

AESO Transmission Capability Map User Guide

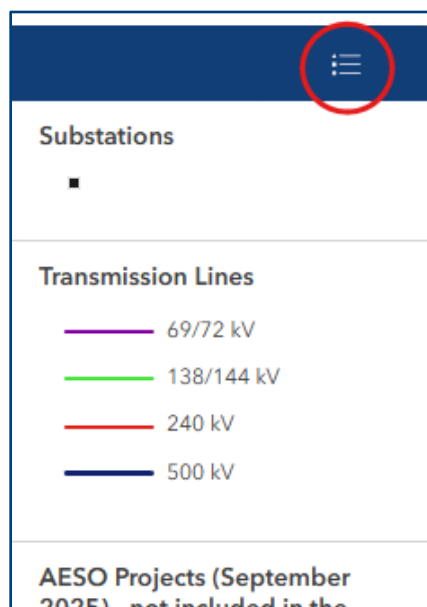
Map Overview

The [AESO Transmission Capability Map](#) is an online interactive tool that provides a visual, geographic guide to assist market participants in making informed decisions for generation capacity and location siting in a way that facilitates transmission system optimization. For any questions regarding usage of the map please contact customer.connections@aeso.ca.

Map Basics

Legend

The map legend can be found on the right-hand side of the dashboard and is open by default when first loading the application. There is a toggle button for the legend in the top right corner which can open and close it.

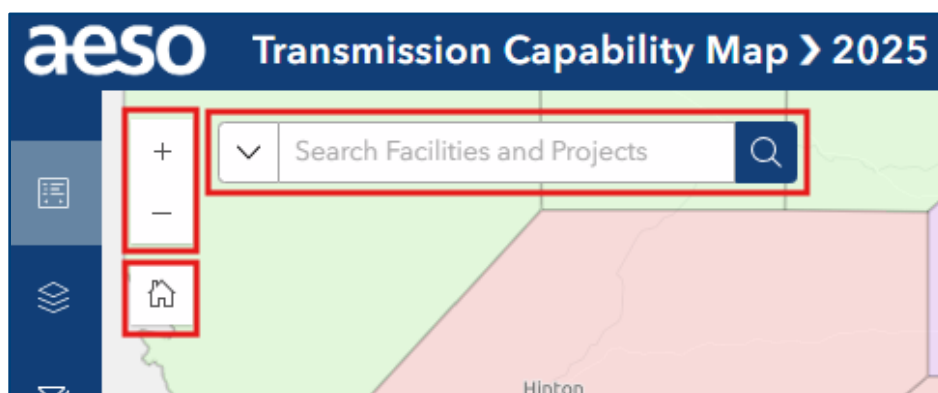


Navigation

Navigate within the map by clicking and dragging across the screen. Zoom in/out using the mouse wheel or the +/- buttons in the top left of the map. The Home button will return the map extent to the default extent.

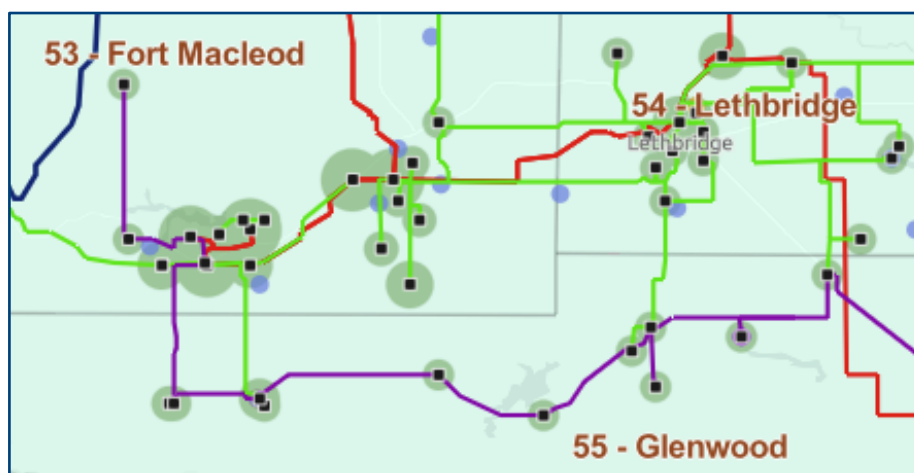
Search Bar

Substations, transmission lines, projects and geographic locations can be searched in the search bar. Substations can be searched by either name or facility code. The drop down on the left side of the search bar allows you to specify which layers to search.



