

National Grid Massachusetts System Data Portal: User Guide

Nov 2020

The screenshot displays the 'National Grid Massachusetts System Data Portal' interface. At the top, there is a navigation menu with tabs for 'Introduction', 'Company Reports', 'Distribution Assets Overview' (which is selected), 'Heat Map', and 'Hosting Capacity'. To the right of the menu, there is a 'A story map' link and social media icons for Facebook, Twitter, and LinkedIn, along with the Esri logo. Below the menu, the main content area is titled 'Distribution Assets Overview' and includes the text 'with Web AppBuilder for ArcGIS'. The central part of the interface is a map of Massachusetts, overlaid with a dense network of multi-colored lines representing the power grid. The map includes various geographical features like rivers, lakes, and state boundaries. On the left side of the map, there is a search bar labeled 'Esri World Geocoder' and several map control icons (home, search, layers, etc.). At the bottom left, there is a scale bar and coordinate information: '-73.884 42.784 Degrees'. At the bottom right, there is a small 'Powered by Esri' logo and a list of data sources: 'Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS'.



Table of Contents

Content	Slide #
Overview	3
Navigation – Tabs	4
Navigation – Map Search	5
Query Tool	6
Tab – Introduction	7
Tab – Company Reports	8
Tab – Distribution Assets Overview	9-11
Tab – Heat Map	12
Tab – Hosting Capacity Map	13-15



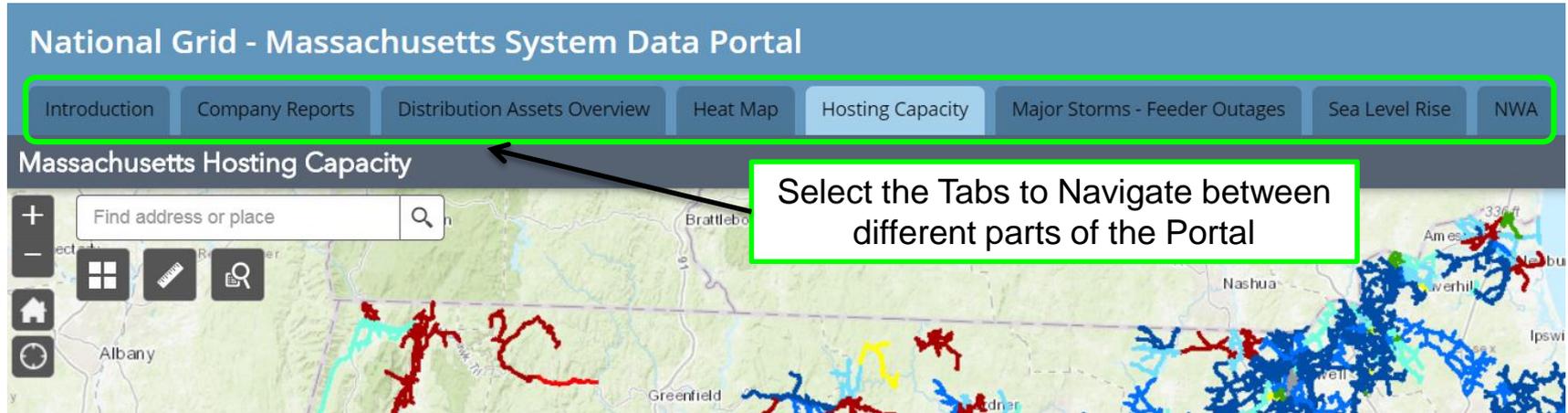
[Click Here to Access the National Grid Massachusetts System Data Portal](#)

National Grid has created a collection of maps to help customers, contractors and developers identify potential project sites.

The maps provide the location and specific information for selected electric transmission lines, distribution lines, associated substations and assets within the National Grid electric service area of Massachusetts.

National Grid's electric system is dynamic. System configurations can change for a variety of reasons both planned and unplanned. National Grid will update the contents on a periodic basis so please be aware that the same location may show different information over time.

