



# County of Los Alamos

## Council Meeting Staff Report

January 16, 2019

---

<b>Agenda No.:</b>	6.C
<b>Indexes (Council Goals):</b>	BCC - N/A
<b>Presenters:</b>	Steve Cummins
<b>Legislative File:</b>	AGR0610-19

---

### Title

Approval of Services Agreement No. AGR19-18 with Transmission & Distribution Services, LLC in the amount of \$195,000.00 plus Applicable Gross Receipts Tax, for the Purpose of On-call Services for Utility Power Distribution Electrical Engineering

### Recommended Action

**I move that the Board of Public Utilities approve Services Agreement No. AGR19-18 with Transmission & Distribution Services, LLC in the amount of \$195,000.00 plus Applicable Gross Receipts Tax, for the Purpose of On-call Services for Utility Power Distribution Electrical Engineering**

### Staff Recommendation

Staff recommends that the Board approve as presented.

### Body

The department performs the vast majority of the electrical engineering (“EE”) design work in-house to operate, maintain, and expand its electrical distribution system. However, certain EE design services for large substation projects are best suited to a third party consulting electrical engineer. Consultants perform critical substation type work on a routine basis and are aware of the latest trends for commissioning new electrical distribution substations.

The Los Alamos Switchgear Substation, (“LASS”) is in place and has been temporarily powered by the department. The temporary power feed provides station service for all electronic devices and maintains the battery system fully charged. LASS will be fed with permanent power from LANL’s new TA-3 substation; tentatively planned for late Spring, early Summer 2019. Prior to the seamless integration of LASS into the LAC DPU distribution grid, there are two critical EE tasks remaining:

1. The programming of ten (10) feeder relays and three (3) back-up bus & differential protection relays. The relays “protect” the \$1.4 million substation and the multi-million distribution grid from essentially “melting down during short-circuits”.
2. The commissioning or “start-up” of LASS is where each of (13) breaker bays and related electronic devices are methodically energized at 15,000 volts and tested to ensure each breaker bay, and related electronic devices, will function as intended.

For tasks related to item 1, the department has updated its short-circuit analysis (“SCA”) and the consultant will be asked to revisit and develop the new over-current device protection and coordination (“OCDP”) scheme for the thirteen (13) LASS substation relays. This task has additional complexity because the LANL OCDP “relay scheme” comes into consideration as well. This means the DPU OCDP consultant may need to “coordinate” relays with the LANL OCDP consultant.

For tasks related to item 2, the consultant will support the department’s engineering and line operations staff during the energizing of LASS. After LANL provides the permanent source feeds, LAC Staff will energize the substation and the consultant will perform the on-site commissioning

---

along with the LASS vendor, Crown Technical.

Finally, the department has other EE design service needs which the department may budget for in future years including:

- Design and installation of fiber optic, arc-flash protection at Townsite and White Rock substations. New technology has made these projects extremely worthwhile and not overly expensive. Basically a fiber optic ring is installed inside the substation buss and connected to a relay. When an arc-flash occurs, the high intensity light will trip the relay. This adds a level of protection to our substation gear and more importantly, a new safety level of protection to our line crews.
- New relaying scheme at Townsite substation which could avoid the issues related to the major power outage experienced on November, 2017. The new relay scheme would minimize operator interaction, respond faster and efficiently and improve the SAIDI.
- 115KV breaker design alternatives at White Rock Substation; i.e. LANL utilizes a 115KV “A-Frame” structure to OPEN/CLOSE the 115KV Norton Transmission line within the substation (1-2 times per year). LAC doesn’t particularly benefit from these switching activities and so it makes sense to explore to move these LANL switching activities outside of DPUs electrical substation.
- Etc.,

#### **Alternatives**

The Board could choose not to approve the recommendation at which time the department would bid electrical engineering services, as they relate to the LASS substation separately. Similarly, the department would bid electrical engineering services for other projects as they arise.

#### **Fiscal and Staff Impact**

The department will use funds from its FY 2020 budget for the LASS substation. The department will utilize its Engineering and Line Operations Staff as necessary and for the seamless integration of LASS into the DPU electrical distribution grid.

#### **Attachments**

A - AGR19-18