

# Distribution Generator Interconnections

## System Impact Study fact sheet

The System Impact Study (SIS) evaluates the impact of a proposed generator project on the safety and reliability of the BC Hydro System. The SIS identifies the constraints and infrastructure upgrades required for interconnection, in compliance with BC Hydro's technical requirements. You can find a pdf of the 35 kV and Below Interconnection Requirements for Power Generators on our website.

The SIS is the third step in the generator interconnection process.



### HOW MUCH WILL MY SIS COST?

The SIS cost is estimated in the previous step of the interconnections process, a Screening Study. If you choose to skip a Screening Study, then a cost estimate is prepared at the beginning of your SIS. A deposit is required up front and will be based on the estimated cost to complete the work. Any overages are billed on actual cost once your SIS is finished. Any balance will be refunded. A typical SIS can cost between \$50,000 to \$130,000.

### HOW LONG WILL THE SIS FOR MY PROPOSED PROJECT TAKE?

The length of a system impact study can vary depending on the project, the location being studied and current BC Hydro workload. The length of your SIS is estimated in your Screening Study report, or if you skip the Screening Study, we estimate how long the study will take at the beginning of your SIS. A typical SIS can take 4 to 12 months to complete.

### ARE THERE ANY PREREQUISITES BEFORE I CAN START MY PROJECT'S SIS?

Yes. Before we can start your SIS, you need to have completed a Basic Distribution System Information Request. We recommend completing a Screening Study too; however a Screening Study is optional. You may jump directly to an SIS, if you choose. An Interconnections Manager would be pleased to answer questions if you are not sure whether to skip the Screening Study.

### WHAT ARE THE SUBMISSION REQUIREMENTS FOR THE SIS?

You need to submit a completed SIS application form. Your completed application package must be signed and sealed by a professional engineer registered in British Columbia.

## WHAT IS INCLUDED IN THE SIS?

### An SIS may include the following when appropriate:

- Load Flow Analysis
- Short Circuit Analysis
- Protection Coordination
- Station Protection Coordination.
- Transformer Inrush Study
- Transient Stability Study
- Grounding Study
- EMTP Study

### The SIS report will include the following outputs:

- A summary of upgrades and work required for:
  - Distribution feeder
  - Station equipment
  - Protection equipment
  - SCADA and Control Centre facilities
  - Telecommunications
  - Revenue Metering
- A P50 conceptual-level cost estimate (+100% / -35%) of the interconnection network upgrades
- Cost and timeline estimates for the completion of the Facilities Study

## AFTER A SYSTEM IMPACT STUDY, WHAT IS THE NEXT STEP FOR MY PROPOSED PROJECT?

The facilities study is the next step in the distribution generator interconnection process.



The facilities study contains a project plan, including a detailed design for the network upgrades required for your proposed project's interconnection. This study also provides a design-level cost estimate (+15% / -10%) of the work and materials required to implement these network upgrades.

## HOW CAN I CONTACT THE DISTRIBUTION GENERATOR INTERCONNECTION TEAM?

Please contact us with any questions. You can visit our website to review and/or download application forms, reference guides and fact sheets. Payments must be sent to the address below or we cannot guarantee your payment will be received.

Distribution Generator Interconnections (System Impact Study)

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