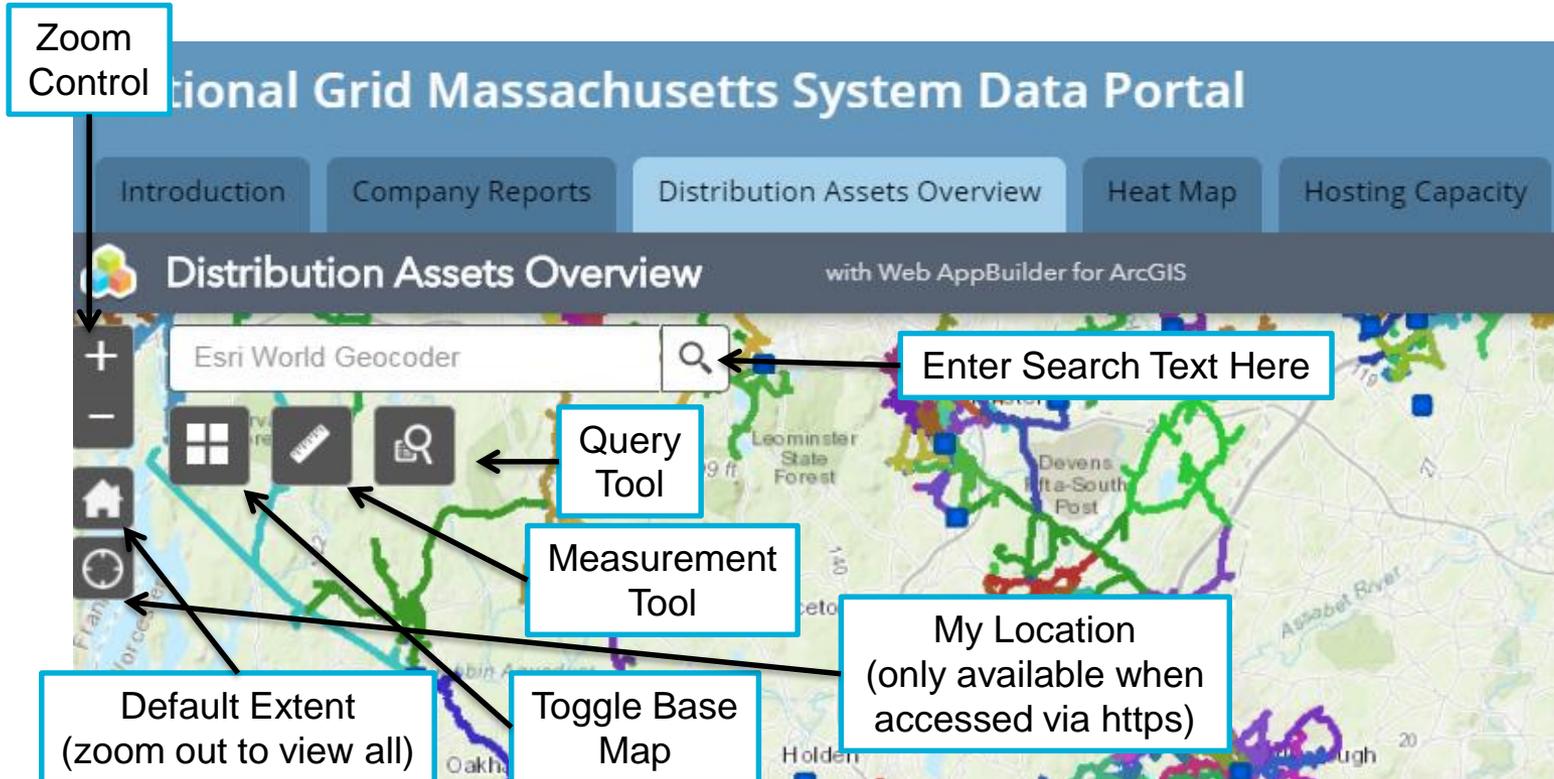
Please note that the portal and maps are not a guarantee that generators can interconnect at any particular time and place. A number of factors drive the ability and cost of interconnecting distributed generation to the electric system and actual interconnection requirements and costs will be determined following detailed studies. These studies will consider your specific project location, operating characteristics and timing. Additionally, environmental and other required permits are independent of our interconnection process and may limit the suitability of a particular site.