Substation Capability Bubbles

The green “bubbles” at each substation provide a high-level illustrative view of the relative magnitude of substation capability. A bigger bubble indicates larger capability at the sub and vice-versa.



Substation Capability Information

To view specific capability at a substation, click on that sub in the map. The substation capability information will open in the Feature Info tab on the left side of the dashboard. Capability is shown at the bus level within each substation.

Transmission Line T-tap Capability Information

To view capability information for a T-tap connection to a transmission line, click on that line and the Feature Info tab on the left side of the dashboard will open. Values are shown for both connecting substations on a line as well as any tapped substations along that line. As a potential T-tap location nears the connecting substations listed, the T-tap capability for the line approaches the MW value shown.

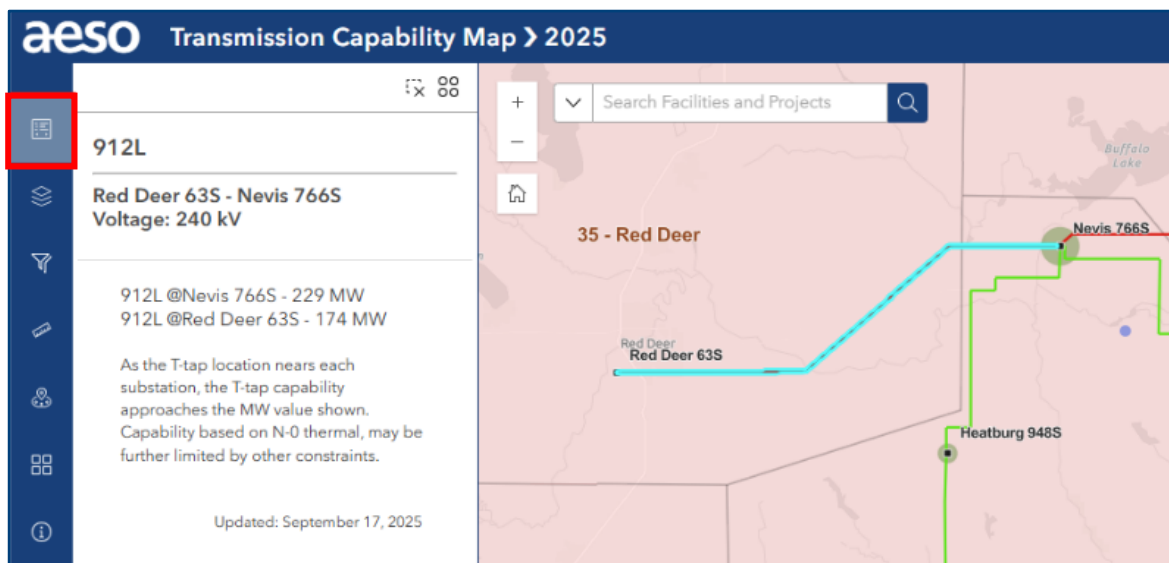
Projects Layer

The map also displays a layer of projects to provide users with context regarding existing project interest that could impact capability in a particular area. Projects are taken from the AESO Project List and are filtered to show Generation and Load projects in the areas covered by the Capability Map. Also shown are projects that have Recently Energized but were not included in the capability calculations. The full AESO Project List and a map showing those projects can be found [here](#). The projects layer is updated monthly as the new project list is released. Please note that the capability values shown are based on the existing transmission system and do not consider the impact of projects in the calculations. To view additional information on a project, click on the project point and the project attributes will open in the Feature Info tab on the left side of the dashboard.

