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 the parties generally involved. See Connecting to the Grid on the AESO website for more detailed information.

Who is involved in the process?

- Alberta Electric System Operator (AESO)
- Market Participant (MP)
- Transmission Facility Owner (TFO)
- Alberta Utilities Commission (AUC)

Stage 0: Application

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

Gate 0

Stage 1: Scope

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

Gate 1

Stage 2: Assessment

- Engineering Study Results (ESR)
- OOM or NID-Level Cost Estimates
- Environment and Land Use Effects Evaluation (if required)
- High-level Facility Design
- Proposal to Proceed
- Stage 2 PDUP
- Stage 2 Construction Contribution Decision (CCD)
- Generating Unit Owner's Contribution (GUOC) Assessment (generators only)
- Stage 3 & 4 Security to the TFO

Gate 2

Stage 3: Regulatory Preparation

- Functional Specification
- Direction Letters
- Engineering Connection Assessment
- Service Proposal and Cost Estimate
- Participant Involvement Program (PIP) Report
- Environment & Land Use Effects Confirmation Letter
- Stage 3 PDUP
- Stage 3 CCD
- System Access Service (SAS) Agreement
- Evidence of ability to pay GUOC (generators only)
- Power Plant Application filed with the AUC (generators only)
- Needs Identification Document (NID) Application
- Facility Application (FA)

Gate 3

Stage 4: AUC Applications

- NID Application Filing
- Facility Application Filing
- Potential AUC Information Requests (IRs)
- Potential AUC Hearing
- NID Approval
- Permit and License (P&L)
- Power Plant Approval (generators only)
- GUOC Payment (generators only)