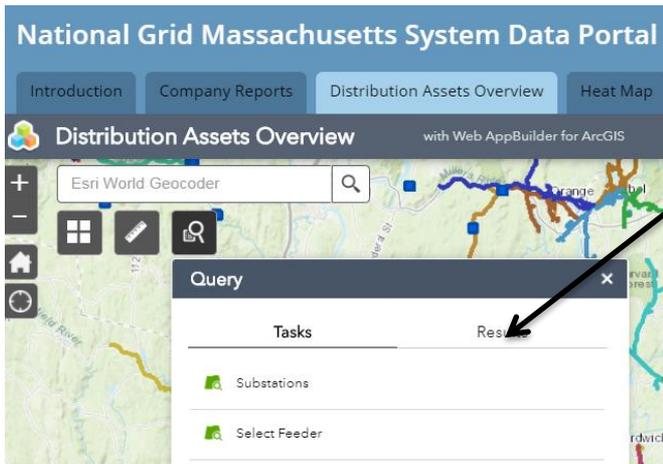
- The Massachusetts System Data Portal contains tabs for easy navigation.

Navigation – Map Search

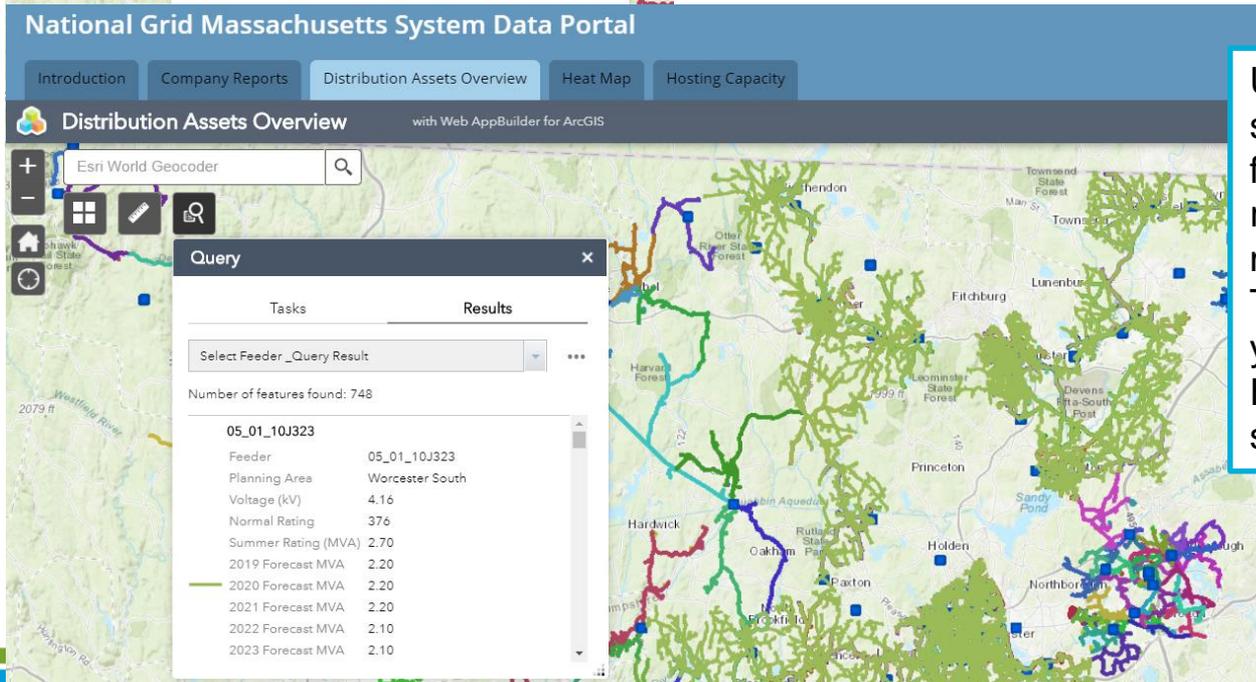
- Use the Search Text bar to find an address or place, similar to Google Maps.
- Or, use the Zoom Controls or mouse wheel to locate a specific location, feeder or substation.



Query Tool



Select Feeders by Substation Name
or by Feeder Number



Using the Feeder Number search method, searching for a specific feeder or region (i.e. 05_01) zooms map to search results. The feeder is highlighted yellow by this method. Feeder information is also shown.

National Grid Massachusetts System Data Portal

A story map    

Introduction Company Reports Distribution Assets Overview Heat Map Hosting Capacity

National Grid Massachusetts

System Information Portal

National Grid has created a collection of maps to help customers, contractors and developers identify potential project sites. Each map provides the location and specific information for selected electric distribution lines and associated substations within the National Grid NY electric service area. National Grid's electric system is dynamic. System configurations can change for a variety of reasons both planned and unplanned. National Grid will update the contents on a periodic basis so be aware that the same location may show different information over time.

