | | 289 | \$1.95 | 1,199 | 639 | \$175.24 | \$104.28 | -\$70.97 | -40.5% |
| 39 | | 451 | \$3.05 | 1,872 | 997 | \$273.52 | \$162.77 | -\$110.75 | -40.5% |
| 40 | | 1080 | \$7.30 | 4,482 | 2,387 | \$654.93 | \$389.71 | -\$265.21 | -40.5% |
| 41 | <u>Other Wattage</u> | | | | | | | | |
| 42 | | 14 | \$0.10 | 58 | 31 | \$8.52 | \$5.08 | -\$3.44 | -40.4% |
| 43 | | 16 | \$0.10 | 66 | 35 | \$9.62 | \$5.69 | -\$3.93 | -40.9% |
| 44 | | 18 | \$0.12 | 75 | 40 | \$10.95 | \$6.53 | -\$4.42 | -40.4% |
| 45 | | 23 | \$0.16 | 95 | 51 | \$14.04 | \$8.39 | -\$5.65 | -40.2% |
| 46 | | 28 | \$0.19 | 116 | 62 | \$17.04 | \$10.16 | -\$6.88 | -40.4% |
| 47 | | 40 | \$0.27 | 166 | 88 | \$24.22 | \$14.40 | -\$9.82 | -40.6% |
| 48 | | 42 | \$0.29 | 174 | 93 | \$25.56 | \$15.25 | -\$10.31 | -40.4% |
| 49 | | 48 | \$0.32 | 199 | 106 | \$29.09 | \$17.30 | -\$11.79 | -40.5% |
| 50 | | 54 | \$0.36 | 224 | 119 | \$32.70 | \$19.44 | -\$13.26 | -40.5% |
| 51 | | 71 | \$0.49 | 295 | 157 | \$43.13 | \$25.69 | -\$17.44 | -40.4% |
| 52 | | 90 | \$0.60 | 374 | 199 | \$54.49 | \$32.39 | -\$22.10 | -40.6% |
| 53 | | 144 | \$0.98 | 598 | 318 | \$97.36 | \$52.00 | -\$45.36 | -40.5% |
| 54 | | 175 | \$1.18 | 726 | 387 | \$106.14 | \$63.17 | -\$42.97 | -40.5% |
| 55 | | 180 | \$1.22 | 747 | 398 | \$109.23 | \$65.03 | -\$44.20 | -40.5% |
| 56 | | 204 | \$1.38 | 847 | 451 | \$123.71 | \$73.62 | -\$50.10 | -40.5% |
| 57 | | 238 | \$1.62 | 988 | 526 | \$144.41 | \$85.96 | -\$58.44 | -40.5% |
| 58 | | 250 | \$1.70 | 1,038 | 553 | \$151.67 | \$90.28 | -\$61.39 | -40.5% |
| 59 | | 289 | \$1.95 | 1,199 | 639 | \$175.24 | \$104.28 | -\$70.97 | -40.5% |
| 60 | | 300 | \$2.03 | 1,245 | 663 | \$181.98 | \$108.31 | -\$73.67 | -40.5% |
| 61 | | 451 | \$3.05 | 1,872 | 997 | \$273.52 | \$162.77 | -\$110.75 | -40.5% |
| 62 | | 480 | \$3.24 | 1,992 | 1,061 | \$291.09 | \$173.22 | -\$117.87 | -40.5% |
| 63 | | 1,520 | \$10.28 | 6,308 | 3,359 | \$921.83 | \$548.57 | -\$373.26 | -40.5% |

ELECTRICITY CRG-11
Comparison Dusk-to-Dawn vs Midnight Option

The Connecticut Light & Power Company
Docket No. 09-12-05
Witness Responsible: C. R. Goodwin