Gate 4

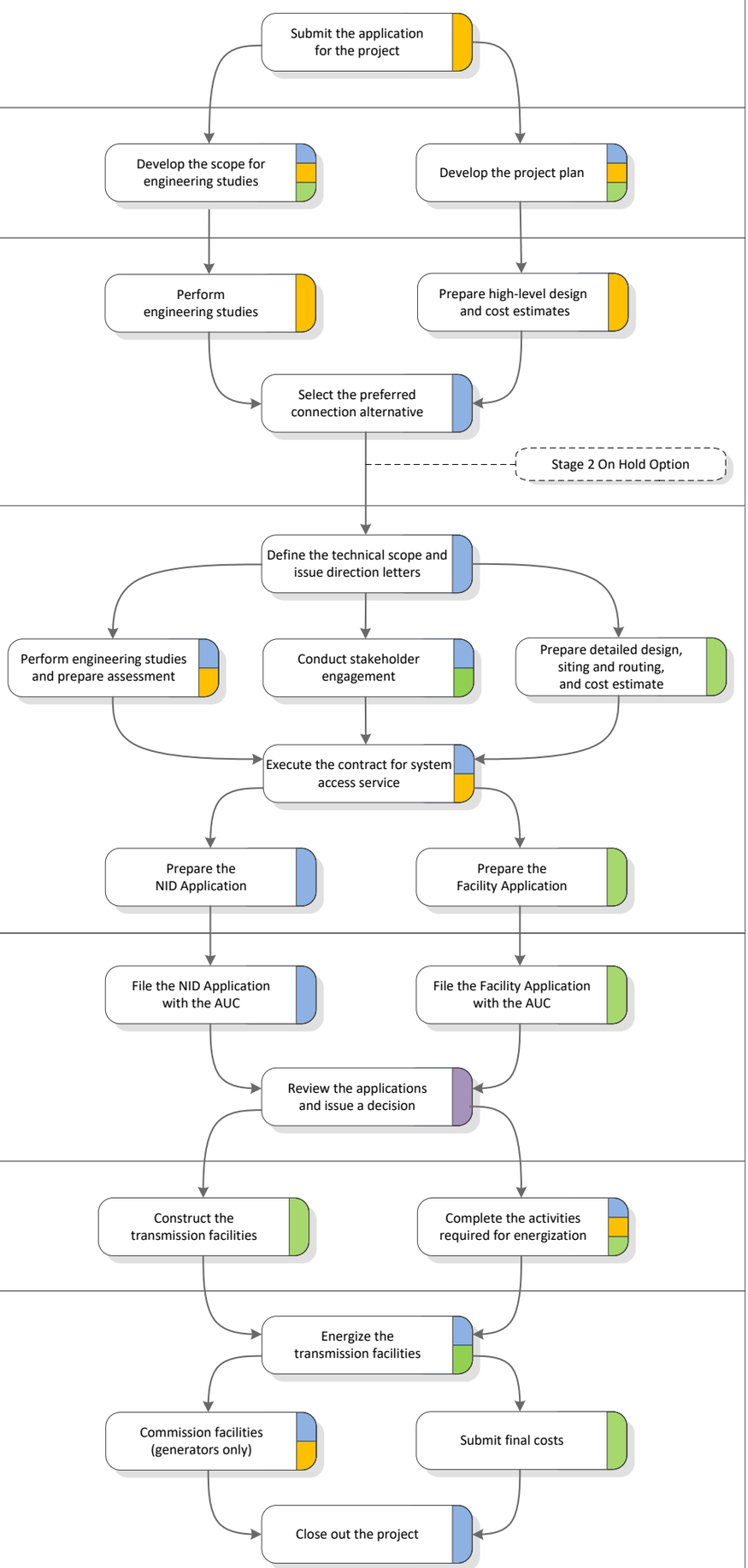
Stage 5: Construction

- 100 Day Energization Package (includes Stage 5 PDUP)
- 30 Day Energization Package
- Energy Trading System (ETS) Setup (generators only)

Gate 5

Stage 6 : Close Out

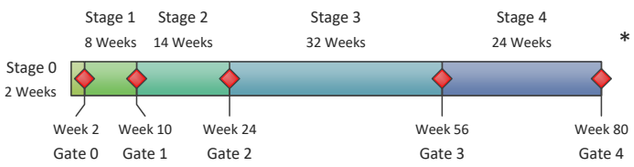
- Energization Authorization Letter
- Post-Energization Package (as-builts)
- Commissioning Certificate (generators only)
- Model Validation Report (generators only)
- Stage 6 CCD
- Final Cost Report



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.

Connection Process – Target Timelines



2020 Year-End 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 Jan 1, 2019 to Jan 1, 2021.
- 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

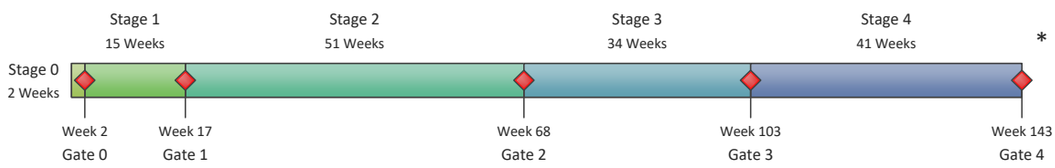
How have projects been grouped?

Load and Reliability Projects
All projects that are adding load or improving reliability, at either new or existing substations

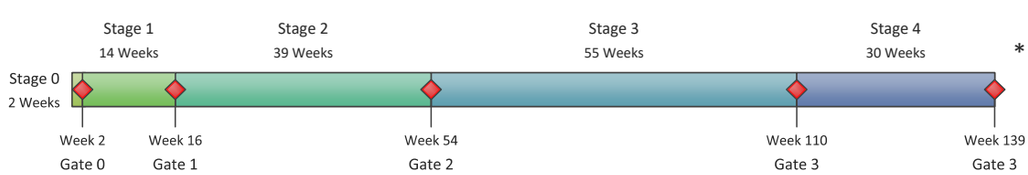
Generation and Energy Storage Projects
All projects that are adding generation or energy storage, at either new or existing substations

Active Connection Projects

Load and Reliability Projects



Generation and Energy Storage Projects



* *Stage 5 has been omitted from the targets and metrics due to the high variability in construction durations*

Stage 6 has no target set for metrics reporting