Please note that the portal and maps are not a guarantee that generators can interconnect at any particular time and place. A number of factors drive the ability and cost of interconnecting distributed generation to the electric system and actual interconnection requirements and costs will be determined following detailed studies. These studies will consider your specific project location, operating characteristics and timing. Additionally, environmental and other required permits are independent of our interconnection process and may limit the suitability of a particular site.

Detailed information on this process can be found at: [\(nCAP\) Customer Application Portal](#).

FAQs

Will the maps be made available directly in a downloadable format?

At this time, National Grid does not anticipate making the maps available in any other downloadable format due to the dynamic nature of National Grid's electric system and the prospect of different users having files with different system configurations. To ensure that National Grid is providing authoritative content the company must be able to maintain its content in an authoritative format.

Are instructions for using the portal available?

To help enable the use of the portal National Grid has provided a guide in pdf format. This can be accessed here: [System Information Portal Help](#)

- Provides an overview of the Portal, with FAQs and a link to this Help Guide

National Grid - Massachusetts System Data Portal

Introduction

Company Reports

Distribution Assets Overview

Heat Map

National Grid Massachusetts

Filed Company Reports

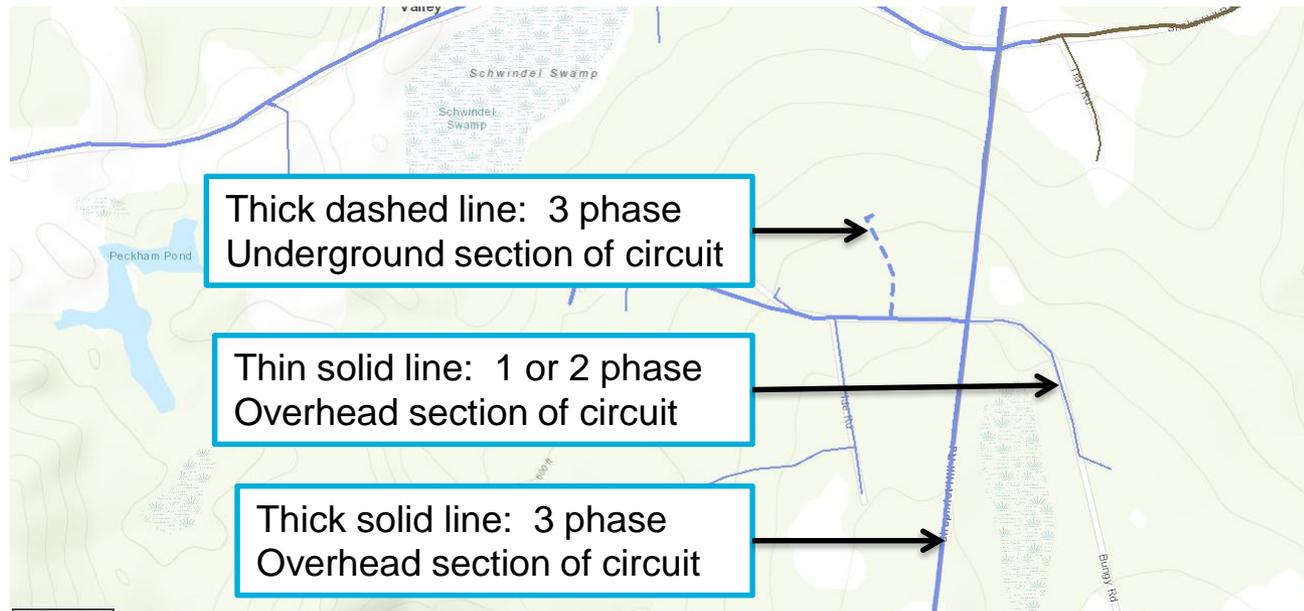
[National Grid - Distribution Planning Criteria](#)

[National Grid Massachusetts - Planning Study Flowchart](#)

[National Grid - 2018 Annual Reliability Report](#)

Location of links for various Regulatory Filings and Company Reports

- A flowchart for National Grid's Distribution Planning Process
- The Planning Criteria National Grid uses for its system.
- The FY2018 ARR (Annual Reliability Report) Filing



- The Distribution Assets Overview tab shows National Grid electric distribution assets, which includes circuits (feeders) by phase.
- Circuit types are coded by line thickness and dash style.