Sidebar Tools

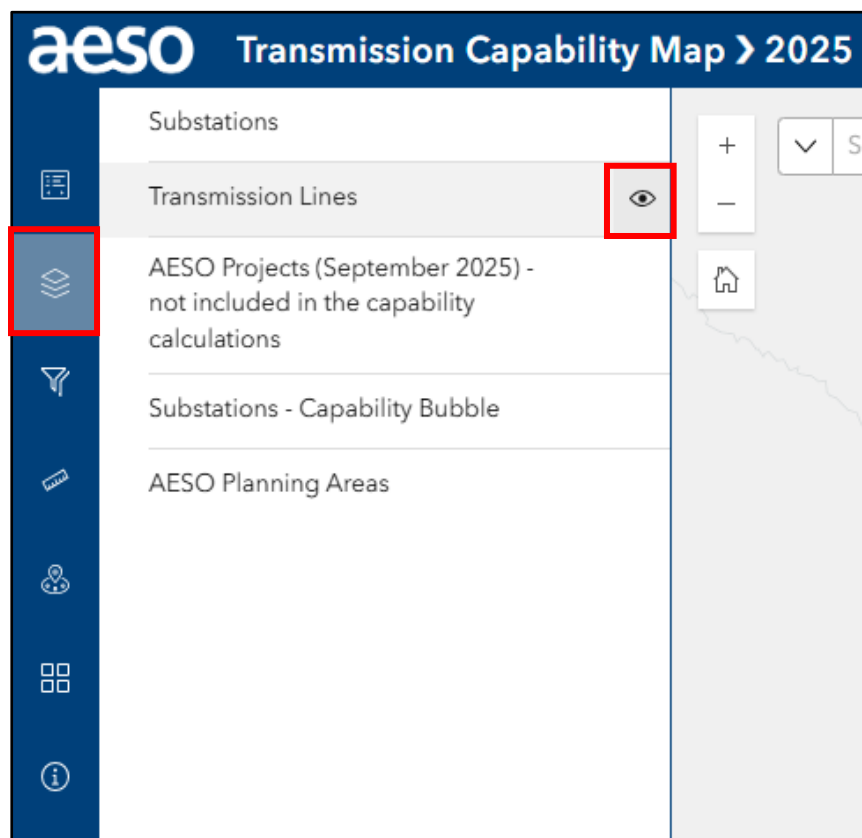
Feature Info

The Feature Info tab in the sidebar on the left side of the dashboard will display feature attributes when a substation, transmission line or project is selected in the map. The selected feature will be highlighted in light blue, and the Feature Info tab will open automatically.



Layers

The map layers tab will display a list of layers in the map. To display or hide layers, click on the eye icon to the right of each layer. The eye icon appears when the cursor is hovering over a layer.



Filters

The Filter tool is accessed with the funnel tab and allows users to only display substations, transmission lines or projects based on specific criteria.

The screenshot displays the AESO Transmission Capability Map 2025 interface. On the left, a vertical sidebar contains several icons, with the funnel icon (representing filters) highlighted by a red box. The main map area shows a geographical region with labels like 'Hinton'. On the right, a filter panel is open, listing six filter categories, each with a toggle switch and a search input field:

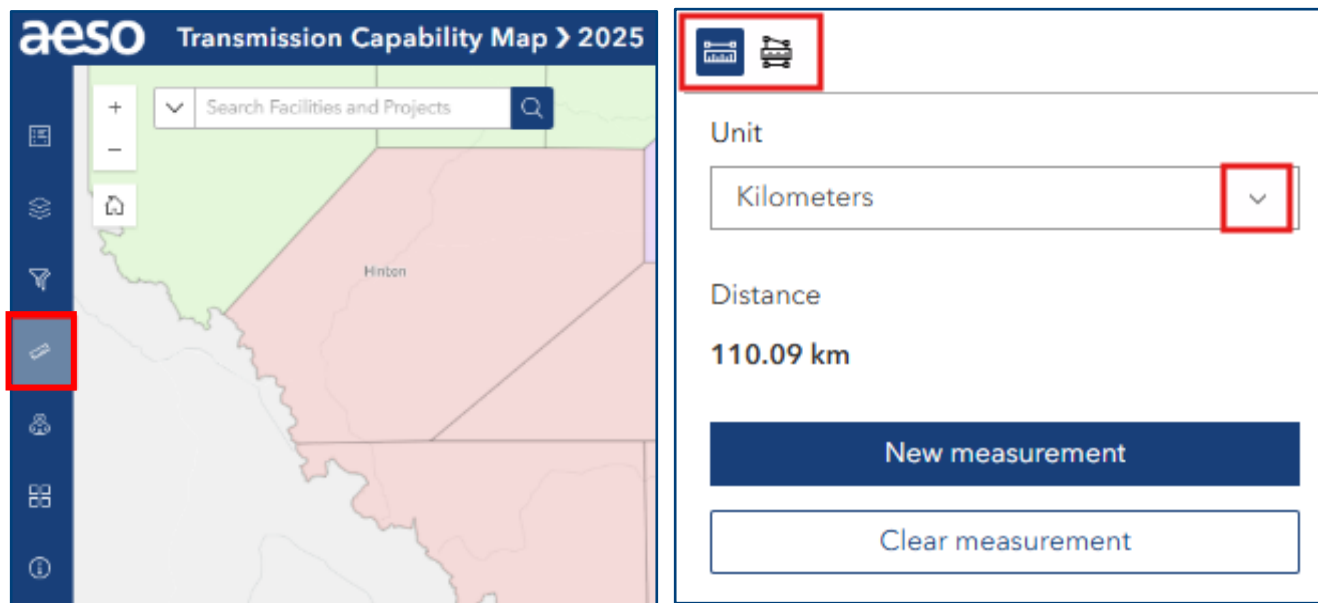
- Substation Capability**: Toggle is off. Input field: "Is At Least (Enter MW Value):".
- Transmission Line T-Tap Capability**: Toggle is on (highlighted with a red box). Input field: "Is At Least (Enter MW Value):".
- Transmission Line Voltage**: Toggle is on. Input field: "Is At Least (Enter kV Value)".
- Project STS (MW)**: Toggle is on. Input field: "Is Greater Than (Enter MW Value):".
- Project Stage**: Toggle is on. Input field: "Is At Least (Enter Stage)".
- Project Inclusion Status**: Toggle is on. Input field: "Select Inclusion Status" with a dropdown menu currently showing "- All -".

Substations can be filtered by capability and transmission lines can be filtered by T-tap capability or voltage. Projects can be filtered by STS MW, Stage, or Inclusion status for project studies.

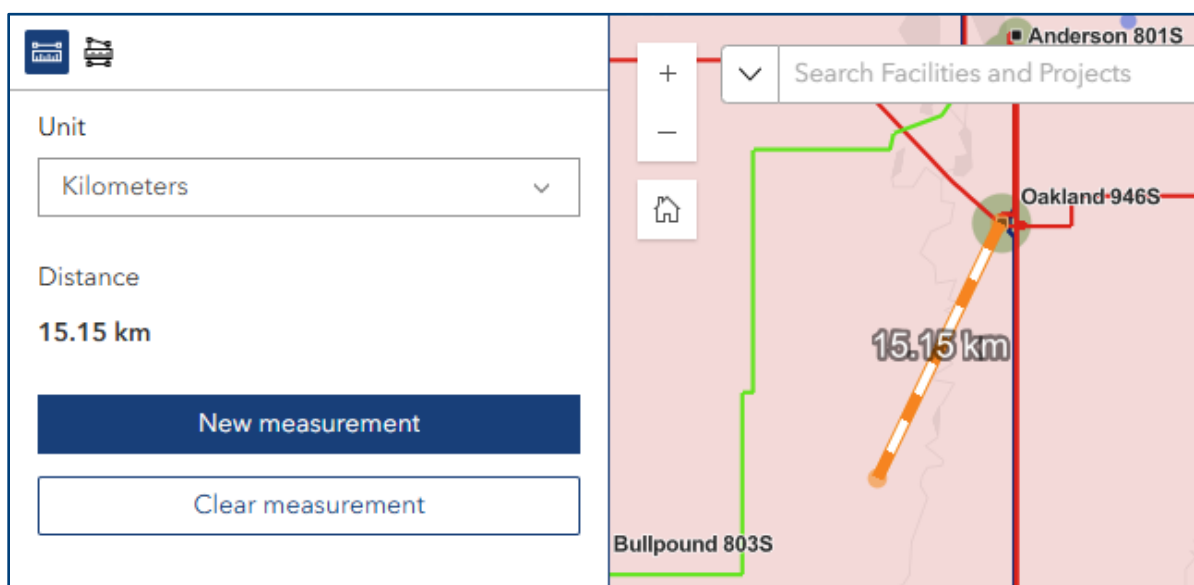
To apply a filter, either enter or select a value and activate the filter using the on/off toggle to the top-right. Multiple filters can be applied at the same time.

