Q. Further to the response to PUB-NLH-468, please state whether, given the present design of the overhead line towers, it would be possible to increase the conductor area to increase the power delivered to Soldiers Point such that additional load shedding would not be necessary taking into account the maximum expected ambient temperature during high load conditions and if so, has this been considered.

A. The ability to avoid load shedding during contingencies was not considered as an optimization variable when conductor optimization was undertaken. Monopole operation with an electrode out of service represents a second contingency situation, and avoidance of load shedding was not a design objective for second contingency scenarios.

Conductors could be designed to be arbitrarily large, with adverse impacts on transmission line cost and its ability to withstand meteorological loading. Provided conductors are not replaced with ones of greater rated tensile strength[1], a conductor could conceivably be replaced with a larger one. Such a replacement would reduce the ability of the line to withstand ice, wind, and combined loadings, as the replacement conductor would be heavier with greater cross sectional area than the original conductor. The impact of replacing a conductor can only be confirmed through re-engineering the transmission line and its structures.

Given the nature of the issue as a second contingency and the adverse impacts to cost and line reliability, this concept has not been considered.

[1] Thus violating the design loadings for dead-end and anti-cascade structures.