Tab - Distribution Assets Overview

National Grid - Massachusetts System Data Portal

Introduction Company Reports Distribution Assets Overview Heat Map

Massachusetts Distribution Assets Overview

Legend toggle button

About window with feeder info

Feeder Legend

Study Area	Northampton-5 berkshire
CDF	05_09_909W4
District	9
FEEDER	909W4
FEEDER_X	
FEEDER_Y	
Substation	FLORENCE JCT 9
Voltage (kV)	13.80
Normal Rating	515
Summer Rating (MVA)	12.30
2018 %SN	66.70%
2019 Amps	341
2020 Amps	338
2021 Amps	336
Zoom to	***

Legend

MASDP_Substations

Substations

MASDP_Overview

Three Phase

OH

- 04_04_101L2
- 04_04_101L3
- 04_04_101L4
- 04_04_101L5
- 04_04_101L6
- 04_04_101L7
- 05_01_0012
- 05_01_10J323
- 05_01_10J366
- 05_01_10J383
- 05_01_11J314
- 05_01_11J330
- 05_01_11J333
- 05_01_11J334
- 05_01_11J351
- 05_01_11J357
- 05_01_12J376
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- 05_01_13J350
- 05_01_13J358
- 05_01_14J367

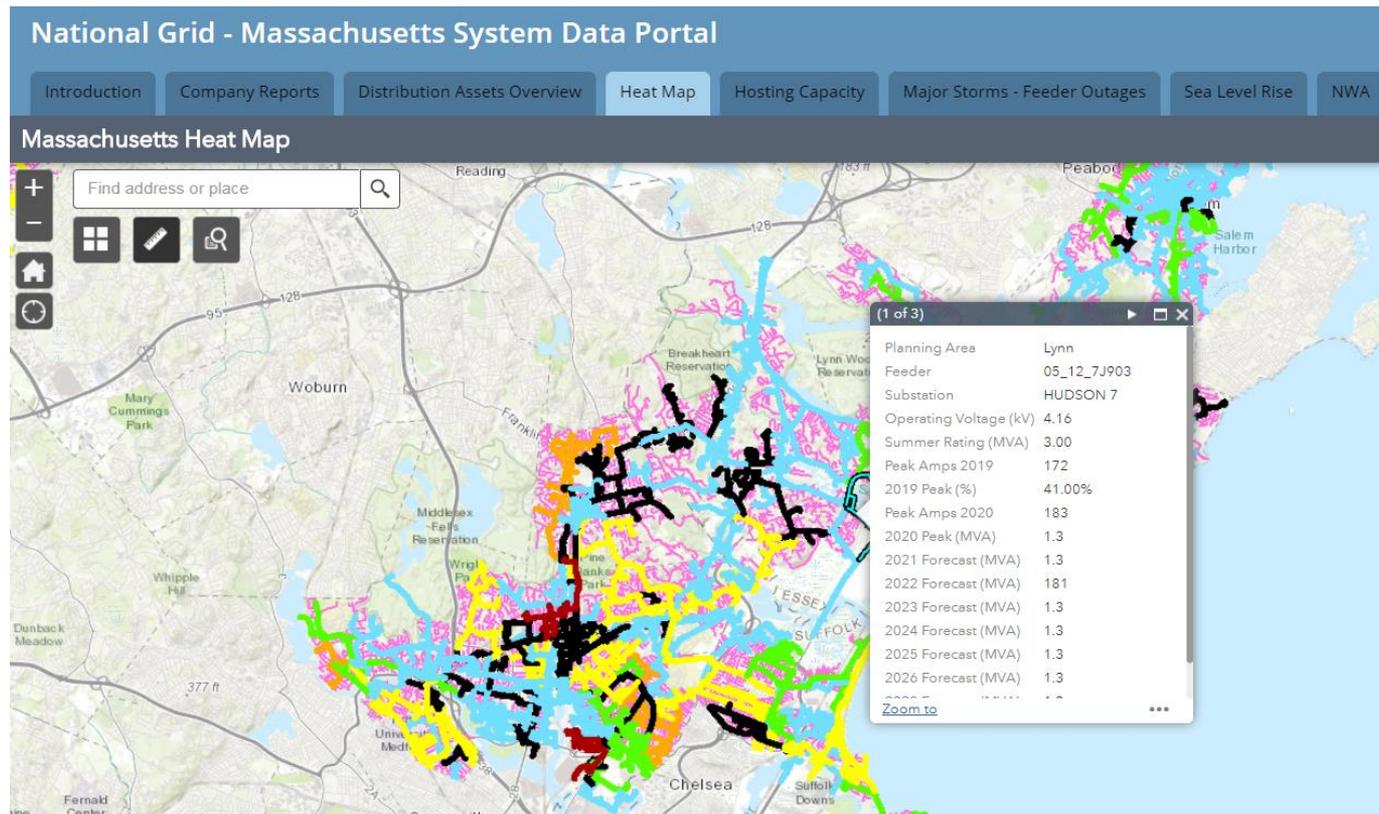
- Circuits are color coded by feeder name, on the Map and in the Legend.
- When a feeder is selected, an about window will pop up with feeder operating attributes and data.

