

BLACK HILLS POWER, INC.
d/b/a BLACK HILLS ENERGY
EL22-002

PoREQUEST DATE : 02/08/22

RESPONSE DATE : 03/09/22

REQUESTING PARTY: Staff

SDPUC Request No. 1.3:

Provide the installed fixture cost as well as the monthly O&M expense per fixture.

Response to SDPUC Request No. 1.3:

Based upon current costs, 40W LED lighting fixtures cost approximately \$200, plus additional costs to complete a fully functional lighting fixture (wiring, poles, etc.), which are approximately \$360. This results in a total estimated cost of \$560 per installation.

O&M expenses per fixture are difficult to forecast. The fixtures are assumed to last the entire 100,000-hour life without needing replacement, but photo controls are expected to have a similar replacement cycle as HPSV lights. Until Black Hills fully converts to LED lighting, it is difficult for the Company to reliably estimate specific monthly O&M expenses. However, the Company anticipates a reduction in O&M expense per fixture.

Supplemental Response to SDPUC Request No. 1.3:

BHP still believes that it is difficult to forecast an appropriate direct O&M expense reduction but has made an estimated assumption that direct O&M per fixture would be reduced by approximately \$0.33 from its current direct O&M amount from its last approved cost of service.

Based off the last approved class cost of service, HPSV lights have very minimal direct O&M assigned to the HPSV class. In that class cost of service approximately \$20,000 of direct O&M was assigned to the 100W HPSV class and the company believes that 90% of that direct O&M can be eliminated converting to LED lighting fixtures. The remaining 10% of direct O&M is BHP's best estimate of the replacement for photo controls.

Attachments: None

Responder: Kyle Komata

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SDPUC Request No. 1.4:

Provide the calculations to justify the \$10.74 charge for the LED lighting rate.

Response to SDPUC Request No. 1.4:

The LED lighting fixtures installed by the Company are approximately \$84 more expensive per fixture than equivalent HPSV fixtures. Without the data available to specifically estimate the monthly reduction in O&M, the Company thought it more appropriate to keep the equivalent rates the same until the time of the next rate review when the Company will have a full test year of yearly O&M, final capital costs and an updated Class Cost of Service study that will fully reflect the Cost of Service for the lighting class.

Supplemental Response to SDPUC Request No. 1.4:

Attached is an estimated incremental revenue requirement and an estimated incremental rate calculation from BHP's existing 100W HPSV rate to a 40W LED rate.

The estimated incremental revenue requirement is a \$1.68 increase over HPSV.

The estimated incremental rate calculation is \$12.09 (current HPSV rate of \$10.74 + \$1.68 estimated incremental revenue requirement minus (-) BHP's estimated direct O&M savings). BHP estimated that LED customer will see approximately \$1.16 in energy usage savings for converting to LEDs resulting in approximately a \$10.93 net bill rate or \$10.93 total bill impact, if BHP would implement the \$12.09 LED rate. The \$1.16 in energy savings for converting to LEDs will occur regardless of whether the rate is changed.

BHP requests that we keep the LED rate at the current HPSV rate of \$10.74 vs the estimated \$12.09 until more information is gathered on direct O&M costs.

Attachments: Supplemental SDPUC 1.4 – LED Street Light Replacement Calculation

Responder: Kyle Komata