

LEHI CITY POWER
Electrical Master Plan
May 2013

(applicable items for RFP #2013-2)

NORTHWEST AND NORTHEAST DEVELOPMENTS

Two new developments are planned with one in the Northwest and the other in the Northeast parts of the City. These projects appear to be on track for requiring power beginning in the 2014-2016 time frame. Each of the developments is estimated to be in excess of 20 MW and each will require new substations. A substation in the area near the Eagle Mountain Switchyard appears to be needed to serve power to the northwest part of Lehi while a substation in the area near Micron appears to be needed to serve the northeast part of Lehi.

At the present time, it would appear that the Northwest Substation should be constructed near the Eagle Mountain Switching Station in 2016 and that the Northeast substation should be constructed near the Micron Complex area in 2014. In this report, the northeast substation will be referenced as the Micron Substation and the northwest substation will be referenced as the Eagle Mountain Substation.

The Micron and Eagle Mountain Substation will each require a new 138-12.5 kV, 20/26/33-37 MVA transformer and should be designed to allow a future second transformer.

TEN YEAR PLAN (selected items)

- **2014 New Micron 138-12.5 kV Substation** – LCP should install a new 138-12.5 kV, 20/26/33-37 MVA substation to handle the new Micron loads.
- **2016 New Eagle Mountain 138-12.5 kV Substation** – LCP should install a new 138-12.5 kV, 20/26/33-37 MVA substation in the northwest near the RMP Eagle Mountain Substation.

FINDINGS AND RECOMMENDATIONS (selected items)

Finding No. 3 – There is a high probability of significant load growth in both the northeast and northwest sectors of the City. Developers have indicated that new loads will be added to the area near Micron and to the area near Eagle Mountain

Recommendation No. 3 – LCP should begin the engineering and material procurement for two new substations. A new 138-12.5 kV, 20/26/33-37 MVA substation with capability of adding a second transformer should be installed in the area near the Micron Plant to the northeast and a second one in the area near the RMP Eagle Mountain Substation to the northwest to handle loads estimated in the 20 MW range. The existing electrical infrastructure cannot handle those proposed new loads.