Tab - Distribution Assets Overview

The screenshot displays the National Grid Massachusetts System Data Portal interface. At the top, there are navigation tabs: Introduction, Company Reports, Distribution Assets Overview (selected), Heat Map, and Hosting Capacity. A 'Layer List toggle button' is highlighted in the top right corner. The main map area shows a distribution network with various colored lines representing different assets. A 'Layer List' panel is open on the right, showing a hierarchy of layers: Operational Layers, National Grid Substations, Substations, National Grid MA Feeders by Phase, Three Phase, Single end Two Phase, Massachusetts Distribution Feeders, and % Based on 2018 Loads. A 'Map Scale' box highlights a scale bar showing 600ft. A 'Map coordinates (long,lat)' box highlights a coordinate display showing -71.689 41.871 Degrees. A smaller coordinate display in the bottom left corner shows -72.811 42.175 Degrees.

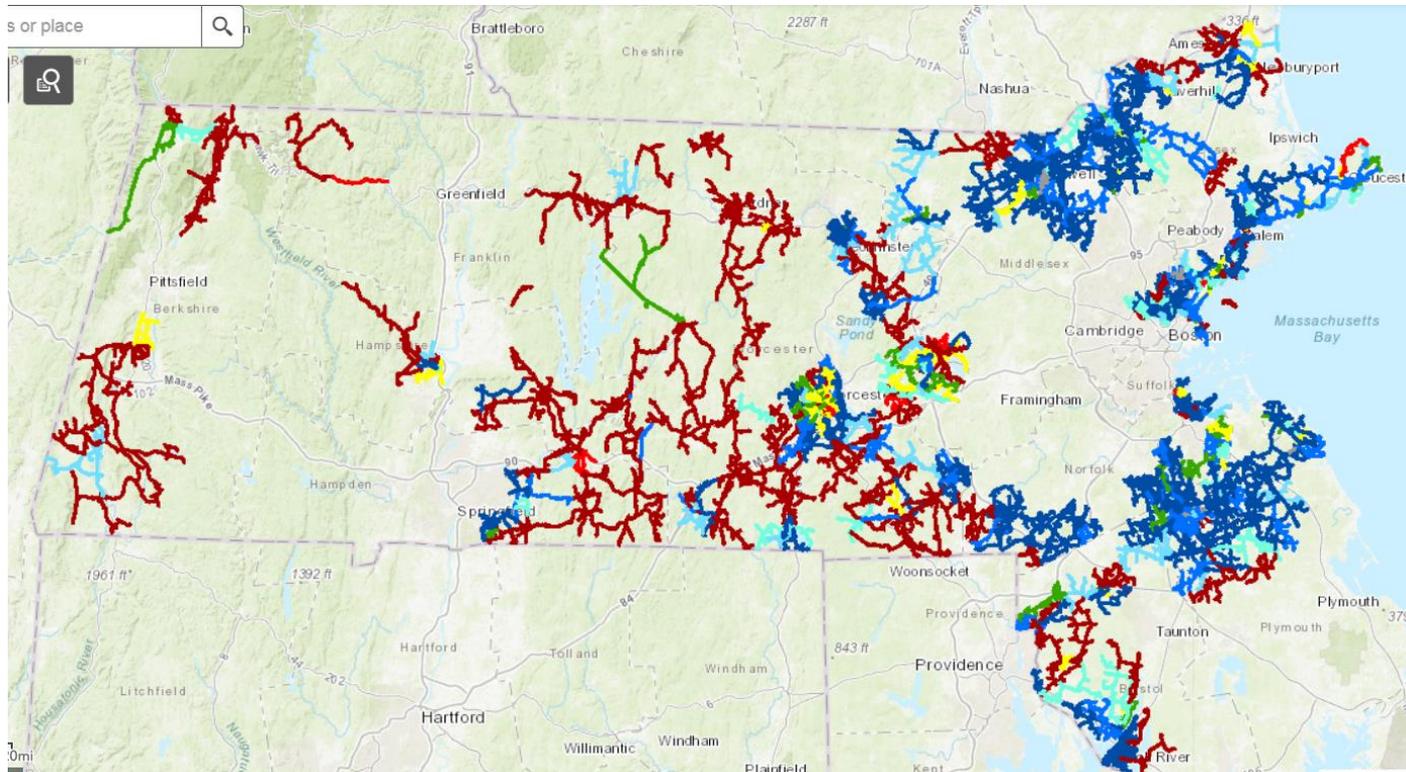
- The window contains map scale and coordinate data.
- A Layer List can be toggled to show different assets of the map system.

