

The Method of Service (MOS) Study is applicable to any industrial/commercial customers requesting sub-transmission service (66 kV and above) served via a customer dedicated substation. These studies fall under Rule 2. The study will provide preliminary scope, cost and schedule for the necessary upgrades and reconfiguration needed to serve the requested load.

## What is an MOS study?

The MOS study is a holistic and comprehensive analysis of a sub-transmission load request. The study includes analysis from several technical engineering and planning groups here at Southern California Edison. The final product is a report that includes preliminary scope, cost and schedule.

## When would a customer request a MOS?

A customer would typically request a MOS study if their load request is above 10 megawatts (MW) and they are looking to be served via a customer dedicated substation at the sub-transmission level (66 kV and above).

## What is required for a complete MOS application package submittal?

1. MOS application
2. One Line (depicting customer infrastructure connection to SCE system)
3. Load schedule (with 10-year forecast)
4. Site map (with substation plot identified)

## Where should a customer send the complete MOS application package?

Customers can email the MOS application package to [mos-af@sce.com](mailto:mos-af@sce.com) and expect to receive a response within five business days after submittal.

## What is the timeframe and cost of study?

Timeframe to complete the study is 7-9 months. This timeline does not begin until all pre-study requirements have been met. The pre-study requirements include complete application package submittal, review of application, internal scoping meeting, drafting and executing of Study Agreement and Non-Disclosure Agreement and collecting Study Deposit funds.

The Study Deposit cost is between \$100-150k. The cost is dependent on study scope and options requested by the customer.

## What is the timeframe for construction execution?

Sub-transmission (66 kV-115 kV) level construction is typically 3-5 years but may vary. Transmission (220kV +) level construction is typically 7-10+ years but may vary.

A key component of the timeline is whether SCE needs an independent permitting process or can utilize the one completed by the customer for the new development.

## What is the typical cost of a customer dedicated substation?

The cost can range between \$5-\$100M but is largely dependent on configuration and customer requirements (e.g., proximity to exiting grid infrastructure, redundancy, line arrangement, protection).

## Who covers the cost of a substation construction?

SCE typically covers costs for any infrastructure necessary to meet our "must serve" obligation (Standard Service); however, individual customers will fund any additional or different infrastructure specifically required to meet customer needs (Added Facilities). Added Facilities are governed by Rule 2.

- **Rule 2:** Standard Service is defined as (1 voltage at 1 location through 1 meter). SCE will try to serve the customer from standard service first. Depending on the request and requirements, it may turn into an Added Facilities request.
- **Rule 2H:** Added facilities are anything in addition to standard service and are typically 100% at the cost of the customer.

## What are the typical dimensions and average available capacity (MW) for SCE's standard substations on the client-site?

- **66 kV or 115 kV Substation:** Typical range is between 95' x 115' (single breaker, no transformation) **OR** 135'-170' (ring bus, transformation).
- **220 kV Substation:** Typical range is between 580' x 620' for a 220 kV collector station **OR** 1,639' x 2,042' if you require transformation.

Average available capacity for a proposed substation depends on the grid characteristics near the customer site, the electrical characteristics of the customer's project, the necessary transformation, and other variables. The study will aim to propose a scope/cost that is the most efficient approach given the project requirements and the existing grid characteristics.

### Can SCE provide a customer with available capacity on the sub-transmission system without a MOS?

Typically, if a customer is looking for capacity in the area, they would need to provide a complete MOS application package and fund the MOS study for capacity to be studied and reviewed with customer.

### Does SCE reserve capacity for customers?

SCE does not reserve capacity for customers unless the customer is able to fulfill the requirements of a Complete Submittal Project. This process requires the project be in final engineering, not subject to change. Below are the required documents needed to reserve capacity:

- Customer Project Information Sheet
- Final Single Line Diagrams
- Final Detailed Load Schedule
- Final Plot Plans
- Final CAD Files
- Design Option Letter

However, if a customer funds a MOS Study, capacity will be reserved during the duration of the study and 90 days after the study is delivered to the customer.

### Where would the new SCE substation, triggered by the customer, be sited? Does SCE require easements?

If the project requires that SCE build a substation dedicated to the project, the customer will have to provide SCE with an easement in perpetuity so that SCE may utilize the customer's site for the substation.

SCE will acquire any necessary easements off of the customer's property.

### What are typical voltage thresholds for capacity requests?

- Load request between 10-20 MW = Distribution Service (50 kV and below)
- Load request between 20-120 MW = Sub-transmission Service (66 kV or 115 kV)
- Load request 120 MW and above = Transmission (220 kV Service)

*\*Please note these thresholds are not binding but should be used as a guide. SCE will review each request individually and determine the appropriate method of service.*

### What is the most common licensing/permit requirement for sub-transmission or transmission projects?

California Environmental Quality Act (CEQA): Required for projects over 50 kV

- Customers can submit the CEQA document for their overarching project and include the work SCE will be doing in the application.
- If the customer elects to have SCE submit the CEQA document, this can potentially add two years to the construction timeline.

General Order 131 E (GO-131 E): Required for transmission projects over 200 kV

- SCE would submit the application to the California Public Utility Commission.

### What is the difference between an Engineering Analysis Report (EAR) and MOS?

Engineering Analysis Report (EAR):

- Distribution level service (50 kV and below)
- Completed by Distribution Engineering
- Customer Project Information Sheet (CPIS) is application
- Application should be sent to Distribution Engineering serving the area
- Duration: 90 days
- Cost: \$3k

Method of Service (MOS):

- Sub-transmission level service (66 kV and above)
- Completed by Customer Interconnection Method of Service (CIMOS)
- MOS application
- Application should be sent to [mos-af@sce.com](mailto:mos-af@sce.com)
- Duration: 7-9 months
- Cost: \$100-150k

### Where can I find the MOS application?

Please find the MOS Application attached (right pane).