The Connection Process

Process Overview

- The Connection Process is followed when the AESO determines that a System Access Service Request (SASR) will require the addition or alteration of facilities on Alberta’s transmission system.
- This process follows a gated approach and is designed to move projects through seven consecutive stages. Projects must complete all required deliverables for a stage in order to advance to the next stage.
- Below is a list of some of the key deliverables, and a high-level flowchart of important activities and involved parties. See Connecting to the grid on the AESO website for more detailed information.

Stage 0: Identify Project
- System Access Service Request (SASR), including:
  - Distribution Deficiency Report (DDR) (Distribution Facility Owners only)

Stage 1: Connection Study Scope
- Connection Plan
- Connection Study Scope
- Stage 1 Project Data Update Package (PDUP)

Stage 2: Connection Proposal
- Connection Proposal, including:
  - Engineering Study Report (ESR)
  - High-Level Cost Estimates
  - High-Level Facility Design
  - High-Level Land Impact Assessment
  - Stage 2 PDUP
  - Stage 2 Construction Contribution Decisions (CCD)
  - Provision of Stage 3 & 4 Security to the TFO

Stage 3: NID & Facility Application
- Functional Specification
- Direction Letters
- Engineering Connection Assessment
- Service Proposal and Cost Estimate
- Participant Involvement Program (PIP) Report
- Environment & Land Use Effects Confirmation Letter
- Needs Identification Document (NID) Application
- Facility Application (FA)
- Generator Application filed with the AUC (generators only)
  - Stage 3 PDUP
  - Stage 3 CCD

Stage 4: Application Filings & AUC Approval
- NID Application Filing
- Facility Application Filing
- Potential AUC Information Requests (IRs)
- Potential AUC Hearing
- NID Approval
- Permit and License (P&L)

Stage 5: Construct & Prepare to Energize
- 100 Day Energization Package (includes Stage 5 PDUP)
- Energization Checklist
- Stage 5 CCD
- System Access Service (SAS) Agreement
- Payment of Generating Unit Owner’s Contribution (GUOC) (generators only)

Stage 6: Energize, Commission & Close
- Post-Energization Package (as built)
- Commissioning Certificate (generators only)
- Model Validation Report (generators only)
- Stage 6 CCD
- Final Cost Report

Who is involved in the process?
- Alberta Electric System Operator (AESO)
- Market Participant (MP)
- Transmission Facility Owner (TFO)
- Alberta Utilities Commission (AUC)

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Target Timelines

- The AESO sets performance targets and timelines with respect to processing System Access Service Requests for Connection Projects.
- Target timelines for the stage durations of Stages 0 through 5 are established in AESO Information Document #2018-018T, Provision of System Access Service and the Connection Process.
- While a target timeline of 16 weeks is set for Stage 5, this is the construction phase of the project and is affected by many factors, including the size of the project, seasonal construction, environmental factors, financing, and the status of customer facilities. As such, this stage has high variability in durations.
- Stage 6 is the closeout stage of the project, and does not have a target timeline set. Project closeout typically occurs six months after the project energizes.

2020 Mid-Year Timeline Metrics

- Metrics on stage durations are published semi-annually to provide visibility of historic project performance compared to the established target timelines.
- The timelines shown below are derived from the median of the gate to gate durations for all stages that were completed in the previous two years.
  - Stages included were completed between Jul 1, 2018 to Jul 1, 2020.
- For reporting purposes, projects with similar characteristics have been grouped together to more accurately reflect their timelines.
- Projects have been shown to take from one to three years to obtain Permit & License from the AUC, prior to entering the construction phase. Multiple factors can influence project timelines, such as:
  - customer decisions on project details
  - location of the connection to the transmission system
  - overall project complexity
  - scope of transmission facilities required
  - the regulatory process established by the AUC

Connection Process – Target Timelines

How have projects been grouped?

Load Projects – Brownfield: Projects that are adding load or improving reliability, and only include changes to existing substations or transmission lines

Load Projects – Greenfield: Projects that are adding load or improving reliability, and include any new substations or transmission lines

Generation Projects – Brownfield & Greenfield: All projects that are adding generation of any kind, at either new or existing substations

Active Connection Projects

- Load Projects – Brownfield
- Load Projects – Greenfield
- Generation Projects – Brownfield & Greenfield

For more information visit www.aeso.ca or contact us at customer.connections@aeso.ca