Tab - Heat Map



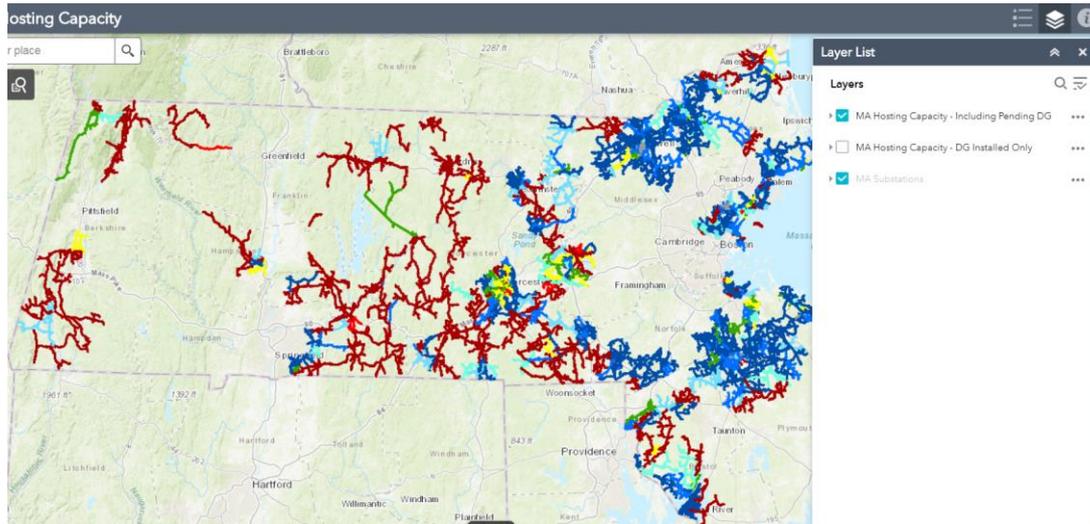
- The Heat Map shows National Grid electric distribution assets, similar to the Distribution Assets Overview tab. Circuits are color coded by % 2019 Actual loading.
- Feeder selection will display a variety of operating attributes and data.

Tab - Hosting Capacity

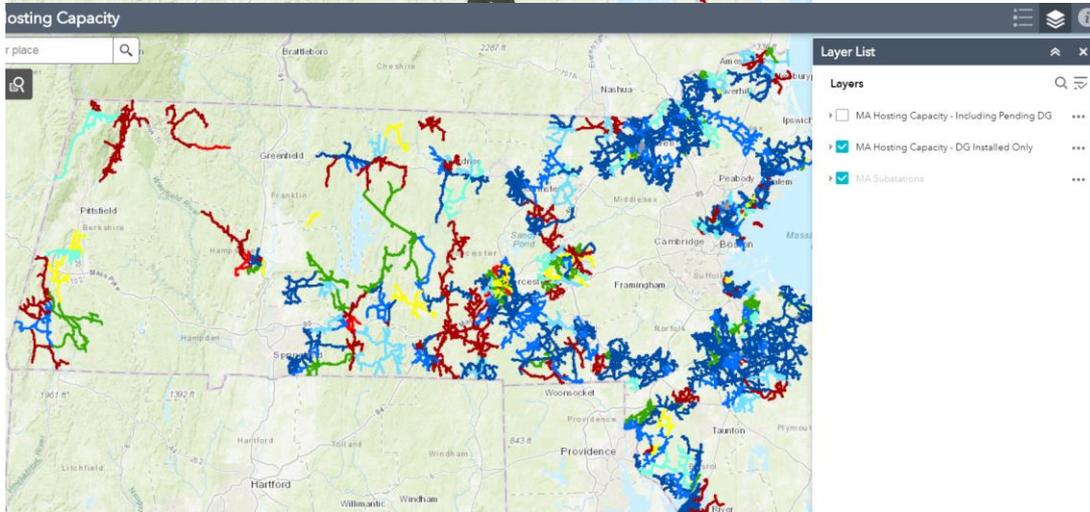


- The Hosting Capacity Map shows the current available Solar MW capacity of distribution lines. It is updated monthly with changes in capacity, connected DG, and pending DG.