RATE 116

Dated: January 8, 2010

Page 1 of 2

Rate 116 - Full Service Streetlighting

| | Type/Size | Wattage | Distribution Monthly Rate | Annual kWh | | Annual Bill \$ | | | | | | |
|----|-----------------------------|---------|------------------------------|--------------|-----------------|----------------|-----------------|------------|----------------|-----------|--------|--|
| | | | | Dusk-to-Dawn | Midnight Option | Dusk-to-Dawn | Midnight Option | Difference | Percent Change | | | |
| 10 | <u>Incandescent</u> | | | | | | | | | | | |
| 11 | 600 lumen | 59 | \$5.58 | 242 | 129 | \$97.67 | \$83.33 | -\$14.34 | \$83.33 | -\$14.34 | -14.7% | |
| 12 | 1,000 | 104 | \$4.65 | 427 | 228 | \$109.85 | \$84.57 | -\$25.28 | \$84.57 | -\$25.28 | -23.0% | |
| 13 | 2,500 | 203 | \$2.52 | 834 | 444 | \$135.81 | \$86.46 | -\$49.35 | \$86.46 | -\$49.35 | -36.3% | |
| 14 | 4,000 | 328 | \$1.98 | 1348 | 718 | \$194.33 | \$114.59 | -\$79.74 | \$114.59 | -\$79.74 | -41.0% | |
| 15 | 6,000 | 449 | \$2.67 | 1845 | 982 | \$265.59 | \$156.43 | -\$109.16 | \$156.43 | -\$109.16 | -41.1% | |
| 16 | 10,000 | 691 | \$4.18 | 2839 | 1512 | \$409.50 | \$241.52 | -\$167.99 | \$241.52 | -\$167.99 | -41.0% | |
| 17 | <u>Mercury Vapor</u> | | | | | | | | | | | |
| 18 | 4,000 lumen | 118 | \$4.77 | 485 | 258 | \$118.66 | \$89.98 | -\$28.69 | \$89.98 | -\$28.69 | -24.2% | |
| 19 | 8,000 | 206 | \$5.16 | 846 | 451 | \$168.99 | \$118.91 | -\$50.08 | \$118.91 | -\$50.08 | -29.6% | |
| 20 | 12,500 | 287 | \$6.34 | 1179 | 628 | \$225.37 | \$155.60 | -\$69.77 | \$155.60 | -\$69.77 | -31.0% | |
| 21 | 22,500 | 455 | \$7.51 | 1869 | 995 | \$326.70 | \$216.08 | -\$110.61 | \$216.08 | -\$110.61 | -33.9% | |
| 22 | 60,000 | 1,103 | \$13.58 | 4532 | 2413 | \$736.63 | \$468.48 | -\$268.15 | \$468.48 | -\$268.15 | -36.4% | |
| 23 | <u>High Pressure Sodium</u> | | | | | | | | | | | |
| 24 | 4,000 lumen | 59 | \$5.59 | 242 | 129 | \$97.79 | \$83.45 | -\$14.34 | \$83.45 | -\$14.34 | -14.7% | |
| 25 | 6,300 | 84 | \$5.55 | 345 | 184 | \$110.30 | \$89.88 | -\$20.42 | \$89.88 | -\$20.42 | -18.5% | |
| 26 | 9,500 | 118 | \$5.89 | 485 | 258 | \$132.10 | \$103.42 | -\$28.69 | \$103.42 | -\$28.69 | -21.7% | |
| 27 | 13,000 | 190 | \$6.28 | 781 | 416 | \$174.15 | \$127.96 | -\$46.19 | \$127.96 | -\$46.19 | -26.5% | |
| 28 | 16,000 | 172 | \$6.29 | 707 | 376 | \$164.95 | \$123.14 | -\$41.81 | \$123.14 | -\$41.81 | -25.3% | |
| 29 | 27,500 | 311 | \$8.00 | 1278 | 680 | \$257.69 | \$182.09 | -\$75.61 | \$182.09 | -\$75.61 | -29.3% | |
| 30 | 50,000 | 472 | \$9.00 | 1939 | 1033 | \$353.42 | \$238.68 | -\$114.75 | \$238.68 | -\$114.75 | -32.5% | |
| 31 | 140,000 | 1103 | \$17.33 | 4532 | 2413 | \$781.63 | \$513.48 | -\$268.15 | \$513.48 | -\$268.15 | -34.3% | |
| 32 | <u>Metal Halide</u> | | | | | | | | | | | |
| 33 | 3,450 Lumen | 72 | \$8.08 | 296 | 158 | \$134.45 | \$116.94 | -\$17.50 | \$116.94 | -\$17.50 | -13.0% | |
| 34 | 5,200 | 89 | \$7.13 | 366 | 195 | \$131.80 | \$110.17 | -\$21.64 | \$110.17 | -\$21.64 | -16.4% | |
| 35 | 8,500 | 119 | \$7.12 | 489 | 260 | \$147.31 | \$118.38 | -\$28.93 | \$118.38 | -\$28.93 | -19.6% | |
| 36 | 14,400 | 207 | \$8.07 | 850 | 453 | \$204.48 | \$154.16 | -\$50.32 | \$154.16 | -\$50.32 | -24.6% | |
| 37 | 22,000 | 289 | \$9.23 | 1187 | 632 | \$261.09 | \$190.83 | -\$70.26 | \$190.83 | -\$70.26 | -26.9% | |
| 38 | 36,000 | 451 | \$10.41 | 1853 | 987 | \$359.43 | \$249.78 | -\$109.64 | \$249.78 | -\$109.64 | -30.5% | |
| 39 | 110,000 | 1080 | \$18.84 | 4437 | 2363 | \$787.79 | \$525.23 | -\$262.56 | \$525.23 | -\$262.56 | -33.3% | |

CERTIFICATE OF SERVICE

Docket No. ER-2010-0356

I do hereby certify that a true and correct copy of the foregoing document has been sent by electronic mail this 30th day of June, 2010, to:

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