Measure Tool, Coordinates

The measure tool is accessed from the ruler tab and enables geographic measurements of distance or area within the map. Select whether to measure Distance or Area and the desired unit of measurement:

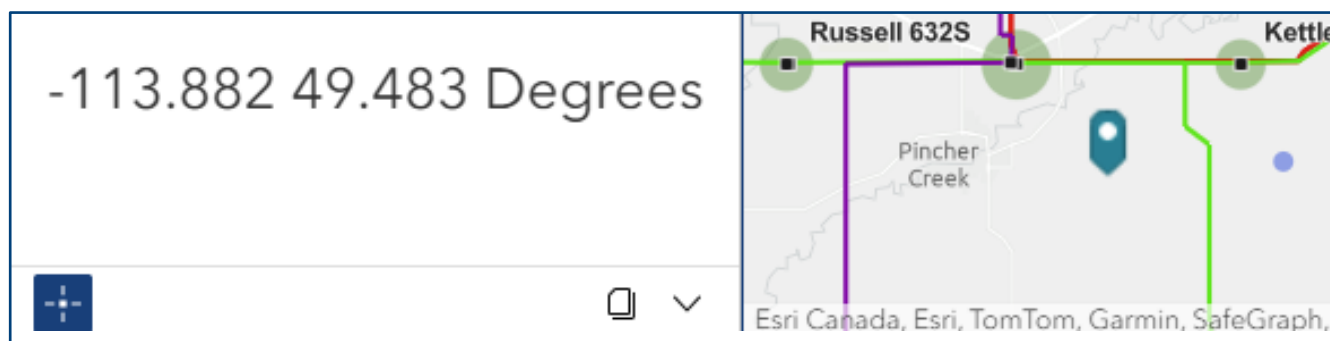


Click on the map to begin the measurement and to add subsequent points to the area polygon or distance line. Double-click to complete the measurement. A typical use for this tool would be



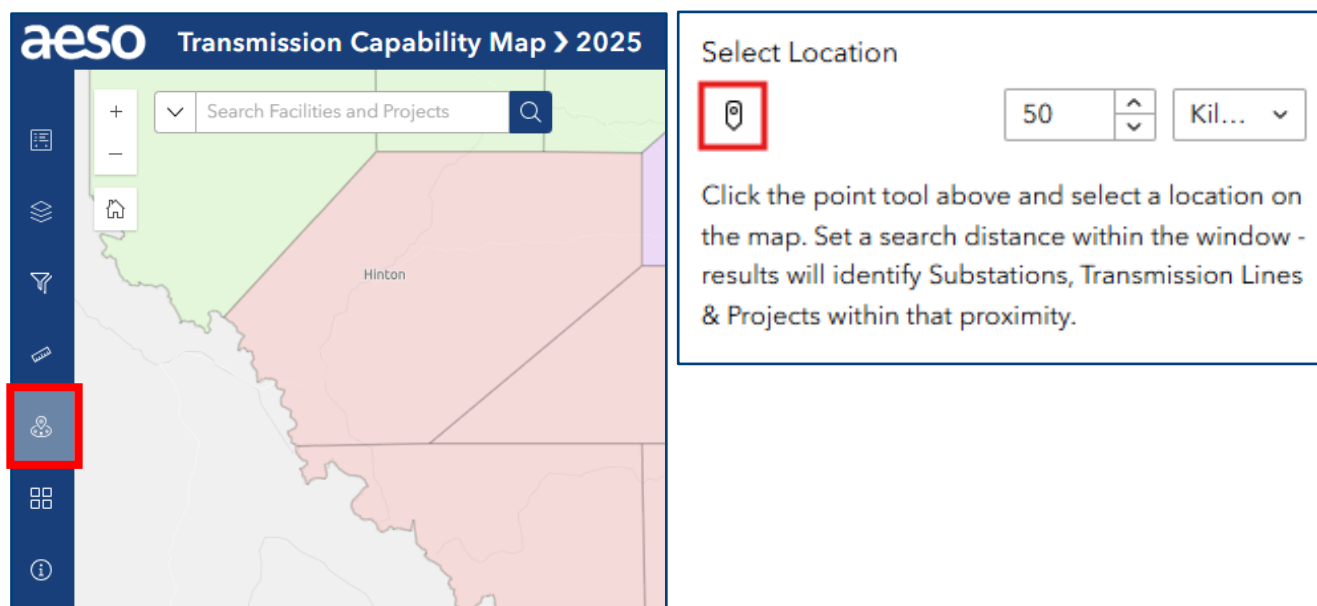
measuring the distance from a potential project location to a substation or line, such as in the example below:

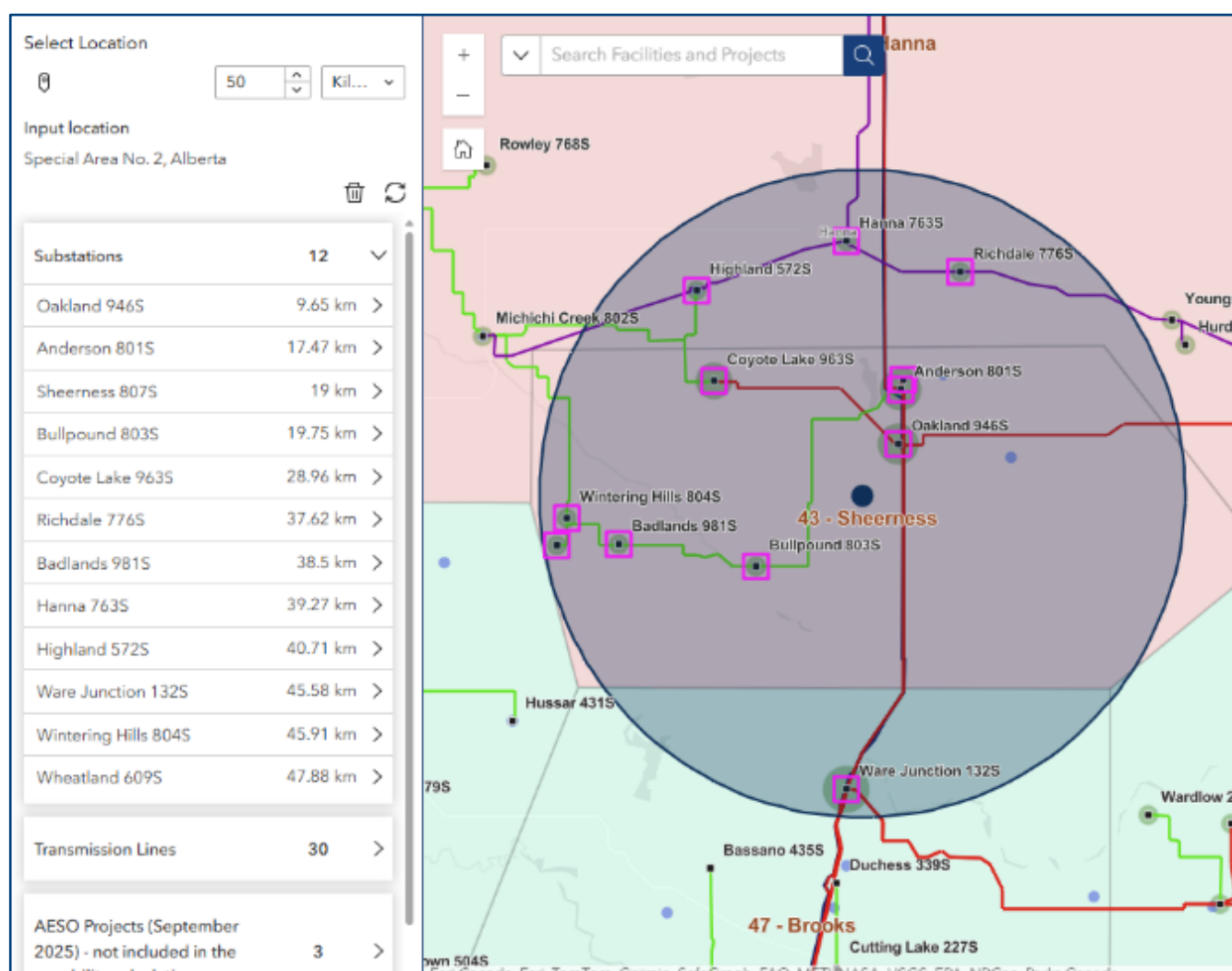
Within the Measure tool is the Coordinates tool, which allows the user to drop a pin on the map and view the coordinates (in decimal degrees) of that pin location. Additionally, coordinates will be displayed for the location of the cursor as it moves across the map.