Tab - Hosting Capacity



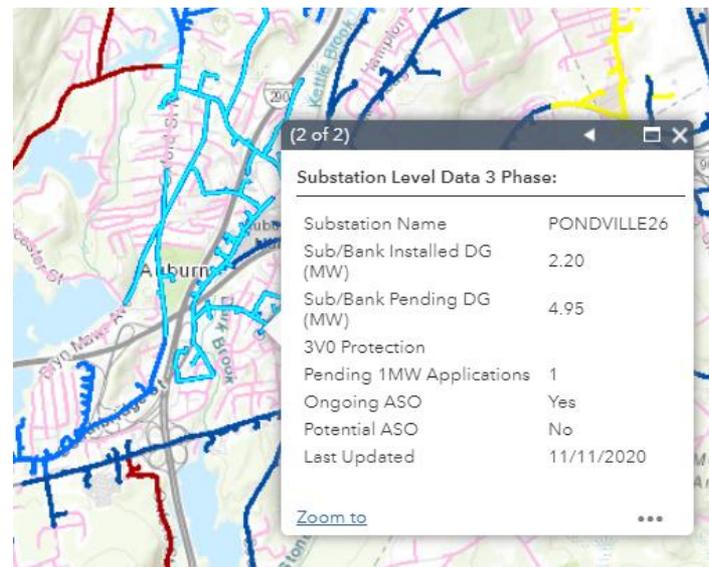
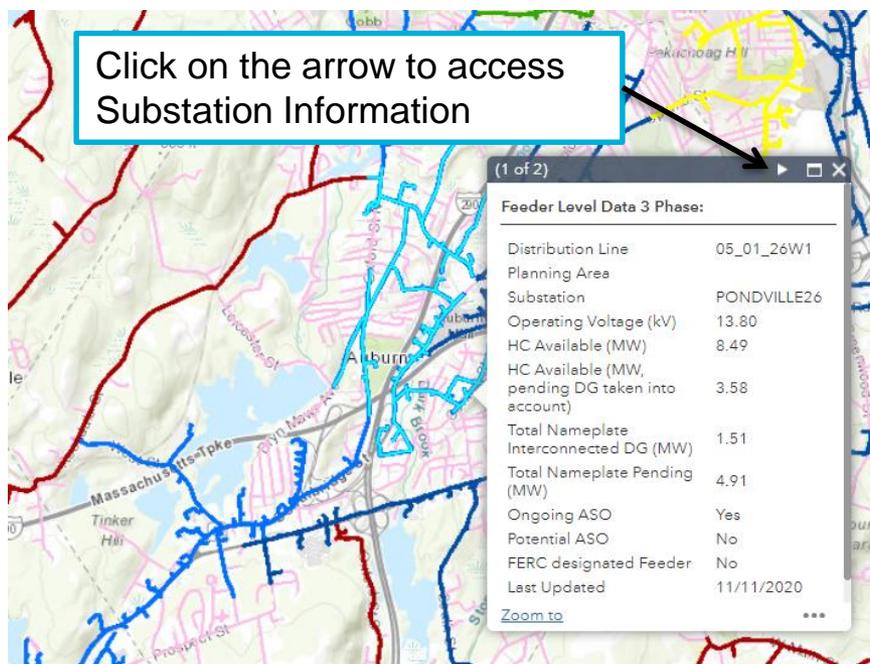
The MA Hosting Capacity Tab now has two different layers. The first one on opening is the hosting capacity with pending DG taken into account as shown to the left.



The second layer (HC without pending DG) can be accessed by opening the layer list, checking 'MA Hosting Capacity – DG installed only' and de-selecting the other layer.



Tab - Hosting Capacity



- The Hosting Capacity Map popup gives feeder level information such as Hosting Capacity, connected and pending DG, as well as ASO status and substation information
- We will be adding Nodal Hosting Capacity in a development tab as the analyses are completed.