Find Nearby Facilities

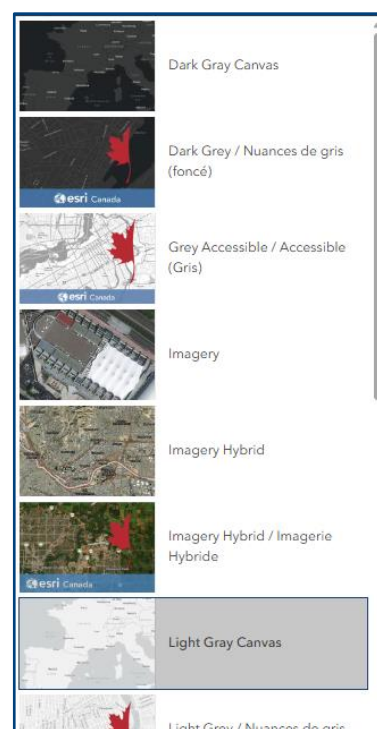
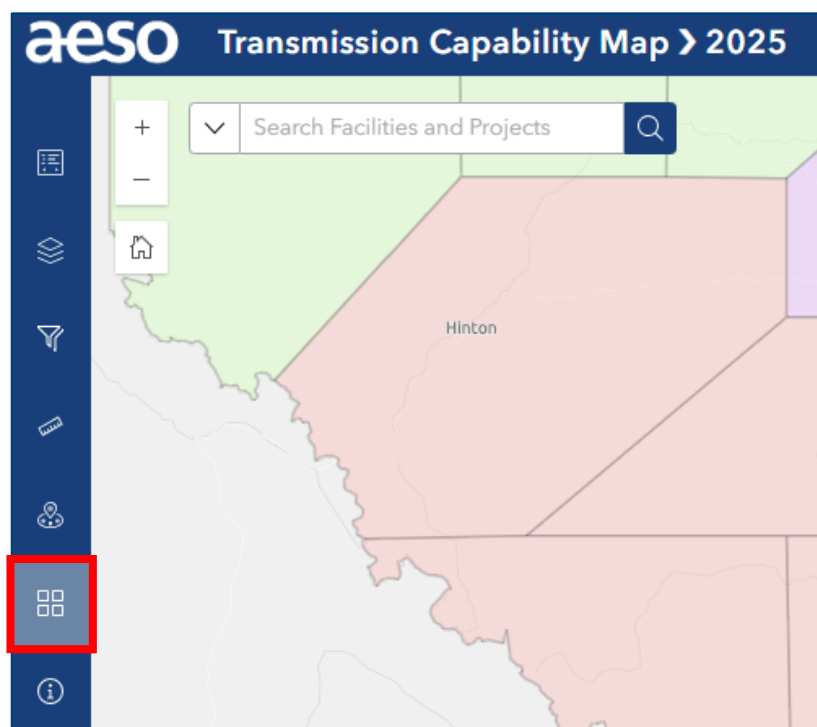
The Find Nearby Facilities tool can be accessed with the NearMe button and can be used to find transmission facilities within a specified radius of a location on the map. To use the tool, specify the search radius, select the point icon, and then place it on the map. The tool will display substations, transmission lines, and projects within the specified radius of the pin location.





Basemap Gallery

The Basemap Gallery tool is accessed with the grid tab and allows the user to change the background of the map. A wide array of Basemaps is available, including detailed satellite imagery. Different basemaps will focus more heavily on different features within the map. Users can choose the basemap that best suits their purpose.



Map Info

The About tab contains general use information about the map/dashboard, including tips on navigating the map as well as links to instructional documentation, an FAQ, this user guide, and an Excel document showing all substation and T-tap capability values.

